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Toddler drinks, formulas, and milks: Labeling practices and policy implications



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ABSTRACT

Toddler drinks are a growing category of drinks marketed for young children 9–36 months old. Medical experts do not recommend them, and public health experts raise concerns about misleading labeling practices. In the U.S., the toddler drink category includes two types of products: transition formulas, marketed for infants and toddlers 9–24 months; and toddler milks, for children 12–36 months old.

The objective of this study was to evaluate toddler drink labeling practices in light of U.S. food labeling policy and international labeling recommendations. In January 2017, we conducted legal research on U.S. food label laws and regulations; collected and evaluated toddler drink packages, including nutrition labels and claims; and compared toddler drink labels with the same brand's infant formula labels. We found that the U.S. has a regulatory structure for food labels and distinct policies for infant formula, but no laws specific to toddler drinks. Toddler drink labels utilized various terms and images to identify products and intended users; made multiple health and nutrition claims; and some stated there was scientific or expert support for the product. Compared to the same manufacturer's infant formula labels, most toddler drink labels utilized similar colors, branding, logos, and graphics.

Toddler drink labels may confuse consumers about their nutrition and health benefits and the appropriateness of these products for young children. To support healthy toddler diets and well-informed decision-making by caregivers, the FDA can provide guidance or propose regulations clarifying permissible toddler drink labels and manufacturers should end inappropriate labeling practices.

1. Introduction

What and how parents feed their infants and toddlers during the transition from exclusive breastfeeding or infant formula to the family diet is critical for establishing healthy dietary preferences and preventing obesity in children (Pérez-Escamilla et al., 2017). The American Academy of Pediatrics (AAP) and American Academy of Family Physicians (AAFP) recommend exclusive breastfeeding for the first 6 months of life with the addition of complementary foods and the continuation of breastfeeding until at least 12 months of age (Gartner et al., 2005; American Academy of Family Physicians, n.d.). Iron-fortified infant formula is recommended for infants who are not breastfed. After 12 months, whole plain cow's milk and healthy foods are advised (AAP Committee on Nutrition, 1988), (World Health Organization, 2013). Despite these recommendations, companies have introduced a category of toddler drinks, marketed for young children during this latter time period (Harris et al., 2016).

There are no consistently used terms for toddler drinks, defined here

as products marketed as appropriate for children between 9 and 36 months old. We differentiate between two types of toddler drinks: "Transition formulas" are marketed for both infants and toddlers spanning 9 to 24 months, and are also known as "follow-up" or "follow-on" formulas. "Toddler milks," also known as "growing up" milks, are marketed for young children between 12 and 36 months.

Although toddler drinks are marketed as advantageous for toddlers' nutrition and growth (Harris et al., 2016), experts do not recommend them. The World Health Organization (WHO) deems toddler drinks "unnecessary" and "unsuitable" as a breastmilk substitute (World Health Organization, 2013). Further, AAFP notes that toddler drinks hold no "advantage" over whole milk and a nutritionally adequate diet (AAP Committee on Nutrition, 1988). Most toddler drinks are primarily composed of powdered milk, corn syrup solids or other added caloric sweeteners, and vegetable oil, and contain more sodium and less protein than whole cow's milk (Harris et al., 2016). The American Heart Association recommends against serving added sugars (including the sweeteners in these products) to children less than two years of age (Vos

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et al., 2017), and experts express concern that these products may increase young children's preferences for sweet tastes, negatively impacting weight outcomes (Pérez-Escamilla et al., 2017). Furthermore, U.S. toddlers' diets have been found to meet or exceed recommendations for most nutrients (Ahluwalia et al., 2016), while the AAFP recommends that parents concerned about picky eating and potential missing nutrients should use a multivitamin instead of toddler drinks (O'Connor, 2009).

Previous research has consistently highlighted concerns that common marketing and labeling practices for infant formula may mislead parents to believe that these products provide benefits over breastfeeding (McFadden et al., 2016; Hughes et al., 2017). However, few studies have examined toddler drink marketing, including product labeling. WHO expressed concern that toddler drink packaging, branding, and labeling practices that closely resemble those of infant formula, may confuse consumers (World Health Organization, 2013). Three studies found that companies marketed infant formula and toddler drinks as part of the same line of products using existing brand names, and similar labels, colors, and logos (Baker et al., 2016), (Berry et al., 2012), (Pereira et al., 2016). Further, they found that the packaging displayed brand names in larger text than the text that identified the actual product category. Another study found that expectant mothers have difficulty differentiating between infant formula and toddler drinks when viewing advertisements (Berry et al., 2010). Furthermore, U.S. companies have substantially increased their advertising spending for toddler drinks in recent years, using messaging that implies that these products are beneficial or even necessary for toddlers' growth and mental performance and offer a solution for picky eating (Harris et al., 2016).

In 2016, the World Health Assembly and WHO recommended that toddler drinks should be included in prohibitions against promoting breastmilk substitutes (WHO, 2016a; World Health Assembly, 2016). In addition, they stated that messaging about products for this age group should support optimal diets, include a statement on the importance of breastfeeding, not promote bottle feeding, and not use images of bottles to imply that a product is intended for infants under 6 months (WHO, 2016a; World Health Assembly, 2016). They called on member states to incorporate guidance into national laws, while taking into account existing legislation and policies, to define products appropriate for infants and young children with a focus on limiting added sugars and salt (WHO, 2016a; WHO, 2016b).

Although the U.S. has not adopted policies to comply with the WHO's International Code of Marketing Breastmilk Substitutes (WHO, 1981), it has a substantial regulatory framework for food labeling that applies to this category. Congress enacts food labeling legislation and the U.S. Food and Drug Administration (FDA) is the federal agency responsible for regulating packaged food labels. (States are preempted, or prohibited, from regulating food labels in the manner described in this paper.) The FDA has the authority to enact regulations fixing and establishing a definition, standard of identity, and reasonable standard of quality for any food (21 USC §341, n.d.). The agency also has the authority to issue guidance documents, which are not binding on companies, to provide industry members guidance on proper labeling practices.

This study fills a gap in the research by documenting current toddler drink labeling practices and examining how U.S. policies and the federal regulatory framework can be utilized or expanded to support clear, transparent, and truthful labeling of toddler drinks. The objective was to assess strategies for the FDA to address toddler drink labeling practices to enable caregivers to make well-informed decisions related to feeding very young children.

2. Methods

In order to examine toddler drink labels in light of the U.S. food labeling framework, this study first examines U.S. food labeling

policies. Then it identifies toddler drink products in the market and critically evaluates toddler drink labels, including comparing them to infant formula labels. All research was completed as of January 14, 2017.

2.1. Labeling policies

One legal researcher conducted research to determine the federal regulatory framework related to toddler drink labels as of January 14, 2017. Using LexisNexis, the sections of the United States Code and Code of Federal Regulations (collectively "laws") related to food labels were analyzed for their applicability to toddler drinks. This included reviewing all infant formula labeling laws and general food labeling requirements (including prohibitions against misbranding). Additionally, key word searches using the terms "toddler" and "infant" were conducted within the labeling laws on LexisNexis and on the FDA's website.

As used in this paper, the federal Food, Drug, and Cosmetic Act defines the term "label" to mean a display of written, printed, or graphic matter upon the immediate container or retail package of any food (21 USC §321, n.d.). FDA regulations define the principal display panel of a food package as the part of a label most likely to be displayed, presented, shown, or examined by consumers when displayed for retail sale (21 CFR §101.1, n.d.). The product's statement of identity, or name of the food, must appear on the principal display panel (21 CFR §101.3, n.d.). Additionally, FDA regulations require an ingredient list and Nutrition Facts panel (21 CFR §101.2, n.d.).

2.2. Toddler drink products and labeling: collection and coding

To identify drinks marketed as appropriate for toddlers, researchers utilized a list from a previous study of food and beverage products marketed for children up to age 3 years (Harris et al., 2016) and conducted internet searches for additional relevant products available in the U.S. as of January 14, 2017.

Researchers visited local retailers and took photos of the entire package for each toddler drink product identified. One product, Gerber Good Start 3 Soy, was not available locally, so researchers used the package images available on Walmart.com. Data collection was completed by January 14, 2017.

Researchers coded the principal display panel of each toddler drink product to gather information on the statement of identity, brand name, font size, and age of the child for which the product was intended. Then, researchers coded all claims and images on product packages. Claims were defined for this study as statements, symbols, vignettes, or other forms of communication anywhere on the package that characterized the product, suggested how to prepare or use it, or provided expert, health, nutrition, or ingredient information (21 CFR §101.13-§101.14, n.d.). Data extracted included each type of message or image, the age of the child the product was intended to serve, and whether the package disclosed an infant formula nutrition panel or standard Nutrition Facts panel required for all other types of beverages.

To compare packaging of toddler drinks and infant formula, the principal display panel for each toddler drink was compared to the principal display panel of the same manufacturer's powder infant formula, if one existed, as found for purchase online as of January 14, 2017. Using the same methods as a previous study (Pereira et al., 2016), researchers coded similarities and differences between the two products' brand names, brand logos (images identifying the brand that are not the brand name such as mascots and symbols), additional images (e.g., cartoon character excluding the brand logo), and background colors and graphics (scheme, design, layout).

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