The National School Lunch Program:
Ideas, proposals, policies, and politics shaping students' experiences with school lunch in the United States, 1946 - present

By

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Abstract

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On an average school day in 2012, The National School Lunch Program (NSLP) supported the provision of lunch meals to almost 2/3 of school-age youth in the United States. Recent spikes in childhood obesity rates and the emergence of childhood-onset Type 2 diabetes have brought renewed attention to the program's potential to positively impact the health of the nation's youth. The Healthy Hunger Free Kids Act of 2010 began a process of reforming the NSLP, requiring schools to serve foods consistent with updated nutrition standards, representing the most important punctuation to school lunch policy in decades. The three papers comprising this dissertation provide new insights into ways the public health nutrition community can support the success of the new policies, and continue to improve the impact of the school lunch program on children's health and development.

The first paper examines the relationship between fruit and vegetable consumption at school and specific factors in the school setting, such as the amount of time available to eat lunch, the quality and variety of produce options served, and whether students are involved in food service decision-making. This cross sectional study of California 7th and 9th grade students (n=5,439) was conducted in 31 schools in 2010. Multilevel regression models were used to assess relationships between students' responses to survey questions regarding school food behaviors and recorded observations of school food environments. The study finds that a longer lunch period was associated with increased odds of a student eating fruits (40%) and vegetables (54%) at school. Fruit quality increased the odds of a student consuming fruit at school (44%). Including a salad bar and involving students in food service decisions increased a student's odds of consuming vegetables at school (48% and 34%, respectively). The findings suggest that institutional factors in schools are positively associated with middle and high school students' consumption of produce items at school.

The second paper explores the original issues and arguments that were presented by advocates, administration officials, and members of Congress in the 1940's, when a National School Lunch program first was being debated in Congress. Political science theory suggests that understanding history can provide insight into current policy debates. The purpose of this paper is to better understand the early framing and arguments that led to the original structure of the NSLP. It was hypothesized that understanding the full complement of issues and arguments debated at the time the program was established would help explain the policies that shape current school lunch environments. This study examined the transcripts of the three Congressional hearings held in 1944-1945, when proposals for establishing ongoing federal support for school lunch programs were first considered in Congress. The study identifies many issues of contention in the early debates, including whether the primary program objective was to serve the Nation's agricultural needs or to support children's health and wellbeing, which federal agency would administer the program, the degree to which federal resources should be used to support school meals, which children would benefit from school lunch programs, whether food and nutrition education should be included, and whether resources would be provided for equipment and training of personnel. The paper shows that the outcome of the early debates continues to shape present policies, and that modern advocates' vision for an optimal school lunch program mirrors the vision of advocates in the 1940's. The paper underscores the importance of understanding the school lunch program's history, in order to more effectively promote and protect children's opportunities to benefit from school meals.

The final paper presents the results of a pilot study of legislative documents from the National School Lunch Program's history (1946 – present), in order to provide a longer-term perspective on the evolution of the program. The purpose of this study is to explore and describe the school lunch policy ideas and proposals that have appeared on the federal decision-making agenda over time, in order to inform future directions for research and advocacy related to school lunch policy. A ProQuest Congressional search utilizing the search terms "school lunch," "school meal," "child nutrition," or "school nutrition" was conducted, and all hearing and bill summaries were reviewed. The findings suggest that Congressional attention to school lunch, in the form of legislative hearings and bills, has shifted over time, with more legislative attention devoted to the program during the period of expansion in the late 1960s through the period of curtailment in the early to mid-1980s. Further, the study shows that the program consistently has suffered from constrained resources, and that periods of investment in the NSLP have been followed by efforts to curtail the program. The study also reveals that after the program's beginning, many issues cycled on and off of the federal decision-making agenda. These issues include: the degree to which the program should be administered at the federal or state level; which students should benefit from school meals; whether nutrition education should be included; what foods and beverages are served; and how the USDA-distributed commodities should be structured. While the school lunch program generally enjoys bi-partisan support, policymakers have not yet exhibited

the political will to provide a program consistent with advocates' desires to operate seamlessly within the school system and offer healthy meals to all students. Future efforts to support and improve the program can now be informed with a better understanding of the program's past political successes and failures. Recommendations about ways the public health nutrition community can continue to support and improve the National School Lunch Program, based on the history described, conclude the paper.

Together, these three papers highlight both opportunities and challenges facing the National School Lunch Program. Cast in the light of this historical perspective, advocates for ideas that have failed in the past can see the value of considering whether current approaches are vulnerable to the same politics that trumped them in past political battles. Similarly, program supporters should understand the proposals to dismantle the federal school lunch program, and why they failed, in order to be prepared to defend the program against similar proposals that may be anticipated in the future. Further, these papers show that while the public health nutrition community may perceive the school lunch program to be a stable federal investment, this perceived stability may be more a function of political good fortune than of a strong and secure federal commitment to children's health and nutrition. Yet current projections suggest that investing in the nutritional health of today's youth is especially important, given the costly epidemics of early-onset diet-related chronic diseases now plaguing the nation. We can no longer afford not to provide a robust and effective National School Lunch Program.

"It is hereby declared to be the policy of Congress, as a measure of national security, to safeguard the health and well-being of the Nation's children and to encourage the domestic consumption of nutritious agricultural commodities and other food, by assisting the States, through grants-in aid and other means, in providing an adequate supply of food and other facilities for the establishment, maintenance, operation and expansion of nonprofit school lunch programs."

-- The National School Lunch Act. P.L. 396-79th Congress, June 4,1946.

"Policy research … assesses the degree to which laws, regulations, and policies accomplish the societal goals for which they were intended; it helps identify the various stakeholders in a particular policy area and their interests… and it provides a powerful tool for developing recommendations and interventions that may improve those programs and services." –McClure and Jaeger, 2008

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Acknowledgements

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Introduction

The National School Lunch Program (NSLP) has provided federal resources to support the provision of lunch meals to students in the United States since President Truman's historic signing of the National School Lunch Act in 1946. As the nation's largest child nutrition program, the NSLP presents a tremendous opportunity to impact the nutrition and health of the nation's youth. The current epidemic of poor nutrition and physical inactivity among children in the US, evidenced by dramatic increases in childhood obesity and diabetes, has brought renewed attention to the School Lunch Program. Recent policy changes resulting from the 2010 Healthy Hunger Free Kids Act (HHFKA) have placed the program in the spotlight. The new policies have, for the first time in decades, strengthened regulations regarding the healthfulness of the foods and beverages that can be served and sold at school and have increased slightly the federal funding available for each meal served in schools meeting the new nutrition guidelines. Political science theory suggests that the feedback policy actors receive after policies change matters; thus, the public health nutrition community must be poised to take advantage of the current opportunity to promote the success of the new policies, to demonstrate that the additional investments are worthwhile, and to highlight ways in which further investments and improvements may benefit the nation's youth. This dissertation helps to prepare the public health nutrition community to take advantage of the current historic opportunity, by analyzing current school environments as well as exploring historical policy issues and arguments to highlight program strengths and potential vulnerabilities. The purpose of this dissertation is to provide a new perspective on the opportunities and challenges facing the National School Lunch Program, in order to inform and advance the practice of public health nutrition.

My interest in studying the school lunch program emerged from my participation in public health nutrition research in middle and high schools in California from 2005-2010. Observing lunch periods and surveying students about their nutrition and physical activity behaviors raised questions about the relationship between school food environments and student behaviors. Although schools implemented the National School Lunch Program differently, most served students highly processed meals, often in packages, while only a few offered salad bars or attractive displays of fresh fruits. Some students selected meals that appeared nutritious, but many opted for foods high in fat, sugar, and salt, for example choosing chips with cheese sauce and chocolate milk or pizza and French fries. This situation was observed even after the Surgeon General of the United States had labeled obesity the biggest children's health crisis of our time, and diabetes had been identified as the most rapidly increasing disease of childhood.

Surprisingly, our survey data suggested that students valued having fresh fruits and vegetables available at school more than any other items. But few reported consuming them. Why? If the produce items were served, what was the disconnect? Further, these experiences led me to wonder how our National School Lunch Program had become the program I was observing. What were the initial

goals, and how had they changed over time? What interests had shaped the evolution of the program? What might this tell us about the future of providing food to children in schools and other public institutions? While this dissertation doesn't provide complete answers to all of these questions, it begins the process of inquiry, and lays the groundwork for future studies to provide more complete answers.

On any given school day, The National School Lunch Program now provides lunch to the majority of school children in the United States. Nearly 32 million students participated in the program daily in 2012, consuming more than 5 billion lunches during the year. Figures 1-3 illustrate the growth of the program over time.

Figure 1: Number of students (in millions) participating in the NSLP, 1950 - 2010

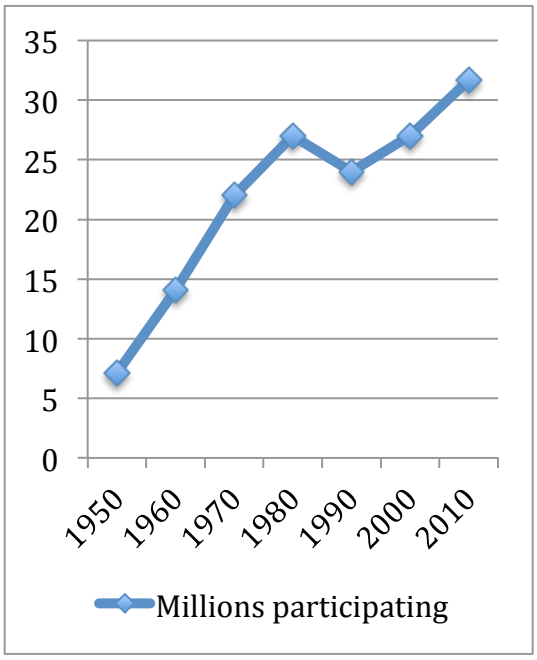


Figure 2: Percent of students receiving free or reduced price meals, 1970 - 2010

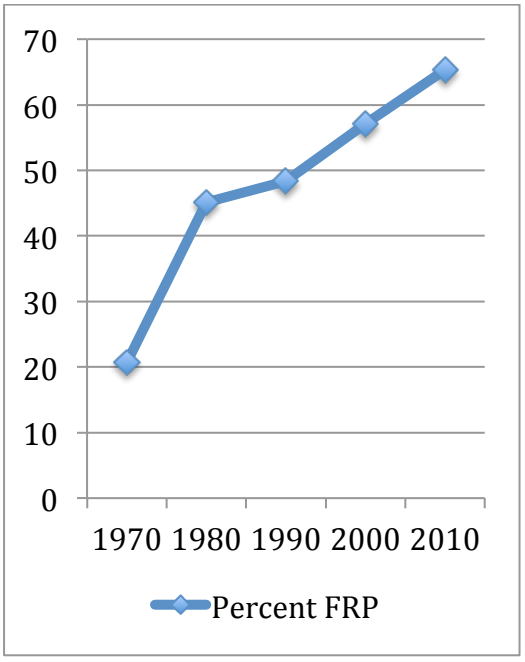
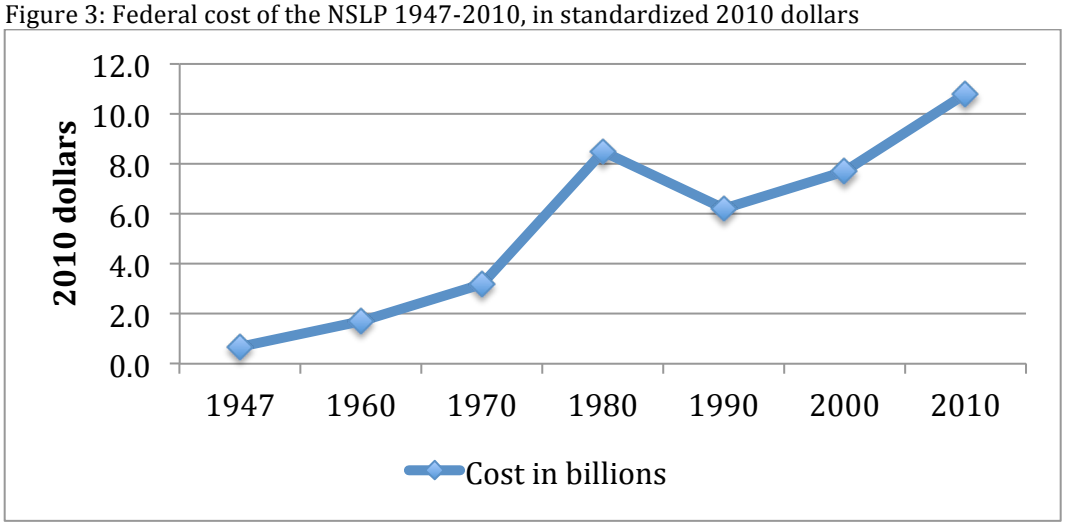


Figure 3: Federal cost of the NSLP 1947-2010, in standardized 2010 dollars



The National School Lunch Program reaches more children and youth than any other food and nutrition intervention, and regularly feeds many children who rely on school meals to meet their nutritional needs. Nearly 60% of the lunches served in 2012, were provided for free to children whose family income was less than 130% of the federal poverty level, and fully 2/3 were provided for free or at a reduced price.[1] In fact, the proportion of meals served to students qualifying for free or reduced price meals in 2012 reached an all-time high, with 68% of meals served to children in this category, up from 58% in 2002, and 15% in 1969, when the free, reduced, and "full" price meal scheme was initiated.[1] This increase in free and reduced price meals served may be partly explained by the extremely high rate of childhood poverty currently, with 22% of children in the United States living in households at or below the Federal Poverty Level,[2] and also reflects an intentional effort to provide school meals to low-income children. This effort has corresponded with a reduction in the participation of students not qualifying for free or reduced price meals. As an illustration of this decline, only 10.2 million students not qualifying for free or reduced price meals participated in the school lunch program in 2012, compared to 12 million in 2002, and 16.5 million in 1969.[1]

Schools have become an increasingly important venue for students to access good nutrition, since many of today's youth spend long hours at school, beginning with early morning care and continuing through after-school programming. The average student consumes 35% of his or her daily energy at school, with those eating breakfast and lunch on campus consuming up to 47% of their daily calories at school.[3] Although evidence documenting the effects of the school lunch program on participants is not as robust as would be desired, studies suggest that good nutrition benefits students. Compared to poorly nourished children, well-nourished children have been shown to have improved academic function and are less likely to miss school for health reasons.[4,5,6] They also have been shown to exhibit improved classroom behavior and attentiveness.[7,8,9,10] Studies have shown that school breakfast meals may increase children's scores on standardized tests and lead to better school attendance.[11,12,13,14] One study suggested that participation in the National School Lunch Program may have long-term positive effects on children's overall educational attainment.[15] Yet while research consistently shows that students eating the school lunch eat healthier foods and have better nutrition in the school setting compared to their peers not eating the school lunch,[16,17,18] even NSLP participants do not meet the recommended intake of fruits, vegetables, or whole grains during lunch at school.[18] Thus, the program may be supporting many students to eat a healthier lunch than they would if the program did not exist, but there is room for improvement.

In recent years, much attention has focused on the school environment as a place to improve students' nutritional health.[19] Much of this effort stems from attention to what has been called an epidemic of childhood obesity, with more than one-third, or about 23 million, children and youth in the U.S., considered to be overweight or obese, a rate that has more than tripled since the 1970s.[20,21,22,23] In fact, the Institute of Medicine recently published a book identifying the school setting as the key to reversing the childhood obesity epidemic in the United States.[19] When the NSLP was established in the 1940s, the primary concerns about children's

nutrition focused on ensuring children consumed adequate calories and essential nutrients to prevent clinical malnutrition and starvation.[24] Now, concerns focus on children consuming adequate or excessive calories of poor nutritional quality leading to a new malnutrition associated with overweight and obesity.[24] The near elimination of starvation in the US population is among the public health successes of the 21st century,[25] but new nutrition challenges have emerged. Recent estimates suggest that nearly 40% of the calories children and youth consume come from solid fats and added sugars, commonly termed "empty" calories, originating from foods and beverages like soda, other sweetened beverages, desserts, and whole-fat dairy products.[26] Children's poor diets have been implicated in numerous children's health conditions, including diabetes, asthma, dental carries, and obesity.[27,28,29] Experts predict that without a change in the current course, one in three children—and nearly half of Latino and African American children—born in the year 2000 will develop Type 2 diabetes in their lifetime.[30] Researchers have projected that this generation of children may be the first to reverse the trend of increasing life expectancy due to the high rates of obesity and blood sugar abnormalities now evidenced in childhood.[31,32] And although the human costs are most alarming, the economic consequences of poor diet also are staggering: experts estimate that annual health-related costs in the U.S. due to obesity are approximately $147 billion[33] and total economic losses cost the nation $1.3 trillion each year.[34]

The relationship between school lunch participation and overweight and obesity has been explored in the literature, but no consensus yet has emerged. A couple of studies have suggested that eating school lunch is associated with an increased risk for obesity,[35,36] but other studies have found no evidence of a relationship.[37,38,39] A recent study argued that many other studies on the effects of NSLP participation on health fail to deal adequately with uncertainty and errors associated with identification issues, including proper reporting of whether or not students participated in the program as well as differences between students participating and not that are not visible from the data.[40] This analysis found that NSLP participation reduced the prevalence of food insecurity by 3.8%, poor health by 29%, and obesity by 17%.[40] The only study to provide a long-term assessment of the impact of school meals on adult health outcomes found no effect of NSLP participation on adult height or BMI.[15] Thus, while it is understood that the NSLP provides needed food to the population of children who otherwise may not have adequate food to eat for lunch, whether the program contributes to or helps to solve the obesity epidemic currently is not clearly established. However, recent policy changes stemming from the Healthy Hunger-Free Kids Act of 2010, aim to increase the likelihood that the program becomes part of the solution to this problem. Whether this outcome is realized could be critical to the program's future political success, particularly as increased resources are spent on school meals. Recent policy successes related to school lunch likely have resulted from re-framing the problem around obesity, which means that demonstrating an impact on obesity could become increasingly important.

Although the present study focuses on school lunch in particular, this is only one of a number of venues that provide foods and beverages to students in US schools. It would be preferable for explorations of school nutrition policy to

consider the school environment comprehensively, including all foods and beverages served at school as well as all of the school venues in which students may have the opportunity to experience nutrition education or other food-related activities. In addition to offering school lunches, federal programs support the provision of breakfast meals in many schools, as well as during- and after-school snack programs. While the school lunch program does not constitute all of the food and beverage options available to students throughout the school day, it is the only food program with a policy lever that currently reaches nearly all public schools in the country. Additionally, the school lunch program has a unique legislative and political history, which warrants attention and better understanding among the public health nutrition community. Although school lunch is only one aspect of the food and nutrition environment facing students attending schools in the United States, it currently serves more students than any other child nutrition program (31.8 million students daily ate a school lunch in 2011,[41] compared to 12.1 million who ate a school breakfast.[42] This dissertation focuses on school lunch because it represents an important, shared national policy that affects the majority of children across the country.

The first paper included in this dissertation presents findings from an analysis of data I collected during my work in schools in 2010. Specifically, the paper examines whether middle and high school students' fruit and vegetable consumption at school is associated with institutional factors in the school setting, like the amount of time allocated for the lunch period, the quality and variety of produce items served, and whether school food services staff involve students in deciding what foods to serve and how to promote the meal program. This analysis comes at a time when new regulations from the HHFKA require students to select fruits and vegetables in order for their school lunch to qualify for federal reimbursement. Since studies have shown that very few students actually report eating fruits and vegetables at school,[17,18] insight into school-level factors that may be associated with increased fruit and vegetable consumption at school can contribute to the success of the new regulations and reduce food waste. Already some regulations resulting from the Healthy Hunger-Free Kids Act of 2010, like limiting the number of servings of grains and protein in lunch meals during the week, have been suspended in the first year of their implementation due to complaints from some schools and interest groups.[43] Making sure schools can successfully provide healthy meals that students want to eat is critical for the health of the nation's children and the success of the National School Lunch Program. Many intervention studies suggest that providing comprehensive nutrition education along with a food environment that encourages healthful eating can be affective in improving youth diets,[44,45] yet neither public officials nor the private sector have yet provided adequate resources to implement evidence-based educational efforts universally in schools. In the meantime, identifying other strategies that schools can employ to encourage consumption of healthy foods is important.

My experiences trying to understand the ways in which to help youth in the United States develop healthful eating habits led me to want to understand more about the history of the school lunch program, how it started, and how it had

become the program I observed in 2010. Further, my explorations of political science theories and public policy models led me to understand that policies result from a dynamic mix of ideas, events, and political situations that sometimes coincide to create change and sometimes seem to maintain the status quo. The policy making process can produce policies that have multiple and even internally inconsistent goals. Additionally, policies that are enacted, even suboptimal ones, can become entrenched and offer limited opportunities for reform. As I explored these theories and models, it became clear that there may be a story to the National School Lunch Program that, if better understood among public health nutritionists, might provide insights into how to move the program into the future in a way most beneficial to students' health and wellbeing. I also came to understand that while history often is told by emphasizing things that have happened (i.e. the policy changes that were adopted), much can be learned from understanding the proposals that haven't succeeded, particularly since these often appear on the decision-making agenda multiple times before they are either adopted or forgotten.[46] The second two papers in this dissertation explore these issues, considering the legislative and political history of the National School Lunch Program, highlighting the issues and arguments that shaped the program's original foundation, and describing the way in which federal attention to the National School Lunch Program and the primary school lunch policy issues on the federal agenda have cycled over time. This exploration covers an assessment of a sample of legislative documents related to the National School Lunch Program from the 1940s to the present time. The review and analysis is a pilot study of these materials, documenting what is available and setting the stage for further in-depth examination and analysis of these documents along with other sources of information to provide useful insights for those working to understand and improve children's health and nutrition in the United States.

PAPER #1

TITLE: School-level factors associated with increased fruit and vegetable consumption among students in California middle and high schools

ABSTRACT

BACKGROUND:
More fruits and vegetables now are served in school meals as a result of the Healthy Hunger Free Kids Act of 2010 (HHFKA). This study assesses the association among select school level factors and students' consumption of fruits and vegetables at school, to enhance understanding of institutional factors that promote *consumption* of produce items *served*.
METHODS: Cross sectional study of California 7th and 9th grade students (n=5,439) in 31 schools in 2010. Multilevel regression models estimated whether the odds of consuming fruits or vegetables at school among students eating the school lunch were associated with the length of the lunch period, quality/variety of produce options, or other factors.
RESULTS: A longer lunch period was associated with increased odds of a student eating fruits (40%) and vegetables (54%) at school. Better fruit quality increased the odds of a student consuming fruit (44%). Including a salad bar and involving students in food service decisions increased a student's odds of consuming vegetables (48% and 34%, respectively).
CONCLUSIONS:
Institutional factors in schools are positively associated with middle and high school students' consumption of produce items. Additional efforts are needed to support schools to structure meal environments to facilitate students' consumption of a healthy diet.

Keywords: school meals, child nutrition, adolescent health, national school lunch program, fruits and vegetables

BACKGROUND

The latest U.S. Dietary Guidelines emphasize the importance of consuming a diet rich in fruits and vegetables for optimal health.[47] Consumption of fruits and vegetables is associated with an overall healthy diet as well as reduced risk for chronic diseases like cancer, cardiovascular disease, and diabetes.[50,48,49] Yet current estimates suggest that only 5-6% of adolescents meet the recommendations for fruit and vegetable intake daily, and of the vegetables that are eaten, more than half are fried potatoes or tomato products (28% and 24% of total vegetables consumed by youth, respectively).[51] Schools are an important venue when it comes to youth diets. The average student is estimated to consume 35% of his or her daily energy at school, with those eating breakfast and lunch on campus consuming up to 47% of their daily calories at school.[3] The National School Lunch Program, which provides meals to nearly 32 million students daily (almost 2/3 of school age children in the US), aims to support consumption of a healthy diet, rich in fruits and vegetables.[41] However, while studies have shown that students eating the school lunch consume more fruits and vegetables at school than students who don't participate, school fruit and vegetable consumption remains far below recommended levels, even among school lunch participants.[16,17,18]

Regulatory changes resulting from passage of the Healthy Hunger-Free Kids Act of 2010 require students to select fruits or vegetables in order for their school lunch to qualify for federal reimbursement.[52] Political science theory suggests that positive feedback demonstrating policy success, for example indicating that these changes are leading to improved student outcomes, like more fruit and vegetable intake, may be critical to the long-term sustainability of this policy change.[53] While no studies assessing these changes are yet available, numerous media reports highlight the successes of the healthier lunches served, although others suggest that too many fruits and vegetables served are wasted.[54,55] With the healthfulness of foods offered in schools beginning to improve, additional focus must be devoted to understanding ways to support students' *consumption* of the healthier foods *served*. This study was designed to examine the effects of select factors in the school food environment on the fruit and vegetable consumption of 7th and 9th grade students eating the school lunch in a sample of California middle and high schools.

While frequently mentioned as a promising strategy for increasing students' school fruit and vegetable consumption,[56,57(p213)] the effect of the length of the school lunch period on students' food consumption has received limited research attention. A 1990's study of food service managers reported that fruits and vegetables were the most highly wasted food items in school meal programs, with 44% of food service managers citing 'not enough time to eat' as a contributing factor to this waste.[58] Similarly, a 1995 study of high school students in Cincinnati found that 82% of students thought that the lunch period was too short.[59] However, other studies have reported that elementary, middle and high school students spent very little time actually eating during the lunch period, leading some authors to conclude that short lunch periods provide adequate time to eat, and others to express concern that students have learned to eat too quickly at school which could contribute to the

development of obesity.[60,61,62,63] However, none of these studies examined the relationship between the length of the lunch period and the foods students were consuming during this time. Only one very small study of elementary school students associated the length of the lunch period with overall food consumption; it reported that a longer lunch period was associated with increased food and nutrient consumption at school.[64]

A few studies have suggested that the quality and variety of fruits and vegetables served to children and youth may be important factors driving students' consumption. Providing students with the option of choosing from a variety of healthy foods at school has been associated with increased consumption of healthy foods and reduced food waste.[65,66] Further, the presence of salad bars in school lunchrooms has been associated with a wider variety of produce selections offered, and linked to increased consumption of fruits and vegetables among elementary school students.[67,68,69,70] A review of the qualitative literature found that visual appeal of fruits and vegetables is important to children, although this finding was general rather than focused on the school environment.[71] Better understanding of the effects of the variety and quality of produce items served at school on middle and high school students' consumption patterns is needed.

The strongest evidence for improving students' food consumption at school suggests that multi-component interventions, including improvements to the foods and beverages served coupled with other efforts, like food and nutrition education and marketing and promotion strategies, lead to the strongest outcomes.[74,65,44,72,73,75,45] Involvement of students in food services, including engaging students in taste testing foods, developing menus, and promoting the meal program, has been suggested as a strategy to improve students' consumption of healthy foods, but has received limited research attention.[44,76] One study found that elementary school students verbally encouraged by food service staff to select fruit were more likely to do so, and equally as likely as non-prompted students to consume it.[77] Evidence demonstrating the effects of food service involvement and staff encouragement to eat fruits and vegetables among middle and high school students is needed.

While school-level factors influencing fruit and vegetable intake are important in the school setting, individual factors also influence students' food behaviors. Studies suggest that high consumption of fruits and vegetables among youth are associated with factors including preference for fruits and vegetables, higher SES, and being female.[78,79,80]

The current study utilizes a social ecological model in hypothesizing that adolescent students' dietary behaviors are influenced both by individual factors as well as contextual factors in their school environments.[81,82] The study aims to help discern what factors in school lunch environments are important predictors of adolescent students' fruit and vegetable consumption at school. Based on the evidence mentioned above, the school-level factors considered to be potentially important include length of the lunch period, a visual assessment of the quality of fruits and

vegetables served, the variety of fruits and vegetables served, the presence of a salad bar, whether food service staff members encouraged students to select fruits or vegetables, whether students were involved in food services, and the proportion of students receiving free or reduced price meals. Additionally, the study considered whether snack foods, like chips and cookies, served as part of school meals were associated with fruit or vegetable consumption. While a good deal of literature shows that these foods sold separately from meals impact students' consumption,[83,84] no studies were found considering the effect of these foods on consumption when served as part of the school meal. The individual covariates considered include grade, gender, whether students reported eating the school breakfast, and whether students reported that fruits or vegetables are important to be able to buy at school, used as a proxy for students' food preferences. The primary research questions in the study are: Is the length of time allocated to the lunch period or the quality or variety of fruits and vegetables served associated with the odds of adolescent students consuming fruits and vegetables at school, adjusting for potentially important school-level and individual-level covariates. We hypothesized that students in schools with a longer lunch period and those in schools where higher quality and more variety of fruits and vegetables were served would have increased odds of consuming fruits and vegetables at school. Secondarily, we hypothesized that students in schools where snack foods were served with school meals would have reduced odds of eating fruits and vegetables at school, and that those in schools where staff encourage selection of fruits and vegetables or involve students meaningfully in food services would have increased odds of eating fruits and vegetables at school. The purpose of this study is to contribute evidence regarding contextual factors in middle and high school environments that may increase the odds of students *consuming* fruits and vegetables at school, since schools now *serve* more of these items to students.

METHODS

This was a cross sectional study, combining school observation data with student survey data from 31 middle and high schools in California collected during the spring of 2010. This study was approved by the Committee for the Protection of Human Subjects at the University of California at Berkeley.

Participants

The schools participating in this study were located in communities involved in the evaluation either of The California Endowment's Healthy Eating Active Communities (HEAC) program (n=19) or Kaiser Permanente's Healthy Eating Active Living (HEAL) initiative in Northern California (n=12; Figure 1). All communities were selected to participate based on their high rates of students eligible for free or reduced priced meals, and include a variety of urban, suburban, and rural environments throughout California (Table 1). Most schools were located in predominantly Hispanic/Latino communities. Within participating communities, one middle and one high school were selected to conduct the data collection activities described in this study.

Instrumentation

Student Survey

The Student Nutrition and Physical Activity Survey, containing 40 questions with 138 sub-items primarily adapted from existing tools, was developed for the HEAC program in 2006 and is described in previous publications.[17,85] This study utilizes the student survey data to assess food consumption patterns at school, attitudes about whether fruits and vegetables are important to students be able to buy at school, and indicators of student demographics. In particular, students were asked to respond yes or no to the questions, "Did you eat the school lunch yesterday?" and "Did you eat the school breakfast yesterday?" Additionally, they were asked to mark whether they ate green salad, vegetables (other than green salad or fried potatoes), or fruit yesterday at school, at home, at some other place, or not at all. Students were asked to respond on a Likert scale (very important, important, not too important, not at all important) to the question: "How important is it ***to you*** to be able to buy the following food items **at school**?" with fresh fruit, green salad, and other vegetables being 3 of the 12 items to rate. Finally, students were asked their grade, gender, and ethnicity.

School meal observations

A school meal observation form developed by the Center for Weight and Health at the University of California, Berkeley, was adapted for this study. Researchers conducting observations provided descriptions of the produce items served based on the prompt: "Please list each fruit or vegetable item served with meals in entrees or as side dishes (describe whether it is fresh, canned, sliced or whole, etc.), and rate it's quality" with response options including "excellent, good, fair, or poor." The prompt was repeated for fruit or vegetable items "in the salad bar," in schools that offered salad bars (n=11). Produce was considered excellent if it appeared fresh, crisp, ripe and otherwise in excellent condition. Produce was considered poor if it was wilted, brown, bruised, or over-ripe. Snack foods served with meals were recorded: "List any snack foods, like chips or cookies, that come with the meal at no extra cost," as was verbal promotion of fruits and vegetables: "Did you observe any staff members providing exceptional customer service, for example, encouraging students to select healthy food items or being extremely friendly and courteous? If so, please describe." Researchers recorded the number of minutes allocated to the lunch period at each school, based on a printed school schedule. Finally, researchers asked food service staff to describe students' involvement in "selecting food and beverage offerings" and in "promotion of the meal program and/or healthy options."

Procedure

Research teams visited each of the participating schools during the spring of 2010 to administer student surveys and observe the foods and facilities available to students at lunchtime in each of the 31 schools. All data were collected during a single day at each school. Trained research team leaders were responsible for observing the school lunch facilities and documenting offerings in writing as well as with photographs. Training included trainers and trainees visiting a single school and

comparing observation results. Each observation was conducted by 1 of 2 trained researchers or the trainers, each of whom completed an observation at 1 school.

Seventh and 9th grade students in participating schools were invited to complete the anonymous and voluntary student survey. Participating schools selected the course/subject (e.g. English, PE, etc.) in which surveys were administered. In schools with more than 400 students in a grade, classes were randomly selected to participate in the survey; in smaller schools, all classes participated. Trained research staff introduced and proctored the survey, which was completed during a single class period in the chosen subject at each school. Proctors reviewed surveys for completion before collecting them from students. Surveys in which fewer than 50% of the questions were answered or where students' responses fit a pattern indicating that they did not read and respond honestly to the questions were excluded.

Data Analysis

Two binary dependent variables were assessed in separate models: whether students reported eating fruits or eating vegetables at school. Students who responded "yes" either to eating green salad or other vegetables at school were included as having eaten vegetables at school. Length of the lunch period was dichotomized into schools with shorter lunch periods (25-30 minutes) and those with longer lunch periods (34-52 minutes). This division was based on the natural cut point in the data, with nearly half of schools (45%) having lunch periods lasting 30 minutes or less. Fruit and vegetable quality were assessed on a 4-point basis, with excellent=4, good=3, fair=2, and poor=1. Both fruit scores and vegetable scores at each school were averaged separately, and dummy variables were created for schools averaging ≥3 (good) for fruit quality and for vegetable quality. Total fruits and total vegetables were dichotomized into 2 groups: schools offering 1 fruit or vegetable choice and those offering 2 or more selections. Student involvement in food services was dichotomized such that schools reporting routinely involving students in food services, with student leadership groups, taste tests, and other similar activities, were coded as involving students, while those reporting limited student participation, like involving students in an annual food services taste test, or not involving students at all, were coded as not involving students. Finally, the percent of students receiving free or reduced price meals was centered at 0 and normalized such that a 1-unit change in the coefficient would correspond to a 5% change in the percent of students eligible for free or reduced price meals. Explanatory student-level variables included dummy variables for gender, grade, whether students reported eating the school breakfast, and a proxy for student preferences: whether students reported fruits or vegetables to be important to be able to buy at school. Binary preference variables were created from the 4-point Likert scale responses to the question of perceived importance, combining "important" with "very important," and "not too important" with "not at all important". Models were not adjusted for ethnicity due to the clustering of minority ethnic groups (those other than Hispanic) within schools, causing challenges with

collinearity; however follow-up assessment verified that ethnicity was not a significant confounder in this study.

Chi-squared analyses were used to assess the relationship between the outcome variables and potential covariates. Variables significantly associated ($p<.05$) either with fruit consumption or vegetable consumption outcomes were included in the regression models. Hierarchical mixed effects regression models were estimated using Stata 11.2. Only students who reported eating school lunch "yesterday" were included in the analysis. Two schools were dropped from the vegetable models, one because no vegetables were served and the other because observers were unable to assess the quality of the one vegetable item that was served. The xtmelogit command was used with clustering at the school level. Six models were analyzed. Models 1 and 2 assessed the response variables (fruit consumption at school and vegetable consumption at school) with all explanatory variables. The third and fourth models investigated whether there was any interaction by grade. Additional models included a quadratic term for the continuous explanatory variable, % students eligible for free and reduced price meals.

RESULTS

Less than 0.5% of students refused to complete the survey. One hundred five surveys were excluded from the dataset due to incompletion or response pattern issues. Overall, 58% of students (n=5,439) reported eating the school lunch (school range 37%-84%; mean for 7th grade=59%; mean for 9th grade=58%), and were included in the analysis. Of these students, 43% were female and 49% were in 7th grade (Table 3). Few reported eating fruit at school (26%), and even fewer reported eating vegetables at school (15%). All 31 schools offered at least 1 fruit with lunch, and all but 1 school offered at least 1 vegetable. The majority of schools offered multiple fruit and vegetable choices; 35% had a salad bar. Most produce offerings were found to be of good or excellent quality, though more fair or poor quality vegetables were served than fruits. Most schools (65%) served snacks, like chips or cookies, with the school lunch. In five schools, at least one food service staff member was observed encouraging students to select fruit or vegetable items. Three schools reported routinely involving students in food services, and were coded as involving students. An additional six schools reported involving students in an annual food services taste test or other limited activity, but were not coded as having substantial student involvement.

Chi-squared tests suggested that all variables of interest except gender were associated with either fruit or vegetable consumption at school, so only gender was excluded from the regression models. No significant interaction by grade was found nor was the need to include a quadratic term for free or reduced price meal eligibility identified; thus, Models 1 and 2 are the final models reported.

The mixed effects regression models estimated that the length of the lunch period was significantly associated with both fruit and vegetable consumption at school among students eating the school lunch (Table 4). A student's odds of eating fruit at

school were estimated to be 40% higher if the school lunch period lasted 34 minutes or longer compared to 25-30 minutes (p=.024), and the odds of eating vegetables were estimated to be 54% higher for a student if the school had a longer lunch period (p<.001), adjusting for quality and variety of fruits and vegetables, whether snack foods were served, staff encouragement of fruits and vegetables, student involvement in foodservices, percent of students eligible for free or reduced price meals, whether fruits/vegetables were important, whether the student ate school breakfast, and the student's grade. Model 1 estimated that the odds of a student consuming fruit at school were significantly (44%) higher if the school served fruit that was on average of good or excellent quality compared to lower quality fruit, adjusting for other covariates (p=.022); model 2 estimated that the odds of a student consuming vegetables at school were significantly higher (48%) if the school had a salad bar. While snack foods served with meals did not significantly affect the odds of a student eating fruit at school, a student in a school serving snacks was estimated to have 56% higher odds of eating vegetables at school (p<.001), adjusting for other covariates. Staff encouragement of fruits and vegetables was not significantly associated with the odds of a student consuming either fruits or vegetables at school, adjusting for other covariates. Student involvement in food services was not associated with the odds of fruit consumption at school, but a student in a school with substantial student involvement was estimated to have 34% higher odds of eating vegetables compared to being in a school not involving students (p=.047), adjusting for other covariates. A 5% increase in the proportion of students eligible for free or reduced price meals was associated with a small but not significant increased odds of fruit consumption (5%; p=.092) and a similarly small but significant decrease in the odds of vegetable consumption (6%; p=.005). A student who reported fruits and vegetables to be important to be able to buy at school had significantly higher odds of consuming both fruits (74%; p<.001) and vegetables (90%; p<.001) at school, adjusting for other covariates, as did a student that reported eating the school breakfast (55% for fruit, p<.001; 56% for vegetables, p<.001). Adjusting for other covariates in the models, the odds of consuming fruit at school were 74% higher for a student in 9th grade compared to 7th grade (p<.001).

DISCUSSION

Substantial evidence suggests that American adolescents would benefit from consuming a healthier diet.[86,87] Schools, as a public environment in which students spend a great deal of time, have an especially important role to play in supporting youth to make healthy choices.[88] Recent policy changes to the National School Lunch Program require schools to serve, and students to select, more fruits and vegetables in order for meals to qualify for federal reimbursement. As more fruits and vegetables are served in schools, it is critical to understand the factors in school environments that may promote consumption of the fruits and vegetables served.

This study found that among the institutional school-level factors examined, including length of the school lunch period, visual appeal of fruit and vegetable offerings, variety of fruits and vegetables served, whether snack foods were served

with meals, staff encouragement of students to select fruits or vegetables, and student involvement in food services decisions, only the length of the lunch period was significantly associated with *both* increased fruit and increased vegetable consumption at school among students eating the school lunch. Specifically, the odds of a student eating fruits were estimated to increase by 40% and the odds of eating vegetables to increase by 54% if the student was in a school with a lunch period lasting ≥34 minutes compared to the lunch period lasting 30 minutes or less. To our knowledge, this is the first study to assess the relationship between fruit and vegetable consumption of middle and high school students and the length of time available for the school lunch period. The findings are consistent with the one prior study reported in the literature that found an increase in nutrient consumption, including nutrients associated with fruits and vegetables, among elementary school students in a school with a longer lunch period compared to a school with a shorter lunch period.[64]

The literature suggests that visual appeal and variety of fruits and vegetables may be important to youth. This study found that the visual quality of fruit was positively associated with students' consumption of fruit, and variety, in the form of salad bars, was positively associated with vegetable consumption. It is possible that this is related to a tradeoff schools face between fruit and vegetable quality and variety. Most schools in this study offered students at least one fruit and one vegetable choice on the school day observed, and the majority of the offerings were considered to be good quality. However, of the four schools that offered at least one fruit item that was rated excellent quality, none offered more than two fruit items. In contrast, six of the 7 schools in which at least 1 fruit item was rated fair or poor quality offered three or more fruit items. A similar pattern was observed for vegetables. Thus, given limited resources, schools that offer more choices may have more difficulty maintaining high quality standards. Better understanding the quality and variety tradeoff is needed. This study adds to the limited body of evidence, mostly conducted in elementary schools, that suggests that salad bars are an effective mechanism for increasing students' consumption of vegetables at school, and importantly adds evidence to suggest that salad bars may be effective in middle and high schools. However, it will be important for efforts to increase the selection of produce items served in schools to consider whether quantity can be increased without negatively impacting quality.

Due to concerns that other latent variables may be responsible for associations observed between length of the lunch period, variety and quality of produce, a variety of other school-level factors that may indicate a school's latent commitment to healthy eating were considered in this study. While it was hypothesized that students in schools serving snack foods, like chips or cookies, with school lunch meals would be less likely to consume fruits and vegetables, the results from this study do not support this hypothesis. Nearly 2/3 of the schools served chips or cookies with lunch, and while this was not significantly associated with fruit consumption, the presence of snack foods was positively associated with vegetable consumption. It is not clear why a student in a school that served snack foods with

meals would be more likely to consume vegetables, but this finding should be explored in future studies. Other factors examined as possible latent factors suggesting school commitment to and promotion of healthy eating included staff encouragement of fruits and vegetables and student involvement in foods services. Unlike the prior study of elementary school students, this study did not find that students in schools where food service staff encourage them to take fruits or vegetables were any more likely to report consuming these items. It is possible that this is due to our observers not capturing these verbal cues in all schools that provided them, since observations were not conducted during the entire duration of the school meal period. It may also be possible that younger elementary school students are more responsive to adults' cues regarding food choices than are adolescent students. Student involvement in food services was positively associated with both fruit and vegetable consumption at schools, but only reached (borderline) significance for vegetable consumption. Further studies should further assess this relationship, since only a very small minority of schools (3) in this sample involved students in food services substantially enough to be included.

The few individual factors examined in this study generally were associated with fruit and vegetable consumption among students eating the school lunch. The proxy used for student preferences, whether students reported fruits or vegetables to be important to be able to buy at school, was associated with higher odds of consuming both fruits and vegetables at school, as suggested by prior research findings.[17] Additionally, a student eating the school breakfast had higher odds of eating both fruits and vegetables at school compared to a student not eating the school breakfast. Only fruit consumption was significantly associated with grade level, with 9th grade students having higher odds of eating fruit than 7th graders.

This study provides evidence that in addition to, and controlling for, individual characteristics, the length of the lunch period may be an important predictor of fruit and vegetable consumption at school among students eating the school lunch. Further, the study found that the visually assessed quality of fruit was significantly associated with fruit consumption and the presence of salad bars, whether snack foods were served with meals, and whether students were involved in food services were positively associated with students' vegetable consumption; the proportion of students eligible for free or reduced price meals was negatively associated with students' vegetable consumption in the school setting. Due to the small number of students reporting eating vegetables at school in this study, the vegetable findings should be interpreted with caution.

Limitations

This study is limited by a number of factors. To begin with, this is a cross-sectional study, suggesting that certain factors are associated with the outcomes of interest in this sample of schools, but unable to establish causation. It is possible that schools with longer lunch periods or serving higher quality and/or more variety of produce items also were engaged in other unmeasured activities to increase fruit and

vegetable consumption, and that these other activities confound the relationships observed in this study.

Additionally, meal observations and student surveys were completed on the same day, but survey questions asked students to respond about food consumption "yesterday." Thus, if schools served substantially different quality and quantity of produce items the day prior, this analysis may misrepresent the relationships between these factors and student consumption patterns. Further, while training of school observers included an assessment of inter-rater reliability, this was not formally recorded. In addition, the measures of food consumption rely on student self-report, which is known to have limitations, as youth are not always accurate in reporting their dietary intake; however, recall methods for students this age have been validated.[89,90] We attempted to reduce recall error by asking students about specific items they may have consumed within a short period of time (yesterday). Social desirability bias also is a concern in this study, as students responded in high numbers that fruits and vegetables were important to be able to buy at school. However, students did not provide uniformly socially desirable responses (for example, few report engaging in desired health behaviors); thus, it seems unlikely that this bias compromises these findings. The use of reported importance of fruits and vegetables being available at school as a proxy for student preference without a formal assessment of the relationship between this construct and actual preferences also presents limitations.

The measure of food quality used in this study, based on visual appeal of the food item, is subjective; improved measures of food quality likely could more fully assist in answering the research question. Additionally, observers were rating only the visual appearance of quality, and it is important to note that taste was not measured in this study. Thus, if produce in some schools appeared appealing but did not taste good, this measure of quality did not detect this. Further, due to collinearity challenges, fruit and vegetable variety as well as whether or not a salad bar was present could not both be included in the models. Because the salad bars observed at the schools more commonly included vegetables rather than fruits, salad bars were analyzed only for the vegetable model, and the presence of 2 or more fruit options was the variety variable included for fruit.

Our sample of schools was relatively small and the range of the proportion of students eating vegetables at school was low. Larger samples of schools and a wider range of students consuming vegetables would strengthen confidence in the results. Also, our outcome of interest was based on students reporting whether they ate fruits or vegetables at school yesterday, rather than specifically asking students whether they ate these items during school lunch. We adjusted the models for breakfast consumption to help account for this, but cannot rule out the possibility of students bringing fruits or vegetables from home and consuming these at school nor can we rule out other sources of fruit and vegetable provision at school. None of the schools participating in the study were involved in special fruit and vegetable snack

programs, so it is not expected that students routinely were given fruits or vegetables at school outside of the school meal program during the school day.

Finally, a variety of factors suggested by the literature to be associated with increasing students' fruit and vegetable consumption at school were not included in this study. For example, an emerging body of literature in the field of behavioral economics suggests that simple adjustments to lunchroom configurations and the way in which foods and beverages are presented may encourage students to select healthier items.[91,92,93,94] Our observations did not capture the arrangement and display of items in the lunchroom and cannot account for how these might influence students' selection and consumption of these items. While to our knowledge, none of the participating schools had made any concerted effort to arrange or display fruit or vegetable items to enhance student selection, some schools may inadvertently have set up their produce this way, which could confound the relationships reported here. Similarly, the literature clearly establishes that the most effective interventions to improve students' food consumption at school include educational efforts in conjunction with changes to the food environment. While we are not aware of any of the schools in this study being engaged in broad, specific nutrition education interventions, it is possible that curriculum differences may help explain the differing fruit and vegetable consumption and could confound the relationships observed. Further, while additional social factors likely impact students' food choices at school, such as peer relationships and other social-group factors,[95,96,97] those were beyond the scope of this study.

CONCLUSIONS

This study provides evidence to suggest that the amount of time available to middle and high school students for eating lunch may influence the consumption of fruits and vegetables at school among students eating the school lunch. It also identifies other school-level factors that may be important predictors of fruit or vegetable consumption, like visual appeal of the produce items, the presence of a salad bar, and student involvement in food services. Despite the limitations of these data, the results suggest that there may be quantifiable benefits to students' dietary intake at school from modifying these school environmental factors. Since schools are required to serve more fruits and vegetables to students, it is especially important that the environment is structured to ensure that the produce items taken by students are consumed. Further efforts are needed to understand the way in which students respond to the tradeoffs between produce quality and quantity, and to assess whether the resources provided to schools to improve meals are adequate. Studies that more completely assess all of the potential factors associated with students' fruit and vegetable consumption, including those considered here as well as the behavioral economics approaches and nutrition education efforts are needed. In depth qualitative analysis of the factors leading to fruit and vegetable consumption in schools is warranted. As limited, but increased, national resources are devoted to increasing the fruits and vegetables served to students in schools across the nation, the science of understanding what drives students' consumption of these items must be accelerated. The health of the nation's children is in peril due

to current dietary practices. Continued efforts to expedite change in this arena are needed.

IMPLICATIONS FOR SCHOOL HEALTH

A great deal of emphasis recently has been placed on increasing students' access to fruits and vegetables at school. Implementation of new federal policy requires schools to offer more produce items and students to take fruits and vegetables as part of a reimbursable school meal. Efforts now must focus on understanding the factors associated with student consumption of the produce items they are served. This study provides evidence that lunch periods lasting 34 minutes or more may encourage middle and high school students to eat more fruits and vegetables at school. Additionally, the tradeoff between increased variety and quality of fruit and vegetable offerings deserves attention. Efforts to develop promising practices for involving middle and high school students in food services may enhance students' consumption of produce. Changing students' school food consumption patterns will require the support of school administrators, teachers, parents, and students, in addition to national, state, and local policy makers. Studies suggest that helping school age students to adopt healthy dietary behaviors ultimately will lead to improved population health.

Figure 1: Location of participating schools in California

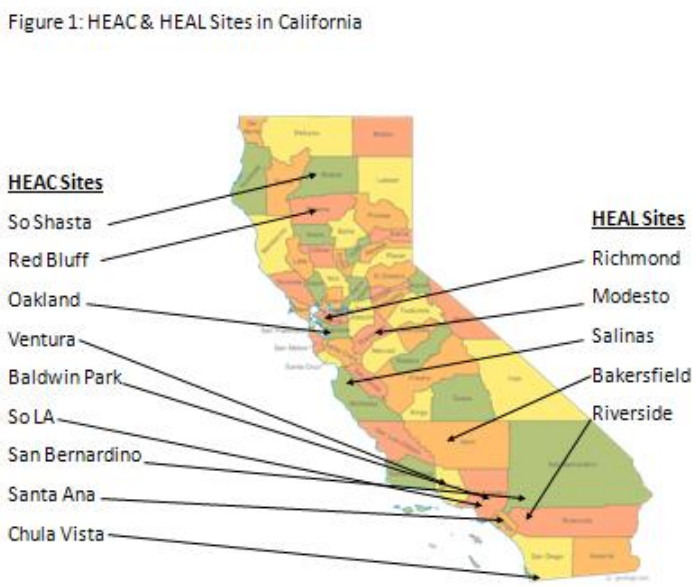


Table 1: Characteristics of the study sample

Characteristic	**Fruit Analysis** (n=31)	**Vegetable Analysis** (n=29)
School-level characteristics	n (%)	n (%)
School Type		
Middle/Jr. High school *	16 (52%)	16 (55%)
High school	15 (48%)	13 (45%)
Location type		
Large urban area	7 (23%)	7 (24%)
Midsize urban area	19 (61%)	18 (62%)
Suburban/Small town	5 (16%)	4 (14%)
Student-level characteristics		
Ethnicity	(n=5,409)	(n=5,193)
Hispanic	69%	71%
American Indian, Native Hawaiian, Pacific Islander	9%	9%
White	8%	6%
Asian	5%	6%
Black	4%	4%
Other	5%	5%

* Includes 1 K-8 school

Table 2: Description of variables included in the study

Variable	Instrument	Measurement	Rationale
School-level variables			
Length of lunch period	Lunchroom observation	Obtained from printed school bell schedule	Some suggest that longer lunch periods may encourage students to eat FV; no studies specifically looking at length of the lunch period and fruit vegetable consumption among middle or high school students were found
Fruit/vegetable quality	Lunchroom observation	Visual appeal rated on a 4-point scale, with 1=poor, 4=excellent	Limited literature suggests that students are sensitive to visual appeal of items
Quantity of fruits	Lunchroom observation	Observers recorded every fruit and vegetable item served for lunch; then counted	Studies suggest that increased choices may lead students to select and consume more FV
Salad Bar	Lunchroom observation	Observers recorded whether or not a salad bar was present	Studies suggest salad bars may encourage students to consume more FV; due to challenge of colinearity, was used in lieu of quantity for vegetables only
Snack foods served with meals	Lunchroom observation	Observers recorded whether chips, cookies, or similar snack foods were served with meals	It was hypothesized that if chips and cookies are served as part of the school lunch, students might consume fewer fruits and vegetables
Staff encourage students to select fruits or vegetables	Lunchroom observation	Observers watched meal service for a short period and noted whether staff members specifically encouraged students to select FV	Prior study suggested that among elementary school students, a verbal prompt to select fruit led to increased fruit consumption among students
Student involvement	Lunchroom observation	Observers asked food service staff about students' involvement in taste testing, menu planning, meal program promotion	Prior literature suggested that involving students in the meal program leads to increased consumption of healthier items served
% students eligible for free or reduced price lunch	Obtained from CA Dept. of Education	Published data re: % of students at each school who qualify for free or reduced price meals	Studies suggest that socioeconomic factors may be associated both with students' food consumption patters as well as school food offerings (Whitaker)
Individual-level variables			
Fruit/vegetables important	Student survey	Students reported whether select items were important for them to be able to buy at school	This item was used as a proxy for student preferences, as it had previously been associated with student intake, and preference has been documented to be important in the literature
Ate school breakfast	Student survey	Students reported whether they had eaten the school breakfast "yesterday"	Since the fruit and vegetable consumption items asked about consumption at school and not about lunch only, controlling for eating breakfast at school was necessary
Grade	Student survey	Students reported whether they were in 7th or 9th grade	Age has been associated with fruit and vegetable consumption in the literature, with younger children generally considered more likely to eat FV
Gender	Student survey	Students marked whether they were male or female	Fruit and vegetable consumption has been associated with gender in other studies

Table 3: Descriptive statistics for student- & school-level variables among students reporting that they ate the school lunch "yesterday"

	Model 1: Fruit Consumption			**Model 2: Vegetable Consumption**	
School-level Variable	Number of schools (%) (n=31)	Percent of students (n=5,437)	**School-level Variable**	Number of schools (%) (n=29)	Percent of students (n=5,224)
Lunch period: 25-30 minutes 34-52 minutes	 14 (45%) 17 (55%)	 44% 57%	Lunch period: 25-30 minutes 34-52 minutes	 13 (45%) 16 (55%)	 45% 55%
Fruit Quality: Good or better	 23 (74%)	 70%	Veg Quality: Good or better	 18 (62%)	 58%
2 or more fruits served	16 (51%)	55%	Salad Bar present	11(35%)	35%
Snacks served with lunch	20 (65%)	68%	Snacks served with lunch	19 (66%)	67%
Staff encourage FV	5 (16%)	19%	Staff encourage FV	4 (14%)	16%
Students involved in food services	3 (10%)	8%	Students involved in food services	3 (10%)	8%
Variable	Mean (SD) school level	Mean (SD) student level	Variable	Mean (SD) school level	Mean (SD) student level
Mean % free or reduced price meal participation	76% (12.6)	76% (12.4)	Mean % free or reduced price meal participation	76% (11.9)	77% (11.3)
Standardized mean free or reduced price meal participation	5.4 (2.52)	5.4 (2.49)	Standardized mean free or reduced price meal participation	5.5 (2.38)	5.6 (2.27)
Student-level Variable	Percent range among schools (n=31)	Percent of students (n=5,437)	**Student-level Variable**	Percent range among schools, % (n=29)	Percent of students (n=5,224)
Ate fruit at school	12%-45%	26%	Ate vegetables at school	5%-26%	15%
Fruit important	59%-87%	72%	Vegetables important	28%-56%	42%
Ate school breakfast	16%-71%	32%	Ate school breakfast	15%-70%	32%
Female	32%-52%	43%	Female	31%-52%	43%
Grade: 7th grade 9th grade	 N/A	 49% 51%	Grade: 7th grade 9th grade	 N/A	 49% 51%

Table 4: Mixed effects model multivariate regression results for the association of school and individual-level variables with fruit and vegetable consumption at school among students who report eating school lunch

Variable	Model 1: Fruit Consumption		Model 2: Vegetable Consumption	
	OR (95% CI)	p-value	OR (95% CI)	p-value
Lunch period ≥34 min	**1.40*** (1.05, 1.88)	.024	**1.54** (1.26, 1.88)	<.001
Fruit/vegetable quality good or better	**1.44** (1.05, 1.99)	.022	0.86 (0.70, 1.06)	.166
2 or more fruits served	1.12 (0.83, 1.49)	.462	--	--
Salad bar	--	--	**1.48** (1.19, 1.84)	<.001
Snack food served with meals	0.96 (0.70, 1.31)	.780	**1.56** (1.25, 1.96)	<.001
Staff encourage FV	0.87 (0.61, 1.26)	.465	0.92 (.67, 1.25)	.589
Student involvement	1.24 (0.79, 1.96)	.354	**1.34** (1.00, 1.79)	.047
% FRP	1.05 (0.99, 1.12)	.092	**0.94** (0.89, 0.98)	.005
Fruit/vegetables important	**1.74** (1.49, 2.02)	<.001	**1.90** (1.62, 2.22)	<.001
Ate school breakfast	**1.55** (1.36, 1.77)	<.001	**1.56** (1.33, 1.84)	<.001
Grade 9	**1.74** (1.37, 2.22)	<.001	1.12 (.91, 1.37)	.284

*Bold type indicates statistical significance at the p<.05 level

BACKGROUND FOR PAPERS #2 & #3

The first paper suggests that schools, now required to serve more fruits and vegetables to students receiving federally supported meals, may promote students' consumption of these items by modifying certain institutional factors in the school setting, like the amount of time available to students to eat lunch, the involvement of students in food service decision-making, and the quality and variety of produce options offered. Because this is a cross-sectional study, however, cause and effect relationships cannot be inferred. While evidence suggests that providing healthy foods in conjunction with a rich program of food and nutrition education is most effective in changing students' eating behaviors, policymakers have yet to commit the resources required to support widespread nutrition education in schools. In the meantime, the present study suggests that other modifications also may support students' consumption of fruits and vegetables at school. By modifying these factors in conjunction with applying behavioral economics approaches, like modifying the placement and packaging of foods, schools may be able to begin to increase students' consumption of fruits, vegetables, and other healthy foods at school. Increasing this consumption is important for improving students' health and for minimizing food waste. Meeting both goals is essential, since a program that fails in the former and produces the latter will be especially politically vulnerable.

The importance of resource contributions to school meals becomes very clear in the following two papers, which describe the history of school lunch program policy and evaluate the potential for political coalitions to form that would strive to increase the federal financial commitment to the the National School Lunch Program. This assessment is based on an exploration of the program's legislative history, which reveals consistency in the arguments and visions presented by program advocates in the 1940s and the modern era, as well as a recurrence of similar school lunch policy issues appearing on the federal agenda over the course of the program's history. The papers rely on a study of Congressional hearings and bills to describe and begin to analyze the issues, events, and interests that have shaped the National School Lunch Program over the course of its history from the 1940s until today. This work is modeled after the work of public policy and political science scholars who have analyzed records of legislative hearings to investigate a variety of issues, including conflict between Congress and the President,[98] the role of scientists in public policy making,[99] and the development of theories of the public policy process, specifically the punctuated equilibrium theory.[100]

While scholars assert that presidents are the primary federal policy agenda-setters, legislators rank second only to the president in agenda setting.[46] In considering the role of Congressional Hearings in public policy making, a body of literature has developed to begin to describe this, but experts disagree about what can be learned from hearings.[101] Some say hearings reflect a meaningless performance on a political stage; others refute this notion and suggest that hearings are a meaningful part of the policy process.[101,99] A variety of roles have been proposed to describe the function of committee hearings, from informing legislators

to positioning committees to handle future legislation.[102] Scholars have suggested that hearings not considering any pending legislation, termed 'non-legislative hearings', may be held to indicate a committee's interest and expertise in a particular policy area to position that committee to take up future bills on a topic.[103] As such, these hearings may include testimony of actors and arguments biased toward a particular perspective, and may not be as balanced as legislative hearings that discuss a particular bill.[99,103] Still, these non-legislative hearings may provide insight into how particular committee leaders plan to address policy issues in a given area, may show new framing of issues when policy topics change committee venues,[100] and also highlight the ways in which the witnesses invited to testify are framing the issues and arguments related to the topic they are there to discuss. Therefore, while non-legislative hearings may mean something different than hearings on a particular piece of legislation, these hearings likely provide information about the issues and ideas considered important at least to the legislative committee hosting the hearing, and thus contribute to understanding the historic record.

Conducting research using legislative hearing records has many limitations. For example, these records are unlikely to uncover corruption, as most of these kinds of influences will be conducted as far from the public record as possible. Hearings may include testimony from carefully selected witnesses likely to advance particular perspectives held by the legislators hosting the hearings, and thus are biased. Yet since hearings are costly, a description of the number of hearings held on an issue at any given time can be informative about the perceived importance of that issue, at least by the committee hosting the hearing.[99] And transcripts from hearings are likely to portray the arguments that witnesses felt would be politically acceptable and possibly influential in shaping public policy. Even if the hearings are not linked predictably to legislative outcomes or real legislator policy commitments[a], it is unlikely that most of the witnesses testifying would attend and speak without at least some kernel of hope that their comments would contribute meaningfully, and witnesses seem likely to try to represent the issues in the way they believe. Thus, hearing transcripts should provide pertinent information about how members of Congress and witnesses sought to represent the program in this formal congressional setting.

While hearings may have different purposes, biases, and other limitations, the records from committee hearings present the debates as they unfolded in the public chambers of Congress, and provide a record of how policy debates evolved in the past that is difficult to reconstruct using other data sources.[99] Although hearings and other legislative documents offer only one small window into the relevant policy debates on an issue at any given time, they do record the formal agenda in

[a] For example, it is possible that a committee chair would hold a hearing on an issue to please a constituent group without actually intending to place real legislative resources behind that policy issue. However, since committee chairs do have political goals that they need to attend to and given that time is a valuable political commodity, it would be surprising if committee chairs devoted considerable time and attention to hearings that bore no relation to their actual political priorities.

Congress and the actors and arguments that were presented in public policy debates.

The following paper provides an in-depth analysis of the issues and arguments debated during the Congressional hearings held in 1944 and 1945, prior to the adoption of the National School Lunch Act, which was signed into law in 1946. The paper shows that understanding the initial policy debates helps answer many current school lunch policy questions, as it reveals that the policy outcomes of the debates in the 1940s persist in current school lunch policies. Further, the review of arguments presented by social reformers working to improve children's health and nutrition in the 1940s highlights the fact that the arguments for improving the school lunch program in the modern era essentially mirror these early arguments. The subsequent paper covers a larger set of issues and arguments presented in Congressional hearings and bills over the duration of the program's history (1946 – present). This paper illustrates that many of the issues that were debated in the 1940s continue to reappear on the formal federal agenda. The paper also highlights the waves of proposals to increase and cut back the federal investment in the school lunch program over time. Together, these papers establish the types of issues and arguments that advocates, administrators, and policymakers have articulated in trying to shape the school lunch program's central goals and programmatic details over time. Cast in this light, advocates for ideas that have failed in the past must consider whether their current approaches are vulnerable to the same politics that trumped them in past political battles. Similarly, program supporters should understand the proposals to dismantle the federal school lunch program, and why they failed, in order to be prepared to defend the program against similar proposals that may be anticipated in the future. Further, these papers show that while the public health nutrition community may perceive the school lunch program to be a stable federal investment, this perceived stability may be more a function of political good fortune than of a strong and secure federal commitment to children's health and nutrition.

PAPER #2

TITLE: Early Arguments and Framing of the National School Lunch Program

ABSTRACT
The National School Lunch Program (NSLP) has supported the provision of lunch meals to schoolchildren in the United States since 1946. Recent policy developments have placed renewed focus on the opportunities presented by the NSLP to improve children's health, and nutrition advocates have become increasingly involved in the federal policy process. Political science theory suggests that understanding history can provide insight into current policy debates. Yet the origins of modern school lunch policy debates and the rationale for establishing a school lunch program initially are not well understood. The purpose of this paper is to summarize the early framing and arguments that led to the original structure of the NSLP. It was hypothesized that understanding the full complement of issues and arguments that were debated at the time the program was established would provide valuable insights into the policies that shape current students' experiences with school lunch. This study examined the transcripts of the three Congressional hearings held in 1944-1945, that considered proposals for establishing ongoing federal support for school lunch programs. The review of hearing transcripts identified many issues of contention in the early debates, including whether the primary program objective was to serve the Nation's agricultural needs or to support children's health and wellbeing, which federal agency would administer the program, the degree to which federal resources should be used to support school meals, which children would benefit from school lunch programs, whether food and nutrition education should be included, and whether resources would be provided for equipment and training of personnel. Better understanding this history can help current advocates more effectively promote and protect children's opportunities to benefit from school meals.

"*Lessons about the past are not merely of antiquarian interest. They speak to issues that continue to animate U.S. social policy debates today*." -- Theda Skocpol, 1995

INTRODUCTION

In the United States, the federal government has contributed financial and material resources to support the provision of lunch meals to schoolchildren for nearly seven decades. This makes the National School Lunch Program (NSLP) the longest running federal nutrition program in the country—outdating the other primary nutrition programs, including Food Stamps (now called SNAP), WIC, the School Breakfast Program, and the Child and Adult Care Food Program. In the past decade, health and nutrition advocates, as well as policymakers, have devoted renewed attention to the School Lunch Program, as the nation has struggled with an epidemic of poor nutrition and physical inactivity among its youth, evidenced by a dramatic increase in childhood obesity, as well as childhood onset of chronic diseases once thought only to plague adults.[30,104] With some research projecting this generation of children to reverse the longstanding trend of increasing life expectancies, and to consume billions of dollars in healthcare expenditures and lost productivity due to chronic disease, attention to ways in which the government can intervene to improve children's health has increased.[31,32,33,34] Schools, as an institution structured to promote and enhance the welfare of children, have become a focus of this attention.[88,19] With the National School Lunch Program feeding a lunch meal to nearly two-thirds of the nation's school children on an average school day, scientists, advocates, non-governmental organizations, as well as the federal government have recognized that optimizing the opportunities presented by this program to influence children's diets and health must be a key component of the government's response to the current crisis.[19,41]

In recent years, researchers, health professionals, parents, and other advocates have proposed ways in which to improve the school lunch program. Many of these proposals have reached the federal agenda, bolstered by recommendations from the Institute of Medicine.[106,105] In 2010, passage of the Healthy Hunger-Free Kids Act began the process of reforming the National School Lunch Program to better link the foods and beverages served and sold in schools with the nutritional needs of the nation's youth. Health and nutrition experts have advocated further actions to facilitate the program's ability to optimally support children's health and development.[19] In addition to improving the nutritional quality of all foods served at school, recent school lunch advocacy efforts have focused on increasing the provision of fresh foods and decreasing processed foods and "fast foods"; providing comprehensive food and nutrition education alongside school meal programs; better integrating the school lunch into the educational process; developing seamless systems so that no stigma is associated with eating a school lunch; and increasing reimbursement rates to ensure adequate resources are available for quality meal service, including funding for facilities and training of food service personnel. Health and nutrition advocates currently are working to change policy to reflect these ideas.

A review of school lunch policy issues that have appeared on the formal federal legislative agenda over the course of the National School Lunch Program's history revealed that a number of these ideas currently popular among program advocates have appeared on the agenda in the past.[107] This recognition begged questions about the origins of these policy ideas: why do we have a National School Lunch Program to being with, and what were the goals of the early program advocates? If the same ideas continue to reappear, but nutrition advocates have continuously struggled to gain political traction for their broadest goals, what does that tell us about the strength of the public health nutrition arguments for school lunch policy reform? Will scientific understanding lead to sustained improvements in the school lunch program, or does the nature of the arguments, promoting an expansion of the federal government, make them likely to meet with the same failed outcomes regardless of the science? In political science, understanding history can make sense of present debates.[108] Further, in order to craft effective policy solutions and strategies, understanding current and past contextual and political relationships can be important.[109] Political science theory suggests that while the infusion of new ideas or actors (people involved in policy issues, not those engaged in the profession of acting) can lead to political mobilization, policy changes also can result from new ways of framing or presenting policy issues or problems, or from devising new solutions to existing problems; the stories told about these problems and solutions matter.[110] To understand how policy ideas ultimately get attention and traction, John Kingdon suggests that policy outcomes can result from various actors simultaneously identifying and defining problems, crafting policy ideas, and interacting with politics in independent streams.[46] Issues arise on the policy agenda through various mechanisms, but are only considered for serious policy action when problem, policy, and politics streams are coupled during the opening of a "policy window."[46] Further, Andrea Campbell suggests that a dynamic interplay exists between public policies and political representation. Using the case of seniors and Social Security as an example, she argues that the creation of Social Security led to the political mobilization of an interest group—seniors—who garnered further political support in order to protect their program.[111] In this case, while interest groups sometimes push policy, the relationship may be bidirectional, with policies creating interest groups and those interest groups mobilizing to continue to shape policy.[111] Together these policy frameworks establish that understanding periods of policy formation, as well as the subsequent feedback of those arrangements, are essential in understanding the development of public policies.

This paper provides an in-depth exploration of the issues and arguments that shaped the National School Lunch Program when it was established in the 1940s, by describing the primary arguments that were presented in Congressional hearings held prior to the passage of the 1946 National School Lunch Act. These hearings, held in 1944 and 1945, document the issues that legislators, bureaucrats, and advocates were grappling with as a national, prolonged commitment to school lunches was being considered. I expected that understanding the ways in which problems, solutions, and politics were involved in the formation of the National

School Lunch Program would provide insights into current program policies, debates, and challenges. History may explain the rationale behind school lunch policies, and provide answers to current questions, such as: Why does the USDA distribute foods as part of the National School Lunch Program? Why are meals provided as a separate means-tested program in an otherwise seamless provision of educational services at school? Why is nutrition education only provided on average for 4 hours per school year despite recognition that nutrition education can support students' consumption of healthy foods? Why is federal funding inadequate to prepare healthy, fresh meals? Answers to these questions may be found only by understanding the historical contexts in which the policies leading to current program structures were developed.

The purpose of this paper is to summarize the early framing and arguments that led to the original structure of the National School Lunch Program. I hypothesized that understanding the full complement of issues and arguments that advocates, legislators, and administrators debated at the time the country established ongoing support for a federal school lunch program would provide answers to questions that emerged from reviewing the legislative records from 1946 to the present. In particular, I expected the early debates to illuminate the problems the program was created to solve and to explain how the program became structured as it was. By understanding the origins of the arguments that continue to reappear, I expected to be able to better understand the policies that shape current students' experiences with school lunch. Despite a number of policy changes over the years, the paper will show that many artifacts of the original debates persist in current policies. Similarly, the paper will demonstrate that most of the modern ideas about what an ideal school lunch program would provide were advocated nearly 70 years ago when the program was being formed. Public health nutrition professionals should understand the history of these issues in order to develop more practical and effective strategies for improving students' experiences with school lunch in the future. This review of the legislative history reveals both the presence of economic and social welfare interests in articulating goals for the program initially, but ultimately shows that the economic interests dominated the policy outcomes. This tension between economic interests and public health policy continues today.[112]

Despite the fact that the school lunch program is the largest child nutrition program in the United States, relatively little has been written about its policy history, and no systematic review of Congressional documents related to the program was found. The most comprehensive account of the program's history, Susan Levine's book entitled "School Lunch Politics," tells a complex story of the politicians and activists involved in establishing the School Lunch Program, yet does not systematically describe all of the programmatic issues and arguments that were being debated at the time the program was established.[113] While Levine writes about an agricultural impetus combining with an interest in children's proper nutrition to support the establishment of a permanent National School Lunch Program, other sources provide distinct accounts of the rationale for establishing the program. For example, the website of the School Nutrition Association, the nation's largest organization of

school food service professionals and advocates, states: "The (National School Lunch Act) came in response to claims that many American men had been rejected for World War II military service because of diet-related health problems."[114] Other authors similarly state that the primary impetus for the program was related to concerns about malnutrition among military recruits.[115,15] Providing the public health nutrition community with a clear understanding of the problem or problems the program was intended to address, and the policy alternatives that were being considered to solve the problems at the time of its inception will inform current professionals about the original impetus for the federal school lunch program, the course the program has taken over time, the degree to which the coalitions of interested parties has been consistent over time, and where the program might be directed in the future.

By relying on Congressional hearing testimony to capture the issues and arguments being considered by legislators, administrators, and advocates at the dawn of the National School Lunch Program, this paper draws upon the experiences of other researchers in utilizing these documents to answer important policy questions.[98,99,100,103] As the paper will show, the hearing transcripts provide a great deal of insight into the issues and ideas considered at the time the School Lunch Program was being established. However, the hearing transcripts do not fully illuminate the behind-the-scenes political deals that produced the ultimate school lunch legislation.[113] In relying on the hearing transcripts to portray the ideas and issues presented at the time, it is important to consider some limitations of interpreting these documents. Theories about human behavior are relevant to public policy in many ways, but are particularly important in guiding the interpretation of the statements of elected officials in public debates. When utilizing transcripts of Congressional hearings to draw conclusions about historic events, it is important to contextualize the interpretation of elected officials' words and actions in theory. The relationships between attitudes and persuasion, intentions and behaviors have been studied extensively in psychology.[116,117,118] The theory of reasoned action and the theory of planned behavior currently are frequently used to suggest the way in which attitudes, subjective norms, intentions, and behaviors are linked. In these models, attitudes and subjective norms precede behavioral intentions, which lead to behavioral outcomes.[119] The theory of planned behavior adds perceived behavioral control to the model, suggesting that one's perception of behavioral control directly influences both behavioral intentions as well as behavioral outcomes.[119] A 2001 review of the literature on attitude theory and research suggests that more predictors in the models may be beneficial, as might the roles of prior behavior and habit: "Although it is now generally recognized that attitudes are relevant for understanding and predicting social behavior, many questions remain. Investigators continued to identify factors that moderate the effects of attitudes and intentions on overt actions."[118(p48)] Thus, if the links between attitudes and actions are not concretely clear in the general public, it can be expected that these connections will be even less solid among elected officials, whose political actions are guided by calculations likely involving many more predictors even than those in the general public. Thus, while this paper utilizes statements of elected officials along with other

witnesses to construct a story about the issues and arguments being considered during the early school lunch debates, caution should be exercised in linking these statements with the ultimate policy outcomes. While the paper will show that the legislative outcome of the school lunch program policy debates in the 1940s did not reflect many of the ideas advocated by the social reformers promoting children's health and well-being in the hearings, it also shows that the members of Congress involved in these debates were actively engaged in shaping what the program would look like. While it is possible that legislators were projecting an interest and openness to a variety of policy alternatives presented by witnesses that wasn't real, the dialogues recorded in the transcripts suggest a more genuine effort by legislators to craft a school lunch program that would be politically feasible given the larger congressional politics of the time, and would solve as many of the problems discussed as possible. Levine describes some of the political maneuverings that occurred once the bills passed through committee, and school lunch program policy was considered on the floor in Congress.[113]

This analysis begins with a brief description of the history of school feeding in the United States that led to the hearings. Following this history, a description of many of the primary issues debated in the hearings is presented, with supporting quotations from the hearing transcripts. These issues include questions of whether the program should be adopted primarily to benefit farmers or children, which federal agency should administer the program, the degree to which federal resources should be devoted to school lunch programs, which children would benefit from school lunches, whether food and nutrition education should be included with a school lunch program, and whether support should be provided to schools to obtain the equipment and personnel needed to operate high quality lunch programs. After a discussion of the issues raised, a summary of the content of the final legislation, the National School Lunch Act, is provided. Those issues that continue to be relevant to modern debates about school meals are presented briefly. The paper concludes with a discussion of the relevance of this study.

HISTORICAL CONTEXT

Beginning in the late 1800s, grassroots charitable organizations and individuals began to establish lunchtime feeding programs at schools in the US, modeled after similar programs that had been underway in some European countries.[113] In the mid-1930s, the Works Progress Administration employed more than 64,000 people in school lunch work projects.[113] But the main Federal role in school meal programs began in the mid-1930s, when the depression raised serious concerns about agricultural markets. In order to prevent price drops for agricultural products when supplies outpaced demand, the government passed the Agricultural Adjustment Act of 1933, which was amended in 1935 with Section 32, which allowed the Secretary of Agriculture to spend up to 30% of the gross receipts from duties collected in customs annually to encourage consumption of domestic agricultural products.[120] These became the primary funds used to support distribution of foods to school meal programs. Some high profile stories of government stocks of food products going to waste while there were Americans going hungry led the government to try

to secure effective channels for distributing surplus products to ensure their timely consumption. The Department of Agriculture found schools to be the optimal institutions to consume surplus items and to expand the market for agricultural products. As the Honorable Marvin Jones, War Food Administrator in 1945, stated:

> We have always considered school-lunch programs our most saisfactory (*sic*) recipients for this sort of distribution, not only because everybody is anxious to see children well fed, but because the schools are physically equipped to handle this distribution much better than relief clients and most of the other outlets we have used in the past.[121(p3)]

Utilizing these funds was justified on the basis that school children were a prime new market for agricultural products. Ensuring that children consumed adequate food meant that farmers could introduce and sell their products to more consumers, as was clearly articulated by Colonel Olmstead, Deputy Director of Distribution of the War Food Administration in 1944:

> Now, if…the school lunch program actually does provide in the long pull a new market, and aid to agriculture in the development of an extended outlet for its product, then we believe this authorization ought to be approved… frankly, we are unable to see how in the post war years, or even right now, when we have a surplus of agricultural commodities in a given community, or given producing area, the Federal government can undertake or even share the responsibility for procuring it, unless it can at the same time provide a rational and defensible outlet for those commodities. You simply can not just buy them and let them rot.[122(p57)]

School lunch programs thus were seen to be both an effective outlet for agricultural surpluses and a vehicle for expanding agricultural markets.

Perhaps importantly, a 1930 White House Conference on Child Health and Protection had led to the development of a Children's Charter, outlining the rights of modern childhood in an ambitious proclamation.[123] These rights and protections were quite comprehensive, including spiritual, physical, and emotional health and wellbeing, access to healthcare, quality education, support services for emotional or physical challenges, and more. Thus, the Hoover Administration had proclaimed the importance of childhood and the government's interest in assuring all children had access to the resources they needed for healthy growth and development. While few of these children's issues had been addressed with new public policies, they had at least been considered at the federal level. This may suggest that children's advocates were organized sufficiently to gain attention on the federal agenda, yet they lacked adequate political power ultimately to produce policy outcomes.

By 1940, it was estimated that more than 2 million children ate lunches in schools that served Federal surplus foods.[124(p4)] These lunches were required to meet particular nutrition requirements, based on the current scientific understanding of the nutrient needs of children. Schools able to provide full lunches were required to meet what was called "Type A" requirements, while schools without adequate facilities to provide Type A lunches could provide smaller, "Type B" meals. Both Type A and Type B meals were required to include milk, protein-rich foods, fruits or vegetables, grains, and butter or margarine. The difference between the two was portion size, with Type B meals being substantially smaller. Schools unable to provide either Type A or Type B lunches were able to serve "Type C" meals, which provided milk only.

In the early 1940s, increased demand for food as a result of World War II led to the exhaustion of federal food surpluses. Thus, the foods that had been channeled into school meal programs no longer were available. In Fiscal Year 1944, Congress appropriated $50,000,000 for school meals to make up for the loss in surplus food distribution. In making this appropriation, however, the Senate Appropriations Committee stated that sponsoring school meals from Section 32 funds was "a perversion of the intention of that law,"[125(p76)] suggesting that a new mechanism to support school meals may be needed. Further, the appropriation was subject to annual approval by Congress. In FY 1945, the appropriations committee denied the appropriation, stating that, "Since this program is not authorized by law, the committee has excluded from the bill any appropriation therefor."[125(p77)]

After the failure of Congress to appropriate funds for school lunches for FY 1945, school lunch supporters began to craft legislation to establish ongoing support for school lunch programs. These supporters generally fell into two groups: (1) fiscal conservatives concerned about efficiency and the government's role in correcting a market failure by intervening to ensure the availability of an appropriate outlet for purchased government surplus crops; and (2) progressive social reformers who believed that providing nutritious meals to children at school would enhance the benefits provided by public education and promote the health and wellbeing of the nation's children. The two groups were mutually dependent, as neither argument was considered likely to succeed in changing federal policy all on its own. In 1944 and 1945, a number of bills that would authorize a federally supported school lunch program were introduced in the legislature. Program supporters had formed a coalition poised to advocate for these bills, since the United States Department of Agriculture (USDA) in the early 1940s had organized school lunch advocates into what was called the Coordinating Committee on School Lunches.[113(p50)] This coalition was comprised of a wide array of individuals and groups that supported school lunch programs from a variety of perspectives: agricultural, educational, social welfare, etc., many of whom came to Washington to testify in support of the development of a national school lunch program.

THE HEARINGS

Two primary Congressional hearings to consider the proposed school lunch bills were held prior to the ultimate adoption of the National School Lunch Act in 1946. The first, entitled "School Lunch and Milk Programs" was held in the Senate Committee on Agriculture and Forestry from May 2-5, 1944. The second, entitled "School-Lunch Program" was held in the House Committee on Agriculture over the course of 14 days spanning March 23 – May 24, 1945. A third, shorter, unpublished hearing, entitled "School Lunch Program" was held on February 15, 1944, by a subcommittee of the House Committee on Agriculture (the subcommittee felt the hearing was of such importance that they invited the entire committee to participate). Although the transcript of this hearing now is available online, the very poor print quality and handwritten edits throughout make it extremely difficult to read. Thus, while the hearing was reviewed, fewer quotations from it appear in this report.

The three committee hearings included 47 witnesses: 3 in the unpublished 1944 House hearing, 35 in the 1944 Senate hearing, and 20 in the 1945 House hearing (11 witnesses testified at more than one hearing). All 47 witnesses testified in support of a school lunch program. Given that the agriculture committees initiated discussions of creating legislative authorization for a school lunch program, it is not surprising that the focus of the hearings was to figure out how to pass this legislation. A powerful interest group at the time—farmers—was relying on the agriculture committee to establish a school lunch program in order to continue political support for government purchases of agricultural surpluses. Yet the committee members did not agree about the structure the program should take, and were not confident that school lunch legislation would pass on the floor in Congress. Thus, the hearings consider multiple bills that include various structural options for school lunch programs. While all of the witnesses testifying supported the program generally, their ideas about the appropriate rationale for the program, as well as the details of how the program ought to be structured differed. The discussions clearly were focused on how and why the federal government should invest in school meals, rather than whether the federal government should invest.

The early hearing transcripts present a partial window into the issues and arguments that were being considered by a variety of actors interested in school lunch at the time of the program's inception. Yet since legislators, agency officials, experts, and advocates participated in the hearings, many of the influential voices of the time likely are represented. Moreover, the politics one would associate with the actions of these classic iron-triangle participants—i.e. the Agriculture Committee Chairs—is explicit in the hearings; participants do not appear to try to mask these politics. As this paper explores, the hearing transcripts highlight a tension among the needs of the various interests involved in the school lunch debates of the 1940s. The degree to which agricultural or children's needs would influence the program's future, and just how those needs would shape the details of the program, were topics of a good deal of discussion. Several other issues of concern also received attention, like the degree to which the program should be supported by the federal

government, which federal agency should administer a school lunch program, which children would benefit from school lunches, whether the program should include an educational component, and whether resources would be provided for equipment and personnel to facilitate high quality lunch programs. The next section of this paper describes in depth the arguments that were presented in relation to each of these issues.

PRIMARY ISSUES AND ARGUMENTS PRESENTED IN THE SCHOOL LUNCH HEARINGS

Which problem(s) was the school lunch program intended to solve?

The hearing transcripts provide very clear evidence that the impetus for the federal involvement in school meals arose to meet the needs of the agricultural sector. Yet the alignment of other interests, including education, health, national security, and social welfare, created a powerful coalition advocating for school lunch. A primary tension articulated in the hearings was between whether the program should primarily be in place for the benefit of the children of the United States or the nation's agricultural sector. This tension was articulated by witnesses as well as by members of Congress. While all witnesses testified in support of the program generally, disagreements about the proper rationale for establishing the program on a permanent basis ensued. Some expressed opinions that establishing multiple goals for a school lunch program were acceptable, yet others argued that the sole purpose of the program should be to improve children's health and wellbeing.

The agricultural sector appeared to understand the value of coupling the benefits of school lunch programs with other outcomes. For example, Lt. Col. Ralph W. Olmstead, Deputy Director of Distribution of the War Food Administration accepted multiple goals for the program in his testimony before the Senate in 1944:

> I have heard a great deal of argument that the school-lunch program is a nutrition program, and educational program, or it is a surplus program. I think a fair view is, it is all of those or at least it can be all of those.[125(p67)]

War Food Administrator Marvin Jones also appeared comfortable with establishing multiple objectives for the school lunch program when he testified in the House in 1945:

> I believe the legislation proposed in H.R. 2673 permanently establishes Federal assistance to school-lunch programs on a firm base. It sets as the policy of Congress the dual objective that we feel the school-lunch program should be designed to accomplish: expanding the markets for agricultural commodities by encouraging domestic consumption and improving the nutritional status of the Nation's children through providing foods for a school-lunch program. We believe that these objectives are inseparable. It goes without

> saying that the proper distribution of food so that everybody in the Nation will be adequately fed is not only to the benefit of the people who are now undernourished, but also to the benefit of the farmer whose economy can never be really stable until the whole population is well fed.[121(p2)]

This statement also is telling of the intimate link between food producers' profits and the population's consumption. Yet Mr. Jones made clear that despite this acceptance of multiple goals, he saw the agricultural goal as primary and the educational, health, and national security goals as secondary:

> … I think an outlet for farm commodities insofar as it is possible to secure it, is the ideal way to proceed. Then if, along side that, we can accomplish what everyone recognizes is desirable from the standpoint of national security and our national future, a well-educated, healthy, growing young population, I think there can be very little argument.[121(p3)]

In contrast, others acknowledged the agricultural impetus for the federal participation in school lunches, but expressed opinions that the program was primarily justified to meet the objectives of children's health and wellbeing. Thomas Parran, the Surgeon General from 1936-1948, said:

> The committee will recall that the first action on the part of the Federal Government in connection with this problem was related to the disposal of surplus foods. It seems to me that that is going at the problem from the wrong point of view. I would hope that in this country we would establish a national policy of aiding in the improvement of nutrition through the provision of school lunches on the basis of the need, the relative need, of the different areas and of the children for food… The major objective, I hope all of us agree, is to improve the health and physical stamina of our children.[121(p13-14)]

In addition to health professionals, home economists, community advocates, and women's groups also strongly advocated for establishing a federal investment in school lunches with the primary objective being to address the needs of children. For example, Elisabeth Amery, State Supervisor of Home Economics in Maryland, representing the American Home Economics Association said:

> We are concerned with the functioning of the school lunch for positive health of all school children… The American Home Economics Association believes that a school-lunch program should have as its main objective the improvement of the nutritional status of the population.[121(p106)]

Similarly, Mrs. Harvey W. Wiley[b] representing the General Federation of Women's Clubs, stated:

> …the main question is the health of our children, so that they will be better able to absorb the education provided for them to fit them for democratic living. This main purpose cannot be secondary to anything. One cannot justify Federal assistance to school lunches on the claim that it will aid farm markets. The program may have begun that way but from now on feeding of hungry children is the main feature. If education is given free in the public schools, then food must now be given to enable the hungry children to absorb the education provided, or else it is thrown away.[125(p49)]

For the politicians, it was clear that enduring a situation in which the government wasted surplus foods while members of the public went without adequate nourishment was untenable. Representative Clifford Hope, Republican from Kansas, said:

> …Of course, I think the reason for this school-lunch program, so far as the Federal Government is concerned, was based upon the fact that we had an almost indefensible situation in the country; we had a great surplus of farm products and at the same time we had many people who were undernourished…[121(p14)]

Other legislators appeared to be confused about the purpose of the school lunch program. In fact, Representative Granger, Democrat from Utah, at one point said: "Mr. Chairman, I am a little confused as to the purpose of this program."[121(p187)] To which the Chairman, John W. Flannagan, Jr., Democrat from Virginia, responded:

> …I think the program was created more or less during a depression, when we had a lot of surplus farm products and it was a method of channeling those crops off. And we thought there was a great need in the schools and that those crops could be used to great advantage in that way… That was the beginning of the program.[121(p187)]

The following exchange between Representative Murray, Republican from Wisconsin, and Representative Cooley, Democrat from North Carolina, further highlights the competing perspectives among the legislators involved in establishing the program:

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[b] Note: I have referred to individuals in a manner consistent with the way they were represented in the hearing transcripts. Thus, I have used the terms Mr., Miss, and Mrs., have included the husband's name for women, and also often have referred to committee leaders as Chairman. While this is not the current convention in reference to gender, it is the way names are recorded in the historic record.

> Mr. Murray. "…To my mind, I don't see where we are going to do much on the surplus problem. I was just wondering how far we can go down that road, Mr. Chairman, and still keep to our main objective, which is to see that the children of this country, regardless of their incomes, have at least the income to get a lunch.
> Mr. Cooley. Is that the objective? The main objective, as I understand it, is to dispose of surplus agricultural commodities, and the feeding of the school children is just collateral to that main objective…[121(p232)]

These exchanges make clear that at the time of these hearings, members of the Agriculture committees in both the House and Senate generally supported the establishment of a federally-supported school lunch program, but that they felt this way for different reasons.

The school lunch program often is attributed to being implemented as a result of malnutrition among military recruits. While it does appear that legislators liked this argument, it is interesting to note that the evidence presented linking school lunch to military recruitment in these early hearings was weak. Data presented in the Senate hearing in 1944 that attributed a large number of rejections of military recruits to nutrition-related conditions were later retracted. The witness was not able to provide the follow-up evidence that had been requested for the Congressional record[c]. The House hearing the following year included testimony related to military interests in the program, but the argument that school meals would increase the preparation of military recruits was not strong. Major General Lewis B. Hershey, Director of the Selective Service, did not present any hard figures for the proportion of military recruits rejected due to malnutrition during his testimony. Rather, he presented estimates:

> From what study we have made I would say that 2 or 3 percent of them [the rejections] only are specified as malnutrition and rickets and a few things that are almost wholly connected with nutrition; but while there are 2 or 3 percent of those nutritional defects specified as such by examiners, there are 40 or 50 or 60 percent, perhaps, of

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[c] The following statement was inserted into the record: "I regret very much the delay which has occurred in sending the information which I promised you some time ago, substantiating my testimony concerning the relation between nutritional status and physical impairment, as shown by draft examinations.

I regret to advise that it has not been possible to correlate these facts. It is my impression that some of the early records of the draft did show such correlation but our Public Health Service statisticians have been unable to confirm it on the more complete returns from the selective service system. They believe that such correlation may exist but there are so many other factors as to obscure the picture.

Our studies in Hagerstown, Md., to which I referred in my testimony, showed that of 91 children whose nutritional state was considered fair or poor, 70 percent were rejected for military service 15 years later, while of 232 children with good or excellent nutritional state, 47.5 were rejected. (Senate Committee on Agriculture & Forestry, 1944)

> rejections that are rejections in which at least nutrition or feeding has much to do with the rejection… I think it would be a more reasonable thing to say that probably at least 40 percent of them are for reasons in which nutrition can be a definite factor.[121(p44)]

In response to whether he thought the school lunch program would help with those rejections, General Hershey said:

> I am not prepared, and I don't think it would be fair, because I don't know much about it, for me to offer an opinion on either school lunches in this bill, or school lunches at all… I don't believe that any one thing—I don't want to say that one thing is right or wrong, but what I am trying to do is stick to my last and not get into the making of opinions on something I don't know about.[121(p47-48)]

Thus, although the argument was discussed, the record suggests that it was an ancillary issue not particularly well supported at the time. However, this idea that school lunches potentially could benefit future military recruits was raised by multiple legislators and witnesses, despite the relatively weak evidence. This issue likely was an important aspect of the public relations rationale for establishing a school lunch program.

These hearings point to two competing rationales for establishing a school lunch program. While the opportunity for the program to address multiple problems with one solution likely produced the leverage needed for policy adoption by increasing the number of supporters with a vested interest in the program, the differing opinions about the justification for the program among its supporters suggests possible fractures could develop within the coalition over time. The disagreements about the program's purpose led to practical disagreements about which federal agency would administer the program, as is discussed in the next section.

What federal agency should administer a school lunch program?

The multiple goals articulated for the school lunch program caused practical challenges. If the program was primarily about agriculture, it made sense for it to be administered by the United States Department of Agriculture. But if the program was primarily about improving children's health and education, then it would be better positioned in the Department of Education. And since the agencies were quite distinct, whether either agency would be capable of ensuring that the objectives of the alternate institution were met was unclear.

The short, unpublished 1944 House hearing focused a good deal on the issue of determining the appropriate administrative authority for a school lunch program. In his introduction, Stephen Pace, Democrat from Georgia, the Chairman presiding over the hearing, stated that the Bureau of the Budget had indicated that a school

lunch program should be administered by the Office of Education in the Federal Security Agency. The Director of the Budget had written in a letter:

> … from an organizational point of view, the Office of Education… would be the appropriate Federal unit for supervising that (school lunch) program and integrating it with the public school program.[122(p2)]

This was a primary reason this hearing was convened to discuss possible legislation to establish a school lunch program.

Many members of the agricultural committees in Congress, both in the House and the Senate, expressed a preference to have a School Lunch Program administered by the Department of Agriculture. Senator Richard Russell, Democrat from Georgia and the man whose name is now included in the title of the National School Lunch Act, (it became the Richard B. Russell National School Lunch Act in 1999), stated:

> I believe very firmly that this program ought to stay in the Department of Agriculture. I think it is going to be discontinued by Congress in a year or two if it is not connected with the disposition of surpluses…[125(p23)]

Similarly, the Chairman of the House Agriculture Committee's framing of a question to the War Food Administrator during an exchange suggests that he likely supported this same position:

> Chair Flannagan: Judge, due to the fact that the moving of surplus farm commodities will enter largely into the program, especially after the emergency, what is your opinion with reference to whether the school-lunch program should remain under the Department of Agriculture, or should be under the Department of Education?"
> Hon. Mr. Jones: …the double purpose can best be served by continuing the program in the Department of Agriculture… To my way of thinking, the school-lunch program is one place where we can have a surplus disposal and have public support... I just feel that surpluses of food and people who don't get enough of the right kind of food to eat are two parts of the same problem, and it helps all the way around if it is handled by Agriculture.[121(p4-5)]

And while the Chief of School Lunch and Distribution Branch of the War Food Administration, Mr. Ockey, expressed support for the goals of nourishing children, he agreed that the program should be administered to facilitate the distribution of agricultural commodities:

> …we feel (it) is very important in the legislation you are considering, that it should be set up in such a way that the Department of

> Agriculture can continue to make those contributions of food in kind to the schools which result from our price-support programs. In whatever manner this is set up, it should be set up in a way which will not create a hindrance to the distribution of these perishable commodities, because in order to handle them satisfactorily they must be handled quickly.[121(p188)]

Yet this position was not universally supported. Many of the organizations testifying before the committees were vehemently opposed to the program being administered by the Department of Agriculture, despite their general support for a school lunch program. The Chairman of the Senate Committee on Agriculture and Forestry from 1933-1944, Ellison Smith, Democrat from South Carolina, and Senator Allen Ellender, Democrat from Louisiana, had proposed S. 1824, which would have had the federal Commissioner of Education administering the program. Educators, home economists, women's groups, and others agreed that the program should be situated in the Department of Education. For example, Clyde A. Erwin, State Superintendent of Education, North Carolina, representing the legislative committee of the Council of Chief State School Officers, argued strongly in favor of the program being administered by the Department of Education. An exchange between Mr. Erwin and Senator Russell illustrates the competing perspectives:

> Mr. Erwin. If this program had been channeled through the Federal Office of Education, directly through the State department of public instruction in North Carolina and straight down through the schools, in my judgment it would have been a much sounder program.
> Senator Russell. … Well, it grew up out of the disposition of surplus agricultural commodities, and no one had ever seriously discussed any bill providing for a Federal school-lunch program prior to that time.
> Mr. Erwin. …When you begin to set up your school-lunch program… your lunchroom becomes a laboratory of nutrition, of other educational features and phases which tie right in with the school program as a whole, not a separate agency sticking out like a thumb… When you begin to set up new channels, you confuse that program and you destroy the integration and cooperation which is necessary.[125(p34- 35)]

Similarly, representatives of the General Federation of Women's Clubs, the National Congress of Parents and Teachers, and the American Home Economics Association argued strongly in favor of the program being administered through the Department of Education. Mrs. Dora Lewis, Chairman of the home economics department of the New York University and representing the Home Economics Association, emphasized the association's support for S. 1824, the Smith-Ellender bill which had the Department of Education administering the program:

> We endorse this S. 1824 for three reasons. We definitely believe in Federal aid for the promotion and establishment of school-lunch programs, with the proviso that an educationally sound program is established. We believe that the objective for such programs should be to improve the health of school children, and to help them and their families develop desirable food habits. We believe that this objective can best be accomplished if the program is administered by the legally constituted school authorities at local, State and national levels.[125(p41)]

And Miss Agnes Winn, assistant director, legislative and Federal relations division of the National Education Association, stated that:

> At the present time there is no surplus of agricultural commodities. With no surplus on hand the program can no longer be defended as a means for lifting the economic level of rural life. The chief justification for continuing the program today can be rationalized only in terms of the educational and health objectives which are advanced as the food habits of youth are intelligently changed and improved. This transfer of emphasis from economic to educational and health considerations provides a substantial basis for declaring that the administration of the school-lunch program should be allocated as a responsibility to the regularly constituted Federal and State educational agencies… At the present time the Congress of the United States is in the position of authorizing a Federal program in the schools of the Nation without reference to the United States Office of Education and to the State departments of education. This arrangement… encourages confusion and controversy between State and Federal agencies as to functions and political processes, and increases the difficulties in the way of successfully administering the program itself."[121(p88-89)]

Additionally, the National Congress of Parents and Teachers, which had sponsored school lunch programs for many years before there was any federal support, also felt strongly that the program should be administered by the Department of Education. A letter from the group's national legislation committee Chair read by the group's Chair, Mrs. Leonard, said:

> …in many cases the general idea seemed to be to use the schools as a dumping ground for commodities that were in surplus, regardless of whether the schools could use the quantities sent to them, with the result that food often spoiled on the shelves… We vigorously oppose H.R. 2673 because we think it a bill which would centralize the program under one agency which is not the proper agency to administer the program in the public schools of our country.[121(p131)]

After reading the letter, Mrs. Leonard stated:

> We feel definitely that it should come under the Department of Education and the State departments. It is an educational program and should be a permanent program.[121(p132)]

Thus, a great deal of disagreement was expressed by those with diverse opinions about the primary purpose of the program in terms of which federal agency should administer the school lunch program. In fact, a compromise agreement was brokered by the Commissioner of Education, Mr. Studebaker, and a War Food Administrator, Mr. Ockey, after being instructed by the Chair of the House Committee on Agriculture to come to some agreement about the operations of a school lunch program. A proposal for the program to be dually administered by the Department of Agriculture and the Department of Education was presented at the end of the House hearing in 1945. In this proposal, the school lunch program would have been structured into two tiers: tier one addressing the distribution of food and funds for food, administered by the Department of Agriculture, and tier two addressing the education, management, equipment, and other needs of school lunch programs, administered by the Office of Education.

To what degree should the provision of school meals be a federal concern?
While the Agriculture committee members and the witnesses they presented in the hearings generally supported the idea of a national school lunch program, concerns about the degree to which the federal government should fund and control the program were expressed. In particular, it was clear that the legislators envisioned a limited federal role, focused on helping states and local schools to establish school lunch programs—regardless of whether the priority was to dispose of agricultural surpluses or support the health and educational needs of children—and then to reduce federal financial support over time. A great deal of time was spent in both primary hearings considering funding formulas for federal involvement, and asking witnesses administering lunch programs about the details of the state and local contributions being made to these programs. Few considered the idea that the Federal government would pay for the program entirely. House Agriculture Committee Chairman Flannagan stated:

> What we are trying to do is to establish a school-lunch program and get it started; but I do not think the idea of any member of this committee is that the Federal Government should undertake the whole job. I think we are all of the opinion that primarily the responsibility is back home in the States.[121(p113)]

Thus, legislators concerned themselves with how federal funds could support state and local efforts, and how federal intervention in the schools could be minimized. Representative Clevenger, Republican from Ohio, spoke clearly about his concern of federal over-reach:

> My whole fear on this program comes from the fact that it is to be controlled from the city of Washington, where it will be tangled up with other programs that affect, not only the school lunches, but our whole educational system… I think these things ought to be under State control, or, better than that, under county control.[121(p5-6)]

Legislators in favor of the program were concerned with structuring it in a way that was most likely to lead to Congressional approval in the present, as well as to increase the likelihood that the program would be continued in the future. For example, Representative Pace, Democrat from Georgia, said:

> The program must be on a basis that will be attractive and must not be on a basis that will justify a succeeding Congress in discontinuing the program. This committee is now charged with the duty of working out a conservative, constructive program that is fair as between the Federal Government and the State government and the communities, one that we in Congress can justify as being fair.[121(p79)]

He suggested a sharing of the costs of the program with 1/3 from federal resources, 1/3 from states, and 1/3 from local schools. The House Agriculture Committee Chairman, Mr. Flannagan, advocated a graduated program of support, in which the federal government would contribute not more than 50% of the needed funds for the first 3 years of the program, 40% for the next 2 years, 30% for the next 5 years, and 25% thereafter. Mr. Flannagan asked a witness, Mr. William T. Cooper, director and supervisor of Allegany County Maryland school lunch program, what he thought of this graduated program of federal support. Mr. Cooper responded that he thought it was wishful thinking that states and locals would be able to provide that level of funding for the program over time. Mr. Flannagan then responded:

> If it is wishful thinking, I will tell you frankly that this school-lunch program is not going to last. If the States and localities cannot contribute their share, you are going to have to kiss it good-by… I am deeply interested in working out a sane, sensible school-lunch program that will place the major part of the responsibility where it should be—on the States and in the localities in those States. If we do not work along that line, I do not believe it will last.[121(p103)]

While all the witnesses seemed careful to agree that school meals should be supported to the extent possible by local people, some expressed concern that these matching formulas would cause schools in more deprived areas to struggle more to implement lunch programs than schools in places with more adequate resources. Some questions were raised about whether school lunches would be available to the students who were most in need. This opinion was strongly articulated by Agnes Winn of the National Educational Association[121(p89)] and by Caroline Ware of the American Association of University Women.[121(p92)] Yet despite these concerns, legislators appeared to be more interested in structuring funding formulas to states

that accounted for statewide need and then letting local people in schools serving lunches decide which students would pay the full price of a meal and which students would eat for free or at a reduced price. They seemed less concerned with figuring out ways to ensure that schools in areas with a large number of students in need would be provided program access.

Further, the legislators expressed quite a bit of concern that there would be a tendency for state and local governments, once provided with federal resources for these school lunch programs, to continue to depend upon Federal resources, despite the intent of the legislators to reduce federal support of the school lunch program over time. For example, Senator Ellender stated:

> I have found out from past experience that if some local communities are able to lean on the Federal Government and get a dollar which in prior years might have been collected locally, they prefer to rely on the Federal Government. …[125(p55)]

And in the House hearing in 1945, Representative Hope, Republican from Kansas, expressed similar concern in response to sentiments of Frank Washam, director of lunchrooms in Chicago, that the locals would be able to assume responsibility for the school lunch program once seed money from the federal government was provided to help establish the program. Mr. Hope responded:

> … I have been down here about 19 years—no one has ever come down and asked the Federal Government to discontinue any appropriation that it was making… I am inclined to be a little skeptical of your view that we are going to have a situation where we will have this program out of the picture so far as Federal contribution is concerned… I think that if we inaugurate a Federal program it will always remain a Federal program.[121(p75)]

But generally, it seemed the legislators supported the idea of providing school meals, just wanted to minimize the federal involvement in the program. This statement from Representative Hope, in a comment to a witness from a local school lunch program, expressed a typical sentiment regarding the need for federal support of school meals:

> I do not think there is anyone who would want to argue with you about the school-lunch program. I think it is pretty well accepted. But we still have this question as to whether or not the funds are to be provided by the Federal Government or by the local communities. I am wondering why it is that in a great city like Chicago you are not able to handle the situation locally rather than depend upon the State and Federal funds in part.[121(p73)]

Discussions of federal support in the hearings made clear that legislators saw the federal support as a contribution to school lunch programs, but that the long-term vision for the program was one in which school lunches primarily would be supported by States and local communities.

Which children should benefit from school meals?

The discussions in the early hearings reflected the idea that providing a hot noontime meal at school was a service intended to benefit all children, not a welfare program for children in need and their families. The original structure of the school day in many communities across the nation had generally provided the opportunity for students to return home at lunchtime and be fed by their mothers, who presumably were there waiting for them. However, in the 1940s, war efforts had required many former housewives to join the paid workforce, and this fact was acknowledged multiple times during the hearings. For example, a representative speaking on behalf of The Cooperating Committee on School Lunches provided this perspective on the benefits of school lunches for school children:

> The cooperating committee on school lunches composed of representatives from the American Red Cross, National Congress of Parents and Teachers, United States Department of Labor, Children's Bureau, United States Department of Agriculture, United States Public Health Service, and Federal Security Agency has this to say: The importance to school children of a nourishing noon meal is recognized by everyone who knows children. Because the country is at war, school lunches are now more important than ever. Many children can no longer depend on the home to supply a nourishing noon meal. Many mothers who formerly made a full-time job of taking care of their families are now spending their days in war industries, leaving no one to serve a meal to the children who come home from school at noon. Working mothers are doing well if they can see that the children get a hearty breakfast before leaving for school and a good supper at night; few can find time in the morning to pack well-planned lunches for children to eat at school at noon... Whether the shortage is of time, of money, or of food itself, more and more homes are looking to the school to make a nourishing meal available to all children who remain there during the noon hour.[121(p52-53)]

In addition to the logistical importance of offering children a noontime meal at school, many witnesses discussed the poor nutritional state of children in the 1940s, and the ways in which providing food at school could help. While malnutrition was seen to be worse among children whose parents had limited financial resources, many witnesses reported that malnutrition cut across income groups. One representative from a neighborhood non-profit organization expressed these sentiments about the value of school meals in his community:

> At home most of the children got coffee for breakfast, and little else with it. Very few of them had anything to eat at home with the exception of perhaps rolls and coffee, or pop, or hot dogs, hamburgers, or pastries, and the school-lunch program provided them… food that was prepared in a much different way from the food which they received at home. … Parents came over to the schools and said, 'Why is it that Johnnie eats carrots in school and he don't eat them at home?'… the truth of the matter is that the WPA dietitians prepared these lunches in such as way as to make Johnnie want to eat carrots…[121(p139-140)]

In his opinion, most students in the community he worked in benefitted from a school lunch program, as did their parents who learned that children would eat healthy foods that were well prepared and served at school.

Although the program was not established as a welfare service for children and families, legislators and witnesses expressed no doubt that it was important to ensure that no child was refused a school lunch due to an inability to pay for it. Mr. Jones, War Food Administrator, said that Congress should decide whether to pay for school meals for all children regardless of their ability to pay, but that meals definitely should be provided to students for whom the cost would be a barrier to them acquiring a lunch meal:

> That is a question of policy for the Congress to determine, as to whether they want to go so far as to furnish it to those who are able to pay. But when a child is unable to pay for the food, I don't like to say he can't get it. Our regulations provide that there must be no discrimination between paying and nonpaying children.[121(p8)]

The importance of not discriminating against children unable to pay for meals and ensuring no stigma was attached to students receiving a meal free of cost or at a reduced cost was echoed by many voices. Legislators questioned many of the witnesses who were involved in local school lunch programs, to understand how they ensured students unable to pay the full price received meals without any negative repercussions. This exchange between Senator Ellender and Lucille Watson, State director of school lunch programs in Georgia, reflects a typical conversation on this topic:

> Senator Ellender. Mrs. Watson, how do you select those in your county who are to get free lunches?
> Mrs. Watson. Senator, we usually have a school-lunchroom committee in each school, which is made up of the superintendent of schools and also one or two teachers, the members of some outside organizations who know the family background of the children and their financial ability and background, so we use that way of deciding as to who will have free lunches.

> Senator Ellender. Have you noticed any ill effects upon their pride among those who get free lunches?...
> Mrs. Watson. No. It is so operated that the children in the school don't know who get the free and who pay for their lunches. They are each given a ticket in such manner that they can go into lunch and no one knows who gets a free lunch.[125(p54)]

Senator Russell agreed that schools were doing a good job providing free meals to those in need without overtly identifying them. He shared his experience of school site visits he'd made in Georgia:

> …they stated that there was no way for the children to tell which paid for their meals and which did not, they were not made conspicuous in any way—those that did not pay.[125(p58)]

The common theme among witnesses offering meal programs was that they had developed mechanisms to provide meals to students that didn't identify or discriminate against those who didn't pay full price for their meals. This issue was seen to be getting addressed adequately at the local level, so although there was some acknowledgement that there were complications in determining which students pay and how much, little time in these hearings was spent considering ways to address this issue within the federal legislation. Representative Poage, Democrat from Texas, did suggest that Congress should include a formula for establishing need in the bill, but conversation ensued about the difficulty of doing this, and no real suggestions ultimately were discussed. Instead, the focus in the hearings for addressing issues of greater need focused on developing funding formulas to States that accounted for variations in population income. Much attention was directed at devising a funding formula that would consider the optimal strategy for distributing funds to the various states and territories, so as to provide relatively more support in States with greater need. The primary strategy promoted for accomplishing this outcome was to base a formula on the number of children in the state and the state's per capita income relative to that of other states. Additionally, quite a bit of time was spent considering the way in which arrangements for school lunch support might work in private schools in states where there was no relationship between the state and the private school, and how the population of children in public schools would affect the formula of providing funds to the state as a whole.

The idea of providing all students with free lunch meals was mentioned in passing a couple of times during these early hearings, but it was not seriously considered among the proposals for immediate action. A few witnesses shared their opinions that over time school lunches should become an accepted service provided to all children by schools. For example, Mr. Cooper, director of Allegany County MD school lunch program, said:

> I may be a little fanatical on the situation, but I believe that lunches are just as important as any other subject matter and should be a part of the school system.[121(p103)]

Mr. Washam, director of lunchrooms in Chicago, expressed similar sentiments:

> I think we are all familiar with the struggle we had to get free textbooks, free bus service to schools, and so forth. We finally have accepted that in most communities of our Nation, and we no longer inquire into the financial station of the children in connection with furnishing textbooks and bus service. It is part of their education… I think eventually it will apply to the school lunch and nutrition education as well as it has to other things; but it is a long uphill pull.[121(p77)]

Thus, the transcripts from the 1940s hearings suggest that the intention of federal support for school lunch programs was to help schools provide noontime meals to all their students. While there was much concern expressed about making meals available for free or at a reduced price to students unable to pay in schools offering a school lunch, the primary focus of discussions was related to providing a general service, rather than a targeted service to students in greatest need. Devising a funding formula that took need into account at the State level was discussed a great deal, as was ensuring that individual meals within schools were provided easily and without stigma to those unable to pay the full cost, though the latter was seen to be getting addressed satisfactorily at the local level. Absent from the discussions in the hearings that considered which students would benefit from school lunches were references to the politics of race and how issues of segregation might affect school lunch program policy. While these issues were vaguely alluded to in discussions of other programmatic issues, and while language was inserted in the final School Lunch Act related to distribution of funds to states where schools were segregated (by an amendment proposed on the floor by a representative not on an agriculture committee), these conversations did not arise in the hearings. Thus, the racial politics operating at the time are among the influences on legislators that are not elucidated fully in the hearing transcripts.

Should food and nutrition education be included?

The hearings involved a good deal of discussion about the importance of providing a food and nutrition education program integrated into the school lunch program. Many advocates argued passionately that a meal program without an educational component was a missed opportunity to make a real impact, and that if the goal of the school lunch program was to improve children's health, then food and nutrition education was critical. To educators, health experts, home economists, and nutrition professionals, linking a school lunch program with education about food and nutrition made the program far more likely to achieve its long-term health objectives. For example, Miss Goodykoontz, Assistant Commissioner in the Office of Education stated:

> The problem is not one of merely feeding the children; it involves much more than that. If children are to learn proper habits of nutrition which will insure well-nourished bodies as they grow into adulthood, teaching must go along with feeding… there must be a close tie-up between the feeding and teaching programs, whereby the school lunch becomes an educational experience and the basis for instilling good eating habits which will become a part of the child's daily life…[125(p17)]

The nation's top health officer at the time, Surgeon General Thomas Parran, agreed that integration of nutrition education and the school lunch program would be beneficial:

> I think it highly important that the program be integrated into the whole educational process. Yes, sir; I think it very important that education in reference to nutrition go along with the actual provision of the school lunch.[121(p16)]

Yet despite this expression of support, when asked for his recommendations about the details of actually crafting legislation to accomplish this integration, Dr. Parran did not recommend any specific language about the content of nutrition education that should be provided or whether it should be supported with federal funds. He said he felt this was an issue for the Congress to decide, that he was not an expert in the area of educational curricula.

Dora Lewis, Chairman of the Home Economics Department at the New York University, representing the American Home Economics Association reinforced the perspective that the feeding of children and their education about food and nutrition were intimately linked and equally important. Yet without a structure for providing the education, she expressed concern that it would continue to be neglected. She said:

> We also believe there are two major responsibilities, the actual feeding of children and appropriate education for the children, which would include teachers, parents, and all others responsible for the program… I want to plead for an educationally sound program… Really, what we have done in so many lunch situations is to employ a lunchroom manager, and her time is so taken up with the actual preparation of the food and getting it served, that the educational program is neglected. …we have to make many attacks on the nutrition program in order to really get it functioning in the lives of the people, of the children and of the community.[125(p41-42)]

Similarly, Frank Washam, director of lunchrooms, board of education, Chicago IL, made a strong case for the importance of school meals including nutrition education. He spoke of the students who came to school hungry, and said that especially in cases where mothers were employed outside the home, children came to school with "an inadequate breakfast and with a lunch which has been poorly selected and packed or frequently without any provision whatsoever for lunch."[121(p51)] He went on say that education could help all students develop healthful food habits:

> Malnutrition is caused not only by poverty but it is also frequently caused by a lack of information on, and interest in, the subject of nutrition… In the lunchroom, as well as in the classroom, the teacher can guide and direct pupils in the formation of these habits. Without careful attention to the school lunchroom as a learning institution, undesirable food habits may result.[121(p51-52)]

Later, when asked by a legislator about whether he would provide students with nutrition education with or without a school meal program, Mr. Washam expressed his feelings of the importance of coupling education with a school environment that facilitated putting that education to work. He stated:

> But Mr. Hope, if we did not tie up the school-lunch program with the education, then the education is largely lost. In other words, we can talk all morning long about nothing else but nutrition in the school and have the child all pepped up about the matter, and then the bell rings, and all the children are turned loose and they rush into a cafeteria, and the counter may be loaded with every kind of food that the human body needs, but it is not so organized that the child is guided in his choice at all, and it does not make sense; it does not click. But when we do this teaching job and then they go to the lunchroom and there they have the type A lunch set up they are guided…[121(p68)]

Thus, early advocates understood the importance of offering both a lunch meal that reflected an attention to principles of good nutrition as well as an educational program that would teach students to appreciate the fundamentals of nutrition.

Even some legislators who were not necessarily inclined to support centralization efforts supported including nutrition education in the federal school lunch program. For example, Representative Pace, Democrat from Georgia, stated that while he was a states-rights advocate, he felt that funds to help schools provide nutrition education could be justified in this legislation.[121(p17-18)] He expressed concern that some small rural schools may not otherwise have the resources to provide the needed nutrition education. And while many legislators suggested that Parent Teacher organizations and other charitable efforts could help schools provide effective lunch programs, Mrs. Paul H. Leonard, Chairman of the National Congress of Parents and Teachers, said that the parents and teachers organizations didn't

have the capacity to run school lunch programs, and that federal assistance was necessary. She emphasized the need for an educational component of the program:

> We feel that the child should be taught the value of food, health habits, better attitudes in the lunchroom when he is eating, and … that when he knows those things he will go back into his home able to teach those things to his parents… We definitely feel that education is one of the most vital phases of the program, if we intend for the school-lunch program to do the good we want it to do… Without the education program we definitely feel that the value of the lunch program is defeated, because just to get a school luncheon and put it on the table for them is not enough…[121(p126)]

Some attention was given to how an educational program should be structured and how to ensure quality in the teaching of this content. A number of legislators seemed to agree that teaching nutrition in addition to providing food was important, and that it should be done well. For example, Senator Poague of Texas expressed concern about ensuring that quality nutrition education was provided by well-trained teachers:

> … what we want to do is to get people who are well trained in nutrition to teach these nutrition courses, rather than to encourage some mathematics teacher to give a nutrition course, no matter how much mathematics she knows… What I am afraid of is that this bill is a preliminary to putting the poorest trained teacher in the school to teaching nutrition.[125(p336)]

Yet despite what seemed to be general agreement about the importance of food and nutrition education, providing a federal requirement for education was a very difficult proposal. Schools were administered at the state level, and issues of segregation led many to want to ensure the federal government didn't intervene at all in state and local schooling. While no one argued that nutrition education wasn't important or necessary, there were discussions about how providing education was not the business of the federal government. As Chairman Flannigan, House Agriculture Committee, stated:

> I think the people get sick and tired of the Federal Government directing everything back home, and I don't want the Federal Government going back to my district and telling my teachers what to teach and directing my school children to do this, that, and the other. I am for a school-lunch program but I want to leave the administration of the program back home.[121(p17)]

Likely the most telling statement revealing the fragile state of the proposal to include nutrition education the National School Lunch Act, despite the overall

agreement of all parties that it would be beneficial to children and their families, was this statement made by Mr. Hope, Representative from Kansas:

> … I do feel that we should not complicate this legislation by making it any more controversial than it is going to be, anyway, by putting in a provision which would indicate that there should be any conditions attached to these grants-in-aid, which would be in any way construed as an attempt on the part of the Federal Government to dictate to local schools what should be taught.[121(p18-19)]

Would additional resources be made available to help schools operate high quality lunch programs?

The federal support provided to schools to support lunch programs prior to the passage of the National School Lunch Act was limited to contributions of food or funds to purchase food, although the WPA had also provided temporary labor to support meal programs. However, many witnesses felt that in order for lunch programs to provide good, healthy, appealing meals to students, additional resources were needed. It was argued that many schools and their local communities could not afford the funds required to provide the facilities, equipment, and skilled personnel needed to operate successful lunch programs. Some of the bills being considered during the hearings established that a portion of funds could be used for non-food expenses, while others did not include such a provision. Discussing the importance of providing this type of funding, Miss Goodykoontz, Assistant Commissioner in the Office of Education, said:

> … many of these small, rural, relatively poor districts cannot get the equipment which is necessary to get a start for the program. During the first few years we believe that some of these districts which have not yet been able to participate because they didn't have the equipment, could get it out of this 20 percent allotment.[125(p23)]

Similarly, Frank Washam, director of lunchrooms in Chicago, cited a lack of facilities as the reason that many Chicago school children went without a complete meal at school. Of approximately 400,000 children in Chicago schools at the time, Mr. Washam said that only about 130,000 had access to complete lunches, primarily because their schools lacked the facilities and equipment to prepare them.[121(p77)]

In addition to facilities, ensuring that food service managers and workers were well-trained was considered to be very important. Speaking to this issue, Mrs. Watson, director of lunch programs in Georgia, stated:

> My visits to the schools have convinced me that no matter how much food we get…when that food reaches the lunchroom, unless it is properly prepared by someone who knows how to do it, we will either have a good lunch or a poor lunch.[125(p55)]

She proceeded to discuss the need for federal support, saying that without it Georgia wouldn't be able to provide the field supervisors needed to ensure good meals were provided to children. The American Dietetic Association also testified in support of ensuring well-trained personnel were available to run school lunch programs:

> This association believes that only through supervision of trained institutional managers can the appropriations allotted to the various schools be used to the best advantage of the children and extended as far as possible. When a surplus item is sent to an area this nutritionist knows what to add to the commodity to make the meal a rounded diet meeting nutritional requirements.[121(p258)]

The US Commissioner of Education agreed with this position: "So the only approach, I would say, would be to extend the conception of this bill somewhat to include supervision and equipment."[121(p250)]

Further supporting the importance of ensuring federal financial support for equipment and training was available, Caroline Ware, representing the American Association of University Women stated:

> … unless trained supervision and essential equipment are provided, the results in improved nutrition and in nutritional habits will be small and the wastes involved will be great... We, therefore, urge that a second title be added to this bill, providing additional and separate funds to be allocated to State educational agencies for supervision and for other services that are essential if school lunches are to make a substantial contribution to the nutritional health of the Nation and to the utilization of agricultural products.[121(p93-94)]

For those who were operating school lunch programs, it was clear that adequate resources for facilities, equipment, and personnel offered the difference between being able to support a meal program and not, as well as between offering a high quality and poorer quality program. Those with experience understood that this was a costly endeavor and that to do it well would require a good deal of resources. While some communities were able to raise the money from local organizations and individuals to meet these needs, this was not true in many places. Thus, advocates urged the federal government to supply resources to support this aspect of school lunches.

THE FINAL LEGISLATION

After two years of debate in Congress, The National School Lunch Act (NSLA) became law on June 4, 1946. In the end, the program would be administered by the Department of Agriculture without any involvement of the federal Office of Education. In states, the state educational agencies were to administer the program

for public schools (private schools were allowed to work directly with the Department of Agriculture). The original NSLA required that at least 75% of the appropriated funds for school lunch were spent on food, and included a formula for determining the apportionment of funds to each state, based on the state's population of school children and need for assistance based on per capita income in the State compared to the national average. Funds were available for use in Alaska, Territory of Hawaii, Puerto Rico, and the Virgin Islands, though these areas together were only provided with a maximum of 3% of the total funds (rather than being included equally in the equation based upon population and need). The NSLA stated that $10 million dollars of the total apportionment for school lunches each year would be available to the Secretary of Agriculture for nonfood assistance to school lunch programs, which was defined as equipment used on school grounds to store, prepare, or serve food to students. Up to 3½% of funds appropriated were to be made available to the Department of Agriculture for administrative expenses.

A formula for reducing the federal burden of support for school lunches was formalized in the NSLA. It was written that between 1947-1950, the federal government would provide a dollar for dollar match with State funds contributed to the program (donated services, supplies, facilities, and equipment. Though not specifically stated in the Act, student payments for meals counted toward the state match). For the years 1950-1955, the federal government agreed to match $1.00 for every $1.50 in State and local contributions, and for the years following 1955, the federal government would match $1.00 for every $3.00 in other contributions.

The NSLA required that meals met minimum nutritional requirements as prescribed by the Secretary of Agriculture and based on evidence from research. Meals were required to be served without cost or at a reduced cost to children unable to pay the full price, and the act specifically required that "No physical segregation of or other discrimination against any child shall be made by the school because of his inability to pay (NSLA Section 9)." The Act also allowed for the continued use of commodities purchased under Section 32 of the Act of August 24, 1935, to be donated to schools. An entire section of the NSLA, Section 10, was dedicated to the handling of funds for private schools.

Among the miscellaneous provisions and definitions written into the National School Lunch Act, the following statement about providing requirements for instruction and supporting meals in states with segregated schools was included:

> In carrying out the provisions of this Act, neither the Secretary nor the State shall impose any requirement with respect to teaching personnel, curriculum, instruction, methods of instruction, and materials of instruction in any school. If a State maintains separate schools for minority and for majority races, no funds made available pursuant to this Act shall be paid or disbursed to it unless a just and equitable distribution is made within the State, for the benefit of such minority races, of funds paid to it under this Act (NSLA Section 11 (c)).

Thus, in the end, nutrition education was not included in the law. Yet, a statement about just and equitable distribution of funds in states with segregated schools was included. These issues were related, in that segregation was a primary reason education was eliminated from the school lunch program. Those favoring segregation were concerned that any federal educational intervention would be a slippery slope, ultimately leading to full federal intervention in education. Levine provides a discussion of the way in which the school lunch program had become "part of a larger struggle over states' rights, federal power, and racial equity."[113(p78)]

CONCLUSION

This examination of the early history of the federal government's role in the school lunch program highlights the intimate connection between agriculture and nutrition policies in the United States. Further, the arguments presented in the hearings show that the seeds of many future debates about school lunch policy already were planted when the program was formally established in 1946. Those working to improve the school lunch program currently will benefit from recognizing that many of the ideas now being promoted have been advocated for many years. Fully studying the reasons for the successes and failures of these policy ideas over time can help inform future approaches to improving the school lunch program.

The hearing transcripts from the 1940s provide clear evidence that the earliest investment of federal resources into school lunch programs in the 1930s was exclusively undertaken for the benefit of the agricultural sector. Although this fact is supported by many statements in the hearings, when the school lunch program history is reported in the modern era, this point often is obscured. Even among those who might think that interests other than agriculture were influential in securing the passage of the National School Lunch Act, it seems a stretch to attribute this primarily to concerns about military recruits' fitness for service, based on this study of the hearing transcripts. However, the persistence of this argument highlights the fact that strength in science and strength in politics do not necessarily coincide. That is, despite the weak scientific arguments presented in the hearings about the link between school lunches and the fitness of military recruits, this argument has stuck for many decades.

The need to distribute surplus commodities to schools had led to an expansion of school feeding programs during the late 1930s and early 1940s. Thus, by the time a formal federal school lunch program was being considered in Congress, a diverse group of stakeholders with an interest in seeing the program continue had formed. Although the federal support initially was provided to facilitate the distribution of surplus foods, the schools receiving the foods and the community of children's advocates that felt that the school lunch programs were beneficial for children's health, education, and long term wellbeing were actively engaged in the early conversations about federal school lunch program legislation. In this way, this study of the school lunch program supports Andrea Campbell's theory that public policies create interest groups.[111] Because federal support for school meals had been

initiated prior to any discussions of creating an ongoing federal school lunch program, educators and others with an interest in how a dedicated school lunch program might be structured to benefit their interests—education and children—already had been organized. Similar to social security policy, in this way it appears that support provided to school meals had created political mobilization among those who could attach their interests to an expanded federal school lunch program.

The hearings suggest that the agricultural proponents of a federally supported school lunch program appeared to believe that they needed the children's health and education advocates in order to create support for the program that could overcome opposition to those in Congress hostile to any expansion of the federal government. In fact, those interested in school lunch programs from an agricultural perspective *were* dependent upon the participation of educators and health professionals, since without people operating school lunch programs, a policy allowing for surplus distribution to school lunch programs would be meaningless. While these competing objectives of interested groups likely expanded the base of support for the program and enabled it to garner the political support needed to pass the legislation, they also may have left it with a weak foundation, not firmly rooted in solving any single problem. The disagreements related to the appropriate rationale for establishing a school lunch program led to practical challenges in crafting the initial legislation, and may have left the program vulnerable to conflict when agricultural and children' health and wellbeing goals conflict.

Though the hearings present a limited view of the school lunch debates, they do highlight a number of issues of contention among school lunch supporters in the 1940s. While it could be argued that these hearings were held simply to add voices of support to the agriculture committees' desires to institute a school lunch program for the benefit of the agricultural sector, the testimony from witnesses as well as comments from legislators suggests a more genuine attempt to craft a program that was politically feasible and had the potential to achieve as many goals as possible without interfering in the less-spoken politics of race and states' rights operating at the time . Yet while the discussions of the program within the agriculture committees suggested that many legislators may have been open to incorporating some of the goals of the progressive social reformers, in the end, few of the issues these advocates advanced were included in the legislation. While some may be tempted to use this outcome as an example of the agriculture committees simply paying lip service to the social reformers and having no intention of crafting a program to meet their desires, my reading of the hearing transcripts paints a different picture. In fact, although there were unspoken political issues motivating the politicians involved in crafting the school lunch program, the hearing transcripts point to a very civil discourse among legislators, with plenty of exchanges suggesting they were making real efforts to work together to develop a beneficial program.

Ultimately, the school lunch program was maintained in the Department of Agriculture, and despite the compromise agreement that had been brokered

between the Agriculture Department and the Department of Education to jointly administer the program, this was not written into the final legislation. Further, although many voices clearly spoke about the importance of integrating food and nutrition education into a school lunch program in order to meet the program's objective of benefitting children's health, education was overtly excluded in the legislation. The clause in the Act specifically articulating the exclusion of educational requirements and including information about schools in states engaged in segregation highlights the tense politics about federal involvement in education in the 1940s. Levine provides a discussion of the politics of segregation and the way in which this statement was included in the School Lunch Act after the hearings concluded.[113] In the end, the main issue advanced by education and nutrition advocates that was included in the National School Lunch Act was the inclusion of funds for non-food assistance, like equipment, for schools. Yet these funds were appropriated only for the first year of the program and were not provided for many years thereafter.[126(p5)]

Interestingly, despite the engagement of educators, health professionals and social welfare advocates in trying to shape the initial school lunch policy, the only hearings held prior to the passage of the National School Lunch Act were held in the agricultural committees in Congress. This may suggest that the agricultural sector already had a powerful hold on the issue, despite the importance and involvement of other sectors, or that Congress already was resigned to structuring a program primarily for the benefit of the agricultural sector. Yet, some of the members of these committees sponsored bills that in some way favored the educational and health-related goals. Despite this fact, the final legislation passed suggests that the agricultural interests proved to be most powerful. While the support and arguments of educators, home economists, health professionals, and other groups likely provided needed voices to continue to ensure schools would be effective distribution channels for agricultural surpluses when needed, few of the desires of these groups that were articulated in the hearings were adopted into law. Yet progressives did achieve success from inserting language into the National School Lunch Act prohibiting school lunch funds from being distributed to states not equally distributing funds across segregated schools. This political success was not related to the testimonies of the health, education, and nutrition advocates in the hearings, but rather resulted from the strategic political calculation of Adam Clayton Powell, a first-term congressman from New York.[113]

Notably absent from the early hearing transcripts were arguments about nutrition. All comments made about the nutritional content of school lunches seemed to suggest a general agreement about what would constitute a healthy meal for children. The Type A and Type B meal patterns were seen to provide what was considered a healthy, wholesome meal, and offered an alternative to the unhealthy foods students might otherwise purchase and consume in the community if they didn't return home for lunch. When specific surplus commodities distributed to schools were discussed, it was clear that the bulk of these items were fresh fruits and vegetables—onions, cabbages, citrus fruits and apples, for example. Documents

presented in a hearing confirmed that in 1944, the bulk of surplus food expenditures were for fruits and vegetables (estimated to be $33 million, compared to $22 million for milk and other dairy products, and $18 million for meats and eggs). These were even encouraged to be from local sources in the communities where schools were taking advantage of the program. Although there was very brief discussion about whether the program's nutrition requirements should be structured to ensure the promotion of whatever surplus foods were available, this received very limited attention, and all stakeholders seemed in agreement that the nutrition requirements would remain structured based upon the Type A, B, and C meal patterns. Of interest, some witnesses testifying in the hearings exhibited an understanding of nutrition issues that only recently have been reported in the scientific literature. For example, Mr. Meegan, a community organizer involved in establishing school lunch programs in his community, discussed the responsiveness of students to price points:

> One significant thing to remember in this program is that if pop is a nickel and milk is a nickel, the children will drink pop; but if pop is a nickel and milk is 1 cent or 2 cents, the children will drink milk.[121(p140)]

While the interests of health and education professionals may not have been fully advanced by the final school lunch policy adopted, all stakeholders involved seemed to be aligned in terms of the perceived nutritional value of the foods distributed to and served in school lunch programs. Although educators, nutritionists, and other advocates preferred a program that included additional elements to the provision of food, like seamless integration with education, these groups at least agreed that federal support of school lunch meals was preferable to the absence of federal support, and that children receiving school lunches would be provided nourishing meals. In this way, the establishment of the program could be seen as a success for all stakeholders involved[d].

Yet the display of the strength of economic interests over social welfare interests as the school lunch program formalized in the 1940s, likely helps to explain the course the program has taken over time. This exploration of the early history of the school lunch program begins to answer questions about why the school lunch program includes USDA commodity food distribution; why the program functions as a separate, means-tested anomaly in an otherwise more seamless provision of school services; why nutrition education is limited; and why federal funding may not be adequate to support the provision of fresh and healthy foods. Additionally, the article demonstrates that many of the ideas and arguments currently being

[d] A search of New York Times articles in 1946 using the search term "school lunch" did not find any evidence that the health, nutrition, and education advocates expressed any public dissatisfaction regarding the passage of the National School Lunch Act. Coverage of school lunch in the Times during this time period generally was framed in support of the program.

proposed by nutrition advocates to improve the school lunch program mirror those advocated in the 1940s. Better understanding the history of the program can help advocates pursue policy strategies to strengthen the program and to avoid policies that may make it vulnerable. Assessing the ways in which the problems, solutions, and politics in the present are distinct from the past may highlight opportunities for change. Yet the early history does not explain whether there have been attempts to change school lunch policy during the program's nearly 70 years of history. The following paper will discuss how from this beginning, issues and arguments cycled on and off the federal agenda over time. Interestingly, though the problems and politics have changed, the seeds of nearly all future policy debates related to the school lunch program were planted in these early hearings.

PAPER #3

TITLE:

National School Lunch Program Policy: Legislative attention and issues debated, 1946-2012

ABSTRACT:
Background: The National School Lunch Program is a cornerstone federal investment in children's nutrition, supporting the provision of lunch meals to most school-age children in the US each school day. The purpose of this pilot study was to explore and describe the ideas and proposals related to school lunch policy that have appeared on the federal decision-making agenda in Congressional hearings or bills proposed, in order to inform future directions for research and advocacy related to school lunch policy.
Methods: A ProQuest Congressional database search utilizing the terms "school lunch" "school nutrition" "child nutrition" and "school meal" identified legislative hearings and bills proposed between 1940 – 2012. Summaries of search results were catalogued in Excel spreadsheets and descriptive analyses were conducted.
Results: Congressional attention in the form of legislative hearings and bills introduced on school lunch varied over time, with more legislative attention to the program during the period of expansion in the late 1960s through the period of curtailment in the early to mid-1980s. Issues including the degree to which the program should be administered at the federal or state level, which students should benefit from school meals, whether nutrition education should be included, what foods and beverages are served, and how the USDA-distributed commodities should be structured, have cycled onto and off of the agenda over time.
Conclusions: The history of the National School Lunch Program shows that many ideas about how to improve or limit the program have been proposed repeatedly during its history. Future efforts to improve and protect the program may benefit from better understanding previous policy successes and failures.

INTRODUCTION

This paper provides an overview of the history of the school lunch program as evidenced by records of legislative hearings and bills proposed from the 1940s to the present. This long-view of school lunch history bridges the current school lunch policy debates with those of the 1940s when the program was formally established. One vision articulated for the program in the 1940s included providing healthy meals to students and education for students and families to help establish healthy lifelong eating patterns in the population. This paper asks whether the politics of the National School Lunch Program (NSLP) can elucidate why that longstanding goal has remained largely a rhetorical one. With a better understanding of the political obstacles to achieving this goal, one can begin to articulate a course for the program that might better promote and protect the health of the nation's children. This study aims to help provide contextual understanding of the issues and arguments that have been proposed about school lunch over time, in order to inform the public health nutrition community about the emergence of the school lunch program in its current form, and to make recommendations about ways to move the program into the future to enhance students' nutrition and health.

Background on the NSLP

The National School Lunch Program is the largest nutrition program in the United States specifically addressing the nutritional health of the nation's children. In the year 2012, the program served meals to nearly 32 million students each school day—almost 2/3 of all school age students in the US[e], at a total cost of $11.1 billion dollars. Nearly 60% of the lunch meals served in 2012 were provided for free to children whose family income was less than 130% of the federal poverty level (FPL) ($29,965 for a family of four in 2012); another 9% were provided at a reduced price for students with family incomes between 130%-185% FPL.[1] Unlike other aspects of public education services provided during school hours, the school lunch program is means-tested, and participation is optional. Federal funds provide reimbursement to schools for the meals served. In 2012, schools received $2.86 for each meal served for free, $2.46 for each reduced price meal, and $0.27 for each meal served to students not qualifying for free or reduced price meals (those whose family income exceeded 185% FPL). Recent policy changes made available an additional $0.06 reimbursement for each meal served in schools certified as meeting newly updated nutrition requirements. Schools in 2012 also were eligible to receive up to $0.23 worth of purchased USDA "entitlement" foods (USDA-purchased and distributed foods, largely from agricultural surpluses) per lunch served, and additional "bonus" foods as available from agricultural surplus stocks.

Although school lunches have been criticized in recent years for serving highly processed foods and providing too much fat and salt, studies consistently show that on average, students eating the school lunch eat more healthy foods and have better

[e] Lunch participation from http://www.fns.usda.gov/pd/slsummar.htm; accessed 3/31/2013; Student population from http://www.childstats.gov/americaschildren/tables.asp.

nutrient intake in the school setting compared to their peers not eating the school lunch.[16,17,18] Still, the most recent comprehensive study of school meals in the United States found that school lunches were too high in sodium and fat, and too low in fresh fruits, raw vegetables, and whole grains.[127] While studies do show that NSLP participants eat more nutrient-rich lunches than their peers not eating school lunch, even school lunch participants do not meet the recommended intake of fruits, vegetables, or whole grains at school.[18]

In addition to school meals, nearly all middle and high schools (90%) and most elementary schools (64%) offer a wide assortment of "competitive" foods and beverages in a variety of places such as the school cafeteria, vending machines, snack carts/bars, school stores, and fundraisers.[127,128] Competitive foods generally consist of highly processed products, rich in added fats and sugars, with few fruit and vegetable offerings.[129,130] When students eating the school lunch also purchase competitive foods, they consume unhealthy items at school similarly to their peers not eating the school lunch.[17]

In order to improve students' nutrition, experts have recommended improving the nutritional profile of the foods served in lunch meals; removing unhealthy snack foods from schools; providing training and technical assistance for food service staff; establishing a nutrition education curriculum for K-12 students; increasing the federal reimbursement rate schools receive for meals; and engaging students, parents, and the broader community in school meal service.[19,105,127] The Healthy Hunger-Free Kids Act of 2010 established new policies to address some of these recommendations, primarily focused on changing the nutritional profile of foods and beverages available to students at school. In particular, this legislation authorized the USDA to change the nutrition standards for school meals to better align them with federal dietary advice and also gave the Secretary of Agriculture authority to regulate competitive foods. Further, the HHFKA slightly increased the meal reimbursement rate for schools serving meals consistent with the new dietary recommendations. This legislation represents the first major update to school lunch policies in decades. Implementation of these policies began during the 2011-2012 school year, and will continue on a phase-in basis over the coming years. Media reports of the changes made thus far suggest that the early implementation has had mixed results. While many stories highlight students successfully eating healthier lunches at school, others cover student revolts, schools dropping the program, and increased food waste.[54,55] Ensuring the success of these new investments could be critical to the future of the school lunch program. Beyond the policies already adopted, experts continue to suggest that schools need to better integrate school meals into the school day and provide adequate education for students and training and resources to workers to increase the likelihood that students consume the healthier foods schools are beginning to offer, and to promote students' development of lifelong healthy eating habits. Along these lines, the USDA recently commissioned the Institute of Medicine (IOM) to review the scientific evidence on nutrition education in schools, which will result in a report for policy makers,

administrators, educators, and health and nutrition professionals about next steps for school nutrition education.

Exploration of the earliest federal history of the school lunch program revealed that many of the recommendations made about school lunches in recent years also were proposed in the 1940s.[131] For example, advocates at that time suggested that school lunches should be fully integrated into the educational program, that a food and nutrition educational curriculum should accompany the provision of meal service in schools, that resources for training and technical assistance were necessary to ensure a high quality meal program, and that meals should offer a healthy alternative to the foods and beverages students might otherwise consume in the community at lunchtime. Early advocates felt that schools offered the ideal venue to help both students and their families establish life-long healthful eating habits—an argument that also is made frequently in the modern era. Yet few could argue that the school food environment in recent decades has educated students and their parents about healthy eating. Instead of leading youth to healthy eating habits, schools have followed cultural norms, providing diets high in processed foods, snack foods, and limited in fresh fruits and vegetables.

Theoretical Framework

The exploration of a number of theories of public policy-making suggest that understanding past proposals in a policy arena may be beneficial for predicting and guiding future policy development. That is, those wishing to change public policies can learn from previous political successes and failures, and can better determine whether the current politics and framing of problems and solutions may present a new opportunity to achieve policy success. A lack of awareness of the history of these arguments may lead advocates to repeat past failures or prioritize short-term successes that history may suggest could create future political vulnerabilities. Further, theories of the policy process show that ideas can languish for long periods of time before being picked up again for policy adoption or permanently discarded. Therefore, advocates in a particular policy arena may benefit from maintaining awareness of policy ideas hostile to their agenda that have been proposed in the past, even if those ideas currently aren't on the agenda.

Many theories have been proposed for how issues rise to prominence in public policy-making. While scholars differ in their assessment of this process, most contemporary authors agree that it is not linear, systematic, or entirely predictable. John Kingdon describes policy outcomes as the result of various actors simultaneously identifying and defining problems, crafting policy ideas, and interacting with politics in independent streams.[46] He argues that issues arise on the policy agenda through various mechanisms, but are only considered for serious policy action when problem, policy, and politics streams are coupled during the opening of a "policy window."[46] Further, Kingdon suggests that policy ideas generally exist for many years in the "policy primeval soup" and that elected officials need to be "softened" before they become ready to embrace a policy idea. Baumgartner and Jones suggest that policy making is characterized by "punctuated

equilibria." That is, policies are adopted and programs change not in smooth, incremental steps but in 'leaps and bounds,' with periods of stability punctuated by periods of activity.[100] They suggest that policy venue (level of government, or even committee within the government, for example) is important in producing these periods of high activity, as some ideas that fail to be acted upon in one policy venue gain traction in another venue and eventually produce broader action. Consistent with Kingdon's model, this model implies that many policy ideas often exist for a fairly lengthy period of time before they are broadly established as public policy. The Advocacy Coalition Framework (ACF), developed by Sabatier and Jenkins-Smith, takes many of the ideas proposed by other scholars and packages them into a new model focused on actors coalesced into coalitions operating within policy subsystems that exist within a broader social, cultural, political and economic framework.[53] An aspect of this model considered in this study is the suggestion that policy-related learning from prior policy actions feeds back into the coalitions, adding to their ongoing formulations.

While the National School Lunch Program was not initiated as a welfare program,[131] this paper will show that policy developments beginning in the 1960s began to shift the program increasingly in this direction. Jacob Hacker argues that contrary to popular conceptions of a stable welfare state in the US, opponents of the welfare state have pursued strategies since the 1970s to limit the protections from risk provided.[132] Thus, without overtly dismantling welfare programs, strategies to undermine them may have left the programs vulnerable. This study will consider whether the case of the National School Lunch Program is consistent with Hacker's theory.

This study draws upon the previous work of public policy and political science scholars who have analyzed records of legislative hearings to investigate a variety of issues, including conflict between Congress and the President,[98] the role of scientists in public policy making,[99] and the development of theories of the public policy process, specifically the punctuated equilibrium theory.[100] While food and nutrition policy can contribute a great deal to the success of a society,[133] no analysis of legislative records on nutrition policy issues was found. However, these records provide a rich source of information about policy ideas, adopted or not, that have been placed on the agenda over time. If public health nutrition professionals are to engage effectively in the legislative policy process, it may be important for them to understand the significance of these actions and the historic context in which they are participating. How much Congressional attention has been devoted to the NSLP? Which Congressional Committees have been involved? What ideas have been proposed but never adopted? Did legislative attention to the program coincide with policy changes? Systematic understanding of the legislative efforts and policy ideas that have shaped the program likely will allow stories from the past to inform future policy directions.

While some scholars have examined the political history of the school lunch program,[113,134] none has provided a systematic review of the legislative records

available, illuminating Congressional attention to the school lunch program and outlining the issues that have been debated. The histories that have been written do highlight various issues and ideas that have shaped the program over time and suggest frameworks for understanding the life course of the school lunch program. Levine provides an in-depth account of the history of school meals in the US, and argues from the perspective of a political historian about the forces that have shaped the NSLP over time. She suggests that the program's shift from providing more meals to middle class students to providing more meals to low-income students is largely responsible for the decline in food quality. As has been suggested by others working in social welfare organizations, "Programs for the poor… are poor programs."[135(p18)] While her book covers the entire history of the NSLP, Levine pays much greater attention to the early period, prior to the 1970s, leaving questions about the issues and ideas shaping the debates in later years unanswered. Sociologist Janet Poppendieck summarized the history of the National School Lunch Program in her book, "Free for All: Fixing School Food in America."[134] She suggests that the National School Lunch Program has been shaped by a series of political "wars": the war on poverty, war on hunger, war on waste, war on spending, and war on fat. She writes that, " Each of these wars has mobilized public support, and each has resulted in both Congressional and administrative action that has changed school food."[134(p 53)] In her assessment, these "wars" have led to a decline in the quality of the food served in schools and focused attention on certain issues at the expense of others. Poppendieck's work, as evidenced by the title, is constructed to persuade the reader that school meals should be free for all students. Her summary of the political history of the program provides valuable insights, and raises questions about whether any of these influences on the NSLP may have been anticipated, when and by whom the seeds for change had been planted. An improved understanding of the history of these debates can help those with an interest in school nutrition to appreciate the political strengths and vulnerabilities of the current school lunch program, and to organize and act appropriately to continue to realize the program's potential to positively impact the health and wellbeing of the nation's children.

This paper presents the results of a pilot study of legislative documents related to the National School Lunch Program. The study reviewed legislative attention to the school lunch program and the related policy issues that reached the formal legislative agenda throughout the program's history from 1946 – 2012. The paper describes the general arc of events and ideas that have constructed the program's history, by describing the number of hearings held on school lunch, the committees holding the hearings, the number of bills proposed, as well as the primary issues considered in the hearings and bills. The paper does *not* provide an in-depth analysis of the factors involved in shaping policy outcomes. Rather, this work lays the foundation for future research to answer questions about the issues, actors, and coalitions important in shaping program policy and political outcomes during particular periods of interest. While the present study provides only a general overview of issues and events, this perspective can benefit those working to improve the school lunch program by providing information about which modern

arguments repeat past arguments, highlighting potential program vulnerabilities, and encouraging an exploration of the similarities and differences between the modern era and the past in order to learn from prior policy successes and failures. As the paper will show, understanding the broad issues that have been important to school lunch policy over time as well as seeing the ways in which particular issues have repeatedly appeared on the formal federal agenda, provides advocates with new insights into the strengths and vulnerabilities of the National School Lunch Program. As such, the paper concludes with recommendations based on this historical perspective for the public health nutrition community regarding future efforts to promote the health of children and adolescents through the school lunch program.

METHODS

A search for Congressional hearings held on school lunch from 1900 – 2012, was conducted in Proquest Congressional. The search terms "school lunch," "school meal," "school nutrition," and "child nutrition" were used. The summary of each hearing identified from this search was reviewed. Those hearings in which the summary documented some discussion of school meals were recorded in an Excel spreadsheet. The hearing name, ID number, chamber of Congress in which the hearing was held, Committee and Subcommittee name, hearing date, duration of the hearing, bill(s) considered, number of witnesses testifying, length of the written transcript, and a brief summary of the issues covered were recorded. Hearings were further categorized as primary school lunch hearings if they were focused on the school lunch program or included at least one distinct panel focused on school lunch. Appropriations hearings, which generally occurred annually, were not included on the primary list due to their excessive length (the transcript from a single appropriations hearing often exceeded a thousand pages) and lack of specificity regarding the placement within the transcript of discussion regarding school meals. These hearings likely would be an important source of information, but were beyond the scope of this initial study. Additionally, hearings focused specifically on the Washington DC school lunch program, the special milk, school breakfast, summer food service program, or on international school lunch programs were not included as primary due to the lack of certainty that the search terms used provided comprehensive information about hearings held on these topics. Only primary hearings were considered in this study. While all hearing summaries were read and recorded, a subset of hearing transcripts also were reviewed in part. The initial pages of hearings often were read when summary information provided too few details regarding hearing content. Additionally, some hearing transcripts were read in more depth, to fill in knowledge gaps or further explore issues of interest.

The bills introduced in Congress related to school lunch also were identified from a Proquest Congressional search, which utilized the same search terms ("school lunch," "school meal," "school nutrition," and "child nutrition"). The year the bills were introduced, the issues they addressed, the bill number, and whether they ultimately were passed were recorded in an excel spreadsheet. When multiple bills on the same topic were introduced in a single year, the different bill numbers were

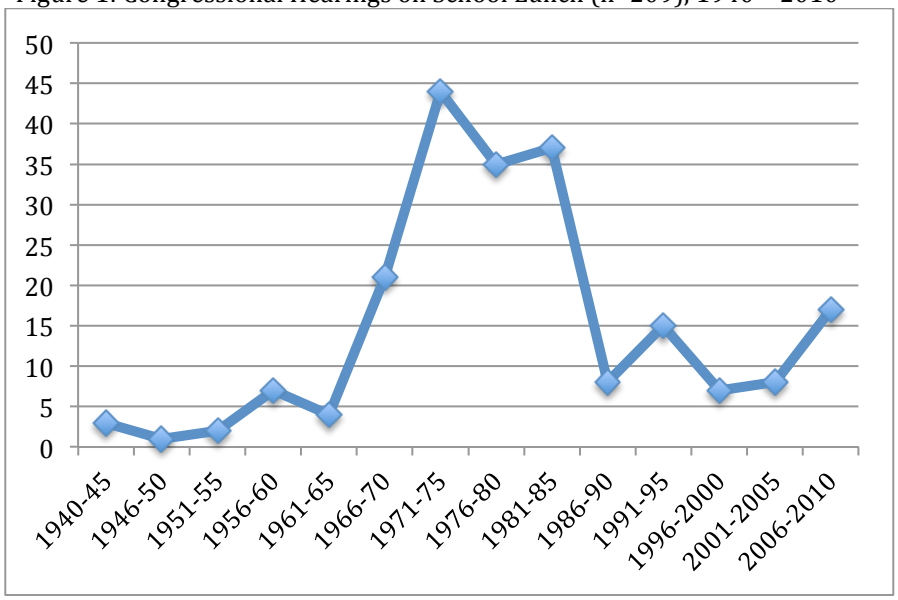
recorded, and each bill was counted separately. A complete record of the bills was not obtained, however, as at the time of the study, ProQuest had not yet uploaded the bill profiles for the 88th – 91st Congresses (1963 – 1971) or for the 98th – 100th Congresses (1983-1988). Personal communication with ProQuest indicated that this information was expected to become available in July 2013, beyond the time frame of this study. While some of the missing information is available from the Library of Congress, it was determined that filling in select time periods from a different database presented problems; thus these data were omitted.

HEARING VOLUME AND COMMITTEES INVOLVED

A total of 428 hearings were identified in the original search. Of those hearings, 205 were considered primary school lunch hearings, focused on the school lunch program or containing a minimum of one panel of witnesses specifically testifying about the school lunch program.

During the first two decades after legislative attention to the issue of school lunch began, few Congressional hearings were held (Figure 1). However, between 1966-1970, the program was discussed in 21 hearings, and during the five years from 1971-1975, the number of hearings on school lunch peaked at 44. Hearing volume remained high until the mid-1980s, when Congressional hearings devoted to the program decreased dramatically. The number of hearings on school lunch has remained relatively low, although increased modestly in the early 1990s and again in the second half of the first decade of the 2000s.

Figure 1: Congressional Hearings on School Lunch (n=209), 1940 – 2010



In the Senate, the Committee on Agriculture and Forestry held the majority of the school lunch-related hearings until 1969, when the Senate Select Committee on Nutrition and Human Needs took over this role (Figure 2). In 1978, the Senate Select Committee was discontinued by Congress and was absorbed as the Subcommittee

on Nutrition into a newly renamed Senate Committee on Agriculture, Nutrition, and Forestry. Since that time, this committee has held the bulk of the school lunch-related hearings in the Senate. In the House, most school lunch hearings have taken place in the Committee on Education and Labor, although hearings on school lunch also have been held in the House Agriculture Committee (Figure 3). In addition to the primary committees holding hearings on school lunch, over time a number of other committees have been marginally involved. For example, between 1940-2011, the House Committee on Education and Workforce held six hearings on school lunch, the House Committee on Budget held 5, and the House Committee on Government Operations held 4. Thirteen committees have held one hearing on school lunch at some point in time and two committees have held two.

Figure 2: Primary Senate Committees holding hearings on school lunch, 1944 – 2011 (includes subcommittee hearings)

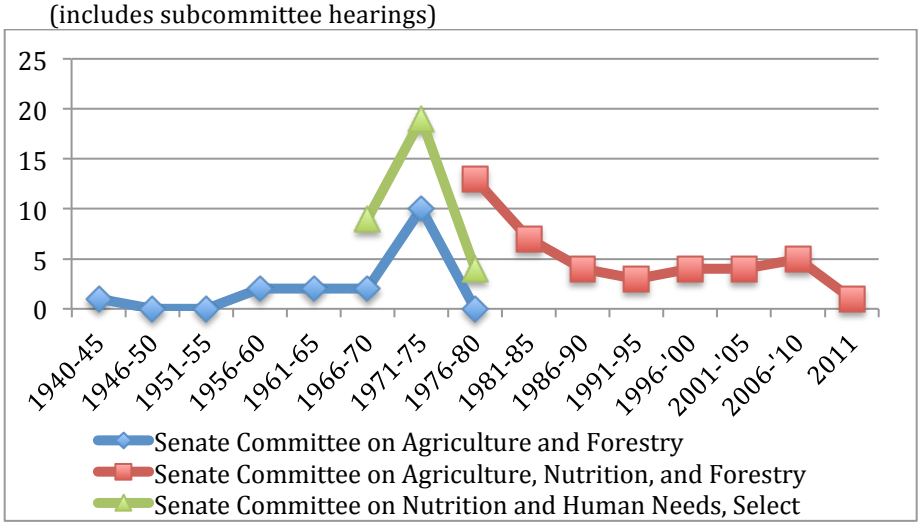
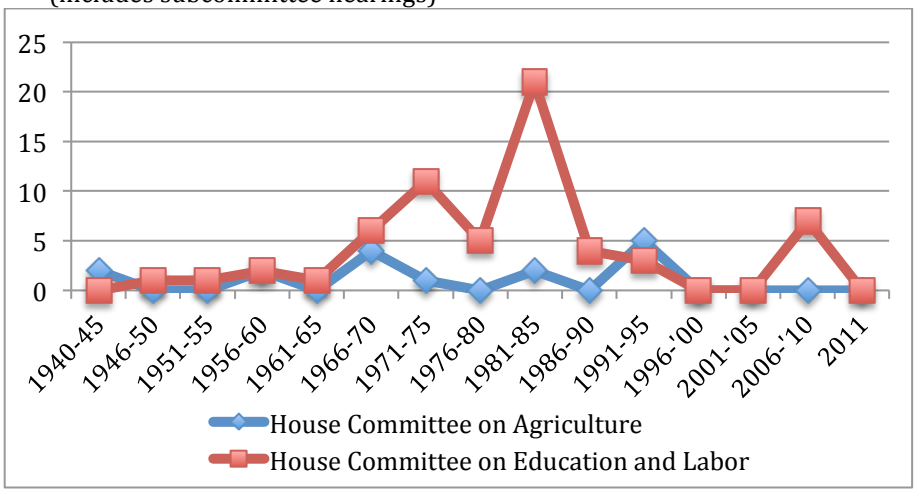


Figure 3: Primary House Committees holding hearings on school lunch, 1944 – 2011 (includes subcommittee hearings)



OVERVIEW OF SCHOOL LUNCH ISSUES BY DECADE

This section of the paper briefly characterizes the school lunch program issues that appeared on the federal legislative agenda by decade, to highlight the overall cycle of events that have constructed the school lunch program's policy history. This broad view of program issues provides the reader with a general impression of time periods that might be interesting to explore in more depth. Further, this overview shows that feedback about policies adopted has led to subsequent policy change proposals, that some policy changes have been incremental while others have been major punctuations, and also suggests that periods of increased investment in the school lunch program historically have been followed by attempts to curtail program spending. This overview further shows that increased Congressional attention to the program sometimes was associated with policy change outcomes, sometimes had no relationship with policy change outcomes, and sometime resulted *from* proposals curtail the program. During times of political attention to school lunch program cuts, advocates have been forced to play defense, and proposals to improve the program have nearly disappeared temporarily. Understanding the debates about big picture issues over time is important in constructing the story of the school lunch program. The decade approach was taken since history often is viewed by decade, and because the tone of school lunch discussions, while not following decade benchmarks exactly, comes close. Following this overview by time period is a more in-depth description of the way in which select issues have reappeared on the federal school lunch decision-making agenda over time.

The 1940s and '50s: program adoption and minor adjustments

Very little Congressional attention, in terms of bills introduced or hearings held, was devoted to the School Lunch Program during the first ten years after it was established. Between 1946-1955, only 2 hearings on school lunch were held, both of which focused on bills that had been introduced suggesting changes to the formula for distributing school lunch funds to US territories (including Alaska & Hawaii).

In 1956, a subcommittee of the House Committee on Agriculture held a hearing to discuss the Department of Agriculture's decision not to purchase peanut butter directly for school lunch programs. In 1957 and 1958, a number of bills proposed modifications to the school lunch program, addressing issues including transferring administration of the school lunch program to the Department of Health, Education, and Welfare (4 bills), allowing junior colleges to participate in the program (3 bills), increasing the protein requirements in school lunches (2 bills), and enriching and packaging grains distributed to school meal programs by the Department of Agriculture (1 bill). Two hearings were held on a subset of these issues, but none of the proposals was adopted into law.

The 1960s: From minor to major funding formula changes

The records from the early 1960s suggest that Congress continued to devote relatively little attention to the school lunch program. While only three hearings were held considering 7 bills, this attention did lead to some important program funding modifications. It had been recognized that the initial formula for

distributing funds to states created a perverse incentive, rewarding states financially for serving lunches to fewer students by allocating funds based on the State's population of school children without regard to the number of meals served. In 1962, amendments to the NSLA modified the formula to consider lunch participation rates in lieu of general population data. Amendments also tried to address the inadequate financial support provided by the federal government for school meals in places with limited resources to establish a lunch program. In the end, however, the 1962 amendments effectively decreased the per-meal reimbursement provided to states with higher than average per capita incomes, while maintaining the rate for schools with per capita incomes lower than the national average (this rate, $0.09/meal, had been in place since the 1940s).

Congressional attention to the School Lunch Program increased substantially in the later portion of the 1960s, and major funding changes resulted. The issue of hunger, malnutrition, and starvation in the United States received mainstream national attention during this period and was elevated to the formal federal decision-making agenda. Senator George McGovern, Democrat from South Dakota, seized the attention to the issue of hunger and attempted to create a federal Commission on Hunger. Among those arguing in Congressional hearings in favor of this Commission were the authors of a 1968 report entitled "Their Daily Bread," which criticized the National School Lunch Program for failing to provide meals to the majority of students in greatest need.[136] "Their Daily Bread" had been commissioned by The Committee on School Lunch Participation, a joint effort of various women's groups. The report found that after 20 years of a National School Lunch Program, only about one-third of the nation's poor children were receiving free or reduced price lunches at school. In a 1968 House hearing focused on creating the Hunger Commission, Representative Pucinski, Democrat from Illinois, reflected on the findings of the report:

> … the thing that this report shows which is even more disturbing (than the fact that only 2 million of 6 million poor students get the hot lunch program) is that while the act provides that there shall be no discrimination in the direction of these lunches, there is evidence that poor children frequently are put at the end of the line. They get what is left. Some youngsters get a hot lunch perhaps two or three times a week because there isn't enough to go around. I believe, Mr. Chairman, that this committee ought to probe and probe very deeply as to why the programs that we pass in good faith here in this Congress, programs that the President proposes to Congress programs that we fund, are not getting down to the people they are intended for.[136(p5)]

The failure of the National School Lunch Program to feed the hungry, despite the original Act's language specifically stating that free or reduced price meals would be provided to needy students without any discrimination, became the focus of attention. While McGovern did not succeed in establishing a federal Hunger

Commission, his efforts led to the establishment of the Senate Select Committee on Nutrition and Human Needs, which he chaired. In 1969 alone, this Committee held seven hearings focused on hunger and federal food assistance efforts, including the school lunch program. In the first of these hearings in March of 1969, former Under Secretary of Agriculture John Schnittker discussed the need to end hunger in the United States immediately. He recommended doubling or tripling the federal investment in nutrition programs; integrating school feeding programs with other aspects of the education process, and transferring program responsibility from Agriculture to Health Education and Welfare. He said:

> The extent of movement on this score, or the lack of it, will be an important indicator of the real concern the administration and the Congress have for hungry people.[137(p2087)]

Later that year, President Nixon acknowledged the presence of hunger in the country and introduced a program for his Administration to address it.[138] Among the proposals, Nixon guaranteed that the United States would provide a free or reduced price lunch to every school child in the country in need of one. This guarantee radically increased the federal financial commitment to the school lunch program.

The 1970s: Tensions between efforts to improve the program and to reduce costs
Implementing the guarantee to provide free or reduced price meals to all students in need challenged federal budgets as well as the resources and political will of states and local schools. The years immediately following these efforts were rich with federal proposals both to improve and to curtail the school lunch program. The Senate Select Committee on Nutrition and Human Needs focused hearings on the ways school lunch program improvements could better address the needs of youth, holding 25 hearings on the school lunch program between 1970 – 1977(when the committee was discontinued by the Senate). These hearings focused on issues and ideas such as considering the challenges various communities across the country experienced in implementing the program, establishing a universal meal program, incorporating nutrition education into the program, addressing the sale of competitive foods and beverages, and ensuring genuine program access for children unable to pay the full price of a school lunch. Some of these ideas resulted in bills introduced in Congress, yet few of them were adopted.

Simultaneously, beginning in 1971, Administration proposals to reduce federal reimbursements for free and reduced price meals began to be proposed, and were discussed in hearings. Throughout the early 1970s, Congressional hearings were mixed with discussions of attempts to reduce the cost of the program and proposals to improve the program. Food price increases also created challenges for the school lunch program during this era. As Senator Allen, Democrat from Alabama and Chair of the Subcommittee on Agricultural Research and General Legislation of the Committee on Agriculture and Forestry stated in his opening remarks in a 1973 hearing:

> Although our school districts have had crises in the past and although they have experienced increased costs in past school years, I don't recall any crisis that has ever approached the present one. The sharply increased costs of food this year and the unavailability of surplus commodities that the schools are accustomed to receiving have placed our schools in a severe financial bind.[139(p1)]

Thus, competition for resources for the school lunch program became a big challenge: Congress proposed funding increases to optimize program services, and Administrations suggested cuts. A 1975 hearing discussed the first proposal to block grant the School Lunch Program and to reduce the federal contribution to lunches of children not qualifying for free or reduced price meals, proposed by the Ford Administration. Yet in 1977, Congress still was considering ways to improve the program, including providing nutrition education and training for students, teachers, and food service workers, as well as discussing concerns about the food and nutritional quality of school meals.

In 1978, the Carter Administration proposed consolidating and revising the federal child nutrition programs, including a proposal to limit eligibility for school lunch by changing the income and age eligibility guidelines. Congresses discussed this proposal while simultaneously considering a bill that would expand the program.[140] Despite the administrative attempts to cut the School Lunch Program in the 1970s, Congress continued to support it, and to entertain ideas about how to improve and expand the program.

The 1980s: Cutbacks and program defense

After the 1970s mix of hearing attention on both program improvement and curtailment, beginning in 1981, Congressional hearings on school lunch almost exclusively focused on funding reductions. Although these proposals were initiated during the Carter Administration, the Reagan Administration succeeded in instituting the first—and only—major budget reductions to the National School Lunch Program during its history. These changes were met with tremendous opposition in Congress. In 1981 alone, 11 hearings (including 3 Oversight hearings) related to budget reductions and program curtailment were held. In 1982, the Reagan administration proposed block granting the School Lunch Program, and reducing the nutrition requirements of school meals in order to cut costs. That year, another 11 Congressional hearings (including 6 Oversight hearings) addressing concerns about the budget cuts were held. This tone continued for the next five years, although the volume of hearings decreased substantially. Between 1983-1987, a total of 16 hearings were held, primarily focused on program funding. Throughout the 1980s, USDA officials frequently testified before Congress to justify proposals to curtail the School Lunch Program. Congress defended the program, but was not actively pursuing proposals to improve or expand its services.

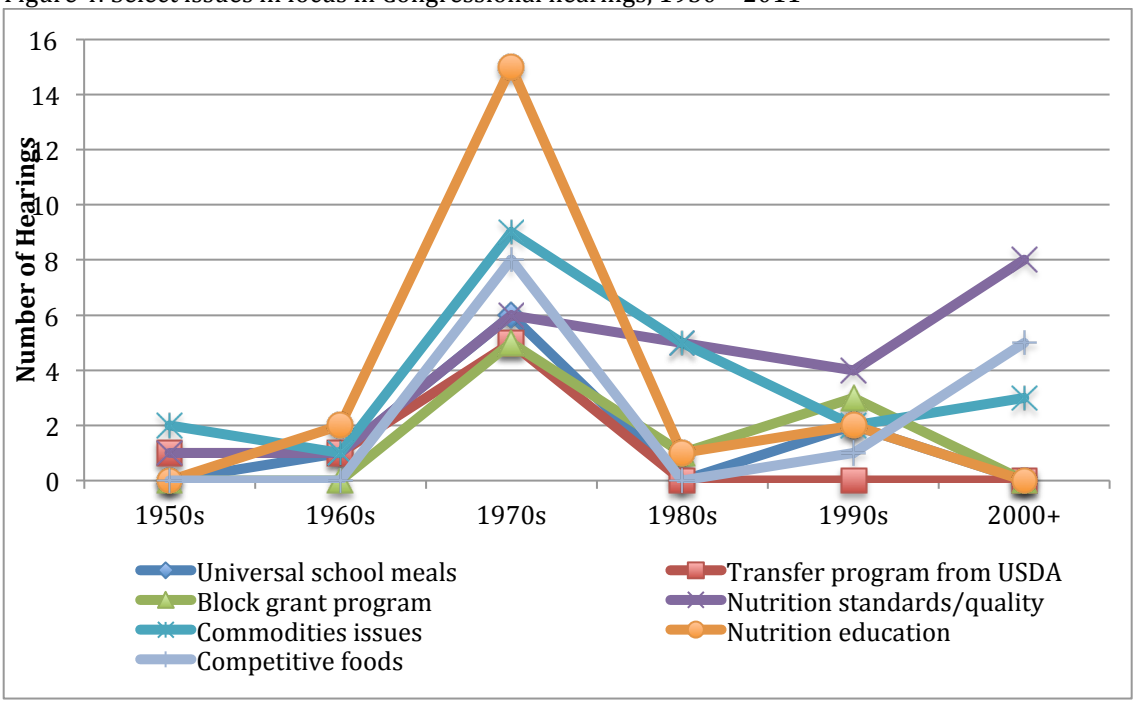
The 1990s: Rebuilding efforts and block grant proposals
The George H.W. Bush Administration began to change the tide on school lunch program funding. In 1989 and 1990, USDA administrators testified before Congress about a new federal initiative to improve child nutrition, including considerations of expanding participation in the School Lunch Program. In 1991, Congressional hearings again began to focus on ideas related to improving the program, including offering universally free meals and improving nutrition education. But in 1995, attention again turned to a proposal, this time from Congress, to block grant the School Lunch and other child nutrition programs. Three hearings were held in 1995 to discuss the block grant proposal, but block grants were rejected by the President. During the remainder of the 1990s, only six hearings on school lunch were held. Two of these hearings addressed food safety (related to an outbreak of Hepatitis A from contaminated frozen strawberries provided to schools by the USDA), and the other four covered the program broadly, beginning to prepare for an upcoming reauthorization. Only 6 bills pertaining to school lunch were introduced between 1996-1999, and none proposed substantial program changes (bills included proposals to prohibit foreign beef, simplify program operations, extend the commodity distribution program, change the name of the National School Lunch Act to the Richard B. Russell National School Lunch Act, and use child nutrition programs to identify children eligible for government supported health insurance programs).

The 2000s: Addressing the nutritional integrity of school food environments
The early 2000s saw renewed attention to the National School Lunch Program in Congress. The issue of rising rates of childhood obesity in the US had emerged on the federal agenda. The role of the National School Lunch Program in addressing this issue was considered, and hearings during this time became focused on improving the nutritional quality of the foods and beverages served to children in school. Twenty hearings held between 2000-2010 focused on issues of improving the quality of school meals, increasing access to fruits and vegetables at school, limiting the availability of unhealthy foods, particularly "competitive foods", increasing program funding, and other similar issues. This period also was active in the number of bills introduced. In 2009 and 2010 alone, more than 30 bills focused on improving the nutritional integrity of school meals and increasing access to the program. These proposals included some of the ideas that had been proposed in earlier eras, like improving nutrition education and establishing a universal school meal program. This attention resulted in the passage of the Healthy Hunger-Free Kids Act of 2010, which changed the nutrition requirements for school lunches in order to be more consistent with current federal dietary guidance and provided authority for the Secretary of Agriculture to regulate the competitive foods sold in schools. The HHFKA focused on changing the foods and beverages available in schools but did not address the issues that had been highlighted in earlier eras regarding the resources needed to facilitate children's *consumption* of the healthier foods served.

IN-DEPTH REVIEW OF SELECT ISSUES APPEARING REPEATEDLY ON THE AGENDA

The previous section discusses the ways in which overall attention to the school lunch program has cycled on the formal federal agenda over time. This section describes in more depth the stories of a few of the school lunch policy issues that have appeared repeatedly on the agenda (Figure 3 or Table 1). These issues are highlighted here, because they are important either to present school lunch policy debates or are expected to be of importance to future policy debates. Describing the way in which these specific ideas have appeared, disappeared, and reappeared on the policy agenda in the past suggests that issues not currently on the agenda may appear again in the future. This section specifically discusses ideas including the degree to which the program should be administered at the federal or state level; which federal agency should administer the program; whether the program should provide meals for all students or targeted services for children in families with constrained financial resources; whether and how much nutrition education should be provided; what kinds of foods and beverages should be served in schools; and whether and how surplus foods should be distributed in the school lunch program. Some other administrative issues described in the previous section also appear repeatedly on the agenda but are not included here, including modifications to funding formulas and eligibility requirements. Most of the issues discussed here also were topics of discussion in the Congressional hearings in the 1940s, when the establishment of a national school lunch program first was being considered. [131]

Figure 4: Select issues in focus in Congressional hearings, 1950 – 2011*



* These same trend lines are presented for each issue separately in the following presentation of information about these individual issues. Overview provided here for perspective.

Table 1: Number of hearings (H) and bills (B) covering select issues related to NSLP policy 1950-2011

Topic	1950s		1960s		1970s		1980s		1990s		2000+		Total	
	H	**B**	**H**	***B****	**H**	**B**	**H**	***B****	**H**	**B**	**H**	**B**	**H**	**B***
Program structure														
Universal school meals	0	0	1	*0*	6	5	0	*2*	2	3	0	1	9	*11*
Block grant program	0	0	0	*0*	5	0	1	*0*	3	0	0	0	9	*0*
Transfer from USDA	1	3	1	*0*	5	0	0	*0*	0	0	0	0	7	*3*
Commodities issues	2	4	1	*5*	9	11	5	*6*	2	5	3	7	22	*38*
Program content														
Nutrition Education	0	0	2	*0*	15	9	1	*1*	2	0	0	4	20	*14*
Nutrition standards/quality	1	2	1	*0*	6	0	5	*3*	4	7	8	12	25	*24*
Competitive foods	0	0	0	*0*	8	6	0	*0*	1	0	5	5	14	*11*
Total number of Hearings/Bills on school lunch in decade	7	22	23	*13*	70	102	53	*29*	22	38	26	89	201 **	*n/a*

*Data regarding bills proposed between 1963-1970 and from 1982-1988 are missing due to ProQuest not yet having prepared them for public access. *Blue type highlights numbers that are incomplete due to missing data.*

** Row and column totals do not match, as some hearings did not include discussion of any of the topics included in the table. This number is the row total.

Program Administration

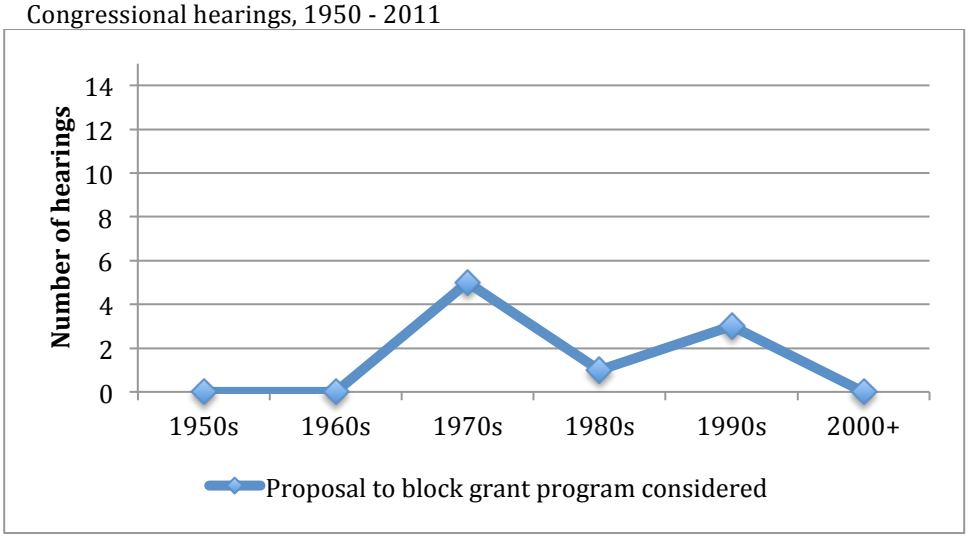
Federal vs. state responsibility; block grant proposals

When legislation to establish a permanent school lunch program was being considered at the federal level initially, members of Congress clearly articulated their vision that this program ultimately should be funded primarily at the state and local level.[131] Federal financial and material support was limited in the 1946 National School Lunch Act, with a matching fund formula that placed equal burden on federal and state budgets for the first few years of the program, but gradually reduced the proportion of federal contributions, so that states were matching $3 to every $1 in federal resources once the program was in place for 10 years. However, President Nixon's guarantee in 1969, that all children in the United States who needed a school lunch but couldn't afford to pay full price for it would receive one, shifted the balance of state and federal funds allocated. The implementation of this guarantee in federal policy required a substantial increase in funds. Once the program became a larger federal expense, proposals to curtail and then to block grant the program, and send its administration back to the states with some reduced level of federal support, began to surface. Block grant proposals were placed on the formal federal agenda in the 1970s, 1980s, and 1990s (figure 5).

While the school lunch program generally has received broad bi-partisan support, as articulated by Senator Harkin, Democrat from Iowa, in a 2001 hearing:

> Of all the issues that have come before this Senate Agriculture Committee in all the years I have been on it, there is none that has been more bipartisan—or, should I say even nonpartisan—than the issue of child nutrition.[141(p2)]

Figure 5: Proposals to block grant the National School Lunch Program discussed in Congressional hearings, 1950 - 2011

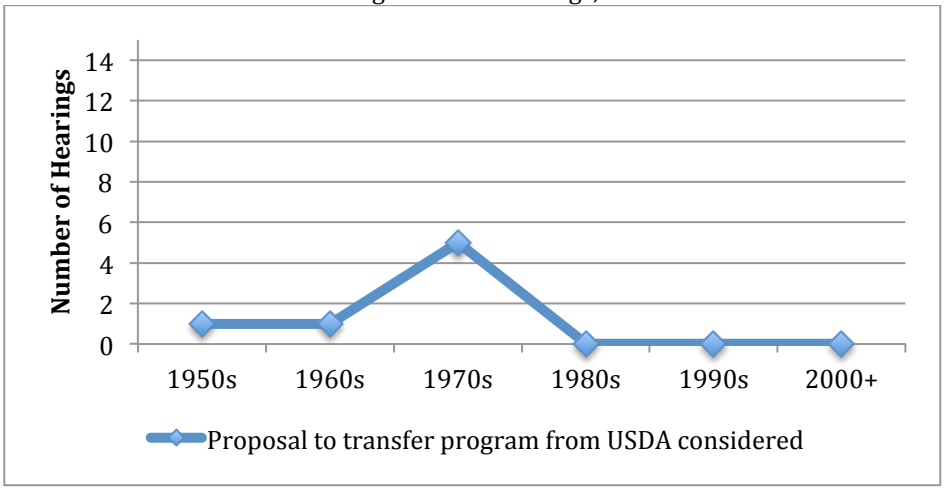


the block grant proposals all have been initiated and supported by Republicans: presidents in the 1970s and 1980s, and a Republican-controlled House of Representatives in the 1990s. Since the mid-1990s, the idea of block granting the School Lunch program has not reappeared on the federal agenda.

Proposals to transfer the program from the USDA

Whether the school lunch program should be housed in the Department of Agriculture or in the Department of Education at the federal level was a topic of a great deal of discussion when the program was established in the 1940s.[131,113] While the legislation that ultimately passed assigned the Secretary of Agriculture responsibility for its administration, proposals to change the program's administrative home in the federal government continued to be raised during the early years. Hearings and bills in the 1950s, 1960s, and 1970s considered proposals to move the program from the Department of Agriculture to the federal department overseeing education (Figure 6).

Figure 6: Proposals to transfer federal administration of the National School Lunch Program from the USDA discussed in Congressional hearings, 1950 - 2011



Early advocates as well as others testifying in later years expressed concern that the school lunch program needed to be better integrated into the school day, and argued that this would happen only if it were administered by the department of education. In 1969, a new USDA agency, originally called the Food and Consumer Service and now known as the Food and Nutrition Service, was created specifically to address nutrition assistance programs. Yet fewer than 10 years after this agency was established, Congress again considered proposals to transfer administration of the School Lunch Program to a new Department of Education. These proposals were not successful, however, and since that era, suggestions to transfer administration of the School Lunch Program from the Department of Agriculture have not been prominent on the formal federal agenda. Some advocates in recent years have suggested the program would benefit from changing administrative homes, yet these proposals have not become a primary topic considered in Congressional hearings or bills. While many are satisfied with the USDA's administration of the program, the full integration within the educational program offered by schools has not been executed. Whether this is due to a lack of interest or willingness to push for an educational component on the part of the USDA, related to ongoing debates about whether the federal government has any role in dictating the content of educational curricula to states, or some combination of other factors is not clearly evidenced by this study of legislative materials.

Which students benefit from the National School Lunch Program (should meal programs be universal or targeted?)**?**

When the National School Lunch Program was established, it was seen as a service that would benefit all children. While the program was not targeted toward the poor, the initial legislation specifically required that meals free of cost or at a reduced price would be made available to students who couldn't afford to purchase meals at full price. Yet decisions about how to identify and serve these students were left to the local schools.

But in the 1960s, exposés of hunger in the US, the inadequacy of the school lunch program to provide meals to students in need, and schools' discriminatory practices in providing free or reduced price meals changed the emphasis. Nixon's response to the school lunch program problems, pledging in 1969 that lunch meals would be available for free or at a reduced price to all students in need, initiated policies that emphasized the program's role in serving meals to students with limited family financial resources. Even though when testifying before Congress in 1968, the authors and funders of "Their Daily Bread" had articulated broad long-term goals of continuing to include all students in the school lunch program, the immediate short-term call for the program to better serve the poor was the piece acted upon. Jean Fairfax, Chair of the Committee on School Lunch Participation had stated:

> It is necessary to have special efforts to meet the urgent needs of poor children immediately. But in the long run, we feel that the poor child will fare best in an inclusive and high-quality school food service program which is designed to meet the nutritional needs of all children. It is for this reason that we have recommended a universal school lunch program which would be free to all children as a normal part of their educational program.[136(p10)]

Yet while the urgent short-term goals were being addressed, financial pressures, food price increases, and other challenges forced schools to provide more meals for less money. Students not qualifying for free or reduced meals began to participate less. In 1974, a National Nutrition Policy Study Report prepared by the Panel on Nutrition and Special Groups, led by Jean Mayer of Harvard, stated:

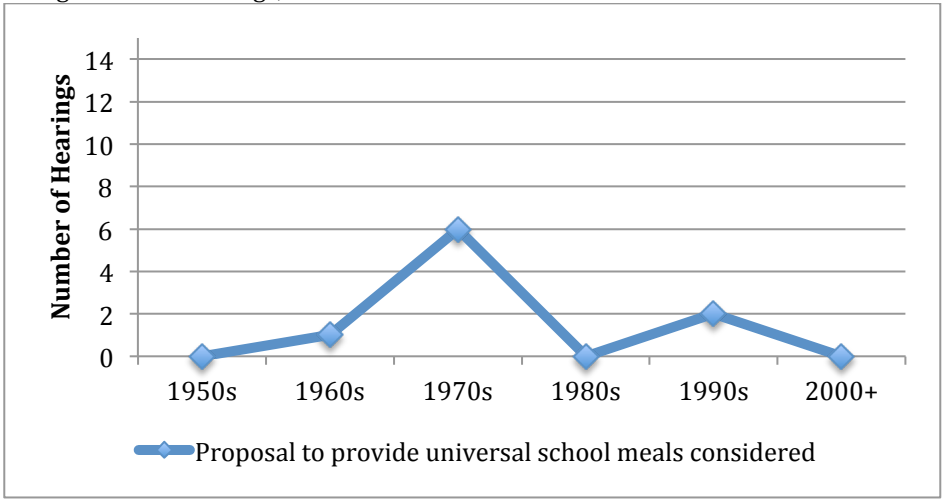
> The third distinctive trait of school nutrition programs—the fact that children from all economic levels may participate—is crucial. It broadens the base of support for the programs, enabling them to enlist educators, nutritionists, anti-poverty workers, and a diverse citizenry as program advocates. This multiplicity of interests probably has helped more poor children to participate than an exclusive anti-poverty appeal could have achieved. On the other hand, divergent goals within the school feeding coalition can lead… to sacrificing the interests of the poor in order to gain legislative consensus.[142(p928)]

Consistent with early advocates, appreciation of the value of including all children in the school lunch program was articulated. Yet arguments about whether the school lunch program should support the provision of meals to students whose families could afford to pay for meals emerged. President Ford in 1975, made clear his opposition to subsidizing meals for students not considered financially needy. Much legislative attention beginning in the 1970s was devoted to addressing formulas for providing access to free or reduced price meals. This eligibility issue was considered sometimes as a way to expand program access (for example, introducing proposals to ignore military pay in calculating eligibility) and sometimes as a way to limit it

(proposals to lower the income thresholds for students to qualify for free or reduced price meals).

The longer-term goals of making the school lunch program universally available continued to be discussed in hearings held by The Senate Select Committee on Nutrition and Human Needs throughout the late 1960s and mid-1970s, but fell from the agenda during the 1980s (Figure 7).

Figure 7: Proposals to establish a universal school lunch program discussed in Congressional hearings, 1950 - 2011



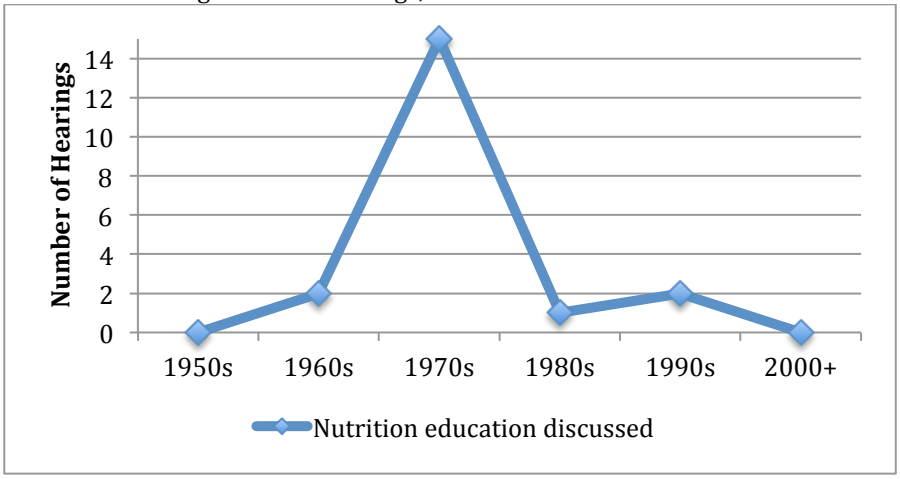
In 1985, USDA officials argued before Congress about why school meals should be restricted to children whose family income was below the Federal poverty level. Eventually, the option for schools to provide universal meal service was adopted, but it targeted low-income schools. Thus, schools in which most students qualify for free or reduced price meals may be eligible to provide a universally available free meal program. Over time, the School Lunch Program increasingly has become viewed more as a welfare program for low-income children than as a general service of benefit to all children, although the government continues to provide a meal subsidy to all students. Despite the recognition of many experts over time that a universal school lunch program provided to all students as part of the school day would be most likely to benefit all children and ensure a high quality meal program, the resources and political will to provide such a program have not become available.

Nutrition Education

Providing nutrition education in schools was a topic of much discussion during the initial school lunch hearings in the 1940s. Advocates suggested that providing healthy foods in conjunction with teaching students about them would be most effective in improving children's long-term nutrition and health. However, neither provisions nor funding for nutrition education was included in the initial legislation. The idea of including nutrition education in the school lunch program reappeared as an issue of focus in Congressional hearings and bills in the end of the 1960s. At that

time, the Senate Select Committee on Nutrition and Human Needs began to discuss the need for nutrition education to improve the services and impact of the school lunch program. During the late 1960s through the mid-1970s, many hearings discussed nutrition education, and multiple bills proposed establishing a nutrition education program (Figure 8).

Figure 8: Proposals related to nutrition education in the National School Lunch Program discussed in Congressional hearings, 1950 - 2011



A 1977 study by the USDA identified nutrition education as an effective mechanism for reducing food waste in the National school Lunch Program. Senator Bob Dole, Republican from Kansas, stated his support for providing such education in a 1977 hearing:

> If there is no question about the need for nutrition education, we had witnesses as late as this morning, a GAO witness saying that we recommend more nutrition education. This was in our Nutrition Committee hearings. We have GAO reports running out our ears about lack of nutrition education. So there is a need for it… We are talking about a program of millions of dollars, and we are talking about millions of dollars of plate waste…[143(p6)]

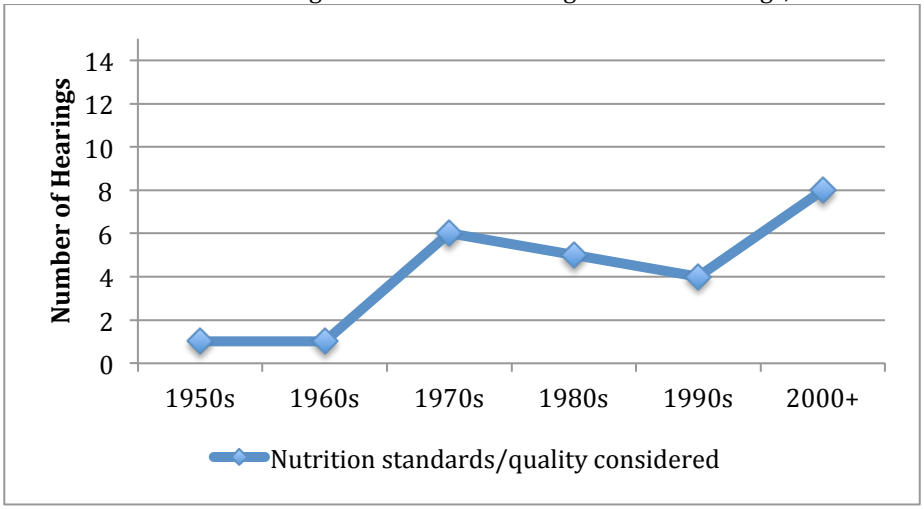
In 1977, Congress passed legislation that established the Nutrition Education and Training Program, which provided resources to train teachers and food service workers to conduct nutrition education programs with students, as well as for the development of curricula and materials. In 1978, a Senate Agriculture, Nutrition, And Forestry Committee hearing included testimony accusing the USDA of using the regulatory process to delay implementation and change the intent of the Nutrition Education and Training Program. While the program ultimately was established, funding decreased substantially within the first years after implementation.[115] The provision of nutrition education in schools was discussed in a couple of hearings in the 1980s and 1990s, but a comprehensive program of progressive, annual nutrition education never has been adopted. The most recent study available estimated that

US students spend an average of 4 hours per school year engaged in nutrition education.[144] In 2010, the Healthy Children Through School Nutrition Education Act was introduced in Congress, recommending that local school wellness policies require schools to provide students with 50 hours of nutrition education annually. However, the emphasis of policy changes in 2010 focused on the foods and beverages available to students; resources or guidelines for nutrition education were not included.

Nutrition standards for foods available at lunchtime

The nutrition guidelines for meals served in school lunch were entirely uncontroversial when the program was being established. At that time, 3 meal types were approved: Type A was considered a full meal, Type B was a smaller portion of that complete meal, and Type C included only milk. Type A and Type B meals were required to include milk, protein-rich foods, fruits or vegetables, grains, and butter or margarine. This meal pattern persisted for many years, with relatively little Congressional attention devoted to the nutritional content of school lunches. In 1957 and 1958, bills were introduced to increase the minimum standard for protein in lunch meals. In 1958, one hearing focused on increasing the amount of milk provided with school lunches, and one hearing in 1969 addressed the issue of improving the nutrition standards for the program. The topic didn't appear again until 1977 when two hearings focused on concerns with the quality of school foods and recommendations to improve the nutritional value of them (Figure 9).

Figure 9: Proposals to modify the nutrition standards or food quality for meals served in the National School Lunch Program discussed in Congressional hearings, 1950 - 2011



Discussions of the nutritional standards of school meals in the 1980s included both proposals to weaken the standards in order to save money, as well as ideas about improving them. Beginning in the 1990s, concerns about school meals being too high in fat and salt emerged. Hearings focused on the nutritional quality of school meals peaked in the 2000's, and resulted in legislation that changed the standards to reflect concerns about school meals including more fruits, vegetables, and whole

grains, and not providing excessive calories, fat, or sodium. These changes were implemented after the problem of childhood obesity had been on the federal agenda for a number of years, and policy makers, health and nutrition experts, and advocates were contemplating the role of the school lunch program in addressing that problem. Further, the Obama administration expressed support for improving the health of the nation's children, and the First Lady pursued a reversal of the obesity epidemic as her primary goal.

Competitive foods

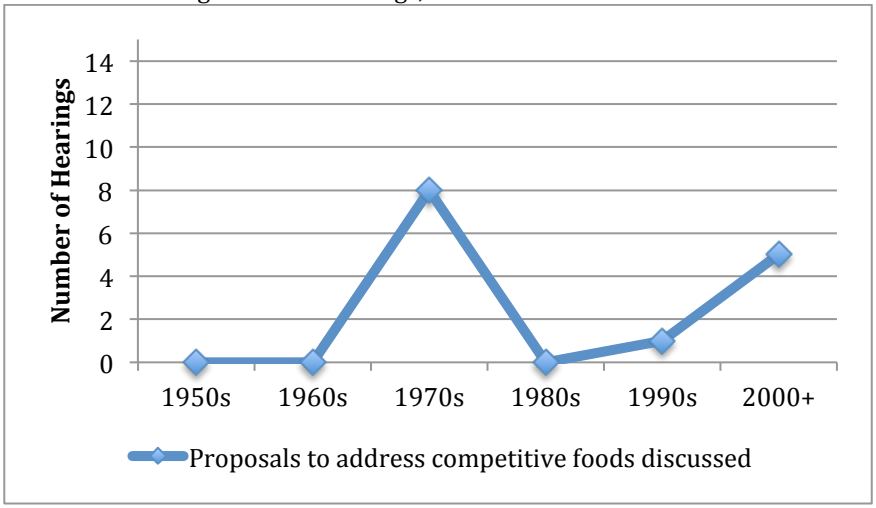
Hearings and bills addressing the issue of selling of what are commonly known as "competitive foods" in schools surfaced initially in the 1970s. An amendment that year to the Child Nutrition Act of 1966 had granted the Secretary of Agriculture the authority to regulate the sale of competitive foods, which resulted in an effective ban on soft drinks and candy being sold in schools (only foods that were served as part of school meals were allowed to be sold, and soft drinks and candy generally were not served).[145] Although the hearing records over the course of the program's history include only a few witnesses testifying from the food industry, this witness representing the National Confectioners Association and the National Candy Wholesalers Association, testifying for an amendment to allow candy sales in school lunch programs in 1972, shows the confidence of the industry in their argument to provide children foods not generally considered health-promoting at school. He argued:

> …it would be unreasonable and outright illogical for school authorities to take away all candy from children… Although many confections stand well in nutritional tests, we recognize that frequently our products are purchased for pleasure more than nutrition. What is wrong with that? Of the various temptations offered today to children, what offers more joy and is less harmful than candy? Must the children leave school to acquire harmless confections as they must do to obtain other items readily recognized as being harmful?[146(p79)]

Five bills were introduced in 1972 to require the Secretary of Agriculture to limit the scope of allowable regulations regarding the sale of competitive foods and to allow food vending machines in schools as long as the proceeds went to organizations approved by the school. This is the first place in which the processed food industry appears to be overtly exerting influence over school lunch policy. Congress acted in 1972 and removed the authority of the Secretary of Agriculture to regulate the use of vending machines in schools. In 1973, The Senate Select Committee on Nutrition and Human Needs held a hearing entitled Federal Food Programs 1973 Part 1: Vending Machine Competition with the National School Lunch Program, to discuss concerns about vending machine sales. Senator McGovern introduced the hearing talking about the potential of sales of unhealthy foods in schools to undermine the long-term health goals of the school lunch program and conflict with the program's ability to educate students about the principles of a healthy diet.[147] Proposals to limit competitive foods arose again in

Congress in the later 1970s, with a bill and hearing in 1977 proposing to authorize the Secretary of Agriculture to prohibit the sale of "junk" foods in food service areas during meal service. The Department was given this authority in 1977, released a recommended rule in 1978 that raised a great deal of controversy, and tried again in 1979, presenting the proposal in a Congressional hearing about child nutrition programs.[148] The result of these actions was a restriction on the sale of items from four categories of "foods of minimal nutritional value": soda water, water ices, chewing gum and certain candies (hard candies, jellies, fondants, etc.).

Figure 10: Proposals to address competitive foods in the National School Lunch Program discussed in Congressional hearings, 1950 - 2011



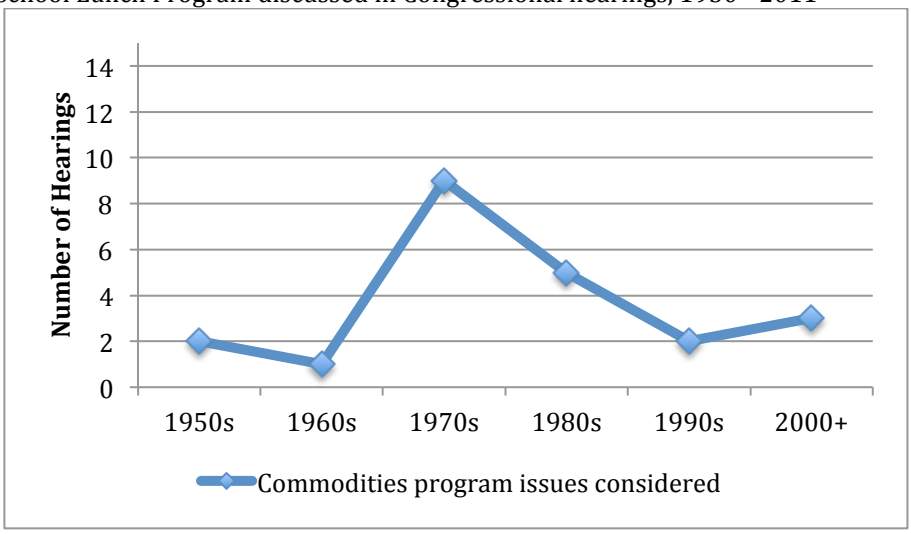
In effect, however, "junk foods" were readily available at schools, and became increasingly common throughout the 1980s, 1990s, and into the 2000s. One hearing in 1994 included discussion of a provision to allow schools to ban the sale of unhealthy foods. But attention to the amount of unhealthy foods and beverages available in schools didn't become prominent on the federal agenda until the early 2000s. Four hearings between 2000-2010 focused specifically on limiting access to unhealthy competitive foods. The Healthy Hunger Free Kids Act of 2010 included granting authority to the Secretary of Agriculture to regulate all foods and beverages available to school students.

Commodities program structure

The initial federal involvement in school lunch programs was established to ensure the availability of an outlet for government-purchased surplus commodities.[131,113] Although issues of commodity program structure haven't dominated the federal school lunch agenda in any particular time period, they have garnered consistent attention, particularly since the 1970s (Figure 11). Primarily, these debates have considered ideas about whether the USDA should continue to distribute commodity foods or whether schools should be provided with money instead of the foods. Yet other issues have been discussed as well, such as a 1973 bill that would require the Secretary of Agriculture to provide cash payments to states of any unexpended funds intended for commodity purchases for school lunch programs; hearings also

focused on ideas of allowing the USDA to distribute foods purchased at market-prices, rather than only distributing surplus commodities. In 1977, a Government Accountability Office (GAO) report on the impact of commodity foods on the school lunch program was discussed in a House hearing. Two months later, the idea of the USDA providing cash in lieu of commodity foods to schools was discussed in a Senate Agriculture and Forestry committee hearing. A bill in 1980 proposed to have the USDA provide credit vouchers to states for the direct purchase of agricultural commodities for school lunch programs. A year later a hearing discussed concerns from small businesses that the commodities program favored big business.

Figure 11: Proposals to modify the structure of commodity foods provided in the National School Lunch Program discussed in Congressional hearings, 1950 - 2011



Beginning in 1986, hearings were held to discuss the idea of modifying the commodities program to establish a commodity letters of credit system for supplying school foods. By the early 1990s, commodities still were being provided to school lunch programs, but the level of commodity assistance as a proportion of total Federal school lunch assistance had decreased from close to 20% in the late 1970s to just above 12% in 1994.[149(p6)] While the commodities program has changed over the years, a hearing from the year 2000 suggested that USDA surplus commodity purchasing programs still were considered essential by the agricultural sector. William Ferriera, President, Apricot Producers of California said:

> The National school Lunch Program is the backbone of the commodity distribution system… It is very important to the agricultural industry that the National School Lunch Program remain a viable outlet for USDA commodities. If the program deteriorates to the point where it is too expensive to operate, the entire commodity distribution system will collapse, and USDA will not have an outlet for products when it makes bonus purchases. Without this outlet, I feel that it will become politically impossible for USDA to support the agricultural industry

through bonus buys, because it will have no way to dispose of these products.[149(p12)]

A 2008 hearing examined the impact of commodity foods on the nutritional quality of school lunches. While the systems of commodity food distribution have changed over the years, the USDA still distributes foods to school lunch programs. The majority of these foods (60%) are required to be items that are in surplus, and additional surplus foods can be provided if available. Despite repeated proposals to phase out the food distribution portion of the school lunch program in favor of providing cash, this has not happened. The link between the school lunch program and the agricultural economy has persisted.

DISCUSSION

The school lunch program has had a remarkable history, maintaining its status as a federal program during a time period in which many government social programs have appeared and disappeared. Further, the program has persisted despite the fact that domestic spending on children in the United States has dwindled over time, while investments in programs for seniors have increased. In fact, between 1960 and 2009, the proportion of domestic spending on children declined by 29 percent.[150] In 2012, federal spending on children represented only 8% of the budget[151] while 22% of children lived in poverty.[2] At a time when the federal government invests very little in children, these precious resources to benefit the nation's youth are critically important. But while the idea of a federal commitment to providing healthy, affordable meals to children in school is laudable, the story of the school lunch program is one of mixed success.

Presently, while the school lunch program successfully reaches many low-income youth in the country, studies suggest that the status of children's nutritional health needs improvement. Young people today are becoming ill from diet-related chronic diseases at earlier ages than ever imagined. Almost none of the children and adolescents growing up in the US currently consume a diet consistent with evidenced-based dietary advice.[86] While schools are not the only children's environment that can influence dietary behaviors, schools can be a very important influence on children's food intake. In order to address the crisis of children's nutrition and the resultant increases in obesity and chronic disease, federal legislation adopted in 2010, has begun to address the nutritional quality of the foods and beverages provided in schools, though much work remains to be done. Some suggest that the ability of the United States to reverse the current crisis in children's health may depend upon the success of these policy changes.[19]

By providing an historical perspective on the National School Lunch Program, this study shows that most of the ideas currently proposed to improve the school lunch program are not new ideas. Rather, many of the ideas have been proposed since the earliest days of federal discussions about implementing a National School Lunch Program, and as shown in Figure 3, many of these issues have continued to reappear on the federal decision-making agenda over the years. While it is not possible to

know whether any particular idea will resurface, history and political science theory suggest that issues that have disappeared are likely to reappear. Thus, school lunch program advocates should be prepared to defend the program against arguments that it should not be administered at the federal level. Additionally, considering prior reasons for the successes and failures of ideas related to national school lunch program policy and considering how different political and social contexts and issue frames create new opportunities or vulnerabilities for the program may inform future efforts. For example, this study suggests that constrained resources, in addition to political disagreements, have prevented the program from being implemented in the way that health and nutrition professionals have suggested for nearly seventy years. The scientific literature now confirms that healthy foods presented in an appealing manner and provided in conjunction with quality, experiential food and nutrition education at school are more effective in shaping students' healthy diets.[44,45] But this evidence supports old common sense. Thus, rather than focusing on the idea of providing nutrition education, the relevant policy question becomes how to find the resources and will to invest in the nutritional health of the nation's children. Further, in an era of policy decisions based on cost/benefit analyses, whether the school meal programs can prove that they contribute substantially to improved children's health when implemented optimally likely will be important. If economic arguments have trumped social welfare arguments related to the school lunch program during the course of its history, framing reforms in terms of resources saved, as has begun to be advocated by health and nutrition experts, may be key to future successes. While the country may not have felt the resources were available in the past to provide healthy, appealing meals to students in conjunction with food and nutrition literacy education to foster the development of life-long healthy habits, the current epidemics of expensive, diet-related chronic disease suggest that the country may not be able to afford not to invest. Understanding that the ideas currently suggested for improving students' nutrition via the School Lunch Program are not new, but rather have been proposed since the program's inception, underscores the importance of understanding the broader political, social, and scientific contexts in which policy decisions are considered.

This examination of Congressional attention to the school lunch program suggests that the amount of hearing attention devoted to the program has not necessarily coincided with new policy adoption. The period of greatest attention to school lunch in hearings was during the 1980s, when Congress was working to protect the program from administrative cutbacks. Additionally, a great many school lunch-related hearings were held by the Senate Select Committee on Nutrition and Human Needs in the late 1960s through the mid 1970s. However, despite a great deal of discussion about ways to improve the school lunch program at that time, very little was accomplished (although other interventions to improve child nutrition were adopted, like the School Breakfast Program). The 2000s have been an era rich with bills proposed to improve school meals and new regulations passed to promote the healthfulness of foods and beverages served to students in schools. While these actions are extremely important—it seems difficult to justify selling foods of

minimal or adverse nutritional value to students in schools when data suggest that children's health is suffering—they do not include actions taken to ensure students *consume* the healthier foods provided nor is it clear that adequate resources are available to provide high quality healthy and appealing foods.

The events of the late 1960s which increased the federal financial obligation to the school meal program combined with events in the 1970s which led to rises in food prices and weak regulations related to the sale of competitive foods set the stage for the budget cuts in the 1980s to begin to seriously dismantle the nutritional integrity of the school lunch program. Despite arguments from advocates in the 1940s and 1970s to provide universal meals and fully integrate food services into the educational program at schools, the school meal program has remained a means-tested anomaly in the school day. The 1980s budget cuts stressed schools even more, and pushed them to provide the cheapest food possible to feed the largest number of students. A rapidly growing prepared food industry was poised and ready to provide cheap processed food items to schools. According to Levine, even those deeply concerned about the quality of school food hoped that the food industry could provide cheap and healthy meals for students.[113] Yet that is not the outcome that has been realized. While the food industry appeared occasionally as witnesses in Congressional hearings, their presence in hearings over time is quite limited. Thus, while the hearing records may provide some examples of food industry arguments for the positions they have advocated on school lunch policy, this record is not likely to be the best source for understanding the political influence of this interest group.

Over time, the idea that the school lunch program should be supported with state and local contributions has subsided, as was anticipated by the program's founders in the 1940s. Instead, the focus of whether resources to feed students were adequate had begun primarily to consider the federal rate of reimbursement. The exposés in the 1960s highlighted states' and local schools' inability to adequately implement the intention of the National School Lunch Act to provide meals for all students, including those whose families couldn't afford them. Arguments to block grant the School Lunch Program and allow states to administer it are cause for concern among advocates, as it seems unlikely that all states will consider the best interest of their students in so doing. As past and present school lunch policy efforts have shown, some states, when given the choice, are willing to sacrifice the health and wellbeing of some or all of their students. For example, in the 1960s, many states failed to provide meals to the students in greatest need. Similarly, in the recent era of discussions about the healthfulness of school foods, some states independently acted to remove the least healthy foods and beverages from schools, like fast food outlets, soft drinks, and candy, while others continued to offer and actively market these items to students. While the federal government has not succeeded in ensuring school meals are a model of health throughout the decades, the program has provided a floor below which states could not fall. Further, the federal government, in implementing the Healthy Hunger Free Kids Act of 2010, now is moving in the direction of improving the program and providing students

with healthy school meals and considering limits to unhealthy foods. But those concerned about maintaining the program at the federal level should remain cognizant of the ongoing proposals to block grant the program, as political science theory suggests that these proposals could return to the federal agenda given a different political context. And creative strategies for identifying resources to implement tested interventions to improve students' food consumption in schools and their development of health-promoting dietary behaviors are needed.

The history of the school lunch program provides some insights into the applications of political science theory. The story supports Kingdon and Baumgartner and Jones' assertion that policy ideas can languish for many years and be reintroduced many times, sometime eventually succeeding.[100,46] Yet while it was expected that some venue change within Congressional committees hosting hearings about school lunch might have introduced new ideas and attention, this was not found. The Senate Select Committee on Nutrition and Human Needs brought with it a great deal of Congressional hearing attention to the School Lunch Program. Yet while some of the work of this committee resulted in successful policy interventions on other nutrition issues, the ideas discussed about school lunch for the most part were not successful. Baumgarter and Jones' theory about punctuated equilibria in policy making appears to be supported by the school lunch program history.[100] The push to provide free or reduced price meals to all eligible students was a major punctuation in what had appeared to be a relatively stable program; the current efforts to improve the nutritional quality of foods provided likely represents a similar punctuation. Hacker's assertion that since the 1970s even welfare programs that have been preserved have been effectively undermined appears to apply to the school lunch program as well.[132] However, recent increased investments aim to improve this situation, but still don't require what experts have suggested for many years to be necessary to have a high quality successful school lunch program.

A currently popular model for developing policy analyses developed by Eugene Bardach involves considering policy issues in eight steps, in order to facilitate the development of better public policies.[152] This path begins with "define the problem." The way that problems are framed can substantially affect the desire of policy makers and the public to address them.[110] In the case of the National School Lunch Program, a lack of clarity about the problem(s) the program is trying to solve has been evidenced since its inception. It may help advocates to consider and articulate the problems that are being addressed as solutions are suggested.

Limitations

While the issues that have been discussed in hearings and proposed in bills at the federal level related to this program provide insight into the program's history, they provide only one limited window through which to view this history. A more thorough history of the school lunch program would include a systematic review of media stories as well as other sources of information, including records of public comment on bills proposed, interviews with key stakeholders over time, and a

review of financial contributions and meetings held between key legislators and groups with a vested interest in the outcome of school lunch-related policy decisions. Further, the data for this study were drawn primarily from the summary documents available in ProQuest Congressional. Not all summaries provided adequate information to determine the primary issues covered, particularly when broad proposals for improving or reauthorizing the program were considered. While some of the full hearing transcripts were reviewed briefly, this was not done systematically and reviews were motivated primarily to explore in more detail issues of particular interest. A single reviewer conducted the research, reviewing summaries and transcripts, and coding issues covered. Thus, this account is biased. Future studies should include multiple readers systematically reviewing the summaries and coding the issues addressed. Additionally, systematically reviewing the detailed hearing transcripts and charting the information would provide a more comprehensive understanding of the issues, arguments, and coalitions involved in shaping school lunch program policy. The information provided in this study can be used to select the time periods and topics of interest. A full review of all the hearing documents is not practical, given that the volume of written transcripts exceeds 45,000 pages. A systematic analysis of the witnesses testifying before Congress about the program would provide important insight into the coalitions active in advocating for the program, and whether/how this has changed over time. The data regarding bills proposed related to the school lunch program were helpful in assessing the story of the program's legislative history, but also have systematic bias, since bills introduced between 1963-1970 and 1982-1988 were not available at the time the study was conducted from the data source utilized. Further, bill summaries were not very descriptive when legislation was broad and included many different policy issues. Thus, the report of content areas addressed by bills proposed greatly underestimates the content of these policy proposals. Finally, while a brief review of New York Times articles including the term "school lunch" in the headline was conducted in order to ensure no major issues or events were missing from the legislative summaries, this review was not captured in a systematic manner, so was excluded from this report. A more thorough analysis of these news stories likely would provide valuable insights into the politics of National School Lunch Program policy over time.

RECOMMENDATIONS: LEARNING FROM HISTORY

Despite the limitations, this broad overview of issues and arguments that have been considered related to the school lunch program over the course of its nearly 70 years of supporting lunch meals for US students brings to light certain important issues that can inform school lunch program proposals in the future. The perspective gained by exploring the legislative past uncovers some strengths and potential vulnerabilities of the program. The following recommendations may be useful for those working to promote children's health through the school lunch program.

1. Pay attention to historical patterns

Understanding that most of the current ideas about how to improve the National School Lunch Program aren't new can help advocates consider the ways in which they may need to approach topics to get traction on issues of concern. Considering the reasons that these ideas haven't gained traction in the past, how issues may be reframed, as well as how differing political and social circumstances may facilitate policy adoption could facilitate success.

Additionally, the history of the school lunch program suggests that the previous period of program expansion was followed by efforts to curtail the program. Thus, the recent era in which expenditures on the school lunch program have increased and new regulations have been adopted similarly could be followed by attempts to cut back. In particular, the historical record shows that there have been repeated attempts to block grant the National School Lunch Program. Thus, those interested in the Program should not be surprised if these arguments reappear on the federal agenda in the future. The recently strengthened nutrition standards for meal foods and the pending standards for competitive foods have raised a good deal of controversy and some of the improvements already have been rescinded in response to outcries from industry and some schools resistant to implementing the changes. Understanding that although the school lunch program has generally enjoyed bi-partisan support, but that conservative presidents and Congressional leaders have considered dismantling the program at the federal level should encourage advocates to think carefully about future strategies. It seems wise for future proposals for improving the program's services to be pilot tested at the state-level in order to learn from and fix problems before implementing them federally. Federal policy proposals should be based on evidence-based strategies shown to be effective in states. Being prepared for arguments to cut back or block grant the program will better position advocates to sustain and continue to improve the program.

2. Define Goals; Recognize Program Weaknesses

In the earliest framing of the National School Lunch Program, supporters did not agree on the primary problem the program was intended to address. It seems that this disagreement about exactly what the School Lunch Program should accomplish has persisted. While this disagreement has not caused the program to be dismantled entirely, it may explain some of the challenges the program has faced over the years. While complete agreement on the problems the program should solve doesn't necessarily need to be reached, supporters likely would benefit from being clear about the problems they are trying to address when crafting policy alternatives. Further, it is important for those with different interests in the School Lunch Program to understand the problems other interests may be aiming for it to solve. For example, it seems that the program in the 1970s experienced a tradeoff between serving food to the hungry and maintaining quality meal service. Yet advocates focused on program access were reluctant to criticize food quality. In recent years, the framing of school nutrition as an opportunity to address rising rates of childhood overweight and obesity likely has been the reason for some political

successes. However, this framing also presents limitations and potential problems. For example, this framing may mean that the continuation of these investments could rely on a demonstration of the program's impact on obesity, and that new discoveries about causes and consequences of obesity could make these investments vulnerable. Further, all food and beverage products that do not contribute to obesity are not necessarily healthful, and the corollary also is true. Thus, a return to framing the goals of the School Lunch Program related to helping students develop life-long healthy eating habits to prevent chronic disease may be a good idea (although this is less measurable in the short-term than obesity rates). In addition, considering other issues likely to gain attention in the coming decades, like the issues of food waste, environmental sustainability, and others, could position advocates to move the program more strongly into the future.

3. Maintain a Strong and Diverse Coalition

When the National School Lunch Act was passed in 1946, an active coalition of diverse stakeholders, representing the interests of agriculture, education, health and welfare, home economics and nutrition was organized and active in advocating for the program.[131,113] At that time the interests of these stakeholders were aligned in terms of wanting to establish a permanent school lunch program, though the details of how to structure the program highlighted differences among these interest groups. From 1946 to now, however, the interests of these groups have not remained aligned. In the modern era, much of the school lunch advocacy has been undertaken by health and nutrition experts and advocates, with a somewhat argumentative tone with the agricultural sector and food industry. The involvement and engagement of educators is not clearly evident. For example, the most recent coalition work related to school food has been led by the Center for Science in the Public Interest (CSPI). Through their National Alliance on Nutrition and Activity, CSPI has organized an impressive coalition of groups interested in health and nutrition policy to advocate for school nutrition issues. While this coalition is broadly representative of health and nutrition interests, representation from fields such as agriculture and education are extremely limited. In order to continue to move the school lunch and other school nutrition programs in a positive direction, it is important for health and nutrition advocates to create broader coalitions. While it may be more difficult to find common ground with groups whose interests are different, the chances of successfully arguing for changes will be strengthened if the voices of more diverse interests can be brought together. Similarly, in order for the school lunch program to offer to children the opportunities its early supporters envisioned for it, educators need to be firm stakeholders and supporters.

Further, children's nutrition advocates should join forces with other groups working to raise the status of children's needs generally on the federal agenda. Currently, advocates for children's health and nutrition seem to operate somewhat apart from children's advocates concerned about preschool, general education, children with special needs, etc. Partnering to ensure federal, state, and local policy makers prioritize the needs of children across disciplines and issues will benefit children. "What's required to make the needs of children truly salient—to build a movement

that might ultimately have the kind of clout that's wielded by the senior citizen's lobby—is the alignment of money, message, innovation, and a coordinated strategy."[153(p178)] Health and nutrition professionals should link with others interested in promoting children's health and wellbeing to foster this alignment. A renewed federal commitment to and investment in supporting the overall growth and development of children presents the most hopeful opportunity for child nutrition programs to fulfill the goals advocates have set for them.

Better bridge training of nutrition and agriculture
The School Lunch Program shows that the link between agricultural policy and nutrition policy in the United States still is intimately intertwined. The program continues to provide an outlet for surplus agricultural products, and is considered important to the agricultural sector. However, few in the field of nutrition are well-trained in relation to the issues confronting the agricultural sector, and the two groups have limited overlap. An emerging focus on food systems and health is beginning to change this, but more work is needed to bridge these fields, particularly in relation to understanding and improving public policies in the interest of children, families, and consumers.

4. Utilize creative strategies to better integrate school meals into the overall educational program
The earliest advocates for a federal school lunch program articulated the importance of providing meals at school that were consistent with educational principles taught, understanding that education alone or provision of food alone would not create a population that was well educated in food and nutrition.[131] The emergence of school lunches as a voluntary program with limited federal support and without any educational requirements attached did not lead to this outcome. Instead, in the majority of schools, lunchrooms continue to be a relatively disjointed experience from the rest of the school day. Unlike any other activity or service provided during school hours, whether students choose to eat a lunch served by the school is a choice, and one with its own means tested system and a requirement that students bring money to pay for this school service. Issues about penalizing children whose parents haven't paid for lunches have made headlines even in 2013.[154] This approach to having school meals function as an anomaly to the rest of the school day is fraught with challenges. It is readily acknowledged by many school food service professionals and nutrition advocates that cafeterias serving all students are better for everyone.[134] Yet, the bulk of school meals now are provided to students who qualify for free meals.

While establishing a universally available school lunch program in 2013 does not appear to be a politically feasible idea due to the costs associated with such a proposal, figuring out other ways in which to provide a program that would be better integrated with the school curriculum and school day likely would benefit students. Behavioral economics research suggests that some simple strategies may facilitate this process until the resources and/or political will is found to change current policies. For example, studies show that people behave differently when

default options are changed.[92] Thus, making participation in the school lunch program an active opt-out process rather than the current opt-in procedures in place in most schools could foster participation. Further, schools could better market and communicate the importance of participation in the meal program to parents and students. Emphasizing the importance of the shared learning opportunities school meals provide, discussing ways the program is integral to the curriculum, and asking parents to opt out of participation in the program rather than requiring them to opt-in might help increase participation. Additionally, finding other creative resource streams could benefit schools, families, and help to decrease healthcare expenditures. For example, David Katz, Editor-in-Chief of the Journal Childhood Obesity has suggested that employer wellness efforts could partner with schools. He said, "Teaching healthy practices in school is of vital importance but we all acknowledge that resource limitations often restrict what can be done there, and the engagement of businesses in support of that effort could help."[155]

5. Develop Scientific Evidence to Highlight Program Impact/Areas for Improvement

Since the program's inception, elected officials and advocates periodically have called for better data regarding school meals. While the 1990s saw the inception of the School Nutrition Dietary Assessment, which provides quality data regarding the foods and beverages schools are offering and children are consuming, attention to other health and nutrition objectives still are inadequately studied. Thus, the degree to which the school lunch program benefits students' and their families' eating habits and food literacy still is not well established. Developing a better understanding of the costs and benefits of specific aspects of the program is important for justifying current expenditures, expanding funding as necessary, and protecting the program from the cuts that may be proposed in the future. Good scientific evidence regarding the benefits of schools meals is difficult to attain, since nearly all students eligible for meals receive them; however, developing this evidence likely will be important for the program's future.

CONCLUSION

Many schools around the country have demonstrated that it is possible to provide healthy school lunches that students like to eat. Evidence suggests that providing healthy foods in an appealing and convenient manner coupled with experiential nutrition education, involving students in deciding what foods are served, and other strategies can facilitate students' consumption of healthy foods at school and their development of healthy eating patters. Politically, garnering the federal resources necessary to provide an optimally beneficial school lunch program has been unsuccessful throughout the history of the school lunch program. With new and potentially expensive nutrition challenges facing the population, now may be the time to invest in children's nutrition. However, history suggests that periods of expansion of the school lunch program have been followed by proposals to cut or eliminate the program. Thus, developing a broad coalition of actors poised to

support the program and developing strong evidence, particularly in the form of cost/benefit analyses currently popular among decision-makers, to support the investment in the school lunch program should be actively pursued by those concerned with ensuring the school lunch program continues to thrive. Further, the school lunch program will do best when the United States decides to invest more substantially in children, and to devote resources to issues that are most likely to prevent them from developing problems in the future. Protecting and improving students' experiences with the National School Lunch Program can provide the nation's youth with the opportunities they deserve to grow and develop optimally and reach the limits of their potential.

CONCLUSION TO THE DISSERTATION

This dissertation highlights a variety of issues that public health nutrition professionals may consider as they engage in efforts to take advantage of the opportunities presented by the National School Lunch Program to improve the health of children in the United States. The recent school lunch policy changes resulting from the Healthy Hunger-Free Kids Act (2010) represent the most substantial punctuation in school lunch program policy since the Nixon proposal to provide school meals to all children in need of a free or reduced price lunch in the 1960s. That proposal led to unintended consequences due to the increase in financial investment necessary to fulfill the promise of providing free or reduced price meals to all the eligible children. The unintended consequences of the increased financial burden included subsequent efforts to curtail program spending, as well as the direct fiscal challenges of providing more meals for less money, that likely contributed to the decline in food quality of lunch meals. The public health nutrition community now has an opportunity to protect the program from similar unintended consequences resulting from recent efforts to improve the quality of foods available at school. The papers included in this dissertation provide insights into strategies for accomplishing that.

While school lunch programs in the United States were initiated in many communities as a public service, the federal support for school lunch programs was initiated strictly for the purpose of supporting agricultural economics. Despite the fact that by the mid-1940s when the program was formally created by law there were strong arguments in favor of establishing the program for the purposes of children's health and wellbeing—and even to support families in which both parents were working outside the home—the final legislation clearly favored the agricultural interests over those of children. This program today continues to operate with this legacy, and while many things have changed over time, some of the earliest goals articulated in connection with the program—to ensure that school meals model healthy nutrition for students and families; to provide an experiential educational support to comprehensive food and nutrition education provided in schools; and to ensure students are provided with optimal nutrition in the school setting—still have not been met. Federal resources have been devoted to ensuring access to school meals is provided to all students regardless of their ability to pay. This has meant spending a substantially larger amount of federal dollars on school meals than was envisioned by the program's founders. Yet even with the substantial federal investment currently provided, the resources still are not adequate to support schools in serving students freshly prepared, high quality meals that are integrated into the overall school curriculum and help students establish lifelong healthful behaviors. Instead, school meal programs continue to struggle to find adequate resources to support the acquisition of adequate facilities, equipment, food service personnel, and food, let alone trying to provide a state of the art food and nutrition curriculum.

Reading the early transcripts from the hearings prior to the adoption of the National School Lunch Act affirmed that the school lunch programs I observed in my years of research in the second half of the first decade of the 2000s provided

students with meals that were inconsistent with those envisioned by advocates when the program was established in the 1940s. Yet new efforts to improve the nutritional quality of the foods available in schools have begun. The first paper in this dissertation suggests that schools should consider factors such as the length of time available to students to eat, and the tradeoff faced between providing a wide variety of fruits and vegetables and high quality items in order to support students' consumption of these items. Involving students in the meal services program also may be beneficial. The later papers uncover possible political vulnerabilities and strengths of the school lunch program, highlighting the fact that most of the ideas related to program improvement in the current era have been proposed for many years. The program continues because it has received broad support from many interests, but also may face vulnerabilities, as the resources it requires are substantial. Yet students today are in need of nutritional support as much as or more than they ever have been. Developing smart, creative strategies to help the National School Lunch Program fulfill the goals envisioned for it by its earliest proponents likely will benefit the nation's youth, and could help the US reduce the financial and human costs associated with the growing burden of diet-related chronic diseases.

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