

May 23, 2024

New York City Department of Health and Mental Hygiene  
Gotham Center, 42-09 28th Street, 14th Floor  
Long Island City, NY 11101-4132

### **Researcher Comment in response to NYC Sweet Truth Act proposed rule**

The undersigned researchers support NYC’s efforts to use evidence-based policy to help consumers make informed and healthy choices. We are public health researchers with expertise in the design, implementation, and evaluation of food and beverage warnings. We bring specific expertise in added sugars warnings in the restaurant setting.

Overconsuming added sugar is a major contributor to obesity, type 2 diabetes, and tooth decay, yet 60% of Americans consume more than the recommended daily limit for added sugar. New York City is the first U.S. jurisdiction to require chain restaurants to display warnings on foods and beverages high in added sugar (>50 grams per serving). Prior research (including by our team) shows that warnings reduce selection of foods and beverages displaying the warnings. New York City’s added sugar warning policy therefore has the potential to reduce added sugar consumption and associated chronic diseases. We therefore strongly support the proposed rule. We offer the following suggestions to improve its effectiveness:

*A. DOHMH should amend the proposed rule to modify the warning statement language.*

We recommend modifying the current warning language, “Eating too many added sugars can contribute to type 2 diabetes and weight gain,” to, “Consuming too many added sugars can increase risk of type 2 diabetes, weight gain, and tooth decay.”

Replacing “Eating” with “Consuming” would include both eating *and drinking* added sugars. The phrase, “increase risk,” would also align the added sugars warning statement with NYC’s existing sodium warning statement, which states: “High sodium intake can increase blood pressure and risk of heart disease and stroke.”<sup>1</sup> Furthermore, there is strong evidence that high intake of added sugars can increase risk of type 2 diabetes,<sup>2,3,4</sup> weight gain,<sup>5</sup> and tooth

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<sup>1</sup> NYC Health Code § 81.49 Sodium Warning

<sup>2</sup> Neuenschwander M, et al. Role of diet in type 2 diabetes incidence: umbrella review of meta-analyses of prospective observational studies. *BMJ*. 2019;365:12368.

<sup>3</sup> Imamura F, et al. Consumption of sugar sweetened beverages, artificially sweetened beverages, and fruit juice and incidence of type 2 diabetes: systematic review, meta-analysis, and estimation of population attributable fraction. *BMJ*. 2015;351:h3576.

<sup>4</sup> Drouin-Chartier JP, et al. Changes in Consumption of Sugary Beverages and Artificially Sweetened Beverages and Subsequent Risk of Type 2 Diabetes: Results from Three Large Prospective U.S. Cohorts of Women and Men. *Diabetes Care*. 2019;42(12):2181-2189.

<sup>5</sup> Nguyen M, et al. Sugar-sweetened beverage consumption and weight gain in children and adults: a systematic review and meta-analysis of prospective cohort studies and randomized controlled trials. *Am J Clin Nutr*. 2023;117(1):160-174.

decay.<sup>6</sup> In addition to being supported by science, adding tooth decay as an outcome may reach a broader range of consumers who have health concerns beyond type 2 diabetes and weight gain.

*B. DOHMH should amend the proposed rule to require that the warning statement be posted on menus and at all self-service dispensing points (e.g. self-service beverage fountains)*

The proposed rule should expand the number of locations on which the warning statement must appear. Local Law 150 requires that the factual warning statement be posted in three locations: (1) “prominently and conspicuously at the point of purchase,” (2) “on the menu or menu board,” and (3) “at any location where a food item requiring an icon pursuant to this subdivision is sold as a self-service item dispensed directly to the consumer.”<sup>7</sup> However, the proposed rule incorporates only one of these locations, stating only “The following statement must be posted prominently and conspicuously at the point of purchase of a covered establishment....”<sup>8</sup>

DOHMH should amend the proposed rule to cover all three locations required by Local Law 150. For warnings to be effective at informing consumers, consumers must first see them and attend to them,<sup>9</sup> which is more likely when the warnings are displayed in more locations, particularly at the location where food and beverage selections are made. Additionally, the rule should clarify that the warning should appear next to beverage fountain dispensers, because fountain beverages like soda often exceed the Daily Value for added sugars. A 2021 survey found that all drink sizes except “kid’s” sizes at most fast-food chains surveyed exceeded the Daily Value for added sugars.<sup>10</sup>

*C. DOHMH should amend the proposed rule to modify the warning icon design to ensure it is as effective as possible at helping consumers identify high-added-sugar items.*

**We urge the department to require added sugar warnings that include icons and text.** A recent randomized controlled trial found that consumers exposed to menus with icon-plus-text added sugar warnings (i.e., icons accompanied by the text “SUGAR WARNING”) ordered 11 fewer grams of added sugar than consumers exposed to menus with icon-only warnings (95% CI: -14, -7,  $p < 0.001$ ).<sup>11</sup> This large difference was likely due to noticeability, as researchers found that only 7% of participants exposed to menus with the icon-only warnings recalled seeing these warnings, compared to 44% of participants exposed to menus with the icon-

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<sup>6</sup> Valenzuela MJ, et al. Effect of sugar-sweetened beverages on oral health: a systematic review and meta-analysis. *Eur J Public Health*. 2020;31(1):122-129.

<sup>7</sup> N.Y.C. Local Law 150 (2023).

<sup>8</sup> New York City Department of Health and Mental Hygiene. *Notice of Public Hearing and Opportunity to Comment on Proposed Amendments to Title 24 of the Rules of the City of New York*.

<sup>9</sup> Roberto CA, Ng SW, Ganderats-Fuentes M, Hammond D, Barquera S, Jauregui A, Taillie LS. The influence of front-of-package nutrition labeling on consumer behavior and product reformulation. *Annual review of nutrition*. 2021 Oct 11;41:529-50.

<sup>10</sup> Center for Science in the Public Interest. *Sweet Excess: Largest Restaurant Chains Consistently Serve Up Drinks with More than a Day’s Worth of Added Sugars*. 2022. [https://www.cspinet.org/sites/default/files/2022-03/Soda\\_Sizes\\_Fact\\_Sheet\\_FINAL.pdf](https://www.cspinet.org/sites/default/files/2022-03/Soda_Sizes_Fact_Sheet_FINAL.pdf). Accessed May 13, 2024.

<sup>11</sup> Lemmon B, Musicus AA, Gil A, Hall MG, Roberto CA, Falbe J. Optimal design of an added-sugar menu warning label policy: A randomized controlled trial. Abstract submitted for presentation at APHA Annual Meeting 2024.

plus-text warnings; the addition of text resulted in a 6-fold increase in the noticeability of the warnings ( $p < 0.001$ ).<sup>12</sup>

Similar results have also been found for sodium warnings. An online randomized controlled trial testing restaurant menu sodium warning designs found that icon-plus-text sodium warnings were significantly more noticeable and more effective at reducing sodium selected than icons alone.<sup>13</sup> There is precedent for such warning designs being mandated by localities: Philadelphia requires sodium warnings on restaurant menus that include icons accompanied by the text, “SODIUM WARNING”.<sup>14,15</sup> Therefore, in addition to modifying added sugar warnings to include icons accompanied by text, **we urge DOHMH to amend its sodium warning policy to mandate icons accompanied by “SODIUM WARNING” text for consistency and improved effectiveness.**

**Another way to potentially increase noticeability of icon-only warnings could be to require the added sugar explanatory statement to show the icon accompanied by “ADDED SUGAR WARNING” text.** For example, “ADDED SUGAR WARNING: [Icon] indicates that the added sugar content of this item is higher than the total daily recommended limit...”

**DOHMH should consider modifying the added sugar warning design to be red, 150% the height of the menu item text, and placed to the right of menu item text, especially if the icon is not accompanied by “added sugar warning” text.** A recent randomized controlled trial testing added sugar warning designs found that red added sugar warnings sized 150% the height of the menu item text were more noticeable than black warnings sized 100%.<sup>16</sup> Red added sugar warnings would also help distinguish the added sugar warnings from the existing black sodium warnings. This study also showed that warnings placed on the right of the menu item text (as opposed to on the left) were more noticeable, especially for icon-only warnings.<sup>17</sup>

**Finally, the icon design should clearly indicate that a product is high in added sugar, especially if the icon is not accompanied by “added sugar warning” text.** We recognize the need to create a warning that is distinct but clearly related to the existing sodium warning. One way to further distinguish the two NYC warnings (Figure 1) is illustrated by Israel’s front-of-package sugar and sodium warnings (Figure 2).<sup>18</sup> DOHMH could consider mimicking Israel’s

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<sup>12</sup> Lemmon B, Musicus AA, Gil A, Hall MG, Roberto CA, Falbe J. Optimal design of an added-sugar menu warning label policy: A randomized controlled trial. Abstract submitted for presentation at APHA Annual Meeting 2024.

<sup>13</sup> Musicus AA, Moran AJ, Lawman HG, Roberto CA. Online Randomized Controlled Trials of Restaurant Sodium Warning Labels. *American Journal of Preventive Medicine*, 2019;57(6),e181–e193. <https://doi.org/10.1016/j.amepre.2019.06.024>

<sup>14</sup> Food Fit Philly. Watch the Salt. Look for the Label. 2024. <https://foodfitphilly.org/sodiumwarning/>. Accessed May 16, 2024.

<sup>15</sup> Philadelphia Health Code § 6-310. Sodium Safety Warning Labeling for Chain Establishments.

<sup>16</sup> Lemmon B, Musicus AA, Gil A, Hall MG, Roberto CA, Falbe J. Optimal design of an added-sugar menu warning label policy: A randomized controlled trial. Abstract submitted for presentation at APHA Annual Meeting 2024.

<sup>17</sup> Lemmon B, Musicus AA, Gil A, Hall MG, Roberto CA, Falbe J. Optimal design of an added-sugar menu warning label policy: A randomized controlled trial. Abstract submitted for presentation at APHA Annual Meeting 2024.

<sup>18</sup> USDA Foreign Agriculture Service. New Nutritional Labeling Regulation – Israel. January 29, 2018. <https://apps.fas.usda.gov/newgainapi/api/report/downloadreportbyfilename?filename=New%20Nutritional%20Labeling%20Regulation%20Tel%20Aviv%20Israel%201-29-2018.pdf>. Accessed May 16, 2024.

design for added sugar, which tilts the spoon towards the viewer to more clearly show that it contains sugar. The department should also consider designs that researchers (in partnership with a professional graphic designer) have already developed and tested (Figure 3).<sup>19,20</sup>

**Figure 1. NYC proposed added sugar warning, next to NYC sodium warning**



**Figure 2. Israel front-of-package sugar warning, next to sodium warning**



Sugar in high quantity



Sodium in high quantity

**Figure 3. Added sugar warning designs tested in randomized controlled trials (icon-only and icon-plus-text)**



Thank you for considering these recommendations.

Sincerely,

<sup>19</sup> Lemmon B, Musicus AA, Gil A, Hall MG, Roberto CA, Falbe J. Optimal design of an added-sugar menu warning label policy: A randomized controlled trial. Abstract submitted for presentation at APHA Annual Meeting 2024.

<sup>20</sup> Falbe J, Musicus AA, Sigala DM, Roberto CA, Solar SE, Lemmon B, Sorscher S, Nara D, Hall MG. Online RCT of icon added-sugar warning labels for restaurant menus. American Journal of Preventive Medicine. 2023 Jul 1;65(1):101-11.



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*Note: The views expressed in this comment letter are those of its individual authors only. This letter is not submitted on behalf of UC Davis, the University of North Carolina, Stanford University, or NYU.*