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Default Beverage Offerings with Kids' Meals across Ordering Platforms and Associated Upcharges in Fast-Food Restaurants in Illinois and Wisconsin

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Key Findings

- **Prior to implementation of an Illinois act to improve the healthfulness of kids' meal beverage defaults, this study of fast-food restaurants in Illinois and neighboring Wisconsin found less than a third of verbal cashier offerings and restaurant website or mobile application menu listings satisfied those criteria.**
- **Two-thirds of cashier offerings (67%) and more than half of restaurant website or mobile application menu listings (54%) included soda as a default kids' meal beverage offering.**
- **Just under half of interior menu boards (45%) met the healthy beverage default criteria.**
- **Among third-party ordering platforms, including Grubhub, Uber Eats, and DoorDash, 55-69% met the healthy beverage default criteria.**
- **Beverage upcharges were uncommon (≤11%) for compliant milk and juice, except for compliant milk offerings on interior menu boards (28% subject to upcharge). Bottled water incurred upcharges more frequently (33-39%). Soda was never subject to an upcharge.**

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Introduction

Recent estimates show nearly one in five (19.7%) United States (U.S.) children and adolescents have obesity.[1] Childhood obesity is associated with increased risk of having obesity and other adverse health conditions in adulthood, including coronary heart disease and diabetes.[2] As a result, reducing childhood obesity is a leading health indicator for Healthy People 2030.[3] Sugar-sweetened beverages (SSBs) are the largest source of added sugars intake for children and adolescents,[4] with almost two-thirds consuming an SSB on a given day,[5] and SSB consumption is associated with increased risk of childhood obesity.[6] This suggests policies that discourage SSB consumption could play a role in addressing childhood obesity.

In 2015-2018, 36.3% of children and adolescents consumed fast food on a given day.[7] Consumption of fast food is associated with poorer diet quality for these age groups, including greater consumption of SSBs.[8] Indeed, studies have consistently shown fast-food kids' meal offerings to be of poor nutritional quality.[9-12] One study found some improvements in the availability of healthier options on kids' menus between 2004 and 2015, although it noted that these were generally not default options.[13] Another study examining 2012-2015 fast-food and full-service restaurant kids' menus found little nutritional progress.[14] Default beverage options have been shown to contribute to higher calorie and sugar content in fast-food restaurant kids' meals.[9] Additionally, SSBs have been shown to consistently represent four-fifths of kids' meal beverage offerings in a study that included both fast-food and full-service restaurants.[14]

A study of upcharges (i.e., charges added to the meal price when specific items are selected) associated with fast-food kids' meal beverage offerings found soda was never upcharged and only 3% of other sweetened beverage selections resulted in an upcharge, while 41% of water, 28% of 100% fruit juice, and 5-20% of diluted fruit juice and milk selections led to an upcharge.[15] Consumers may be dissuaded from ordering healthier beverages if those selections come with an additional charge, even if they are included among the default offerings.

Both voluntary standards such as the National Restaurant Association's Kids LiveWell initiative[16] and legally mandated requirements such as California's healthier default beverage law (SB1192)[17] have been implemented to improve the nutritional quality of kids' meal beverages. Evidence on the impact of these

measures is mixed, with varied results both across studies and within studies across different outcome measures (e.g., cashier verbal offerings versus menu postings).[14,15,18-22]

On August 20, 2021, Illinois passed a healthy beverage default (HBD) act, effective January 1, 2022, requiring beverages offered by default (i.e., automatically included, absent consumer request for an alternative beverage) with children's meals meet specific criteria.[23] Specifically, the following beverages are the only allowable defaults under the Act: (1) water with no added natural or artificial sweeteners, which may be sparkling or flavored; (2) 100% juice, which may be diluted with plain or carbonated water, in a serving size of ≤8 ounces; (3) non-fat or 1% dairy milk with ≤130 calories per serving; and (4) non-dairy milk with ≤130 calories per serving, which must further contain no added natural or artificial sweeteners and meet the standards for the National School Lunch Program. Using data collected as part of a larger evaluation, this brief examines differences across platforms (i.e., both physical locations and online menu listings) in default beverage offerings with kids' meals and associated upcharges in Illinois and Wisconsin fast-food restaurants prior to the Illinois HBD Act taking effect.

Methods

Fast-food restaurants were sampled from Cook, DeKalb, and LaSalle counties in Illinois and Milwaukee, Kenosha, and Walworth counties in Wisconsin. Counties were selected to ensure restaurants were sampled from both urban and rural areas using the 2013 National Center for Health Statistics Urban-Rural Classification Scheme for Counties.[24] Restaurants were sampled from Illinois and comparison sites in Wisconsin as part of a larger planned pre-post evaluation of the Illinois HBD Act. Restaurants were sampled from 12 national fast-food chains serving kids' meals with locations in both the Illinois and Wisconsin counties.

Field audits were conducted from October 29 – November 18, 2021, to assess offerings at restaurants' physical locations. Data on online kids' meal offerings from restaurant websites or mobile applications as well as third-party ordering platforms including Grubhub, Uber Eats, and DoorDash were collected for the same restaurants from November 18-24, 2021. Data were collected and coded using the Food Policy Program Fast-food Restaurant Kids' Meal (FPP-FFKM) tool, which has been shown to provide reliable measures of kids' meal default beverage offerings and characteristics of those offerings.[25]

Because this study focuses on differences across platforms, the sample has been limited to restaurants with data available for the cashier, interior menu board, restaurant website/application, and at least one of the three third-party platforms. A total of 201 restaurants were sampled, including replacement restaurants where an originally sampled restaurant could not be audited in one or more platforms (e.g., interior menu board). Forty-three restaurants were excluded from analyses as the interior menu board could not be coded (22 where the restaurant interior was inaccessible, 1 where the data collector was asked to leave before photos could be taken, 17 where the menu board did not show a kids' meal or did not indicate beverages included with a kids' meal, and 3 where restaurants were drive-thru only). An additional 25 restaurants that did not have a restaurant website/application and another 20 that did not have ordering available via at least one of the third-party platforms (i.e., Grubhub, Uber Eats, or DoorDash) were excluded. Finally, restaurants for which compliance could not be determined for the interior menu board (three), cashier response (four), or restaurant website/application (10) were excluded, leaving a final balanced analytical sample of 96 restaurants. Analyses specific to Grubhub and DoorDash each excluded another four restaurants for which compliance could not be determined. Additional restaurants for which platforms were not available or could not be coded left 61, 81, and 82 restaurants, respectively, for analyses of Grubhub, Uber Eats, and DoorDash. Sample sizes for specific beverage offerings were sometimes lower due to item-specific missing data (e.g., data needed to determine milk or juice compliance).

Beverages were classified into 18 mutually exclusive categories based on the FPP-FFKM tool.[25] Compliance (or noncompliance) was clear for certain categories (e.g., bottled water, regular soda); however, this was not the case for other categories where several factors contributed to this determination. The compliance of default dairy milk offerings was computed based on fat percentage and calories, and compliance for juice offerings was determined based on 100% juice status and serving size. No non-dairy milks were offered as default beverages in any restaurants in our study.

Where there was more than one default offering under a given beverage category, an overall measure was computed for whether all offerings in the given category incurred an upcharge. For example, if a restaurant offered multiple compliant juice options as defaults, compliant juice would only be counted as subject to an upcharge if all the options incurred an upcharge. For restaurants that applied upcharges to all default beverage offerings, only the amount above the minimum upcharged amount for any default offering was counted as an upcharge for analyses. Data on upcharges were not captured for restaurant websites/applications.

McNemar's test was used to test the statistical significance of differences in overall beverage compliance across platforms, accounting for the fact that the same restaurants were assessed across platforms.[26] Analyses were conducted in Stata/SE 17.0.

Results

Table 1 shows the prevalence of specific default offerings and overall compliance of kids' meals with the provisions of the IL HBD Act prior to its implementation by platform (including both physical locations and online menu listings). Compliant milk and juice were offered by default in 70-87% and 48-90% of restaurants, respectively, across all platforms. Bottled water was offered by default in 25-44% of restaurants across all platforms except for cashier offerings, where it was only a default in 1% of restaurants. In terms of non-compliant offerings, soda was offered by default in 16-30% of restaurants across all platforms except for cashier offerings and restaurant websites/applications, where it was a default offering in 67% and 54% of restaurants, respectively. Non-compliant milk was offered in 21-40% of restaurants across all platforms except Grubhub, where it was only offered as a default in 2% of restaurants. Non-compliant default juice offerings were found in just 1-12% of restaurants.

Overall, only 19% of cashier offerings and 29% of restaurant website/application menu listings were in compliance with the IL HBD Act at baseline, whereas nearly half (45%) of interior menu boards and 55-69% of menu listings on Grubhub, Uber Eats, and DoorDash were in compliance at baseline. Differences in compliance between the cashier offerings and restaurant website/application relative to all other platforms were statistically significant, as were those between the interior menu board and Grubhub and Uber Eats. Differences in compliance between the cashier offerings and restaurant website/application and between the interior menu board and DoorDash were not statistically significant.

Table 2 shows the prevalence of upcharges for default beverages included with kids' meals by beverage type and platform. Bottled water incurred an upcharge in at least one-third (33-39%) of restaurants where it was a default. Milk on the interior menu board incurred an upcharge in 28% of restaurants where it was a default; prevalence of upcharges was higher for non-compliant compared with compliant milks (57% versus 28%). Both compliant and non-compliant default milk incurred an upcharge in at most 11% of restaurants on the third-party platforms. There were very few upcharges for default juice offerings (≤6%), and soda never incurred an upcharge.

TABLE 1 **Prevalence of Restaurant Default Offerings with Kids' Meals and Compliance with the Provisions of Illinois' Healthy Beverage Default Requirements, Comparison by Platform on Balanced Sample**

	Cashier	Interior menu board	Restaurant website/app	Grubhub	Uber Eats	DoorDash
Overall beverage compliance (n=96, 96, 96, 61, 81, 82)	19%	45%	29%	69%	60%	55%
Bottled water (n=94, 96, 96, 61, 81, 82)	1%	25%	38%	44%	35%	32%
Milk (n=94, 96, 96, 61, 81, 82)	72%	83%	88%	75%	83%	83%
Compliant (n=91, 96, 92, 60, 80, 81)	70%	83%	87%	75%	82%	83%
Non-compliant (n=91, 96, 92, 60, 80, 80)	34%	39%	40%	2%	21%	23%
Juice (n=94, 96, 96, 61, 81, 82)	94%	84%	63%	52%	62%	63%
Compliant (n=79, 95, 91, 58, 80, 81)	90%	80%	60%	48%	61%	60%
Non-compliant (n=79, 95, 75, 58, 80, 81)	8%	4%	12%	5%	1%	7%
Regular Lemonade (n=--[a], 96, 96, 61, 81, 82)	--[a]	16%	9%	20%	1%	6%
Soda (n=94, 96, 96, 61, 81, 82)	67%	16%	54%	30%	19%	23%
Sports drink (n=94, 96, 96, 61, 81, 82)	18%	4%	21%	2%	0%	1%
Energy drink (n=94, 96, 96, 61, 81, 82)	0%	0%	0%	0%	0%	0%
Tea/iced tea (n=94, 96, 96, 61, 81, 82)	52%	16%	29%	3%	0%	1%
Other[b] (n=94, 96, 96, 61, 81, 82)	53%	10%	11%	5%	1%	6%

Percent of restaurants offering each listed beverage type by default and percent meeting the provisions of the Illinois Act requiring healthy default beverages with kids' meals are shown. Sample sizes by platform are shown at the beginning of each row separated by commas.

a Regular lemonade was grouped with juice in assessing cashier responses.
b Other beverages included artificially sweetened lemonade and juice, unsweetened tea/iced tea, sparkling water, Vitamin Water, limeade, shakes, slushes, and frozen drinks.

TABLE 2 **Prevalence of Upcharges Associated with Restaurant Default Offerings with Kids' Meals, Comparison by Platform on Balanced Sample**

	Interior Menu Board	Grubhub	Uber Eats	DoorDash
Bottled water (n=24, 27, 28, 26)	33%	37%	39%	38%
Milk (n=80, 46, 67, 68)	28%	7%	10%	4%
Compliant (n=80, 45, 66, 67)	28%	7%	11%	4%
Non-compliant (n=37, 1, 17, 18)	57%	--[a]	0%	0%
Juice (n=81, 32, 50, 52)	0%	6%	0%	0%
Compliant (n=76, 28, 49, 49)	0%	0%	0%	0%
Non-compliant (n=4, 3, 1, 6)	--[a]	--[a]	--[a]	--[a]
Soda (n=15, 18, 15, 19)	0%	0%	0%	0%
Other non-compliant beverages[b] (n=13, 14, 1, 6)	0%	21%	--[a]	--[a]

Percent of restaurants imposing upcharge on each listed beverage type where offered by default is shown. Sample sizes by platform are shown at the beginning of each row separated by commas. For all beverage types, except bottled water, there could be multiple different options offered by default; upcharge statistics are based on the prevalence of upcharges for all default options.

a Estimates not shown where they would be based on fewer than 10 observations.
b Other non-compliant beverages included regular lemonade, artificially sweetened lemonade and juice, sports drinks, tea/iced tea, unsweetened tea/iced tea, Vitamin Water, limeade, slushes, and frozen drinks.

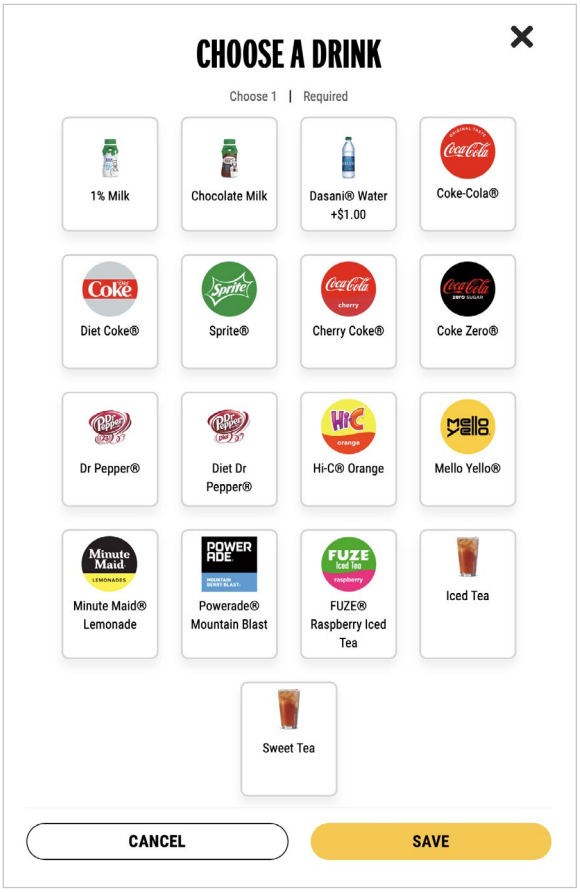
Discussion

Based on the criteria for kids' meal beverage default offerings in the IL HBD Act, this study found compliant milk and juice default offerings in 70-87% and 48-90% of fast-food restaurants, respectively, and non-compliant soda default offerings in 16-30% of restaurants across all platforms except for cashier offerings and restaurant websites/applications, where 67% and 54% of restaurants, respectively, included soda as a default offering. Fewer than one-third of cashier offerings and restaurant website/application menu listings only offered healthier default beverages with kids' meals, and fewer than half of interior menu boards did so, compared to 55-69% of third-party ordering platforms. Upcharges were relatively uncommon for compliant beverages, except for bottled water across all platforms (33-39%) and milk on interior menu boards specifically, where upcharges were still more common for non-compliant than compliant milks (57% versus 28%). Soda was never subject to an upcharge on any platform.

This study's findings of a high prevalence of unhealthy default kids' meal beverages are consistent with previous research.[9,15,18-21] Similar to our findings, previous research has noted lower compliance of beverages offered by cashiers compared to those from other platforms, even where policies requiring healthier defaults have taken effect.[18,20] This suggests an important role for restaurants in training staff to ensure cashier offerings align with healthier defaults observed on menu listings.

Interestingly, this study found that third-party ordering platforms were generally more likely to offer only healthier default beverages than any of the three platforms controlled by the restaurant itself, including online restaurant websites/applications. The way kids' meal beverages are often listed on restaurant websites/applications suggests these beverage offerings may not have been programmed separately from the main drinks menu (example in Figure 1), so the observed differences could be the result of technical differences in programming menus. To our knowledge, only one other study has examined differences in online kids' meal default beverage offerings across platforms.[15] It examined the same four online ordering platforms considered in the current study, but found much smaller differences in compliance between restaurant websites/applications and third-party ordering platforms. However, this earlier study used several different measures

FIGURE 1 **Example Kids' Meal Beverage Listing on a Restaurant Website**



of compliance, none of which is directly comparable to that used in the current study. Further research is warranted to better understand online ordering platform practices, which may be of increasing importance as consumer behavior has shifted in response to the COVID-19 pandemic.[27]

While this study's findings on the prevalence of upcharges are generally similar to those of the only previous study we are aware of that has examined this, the previous study found a notably higher prevalence of upcharges for 100% fruit juice (28%)[15] than we did for compliant juice (0%). Differences may be explained in part by the fact that the previous study produced a separate estimate for diluted fruit juice (8%), whereas this study included both diluted and non-diluted unsweetened juice in its compliant juice measure. Differences could also be attributable to regional factors such as differences in food costs and preferences, as the previous study was carried out in California rather than the Midwest.

Findings highlight room for substantial improvement in the healthfulness of beverages offered as defaults in fast-food restaurant kids' meals. In particular, they highlight the potential importance of better cashier training and ensuring kids' meal default offerings on restaurant websites/applications do not incorporate the full drinks menu. The findings of this study suggest an important potential role for policy intervention to improve kids' meal offerings, which should be explored further in future research.

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