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Short communication

## Healthy default beverage policies for kids' meals: A statewide baseline assessment of restaurant managers' perceptions and knowledge in Delaware

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### ABSTRACT

The consumption of sugar-sweetened beverages (SSBs) has been linked to obesity, diabetes, and other negative health outcomes among children. In response, many government entities have enacted healthy default beverage policies that require restaurants offering bundled kids' meals—food and drink items combined and sold as a single unit—to include only healthier drinks. Despite growing interest in these policies, little is known about their potential reach, restaurant management perceptions, and possible implementation challenges. This study evaluated restaurant managers' knowledge and support of a policy in Delaware that had passed, but not yet gone into effect. We conducted structured in-person interviews with managers (n = 50) from full-service and quick-service chain and non-chain restaurants (QSRs) using a stratified random sample. Managers were interviewed about the number of bundled meals sold, beverage sales with those meals, and awareness and perceptions of the policy. On average, QSRs sold significantly more bundled kids' meals per week (281) compared to full-service restaurants (111), and managers from chain restaurants reported selling significantly more bundled kids' meals per week (233) compared to non-chain restaurants (91). Managers reported 72.5% of those meals were sold with a healthier beverage (water, milk, or 100% juice), consistent with the forthcoming policy, while 28% were sold with SSBs. Furthermore, although only three managers (6%) reported knowing about the policy, the majority supported it when it was explained. Our findings indicate general support for the intent of the policy, but suggest the need for tailored implementation approaches and additional education for restaurant manager's and staff.

### 1. Introduction

The consumption of sugar-sweetened beverages (SSBs) (e.g., soda, sweetened juice drinks) has been linked to heart disease, diabetes, and other chronic, diet-related diseases (Malik et al., 2006). SSBs are of particular concern for children's health since American children consume 143 calories per day from these drinks, far exceeding recommended intake for added sugars (Keller et al., 2015; Powell & Nguyen, 2013). The consistent consumption of SSBs by children have been linked to developing overweight, becoming obese and remaining obese for their entire lives (Luger et al., 2017; Vinke et al., 2020). Americans

typically consume one-third of their daily calories away from home, and children's average consumption of sugar increases by 24–64 calories when they eat at fast-food or quick-service restaurants (QSRs) (Morrison and Lin, 2012; United States Department of Agriculture, 2019; Saksena et al., 2018).

In order to address health concerns related to SSB consumption, to date, 17 jurisdictions have passed a policy that requires restaurants offering bundled kids' meals—a combination of food and drink items sold as a single unit—to offer only healthier drinks as the default beverage option, such as milk, water, and in some cases, 100% juice (Yang and Benjamin-Neelon, 2019; Karpyn et al., 2020). These policies,

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collectively termed “healthy default beverage” (HDB) policies, apply to QSRs and full-service restaurants. They do not prohibit the purchase or selection of alternative beverages.

One example of a statewide HDB policy is the State of Delaware’s, which was passed in July 2019 with an implementation date of July 2020. The policy limits the default beverages in kids’ meals to: (1) plain, flavored, or sparkling water (none with added sweeteners); (2) regular, low-fat or fat free milk including flavored milk or non-dairy milk alternative; or (3) 100% juice with no added sweeteners, or combined with water or carbonated water in a serving size of 8 oz or less (H.B. 79 § 122, 2019).

Despite the growing interest in HDB policies and, in particular, the passage of Delaware’s statewide policy, little is known about the volume of bundled kids’ meals sold, the types of beverages sold and purchased as part of the bundle, nor restaurant manager knowledge and support of the policy prior to implementation. This study seeks to fill these gaps.

## 2. Methods

In-person interviews were conducted with managers at 50 Delaware restaurants in early 2020 (Table 1), approximately seven months after the passage of the statewide policy, but five months before implementation. Initially, a database of all restaurants operating in Delaware was obtained from the North American Classification System Association (N = 1375). Geographic location (county) and urban/rural designation using standard Rural-Urban Commuting Area codes were ascribed to each restaurant and mapped with GIS software (United States Department of Agriculture Economic Research Service, 2019). Of the initial 1375 restaurants, 447 (32.5%) were removed due to having an ineligible (ie. City of Wilmington is subject to a separate policy) or impossible address. Of the remaining 928 restaurants, 259 (27.9%) were closed (ie. seasonal beach restaurants) or unreachable. Next, trained research assistants contacted restaurants to determine if they currently offered an eligible kids’ meal bundled with a drink. Of the 669 restaurants, 207 (31%) sold bundled kids’ meals and 462 (69%) did not. Restaurants were included if they were subject to the state-level policy (currently offered a bundled kids’ meal that included a drink) and were reachable by phone on one of three attempts over the course of six weeks, including evenings and weekends. A random sample of 52 of the eligible 207 restaurants, stratified by restaurant type (QSR versus full-service), county and urbanicity (urban versus rural) was created. All interviews were conducted onsite at restaurants during the weekday, but outside of mealtime rush hours, with the manager currently on duty. Structured Interview responses were recorded on the paper-based tool which included notes to capture any narrative content and comments. All study-related procedures were reviewed by the Institutional Review Board at the University of Delaware and deemed exempt.

*Measures:* Prior to field data collection, the structured interview tool

**Table 1**  
Characteristics of participating restaurants with bundled kids’ meals and of managers (n = 50).

Characteristics	n (%)
<i>Restaurant Characteristics</i>	
Full-Service	30 (60%)
Chain	12 (40%)
Independent	18 (60%)
Quick-service	20 (40%)
Chain	19 (95%)
Independent	1 (5%)
Urban/Suburban	45 (90%)
Rural	5 (10%)
<i>Manager Characteristics</i>	
Owner	2 (4%)
Started working at restaurant ≥ 1 year ago	40 (80%)
Started working at restaurant < 1 year ago	8 (16%)

was pilot tested with eight managers and modified to improve length and clarity. The final tool consisted of 11 closed-ended and two open-ended questions. Questions included: the manager’s position and length of time employed at the restaurant location; estimates of the number of kids’ meals sold per week on average (“About how many kids’ meals do you sell on average per day, week, or month, whichever is easiest for you?” “It’s okay to estimate.”); the proportion of these meals sold with different types of beverages (e.g. milk, water, soda) (“This year, what percentage of kids’ meals were sold with each drink you mentioned?” and knowledge and perceptions about the HDB policy. These included where they first learned about it; their level of support for the policy; their perceptions of benefits of the policy to both restaurants and customers (open-ended). Managers were also asked whether each of six different potential types of support would help them to implement the policy. For each item, they indicated yes, no, or already done. Photo cards were provided as visual aids to assist the manager in estimating the percentage of meals with different drink types. The photo cards displayed the following four beverage categories: (1) Sweet tea, Lemonade, Sports Drinks, Fountain Drinks, Soda; (2) 100% Juice; (3) Water; and (4) Milk (Plain and Flavored). Managers had no limit on the time allotted for responses, and were allowed to consult with other staff or records although they were not explicitly provided with questions in advance.

*Data entry and analysis:* Following the interviews, responses which were initially recorded onto paper forms were double entered into an online database. For close-ended questions, frequencies were calculated, and Fisher’s exact test and independent sample t-tests were used to explore differences in restaurant characteristics. For open-ended questions, a qualitative codebook was developed by one researcher in collaboration with the research team. Ninety-nine excerpts were coded using Dedoose™ software and coding themes and content were reviewed and discussed via tabular review of quote content with the team. Disagreements regarding codes were resolved through discussion.

## 3. Results

Interviews were conducted at full-service (60%) restaurants, and chain restaurants (62%), located in an urban or suburban area (90%). Of the initial sample of 52 restaurants, 50 (96%) agreed to participate in the manager interview. Two managers were also owners. The majority of managers interviewed worked at the restaurant for at least one year (84%).

Manager responses to requests to estimate the number of kids’ meals sold and the types of beverages sold with kids’ meals ranged from 1 per week to 1050 per week (median = 100; mean = 168). On average, managers reported that QSRs sold significantly more bundled kids’ meals per week (mean = 281, SD = 336.7) compared to full-service restaurants (mean = 111, SD = 107.6) ( $p = 0.039$ ), and chain restaurants sold significantly more bundled kids’ meals per week (mean = 233, SD = 277.4) compared to non-chain restaurants (mean = 91, SD = 127.5) ( $p = 0.017$ ). Managers reported that restaurants in rural areas (n = 5) served an average of 193 bundled kids’ meals per week compared to 177 in non-rural areas (n = 45) ( $p = 0.89$ ).

Across all restaurant types, managers reported that 71% of kids’ meals sold included only the adherent drinks of water, milk (any type), or 100% juice, while 28% included an SSB (i.e., non-adherent drinks) (Table 2). QSRs reported a significantly higher average proportion of meals served with adherent drinks (78.2%) as compared to full-service restaurants (66.9%) ( $p = 0.15$ ). Chain restaurants reported a significantly higher average proportion of meals served with adherent drinks (78.8%) versus non-chain restaurants (59.5%) ( $p = 0.017$ ).

Based on manager interviews, the majority of restaurants (83.7%) offered milk as an option with the kids’ meal, and of those, 73.5% offered sweetened/flavored milk. Only five restaurants (10.2%) that offered milk did not offer any sweetened milk.

Three (6%) managers reported knowing about the policy; of these, two learned about it from the media and one from their corporate

**Table 2**  
Characteristics of beverages offered and sold; Manager perceptions of HDB policy (n = 50 except as noted).

Beverage Characteristics	
Percent of Meals Sold by Beverage Type	Mean Percentage
Water	15.2%
100% juice	34.4%
Milk (mostly unflavored)	8.6%
Milk (mostly flavored)	10.5%
Milk (type not specified)	3.7%
Sugar Sweetened Beverage (e.g. soda, sweetened juice)	28.3%
<i>Milk Type Offered with Kids' Meal (n = 49)</i>	<i>n (%)</i>
No milk offered	8 (16.3%)
Flavored milk	36 (73.5%)
Only Unflavored Milk	5 (10.2%)
<i>Beverages Sold Already Consistent with Policy (100% juice, water, milk) (n = 47)</i>	<i>Mean Percentage</i>
All restaurants	71.0%
Full-service restaurants*	66.9%
Quick-service restaurants*	78.2%
Chain restaurants**	78.8%
Non-chain restaurants**	59.5%
<b>Managers Perceptions</b>	
<b>Support for Policy (n = 49)</b>	<b>N</b>
Support a lot	37
Support a little	2
Neutral	9
Somewhat oppose	0
Strongly oppose	1
<b>Helpful for Implementing the Policy? Yes/Already done<sup>1</sup></b>	<b>N</b>
Staff training	41
Information or promotion for customers	36
Information or training from corporate offices ( <i>chain restaurants only; valid n = 28</i> )	25
Information from vendors and suppliers	30
Information or training from government licensing and inspection office	24
Information for vendors or suppliers	25

\* p value for t test = 0.15

\*\* p value for t test = 0.017

<sup>1</sup> Managers were asked about each resource separately; numbers are out of total that responded to the item.

headquarters. When the policy was explained to managers, 37 (75.5%) supported it *a lot* and only one opposed the policy. Managers at QSRs and those from chain restaurants were more likely to report 'supporting the policy a lot' (89.5% and 86.7%, respectively) compared to full-service and non-chain (66.7% and 57.9%, respectively) ( $p = 0.034$  for chain/non-chain;  $p = 0.048$  for full-service/QSR).

Twenty-six (52%) managers responded to the open-ended question asking about potential benefits of the policy; however, when asked to describe these benefits, 10 (38.5% of those reporting benefits) actually described *negative* impacts on restaurants. Most managers generally explained the policy's benefits as helping the restaurant to play a role in supporting children's health ("We're helping kids make healthier choices" and "Sounds healthier in terms of options"). Of the managers who reported benefits in terms of drawbacks, most shared concerns about lost sales and about milk. For example, one manager reported that the policy "hurts the restaurant's sales but is worthwhile for the kids' health."

Most managers indicated that staff training 41 (91.1%) and information or promotion for customers 36 (85.7%) would help to implement the kids' drink policy.

#### 4. Discussion

Structured interviews with managers consistently found they were receptive to the policy, despite some concerns related to stocking and sales. While supportive, managers had limited familiarity with the

forthcoming policy, and were unaware of requirements. Managers indicated they would benefit from both additional staff training and educational information for customers, although they were less enthusiastic about training from government inspectors or information for vendors or suppliers.

Managers' lack of awareness about the new policy raises important questions about its implementation and how compliance will be measured by health officials. Findings suggest that managers need detailed guidance about how the policy is operationally defined, and would like materials they can share with customers, not just their staff.

Our findings also indicate that chain QSRs sell more than twice as many bundled kids' meals (mean of 294 meals per week), as compared to chain full-service restaurants (mean of 136 meals per week), and that of these, 21.8% are sold with soda. The literature on retail sales data for kids' meals overall is sparse, and in particular the volume sales of bundled kids' meals, including the types of beverages, are largely unavailable in the public domain. However, one retail report based on the recall of a toy in a meal suggests that one large fast food chain nationally sells 250 bundled kids' meal every three seconds, and that nearly 15% of customers include a bundled kids' meal in their purchase (Portnoy, 2016).

While this study provides important insight, it does have a number of limitations. First, we rely on manager report of sales rather than actual sales data from receipts or records, or observation. Second, our interviews were only conducted with managers on duty, primarily during the day. It is possible that another manager or restaurant worker may have a different estimation of the number of kids' meals sold and the beverages associated with those meals. Last, our sample included only 5 rural restaurants limiting the conclusions which can be drawn about this important subsample.

#### 5. Conclusion

Numerous jurisdictions have enacted policies that require restaurants to include healthy beverages in their bundled kids' meals. These HDB policies have the potential for the largest impact in chain restaurants, based on our Delaware sample. Accordingly, efforts to inform restaurant managers regarding these policies, and ultimately to enforce these policies, should start with chain restaurants; retail point-of-sale data would help document effectiveness of this approach. Further, as states and other jurisdictions move toward policy implementation, educational materials and programs for both staff and customers should be considered.

Finally, as many restaurants have shifted to online and drive-through sales during the COVID-19 epidemic, it is unclear what and how the default beverage policies will be translated to online kids' meals and meal delivery service online ordering systems. Future research should consider policy effectiveness in these contexts, and seek to broaden data collection efforts to include more restaurant staff, observation and analysis of sales data.

#### Declaration of Competing Interest

Authors have no conflicts of interest to disclose.

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