

School Nutrition Directors' Perspectives on Preparing for and Implementing USDA's New School Meal Regulations

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ABSTRACT

Purpose/Objectives

The U.S. Department of Agriculture's (USDA) new school meals regulations went into effect in July 2012. The purpose of this research was to explore school nutrition director's (SNDs) perspectives and attitudes about the new regulations and to identify strategies used to prepare for and subsequently implement the regulations.

Methods

For this qualitative research study, semi-structured interviews were conducted in 2012 and 2013 with 10 SNDs from six states in the northeast and south, before and after the implementation of USDA's new school meal regulations. Interviews were transcribed verbatim, coded, and analyzed to identify major themes.

Results

Three major themes that emerged were readiness, challenges, and school nutrition's role in children's health. Most of the SNDs felt prepared for USDA's new school meal regulations. Concerns remained about inadequate time to fully prepare for the implementation schedule, increased food costs, and declines in student participation. Most believed that students would adjust to the new regulations over time, but there were lingering concerns about the influence of the food environment outside of school.

Application to Child Nutrition Professionals

Study findings provide further insight into the challenges that need to be overcome, most notably cost management and procurement of foods compliant with the new regulations. Strategies employed to ensure the success of new school meal regulations included staff training, menu flexibility, and the adoption of fruit and vegetable salad bars to encourage student acceptance and consumption.

Keywords: National School Lunch Program; NSLP standards; school nutrition director perspective; school nutrition programs

INTRODUCTION

Although the prevalence of childhood obesity has begun to stabilize, with 17% of children and adolescents in the United States considered obese, a significant number of youth are still at risk for the negative health consequences of obesity (Ogden, Carroll, Kit, & Flegal, 2014). Just over 30 million children participated in the National School Lunch Program (NSLP) during the 2013 school year, which is administered federally by the U.S. Department of Agriculture (USDA) Food and Nutrition Service (FNS) (USDA-FNS, 2014). Most participating children (70%) were

eligible for free or reduced price meals (USDA-FNS, 2014). Since children may consume up to half of their daily energy at school, there are concerns that participation in school meals programs may be related to childhood obesity (Briefel, Crepinsek, Cabili, Wilson, & Gleason, 2009; Clark & Fox, 2009; Fox, Dodd, Wilson, & Gleason, 2009). However, research suggests that children participating in the NSLP consistently have better nutrient intakes compared to non-participants with school lunches containing less fat, sodium, and added sugars than those brought from home (Clark & Fox, 2009; Caruso & Cullen, 2015). Accordingly, attention has focused on the school environment as a setting where policies can be implemented to reduce the prevalence of childhood obesity (Story, Nannery, & Schwartz 2009; Waters et al., 2011).

In January 2012, USDA issued new regulations adopting many of the Institute of Medicine's recommendations to improve the overall healthfulness of school meals (USDA-FNS, 2012). These recommendations include serving more whole grain-rich foods, increased portions of fruits and vegetables with a greater emphasis on variety, and limiting milk offerings to unflavored fat-free or low fat (1%), and only fat-free flavored (Institute of Medicine, 2007, 2009). The new meal standards, the first in over 15 years, went into effect in July 2012 and consisted of sweeping changes setting both lower and upper limits on the number of calories served as well as nutrient targets for total fat and sodium. The support of school nutrition directors (SNDs) is integral to the successful implementation of policy changes within the overall school food environment (Gillis et al., 2009). SNDs acknowledge their important role in making healthy foods available to students (Stinson & Lofton, 2009). Most believe it is important to prepare nutritionally balanced meals and perceive that school lunches, when designed to meet earlier federal standards, were healthy (Price & Telljohann, 1994). Although surveys of SNDs have been conducted to explore attitudes and perceptions, they do not capture the depth and nuances of perception (Price & Telljohann, 1994). A qualitative approach captures experience and thus provides unique insight into and details about beliefs and perceptions that would not be accessed using traditional survey methodology. This qualitative research aimed to explore SNDs' perspectives and attitudes, as well as the approaches used to prepare for USDA's new school meal regulations and subsequent reflections after the first year of implementation.

METHODOLOGY

As part of a larger study evaluating school children's acceptance of lower-calorie flavored milk, milk processors from across the U.S. serving school districts from 23 states were asked to identify public school districts using lower-calorie flavored milk as of the 2008-2009 or 2009-2010 school years. A purposive sample of school districts (n = 35) was identified for study recruitment, and 22 school nutrition directors returned a signed informed consent form. A convenience sample of ten public school districts from the northeastern (n=7) and southern (n=3) regions of the U.S. was selected and enrolled for a series of plate waste studies as part of this larger study from 2010-2014. Interviews with each district's SND were scheduled by the lead author in conjunction with plate waste work in each district between May-July 2012 and again in 2013. Each SND provided written informed consent, as well as verbal consent to the audio recording of the interviews. The University of Vermont's Institutional Review Board approved the study.

Semi-structured Interview Guide

Interview questions were developed by the research team based on a literature review with input from school nutrition professionals. SNDs were asked to identify: strategies used to prepare for and subsequently implement the new regulations; anticipated challenges; communications strategies within the school district and community, including vendors; overall attitudes towards the new regulations; and perceived long term program impact. A sample of the question topics is included in Table 1.

Table 1. Semi-Structured Interview Guide

Topics	2012 Questions	2013 Questions
Opening Question	How do you feel about the new rule?	One year later, how do you feel about the new rule?
Key Questions		
Preparation	How has your district been preparing for the new rule? What is already in compliance? What are you most looking forward to?	
Concerns/Challenges	What components are you most concerned about?	What was most challenging? How did you deal with challenges?
Attitudes	What would you change/amend about the rule and why?	What would you change/amend about the rule and why?
Closing Question	In ten years, what do you think the impact will be?	In ten years, what do you think the impact will be?

Procedure

Individual interviews (30-45 minutes long) were conducted by the lead author and digitally recorded (in-person and telephone) with each SND. A second researcher acted as an observer/note taker during the in-person interviews. Eight interviews were completed prior to the implementation of USDA's new school meal regulations (May-July 2012). Two SNDs did not respond to email or telephone messages to schedule interviews prior to the start of the 2012/13 school year. Follow-up interviews were completed in-person with all ten SNDs from May-June 2013 immediately following the first year of implementation.

Data Analysis

The interviews were transcribed verbatim and reviewed and corrected by the lead author. To ensure anonymity of each interview participant, interview data were de-identified. The initial transcripts and field notes were coded by a team of four trained researchers to identify categories in response to each of the major questions using focused qualitative data analysis techniques (Creswell, 2007; Strauss & Corbin, 1990). The use of focused coding allowed researchers to analyze transcripts using the same set of thematic categories. Two independent coders systematically analyzed interview transcripts, which were reconciled by the lead author. Interview data were separated into fragments based on coding, from which general themes were identified.

RESULTS AND DISCUSSION

Overview and Demographics

Most of the 10 SNDs worked in self-operated meal programs (n=8); two worked for contract foodservice providers. The districts' schools represented urban, suburban and rural regions from six states. The school district demographics represented by the SNDs are provided in Table 2.

Table 2. School District Demographic Characteristics of Study Participants (N=10)

Characteristics	M (Range)
Student enrollment	5,738 (2,523-15,154)
Student eligibility for free/reduced price meals	53.9% (5.6%-87.7%)
Number of schools/district	8 (5-21)
Student Race/Ethnicity	M ± SE
White	77.6% ± 5.8
Black	9.2% ± 5.3
Hispanic	14.4% ± 9.9
Asian	3.3% ± 1.11

Interview Findings

Three broad themes that emerged from analysis of the 2012 interviews and also seen in the 2013 interviews were readiness, challenges, and school nutrition's role in children's health. Within each of these themes, a number of distinct and sometimes conflicting subthemes emerged (Table 3).

Readiness. In 2012, the SNDs expressed overall optimism that each district was prepared, as their meal programs had already made a lot of changes in anticipation of the new regulations. *“There are just a few more things we need to do.”* The SNDs reported that training was available from their state Department of Education. With staff and students prepared, it was expected that the final implementation would not result in large changes. As a result of state requirements enacted ahead of USDA regulations, most programs had already increased the variety of fruits and vegetables offered, moved to mostly whole grain-rich foods, and removed higher fat milks. For one district, preparing for the HealthierUS School Challenge was helpful (USDA-FNS, 2015).

There were regional differences around the ability to procure compliant food items, specifically whole grain-rich foods and age-appropriate portion sizes. SNDs worked together regionally to compare product availability and menu plans. Those working for contract foodservice companies benefited from standardized menus.

While most felt prepared, in 2013 they wished for more time to prepare and a longer implementation period. As the new regulations took effect, there was a general sense of not enough time to transition into all of the details.

Table 3. Major Themes, Subthemes and Selected Quotes from Interviews

Major Themes	SubThemes	2012 Quotes	2013 Quotes
Readiness		<i>"We're there in a lot of ways."</i>	<i>"I would have liked to have had more time to digest it."</i>
Challenges	Menu Planning	<i>"These regulations are going to force schools into relying more on processed products to have portion control."</i>	<i>"They don't like the sweet potato tots, so we're going to give them regular tater tots and offer squash another day."</i>
	Financial	<i>"If it tastes like cardboard, we will have students that won't eat. I am concerned we will lose participation."</i>	<i>"Every time we had spring salad mix on, our counts went down. We went back to chopped romaine... our accounts are back to where they need to be." "I don't know what my fund balance is going to look like in the next couple of years."</i>
School Nutrition's Role in Children's Health	SNDs as Role Models	<i>"Feeding children is a good mission to have."</i>	<i>"Directors are looking harder for more whole grains and more low-fat and low-sodium products." "The law motivated us to change. Some might have been doing a great job before, but everyone wasn't doing it."</i>
	Food Environment outside of School	<i>"It's a huge change for our children's palates if they don't have it on the outside. Hopefully there will be a balance that they'll go home and ask for the nutritious stuff we're serving."</i>	<i>"How do you reach them at home?"</i>
	New Norms	<i>"Child nutrition has evolved since when I was in school, so it can be done."</i>	<i>"I think kids are probably eating more fruits and vegetables."</i>

Challenges

Menu Planning. Developing new menus to comply with the new calorie minimums and maximums for different age groups was described as difficult in 2012. At the elementary level, it was hard to stay under calorie maximums due to the inability to purchase smaller age-appropriate portion sizes of bread. For high school students, calorie minimums were challenging as a result of the portion size restrictions for grains and proteins and fat restrictions for milk. Subsequently,

several SNDs reported adding condiments (low-fat ranch dressing) or desserts (pudding) to menus as strategies to reach the calorie minimums.

Districts that submitted documentation certifying menus were in compliance with new USDA meal patterns were eligible for an additional 6-cent per lunch reimbursement. While the process was described as time consuming and difficult, all ten SNDs submitted certification.

During the 2012/13 school year, SNDs noted what menu items led to drops in NSLP participation and made adjustments. Others worked on presentation to make fruits and vegetables more visually appealing. In order to meet the vegetable sub-group variety requirements, several SNDs installed a salad or vegetable bar. These strategies align with an earlier study where school foodservice managers were creative in how vegetables were served to encourage consumption (Thiagarajah, Getty, Johnson, Case, & Herr, 2015).

Financial. Most directors expected that NSLP participation would drop resulting in decreased revenue. This concern about finances was compounded by the anticipated increased cost of fresh fruits and vegetables. Offering fresh, colorful fruits and vegetables was simple; ensuring children ate them was not. *“We make money by the nickel, dime, and pennies, so when a kid throws out an apple that cost 20 cents, ... that all adds up.”*

For a number of districts, concerns about finances were realized after the first year of implementation. Between declines in meal participation and increased food costs during the 2012/13 school year, SNDs were happy to break even, with several using existing surplus funds. SNDs reported plans to raise meal prices, lay off cafeteria staff, delay equipment replacement, and reduce their own hours for the 2013/14 school year, similar to other research findings (Thiagarajah et al., 2015). By the end of the 2013/14 school year, two districts pulled high schools out of the NSLP, one changed to a contract foodservice company, and one SND took on the administration of a second school district. In an effort to increase NSLP participation and related revenue from federal reimbursements, two districts serving lower-income communities applied for the Community Eligibility Provision whereby all students were offered free meals.

School Nutrition’s Role in Children’s Health

SNDs as Role Models. Maintaining a positive attitude was shared as a priority by most SNDs as part of their staff training and communications with the school community and parents in 2012. The actual implementation and preparing for the next round of regulation changes for breakfast in the 2013/14 school year was harder than most expected. Maintaining that positive attitude was increasingly difficult when reactions towards the regulations were polarized after the first year of implementation. On one side, some SNDs reflected, *“It’s been positive for kids.”* For those who saw declines in NSLP participation, *“You struggle to gain customers and when you lose them, you have to work five times as hard to get them back.”*

Food Environment Outside of School. Across both years, some SNDs wondered how successful the regulations would be in changing children’s eating habits. It was questioned whether the school environment could change children’s eating habits if 1) students don’t eat the food, 2) meal participation drops, 3) the home food environment doesn’t change, and, 4) the greater food environment (fast food/restaurants/marketplace) doesn’t change.

New Norms. In spite of the perceived challenges, the SNDs were genuinely hopeful that over time these changes would be accepted as the new norm for healthy eating by children. Some reflected back to when cigarette smoking was allowed on school grounds or more recently when schools were allowed to sell soda. While they feared that meal participation would drop and food would be wasted, as shared by one SND, “*With time, kids will adjust.*”

CONCLUSIONS AND APPLICATION

Based on the current study, most of the SNDs interviewed felt prepared for USDA’s new school meal regulations. While not unanimous, the new school meal regulations were perceived positively; however, SNDs felt there wasn’t adequate time to fully prepare for the current implementation schedule. Concerns remained about the financial implications resulting from increased food costs and decreased revenue from declines in NSLP participation. Increased costs related to offering healthier foods has been frequently reported as a barrier for school foodservice staff (Stephens, Byker Shanks, Roth, & Bark, 2015; Thiagarajah et al., 2015; Volpe et al., 2013). While most believed that school communities and students would adjust to the new regulations over time, there were still concerns about what was perceived as an unhealthy food environment outside of school. Family influence, for example, is thought to be a barrier to children accepting more nutritious foods in school (Slawson et al., 2013).

Limitations of the Research

While this study provides a deeper understanding of SNDs perceptions before and after implementation of the updated school meals regulations, it is not without limitations. A small number of SNDs were interviewed and not balanced across the country; thus the results may not be generalizable nationwide. A more diverse sample would support greater confidence in the findings. Several were active members of the School Nutrition Association and subsequently may have been better informed about the new regulations. The polarized attitudes about the new regulations may be related to school district demographics. Districts serving moderate to higher income student populations may have seen more substantial declines in NSLP participation. However, SNDs from lower income communities also expressed concerns about NSLP participation among older students.

Considerations and Applications

Findings from this set of interviews, conducted before and after implementation of USDA’s new school meals regulations, build on previous research and give voice to the challenges SNDs representing diverse communities face. SNDs are generally supportive of policies that promote healthy school meals. The majority of schools across the U.S. offered school meals in compliance with the new regulations over the course of this study period (USDA-FNS, 2015).

NSLP participation in the U.S. had steadily increased to a high of nearly 32 million children served each day during the 2011/12 school year. However, since the new school meals regulations took effect, participation has declined to less than 31 million children. These declines in student participation result in decreased revenue. The financial viability of the new meal regulations needs to be evaluated. While all of these school nutrition programs successfully completed the requirements for the 6-cent certification, most experienced revenue declines. There are opportunities for schools serving a higher proportion of students eligible for free or reduced priced meals to implement additional programs to increase meal participation and

revenue. Schools serving communities just below those thresholds may require additional financial support.

USDA's update to the school meal standards, which made permanent the flexibility to allow schools to serve larger portions of whole grains and proteins at lunch, resolved one set of concerns expressed in these interviews (USDA-FNS, 2013). Yet, vending, particularly for whole grain-rich and lower sodium products, was still perceived as a concern. These findings are similar to other research where foodservice directors have indicated product availability is a barrier to implementing healthier school meals (Volpe et al., 2013).

Other than the sodium requirements, all of the new meal regulations for both breakfast and lunch went into effect by the 2014 school year, with the majority of the changes required for the 2012 school year. District programs believed they were ready for the rollout of the new meal regulations per this schedule with adequate training from the respective Departments of Education. To feel confident in meeting the new standards, there was movement away from 'scratch cooking' and local procurement towards the purchase of more processed foods with a "Child Nutrition" label.

SNDs were creative and flexible during the first year of implementation to modify menu plans and meal presentation to encourage student acceptance and consumption, especially around the fruit and vegetable requirements. While there is a focus on salad bars as an attractive way to encourage student acceptance and consumption of fruits and vegetables, more research is needed to confirm these outcomes (Adams, Bruening, & Ohri-Vachaspati, 2015). Student acceptance of menu changes is commonly cited as a concern, but has been seen to improve over time (Volpe et al., 2013; Schwartz et al., 2015). Additionally, students consume more of their entrée, milk and vegetables when there is sufficient time for lunch (Cohen, Jahn et al., 2015). Research suggests that plate waste in schools has always been high, and among lower income schools can recover over time as programs change (Cohen, Richardson, Parker, Catalano, & Rimm, 2014; Cohen, Richardson et al., 2015; Schwartz, Henderson, Read, Danna, & Ickovics, 2015; Thiagarajah et al., 2015). By the end of the first year of implementation, the timeline felt aggressive to this group of SNDs. The success of major policy/program changes would benefit from these insights, including considering more gradual implementation of future school nutrition policies.

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