HEALTH EDUCATION & BEHAVIOR

Health Education & Behavior
1–9

DOI: 10.1177/1090198117699509
journals.sagepub.com/home/heb
SAGE

Potato Chips, Cookies, and Candy Oh My! Public Commentary on Proposed Rules Regulating Competitive Foods

Lauren M. Dinour, DrPH, RDN[1] and Antoinette Pole, PhD[1]

Abstract

Background. The Healthy, Hunger-Free Kids Act of 2010 authorizes the U.S. Department of Agriculture (USDA) to establish nutritional standards for all foods sold in schools participating in federally funded meal programs. These foods, known as competitive foods, are commonly found in school cafeterias, vending machines, fundraisers, and snack bars and are associated with unhealthy dietary patterns. However, little is known about the regulatory process and opportunities for public participation to improve school food. *Aims*. This study investigates public commentary on the USDA's proposed rules governing competitive foods in schools. *Methods*. On February 8, 2013, the USDA's Food and Nutrition Service solicited public comments via Regulations.gov. A corpus of 247,871 public comments was obtained. Duplicate and near-duplicate comments were removed resulting in 3,032 unique comments. Two researchers content analyzed 10% of the sample, removing nonrelevant comments (n = 249). *Results*. A majority of commenters are women, and mention their affiliation. Comments tend to be short, and exhibit low levels of complexity. An overwhelming majority of comments expressed concerns about the public health of youth vis-à-vis the new rule, whereas a small but vocal minority opposed the rule for financial and labor reasons and/or opposition to further government regulation. *Discussion*. Commentary on proposed rules should be specific, avoiding off-topic remarks. Commenters should be strategic, include their credentials, and provide a rationale for their position. *Conclusion*. The rules governing competitive foods are poised to reverse the childhood obesity epidemic, and public commentary may shape these rules.

Keywords

adolescent health, child health, diet, health policy, nutrition, school-based health promotion

Childhood obesity is arguably one of the most significant public health issues facing the United States. Nearly one third of children and adolescents are overweight or obese (Ogden, Carroll, Kit, & Flegal, 2014), and experts forecast the current generation of children will live shorter lives than their parents because of elevated risks associated with excess weight (Olshansky et al., 2005). Efforts to combat obesity during the past decades have stabilized the increasing prevalence of obesity in children (Skinner & Skelton, 2014). To reverse childhood obesity, multiple interventions are needed to improve the "toxic" food environments in which children live, learn, and play (Brownell & Horgen, 2004). One of these strategies consists of increasing the healthfulness of school food since youth potentially consume two or more meals and snacks while at school (Driessen, Cameron, Thornton, Lai, & Barnett, 2014).

Competitive foods—those foods and beverages sold in competition with the School Breakfast Program and National School Lunch Program—are commonly found in school cafeterias and stores, vending machines, fundraisers, and snack bars. Research indicates that competitive foods are associated with increased calorie, fat, and sugar consumption and decreased fruit, vegetable, and milk intake (Fried & Simon, 2007). Studies also suggest that exposure to competitive foods is associated with higher body mass index in adolescents (Fox, Dodd, Wilson, & Gleason, 2009). Yet these relationships are reversible when there is greater regulation of competitive foods (Taber, Chriqui, & Chaloupka, 2012; Taber, Chriqui, Perna, Powell, & Chaloupka, 2012).

[1]Montclair State University, Montclair, NJ, USA

Corresponding Author:
Lauren M. Dinour, Montclair State University, 1 Normal Avenue, Montclair, NJ 07043, USA.
Email: dinourl@mail.montclair.edu

At the federal level, between 1977 and 2010, the U.S. Department of Agriculture (USDA) only restricted the sale of foods of minimal nutritional value[1] from being sold in food service areas during mealtimes (Fried & Simon, 2007). In the absence of strong federal rules many states adopted or strengthened existing regulations, though the breadth and rigor of these state policies vary (Dinour, 2015). With unhealthy foods still sold in schools, demands to further regulate competitive foods led to the passage of the Healthy, Hunger-Free Kids Act of 2010. As required by the Healthy, Hunger-Free Kids Act of 2010, in February 2013, the Food and Nutrition Service (FNS)—an agency within the USDA that oversees school meals—released its proposed standards limiting calories; total, saturated, and *trans* fats; total sugars; sodium; and portion sizes of competitive foods and beverages while emphasizing specific nutrients, fruits and vegetables, whole grains, and plain water, nonfat and low-fat milk, and 100% fruit/vegetable juice (USDA, 2013). Public comments on the FNS's proposed rule were solicited via Regulations.gov between February and April 2013.

We ask, what types of public comments were made to the FNS's proposed rule, and how do the type and manner of commentary compare with those in other e-rulemaking studies? To create policies to halt and reverse childhood obesity, nutrition and public health advocates must understand the regulatory process and opportunities to shape policy. This study seeks to (a) characterize who commented in response to the FNS's proposed competitive food regulations, (b) describe the types of comments submitted, and (c) examine the content and substance of these comments. As stated on Regulations.gov, "agencies make determinations for a proposed action based on sound reasoning and scientific evidence rather than a majority of votes. A single, well-supported comment may carry more weight than a thousand form letters" (eRulemaking Program, n.d.-b). Consequently, this article focuses on unique comments submitted rather than form letters.

eRulemaking and Civic Engagement

The FNS invited comments on the proposed rule via Regulations.gov as part of the federal government's e-rulemaking initiative to enhance public participation in the regulatory process (eRulemaking Program, n.d.-a.). Despite the government's vision of increased public access, researchers question whether or not online participation actually results in a greater degree of citizen engagement and better rules (Benjamin, 2006; Shulman, 2006). Shulman's (2006) analysis of public comments on the Environmental Protection Agency's (EPA) proposed rule change to national standards governing hazardous air pollutants finds no deliberation among commenters. Rather, 79% of comments are duplicates initiated by electronic advocacy campaigns. Shulman (2006) further speculates that mass e-mail campaigns may be counter-productive, making the process harder for regulators to find the more substantive and sophisticated comments among the slew of identical or near-identical ones.

Mass e-mail campaigns alone are not expected to change rules, but instead demonstrate a volume of interest and provide the public with a first step toward participation and engagement (Karpf, 2010). Rulemaking is not a process equivalent to electoral democracy, and agencies are not required—nor should they be expected—to make changes to regulations in response to the numerical weight of public comments (Farina, Newhart, Heidi, & Cornell eRulemaking Initiative, 2012). Mendelson (2012) argues that federal agencies must determine how much value to place on mass comments, suggesting that while they should not automatically lead to rule changes, comments should at least be considered and investigated. Mass comments can be useful for agencies to gauge public resistance, anticipate significant opposition, determine misunderstandings or misinformation, or prompt further consideration of public viewpoints (Mendelson, 2012).

These debates inevitably lead to questions regarding how to best evaluate public commentary with researchers using a range of approaches. Bryer (2011) suggests measuring the quality of public comments. Analyzing three proposed rules from the (a) Department of Health and Human Services, (b) EPA, and (c) National Oceanic and Atmospheric Administration, Department of Commerce, the author codes comments on a range of dimensions (Table 1). The coding schema, however, does not define or operationalize each construct beyond noting their scales so replication is somewhat problematic. Kwon, Shulman, and Hovy (2006) and Shulman (2006) similarly analyze public comments on EPA rules creating new codes and using existing coding schema, some of which were co-opted for this study (Table 1). By evaluating comments on competitive foods our study seeks to build on the conceptual frameworks established by these authors.

Method

In January 2015, a corpus of 247,967 public comments (docket ID: FNS-2011-0019) was obtained from the FNS. Using DiscoverText (DiscoverText, n.d.), duplicates and near-duplicates were removed resulting in a sample of 3,032 unique items (1.2% of the corpus). For analysis, 10% of the unique comments (n = 303) were randomly selected by DiscoverText.

Content analysis was employed using grounded theory (Glaser & Strauss, 1967), identifying emerging themes and codes from previous studies (Table 1). A total of 34 codes were created (Supplemental Table A). Demographic codes were adapted from the FNS and incorporated into the coding schema. The FNS also asked commenters to self-identify their occupation/industry from a list of 79 categories. Since many categories are similar, they were collapsed into 26 categories (Supplemental Table B). Commenters who did not self-select a category were coded as *individuals*.

Table 1. Theoretical Constructs Used to Analyze Public Comments.

Construct	Author (year)	Adopted (yes/no/modified)
Extent of relevance to the request for comments	Bryer (2011)	Modified
Developed credibility of the writer	Bryer (2011)	No
Logic of the argument	Bryer (2011)	No
Objectivity	Bryer (2011)	No
Identity of the writer as a representative of a state or other organized association or body	Bryer (2011)	Yes
Anonymity of the writer	Bryer (2011)	Yes
Position on the rule	Bryer (2011)	Yes
Form-letter communication	Bryer (2011)	Yes
Gender	Bryer (2011)	Yes
Topic		
Economic	Kwon, Shulman, and Hovy (2006) Shulman (2006)	Yes
Government responsibility	Kwon et al. (2006)	Yes
Health	Kwon et al. (2006)	Modified
Public health and safety	Shulman (2006)	
Legal	Kwon et al. (2006) Shulman (2006)	Yes
Science	Kwon et al. (2006)	Modified
Technology	Kwon et al. (2006)	Modified
Science and technology	Shulman (2006)	Modified
Social values	Shulman (2006)	Modified
Structure		
Assesses the main claim and the reason supporting the claim	Kwon et al. (2006)	Yes
Opinion		
Whether or not the commenters support or oppose the regulation, or propose a new idea	Kwon et al. (2006)	Yes
Expertise (text referring to an advanced degree, job training, etc.)	Shulman (2006)	No
Information in docket (not comments; text reflecting the writer has read and is responding to information in the docket but not to another writer's comment)	Shulman (2006)	No
Personal experience (text providing personal knowledge, experience, or narrative as the basis for a claim)	Shulman (2006)	No

Additionally, 11 of the 34 codes were adopted or adapted from previous studies (Table 1).

Prior to coding, two researchers conducted 13 rounds of interrater reliability (IRR) selecting subsamples from the full corpus. Initial rounds of testing contained 20 comments. Smaller subsamples of 10 comments were selected to further refine five variables. Simple percent-agreement measures were calculated for each code to determine IRR. This process generated IRR with ≥80% agreement for all but two variables: *relevance* = 70% and *position* = 60%. The two researchers then independently coded half of the sample (n = 303), consistent with the approach used by Bryer (2011), Cardie, Farina, Rawding, and Aijaz (2008), and Shulman (2006). Only comments deemed relevant to the proposed rule were included in the final analysis. Relevant comments addressed competitive foods, whereas comments tackling the National School Lunch Program or School Breakfast Program were considered irrelevant. A total of 249 out of 303 comments (82%) were deemed relevant.

Results

Who Comments

A majority of unique comments were submitted by *women*, who include their *contact information* and *affiliation*. Women submitted 67% of comments, and more than half of commenters reference their occupation or employer. Among commenters, fewer than 5% are anonymous while nearly one third of commenters provide their name and no other identifying information. Sixty-two percent of comments contain either a mailing address or e-mail. On submission, commenters were asked to self-select a classification created by the FNS (Figure 1). A plurality of commenters did not self-select a category and are therefore classified as *individuals*. Collapsing *schools* and *school food services* together similarly comprise 31% of commenters. In contrast, only 7% of the sample might be ascribed to the *food industry*.

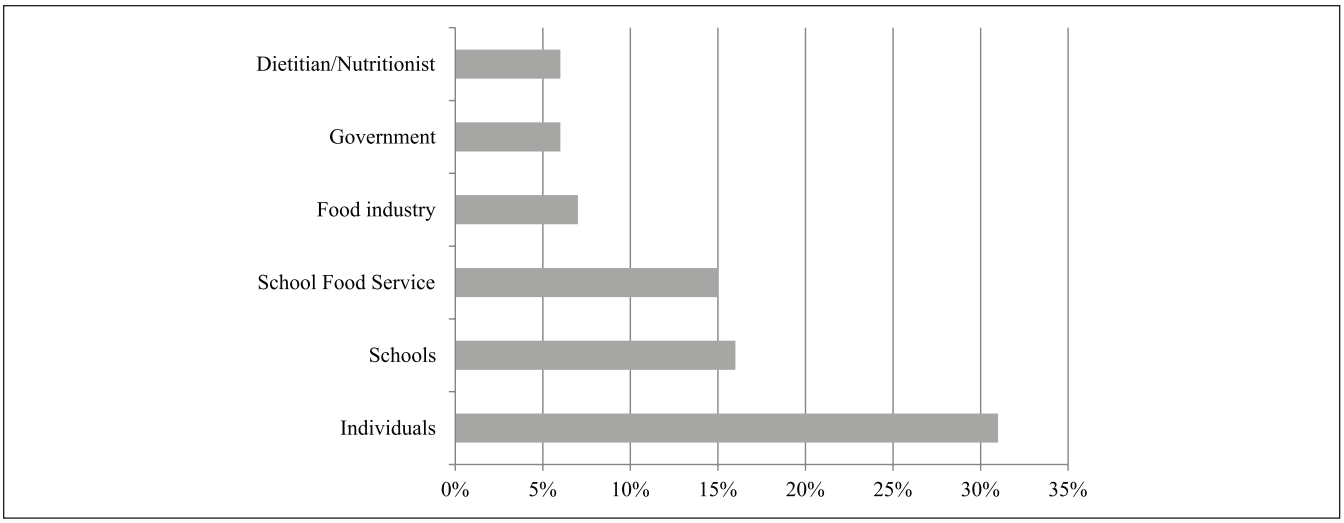

Figure 1. Self-classification of commenters responding to the Food and Nutrition Service's proposed rule on nutrition standards for all foods sold in school as required by the Healthy, Hunger-Free Kids Act of 2010: February-April, 2013.

Types of Comments

To understand comment characteristics, we analyzed whether the comment was submitted on *letterhead*, the *length of the comment*, and the *complexity*. Since comments in this sample do not include form letters, it was not surprising that only 15% of comments appear on letterhead. Comments range between 2 and 36,473 words. After removing outliers from nonnormal distributions, average comments consist of 272 words (SD = 288.6) with a mode of 34 words. Comment complexity was analyzed using a three-point scale—*low, medium*, and *high*. Comments containing only one idea were classified as low in complexity, whereas those highlighting two or three ideas were categorized as medium in complexity, and comments deemed high in complexity contain four or more ideas (Table 2). Fewer than one third of comments illustrate high- or medium-level complexity, whereas a plurality of comments (41%) demonstrates low complexity. Finally, comments illustrating high complexity tend to be lengthier and more substantive, often addressing four or more rule provisions in a point-by-point fashion.

Content and Substance of Comments

Figure 2 illustrates several nutritional components individuals mentioned in their comments. Among beverages, 30% of comments mention *sugar-sweetened beverages*. Comparatively, other beverages—*milk* and *water*—are rarely mentioned. Across other nutritional components, commenters appear most concerned with *calories* and *sugar*.

How competitive foods affect the diets of children appears frequently in comments. More than 72% of commenters express concern about *public health*, and in particular obesity. Underlining the role of health one commenter noted, "The health and healthy habits of our children will have a direct affect [*sic*] on the physical and economic health of our country's future. Please make decisions based on the good of the children. Thank you!" Another commenter recognized the obesity epidemic, however, rejected the role of school foods writing,

> . . . Our jobs as Food Service Directors is [*sic*] getting so difficult. If you really want to cure child obesity it is not in our school, it is in education to the parents, it is limiting McDonald's on super sizing, it is limiting your lack of exercise. I have 3 children myself and I insist on them participating in group activities and/or sports to keep them busy, teaching them the difference between a good snack and a empty calorie snack, and limiting the snacks I purchase from my weekly grocery trip.

Finally, we coded comments for *explicit support* or *opposition to the proposed rule* along with the justification for the commenter's position. More than half of commenters (57%) do not express explicit support or opposition, but rather discuss concerns or include *suggestions for change*. One quarter of comments contain explicit support while 18% of comments oppose the proposed rule. The most frequently mentioned reason for opposition is *financial and labor*, composing 43% of comments. While many of the financial concerns stem from school districts and school food service, this excerpt from a food industry professional underlines the financial obstacles he perceives,

> We are a small business operating in Southeastern Michigan and employ a total of 17 employees companywide. We operate specifically a total of 15 School Districts. These new regulations will force us to reduce our operations by one route, reducing overall sales by ½ million dollars and layoff 2½ people or 15% of our staff. There needs to be a fight or argument from NAMA to prolong this action and allow the manufactures to catch up to

Table 2. Examples of Comments With Low, Medium, and High Complexity Responding to the Food and Nutrition Service's Proposed Rule Regarding Nutrition Standards for All Foods Sold in School as Required by the Healthy, Hunger-Free Kids Act of 2010: February-April, 2013.

Complexity level	Illustrative example
Low	"The new rules on a la carte are an over reach by the government. This is an unfunded mandate and according to the Supreme Court, unfunded mandates are unconstitutional. But there has been no indication from this administration over the past 5 years that the constitution [*sic*] applies to them."
Medium	"The changes to our program at the high school level are proving to be detrimental to students and employees. The students are NOT buying into the changes and are brown-bagging or buying from the gas stations and bringing it to school. We have had a very successful lunch program which I have been a part of for 12 years and am very proud of what our past and present directors have accomplished. These changes are so restrictive sales have plummeted drastically. We have had 3 wonderful employees laid off in March and working hours slashed for high school food service employees only. Two employees lost their health insurance due to decrease in hours. These new guidelines take away the right as a young adult to choose what to eat. Obesity starts at the home NOT in school. Please reconsider these severe guidelines and the impact they are having."
High	". . . **Potable Water** Section 203 of the HHFKA requires schools participating in the National School Lunch Program (NSLP) to make potable water available at no charge during meal times. This initiative was implemented in the NSLP beginning in the 2011-12 school year. The requirement to provide potable water in the after-school snack program may be more challenging to implement, as many of the after-school activities are scattered throughout school buildings and children eat their snacks in classrooms instead of the cafeteria, where most schools have been providing the potable water. After-school staff will need to be trained and have access to pitchers and cups or have a functioning water fountain nearby for children to access. **Nutrition Standards Overview** The entire process for planning and evaluating compliance with these provisions will require a significant review of products and careful selection to ensure compliance with the standards and to ensure that the funds invested in the food products will yield a profit. While the goal to increase consumption of fruits, vegetables, whole grain products and low fat or fat free dairy products is commendable, it is incumbent on the "consumer" to decide to spend their money on one of these products. The rule presents competitive foods as "good" foods versus "bad" foods, which contradicts the Dietary Guidelines for Americans (DGAs). The DGAs encourage people to make overall good food choices and to eat certain foods in moderation—those with solid fats and added sugars. **Naturally Occurring Nutrients** We ask USDA to proceed with caution regarding the proposal that foods be available to students that contain both naturally occurring nutrients of concern, as well as foods fortified with the nutrients of concern, namely, calcium, potassium, vitamin D and fiber. We agree that targeting these items will encourage schools to choose foods that will promote consumption of these nutrients, but fear that it may be impossible for schools to do this accurately. The problem with targeting specific nutrients is that nutrient facts labels do not contain enough information for a school to determine whether a nutrient is naturally occurring or a fortification. If USDA chooses to keep this provision in the Final Rule, clear and definitive guidance needs to be developed and provided to food service operators. The guidance should be clear enough so that schools can make accurate determinations for prepackaged single serve items as well as homemade entrée and side items that are not included as part of the reimbursable meal. **Calorie Standards** The proposed rule is intended to limit a student's access to foods of low nutritional quality that meet specific standards for calories, fat, saturated fat, sugar and sodium. Snack items are limited to 200 calories per portion, but the rule does not address the number of portions/units a student is able to purchase at one time. The Rule does not limit the number of calories a student can consume as long as the student can purchase as many portions/units they can afford. Manufacturers will need to change the portion sizes of many currently available items to conform to the Rule. We concur with USDAs delayed implementation of the new competitive food standards for one full school year in order to allow manufacturers time to reformulate products and change items to single serve packaging. SFAs will have to manually calculate homemade products, both entrée items and snack foods, to determine if they fit the new standards. It is our experience from the previous School Meals Initiative (SMI) process, that SFAs, even those that used Nutrient Standard Menu Planning (NSMP), have limited experience with nutrient analysis software in order to yield correct data. The data that is entered into nutrient analysis software was often observed to be inconsistent or incomplete. Therefore, evaluating homemade items on the line may be difficult or impossible for even the most savvy food service director. This fact should be considered carefully by USDA prior to publication of the Final Rule. USDA should work to develop guidance documents in conjunction with the Final Rule to ensure successful implementation. **Sodium** The sodium restrictions articulated in the Rule are based on the HUSSC Gold of Distinction standards. These standards are the vanguard of optimal health and while we appreciate that schools need to move in this direction, requiring this standard from the outset is unrealistic . . ."

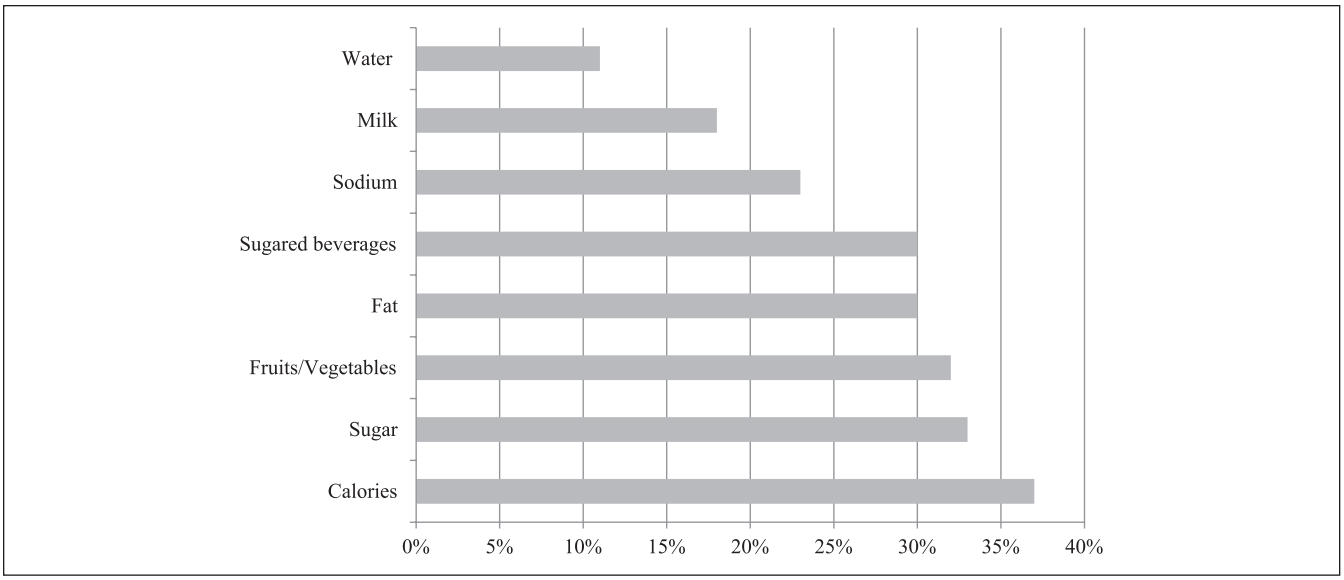

Figure 2. Nutritional components mentioned in comments responding to the Food and Nutrition Service's proposed rule on nutrition standards for all foods sold in school as required by the Healthy, Hunger-Free Kids Act of 2010: February-April, 2013.

> the regulations to avoid such an impact or lighten the restrictions. HELP!!

Additional *government regulation*, the second most frequently mentioned reason for opposition, is noted by 23% of commenters. Highlighting the challenges of additional regulation, a school food service staff writes,

> I have worked in the public school system for 15 years now. We have excellent ala [*sic*] carte items that many students are able to choose from. Now with the regulations in place for fruits and vegetables that are mandatory [*sic*] on our menus, the majority of students are throwing the meals away except for the protein main item, and are choosing to purchase ala carts [*sic*] to eat with their sandwich, etc. When you limit the publics [*sic*] right to choose, you have violated our constitutional rights, which are already intrusive enough. Many students have their only meal here at school. Too [*sic*] limit them any more will mean many will go through the rest of the day hungry.

In contrast, only 8% of comments suggest that additional government regulation of competitive foods is beneficial.

Discussion

Who Comments

More women commented on the proposed rule than men contrary to other e-rulemaking studies (Bryer, 2011; Shulman, 2006), likely attributed to the topic and who might be most affected. There are several plausible reasons for this. First, women remain the primary caregivers in the United States (Laughlin, 2013) and tend to be concerned with what their children eat. Second, schools and school food services submitted nearly one third of comments. In 2011-2012, three quarters of schoolteachers were female (U.S. Department of Education & National Center for Education Statistics, 2015), and food service areas are still occupied mostly by "lunch ladies" (Jacobs & Graham-Squire, 2014).

Half of commenters mentioned their affiliation establishing credibility so regulatory officials might recognize their expertise. These results contradict Bryer's (2011) study, which shows a majority of commenters did not establish any credibility in response to proposed rules from the Department of Health and Human Services and EPA. While this might be due to differences in the issue and agency, it is likely that in the 4 years since Bryer's study individuals and groups have become more sophisticated and strategic in their use of technology, better understanding the importance of including their affiliation. Tips for submitting effective comments (not available during the proposed changes to competitive foods) appear on Regulations.gov, encouraging the public to "Identify credentials and experience that may distinguish your comments from others. If you…have relevant personal or professional experience (i.e., scientist, attorney, fisherman, businessman, etc.) say so" (eRulemaking Program, n.d.-b).

Commenters were asked to select an industry/occupation classification. Since the proposed rule affects schools, a plurality of commenters are concentrated among schools. While the FNS asked commenters to self-select a classification, not all departments and agencies include this field when soliciting public comments (Centers for Medicare and Medicaid Services, 2015; EPA, 2015). Perhaps the FNS included the field to identify major interests including schools, health and nutrition professionals, and food companies. A long history of interest group ties to the USDA and food policy highlights the influence of food industry lobbies (Nestle, 2013; Simon,

2006). The small number of comments from industry experts was not unexpected since the sample focuses on unique comments. A greater number of industry comments might be present among the duplicate and near-duplicate comments, though it is possible that individuals affiliated with the food industry might have submitted anonymous and individual comments. Still, food companies often defer to their larger industry counterparts. For example, rather than receiving comments from every beverage company, the American Beverage Association submits comments lobbying on behalf of all paying members. Additionally, food companies may rely more heavily on other methods of influence besides the public comment process.

Types of Comments

The data contain a small percentage of comments that appear on letterhead. Again, this is likely the case because the sample consists of unique comments rather than form letters. The data further show that comments are short in length, paralleling findings from the 2009 Department of Health and Human Services proposed rule (Bryer, 2011). In an era of sound bites and truncated communication, messages are notably shorter than e-mail and letters that contain no word limit. Twitter and text messages, for example, contain a maximum of 140 and 160 characters, respectively. Succinct messages have become the norm and are likely reinforced by social media (Pew Research Center, n.d.).

Content and Substance of Comments

The data show that a majority of commenters do not mention the nutritional components of the proposed rule. These components are quite complex, requiring a fairly sophisticated understanding of nutrition probably inaccessible to most people. Specifically, among the components related to beverages, sugar-sweetened beverages garnered the most comments yet comparatively the number of comments is small. While Nestle (2015), among others (Fried & Simon, 2007; Simon, 2006), depicts the deleterious role of the soda and beverage lobbies on schools, it was surprising that more commenters did not address this.

Commenters also discussed the role of calories and sugar. With one third of youth overweight or obese (Ogden et al., 2014), reshaping the landscape of competitive foods to reverse obesity with the proposed rule holds great promise. Taber, Chriqui, and Chaloupka (2012) find, compared with high school students residing in states with no regulations on competitive foods, students attending California high schools (with regulations) consumed lower amounts of fat, sugar, and calories. Similarly, a comparative study of state competitive food policies (prior to the enactment of the Healthy, Hunger-Free Kids Act of 2010) shows students in states with stricter competitive food laws are less likely to remain overweight or obese over time compared with students in states with no competitive food laws (Taber, Chriqui, Perna, et al., 2012). These findings suggest that revamping competitive foods at the federal level may further combat obesity, improving the health of school children.

Although an explicit position on the proposed rule was not offered by a majority of commenters, many provided nuanced responses. When commenters offered a reason for opposing the proposed rule, they most often mentioned financial and labor reasons or further government regulation. This is expected since one of the main obstacles to improving competitive foods is fear of reduced profits for schools (Peart et al., 2012). Likewise, deregulation and opposition to big government characterizes the political landscape in the United States since 1980. This opposition appears stronger when government requires individuals to alter their behavior. For example, while regulations governing tobacco usage, labeling, and advertising were enacted in 1965 and further bans on advertisements were enacted in 1970, opposition to increased regulation remained quite pronounced (Brandt, 2007) and new regulations were not passed again until 1994. A similar trend occurs in school food. A 2007 survey of school food shows a plurality of parents (48%) believe that their child's school lunch is not offering too many "objectionable foods," though two thirds admit that schools should offer more nutritious foods (Saad, 2007). When public school parents were asked about the regulation of competitive foods in 2013, only 50% supported stricter regulations, illustrating how contentious this issue remains (Saad & Busteed, 2013).

Limitations

Several limitations are worth noting. First, this study only examines one policy area—competitive foods. Arguably understanding how e-rulemaking affects more than one policy area provides a comparative advantage. Still, several studies (Bryer, 2011; Kwon et al., 2006; Shulman, 2006) only focus on one policy area and make a valuable contribution to the field. This study contributes to the literature by examining the quality of comments (Bryer, 2011), while building on other e-rulemaking studies (Kwon et al., 2006; Shulman, 2006) by analyzing a new policy area.

Second, this study only analyzes unique comments. Unfortunately, not all duplicates or near-duplicates were eliminated from the sample, since attachments were not always readable by the software. This occurred five times and these cases were removed from the sample. Three comments were determined to be form letters and two comments consisted of lists of names, addresses, and signatures. While it is possible that some duplicates and/or near-duplicates remain in the sample, these likely represent a small minority of coded comments and have limited to no effect on the results.

Finally, the data were hand coded by the authors. The use of two coders is not atypical in health and public health–related content analysis (Primack, Nuzzo, Rice, & Sargent, 2012) or in the e-rulemaking literature (Bryer, 2011). The

authors engaged in several rounds of preliminary coding to ensure that codes achieved acceptable levels of IRR. We conducted IRR on all the variables, but realize that simple percent agreement does not account for instances of chance agreement. Despite these limitations we believe that this study provides valuable insight into the regulation of competitive foods and participatory democracy especially in an era of smart phones and greater Internet access.

Implications for Practice and Research

To improve the efficacy of public commentary on proposed rules by public health advocates, scholars, and others we offer several recommendations. First, commenters should be specific when submitting comments, being sure to reference the section or subsection of the proposed rule. Second, comments should avoid off-topic remarks beyond the purview of the rule. For example, several comments address the National School Lunch Program and School Breakfast Program but not competitive foods. Third, commenters should be strategic, understanding how their comment might make a difference. Inclusion of one's credentials and offering empirical evidence might lead to serious consideration by an agency official (eRulemaking Program, n.d.-b). Last, comments should include a rationale or justification underlining the reason for the commenter's position. Is the commenter opposed to the proposed rule change because it would be a financial burden or is the implementation of the proposed rule problematic for some reason?

Agencies also can do more to improve the quality and usefulness of public comments. First, agencies should offer specific guidance on the type of feedback being solicited and the content areas most helpful for agency decision making. For example, the FNS offered four sets of alternatives and requested comments on the relative merits of each. Compared with the relatively small amount of support each approach received (between 25 and 1,165 comment submissions each), there were more than 18,000 comments expressing general support or opposition for the proposed rule without rationale for the position (ICF Incorporated, 2013). This disparity in comment content may be related to the fact that the request for specific feedback was scattered throughout a lengthy 39-page proposed rule. We, therefore, also recommend that agencies provide a bulleted summary for which feedback is being sought on the first page of any proposed rule, ideally in close proximity to the due date and submission addresses.

Finally, agencies should provide feedback mechanisms highlighting the changes made between proposed and final rules, informing commenters of the extent to which their input was incorporated into the final rule. For example, a number of changes were made to the competitive food rule before its final version (Supplemental Table C). In the preamble to the interim final rule, the FNS provides some feedback on which comments influenced revisions to the proposed rule, as well as justifications for why suggested revisions were or were not made. This type of feedback not only lends transparency to the rulemaking process but also assists the public in crafting more useful comments in the future. Since regulatory changes are poised to alter the direction of the childhood obesity epidemic, exploring the quality and value of e-rulemaking and public participation in competitive foods and related topics is especially valuable.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

Supplemental Material

Supplemental Tables A–C are available with the online article at journals.sagepub.com/home/heb.

Note

1. A food that provides less than 5% of the Reference Daily Intake (RDI) for eight specified nutrients per 100 calories and per serving. Items considered foods of minimal nutritional value include sugar-sweetened carbonated beverages, water ices not containing fruit or fruit juices, chewing gum, and certain hard and sticky candies (Categories of Foods of Minimal Nutritional Value, 2012). However, many energy-dense foods are not classified as foods of minimal nutritional value (e.g., noncarbonated sweetened beverages, ice cream, chips, french fries, doughnuts, cakes, and chocolate).

References

Benjamin, S. M. (2006). Evaluating e-rulemaking: Public participation and political institutions. *Duke Law Journal*, *55*, 893-941.

Brandt, A. M. (2007). *The cigarette century: The rise, fall and deadly persistence of the product that defined America*. New York, NY: Basic Books.

Brownell, K., & Horgen, K. B. (2004). *Food fight: The inside story of the food industry, America's obesity crisis, and what we can do about it*. New York, NY: McGraw-Hill.

Bryer, T. A. (2011). Public participation in regulatory decision-making: Cases from regulations.gov. *Public Performance and Management Review*, 37, 263-279.

Cardie, C., Farina, C. R., Rawding, M., & Aijaz, A. (2008). *An erulemaking corpus: Identifying substantive issues in public comments*. Retrieved from http://scholarship.law.cornell.edu/ceri/6

Categories of Foods of Minimal Nutritional Value, 7 C.F.R. 210 Appendix B (2012).

Centers for Medicare and Medicaid Services. (2015). *Proposed rule: Medicare program: End-stage renal disease (ESRD) prospective payment system, and quality incentive program CMS-1628-P*. Retrieved from https://www.regulations.gov/document?D=CMS-2015-0073-0002

Dinour, L. M. (2015). Conflict and compromise in public health policy: Analysis of changes made to five competitive food legislative proposals prior to adoption. *Health Education & Behavior*, *42*(1 Suppl.), 76S-86S.

DiscoverText. (n.d.). Homepage. Retrieved from http://discovertext.com/

Driessen, C. E., Cameron, A. J., Thornton, L. E., Lai, S. K., & Barnett, L. M. (2014). Effect of changes to the school food environment on eating behaviours and/or body weight in children: A systematic review. *Obesity Reviews*, *15*, 968-982.

Environmental Protection Agency. (2015). *Proposed rule: Partial exemption of certain chemical substances from reporting additional chemical data*. Retrieved from https://www.regulations.gov/document?D=EPA-HQ-OPPT-2014-0809-0016

eRulemaking Program. (n.d.-a). About us. Retrieved from http://www.regulations.gov/#!aboutProgram

eRulemaking Program. (n.d.-b). *Tips for submitting effective comments*. Retrieved from https://www.regulations.gov/docs/Tips_For_Submitting_Effective_Comments.pdf

Farina, C. R., Newhart, M., Heidi, J., & Cornell eRulemaking Initiative. (2012). Rulemaking vs. democracy: Judging and nudging public participation that counts. *Michigan Journal of Environmental & Administrative Law*, *2*, 123-172.

Fox, M. K., Dodd, A. H., Wilson, A., & Gleason, P. M. (2009). Association between school food environment and practices and body mass index of US public school children. *Journal of the American Dietetic Association*, *109*(2 Suppl.), S108-S117.

Fried, E., & Simon, M. (2007). The competitive food conundrum: Can government regulations improve school food? *Duke Law Journal*, *56*, 1491-1539.

Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory: Strategies for qualitative research*. Chicago, IL: Aldine.

ICF Incorporated. (2013). *Proposed rule on nutrition standards for all foods sold in school as required by the Healthy, Hunger-Free Kids Act of 2010: Final summary of public comments*. Retrieved from http://www.fns.usda.gov/sites/default/files/allfoods_commentsummary.pdf

Jacobs, K., & Graham-Squire, D. (2014). Labor standards for school cafeteria workers, turnover and public program utilization. *Berkeley Journal of Employment & Labor Law*, *31*, 447-458.

Karpf, D. (2010). Online political mobilization from the advocacy group's perspective: Looking beyond clicktivism. *Policy and Internet*, *2*(4), 7-41.

Kwon, N., Shulman, S. W., & Hovy, E. (2006). Multidimensional text analysis for erulemaking. In *Proceedings of the 2006 International Conference on Digital Government Research* (pp. 157-166). Phoenix: Arizona State University.

Laughlin, L. (2013). *Who's minding the kids? Child care arrangements: Spring 2011 Household Economic Studies*. Retrieved from https://www.census.gov/prod/2013pubs/p70-135.pdf

Mendelson, N. A. (2012). Should mass comments count? *Michigan Journal of Environmental & Administrative Law*, *2*, 173-183.

Nestle, M. (2013). *Food politics: How the food industry influences nutrition and health*. Oakland: University of California Press.

Nestle, M. (2015). *Soda politics: Taking on big soda (and winning)*. Oxford, England: Oxford University Press.

Ogden, C. L., Carroll, M. D., Kit, B. K., & Flegal, K. M. (2014). Prevalence of childhood and adult obesity in the United States, 2011-2012. *JAMA Journal of the American Medical Association*, *311*, 806-814.

Olshansky, S. J., Passaro, D. J., Hershow, R. C., Layden, J., Carnes, B. A., Brody, J., . . . Ludwig, D. S. (2005). A potential decline in life expectancy in the United States in the 21st century. *New England Journal of Medicine*, *352*, 1138-1145.

Peart, T., Kao, J., Crawford, P. B., Samuels, S. E., Craypo, L., & Woodward-Lopez, G. (2012). Does competitive food and beverage legislation hurt meal participation or revenues in high schools? *Childhood Obesity*, *8*, 339-346.

Primack, B. A., Nuzzo, E., Rice, K. R., & Sargent, J. D. (2012). Alcohol brand appearances in US popular music. *Addiction*, *107*, 557-566.

Saad, L. (2007, August 15). *Parents indicate school cafeterias could do better*. Retrieved from http://www.gallup.com/poll/28402/Parents-Indicate-School-Cafeterias-Could-Better.aspx?utm_source=school%20food&utm_medium=search&utm_campaign=tiles

Saad, L., & Busteed, B. (2013, March 12). *Americans favor limiting sale of unhealthy food in schools*. Retrieved from http://www.gallup.com/poll/161318/americans-favor-limiting-sale-unhealthyfoodschools.aspx?utm_source=school%20food&utm_medium=search&utm_campaign=tiles.

Shulman, S. W. (2006). Deliberation? Mass e-mail campaigns and U.S. regulatory rulemaking. *Journal of E-Government*, *3*(3), 41-64.

Simon, M. (2006). Can food companies be trusted to self-regulate an analysis of corporate lobbying and deception to undermine children's health. *Loyola of Los Angeles Law Review*, *39*, 169-236.

Skinner, A. C., & Skelton, J. A. (2014). Prevalence and trends in obesity and severe obesity among children in the United States, 1999-2012. *JAMA Pediatrics*, *168*, 561-566. Retrieved from http://doi.org/10.1001/jamapediatrics.2014.21

Pew Research Center. (n.d.). *Social networking fact sheet*. Retrieved from http://pewinternet.org/fact-sheets/social-networking-fact-sheet/

Taber, D. R., Chriqui, J. F., & Chaloupka, F. J. (2012). Differences in nutrient intake associated with state laws regarding fat, sugar, and caloric content of competitive foods. *Archives of Pediatrics & Adolescent Medicine*, *166*, 452-458.

Taber, D. R., Chriqui, J. F., Perna, F. M., Powell, L. M., & Chaloupka, F. J. (2012). Weight status among adolescents in states that govern competitive food nutrition content. *Pediatrics*, *130*, 437-444.

U.S. Department of Agriculture. (2013). National School Lunch Program and School Breakfast Program: Nutrition standards for all foods sold in school as required by the Healthy, Hunger-free Kids Act of 2010; Proposed rule. *Federal Register*, *78*, 9530-9567.

U.S. Department of Education & National Center for Education Statistics. (2015). *Digest of Education Statistics, 2013 (NCES 2015-011), Chapter 2: Elementary and Secondary Enrollments*. Retrieved from http://nces.ed.gov/programs/digest/d13/ch_2.asp