

SUCCESSFUL APPROACHES TO REDUCE SODIUM IN SCHOOL MEALS STUDY (SUMMARY)

Background

The National School Lunch Program (NSLP) and School Breakfast Program (SBP), administered by the U.S. Department of Agriculture's (USDA) Food and Nutrition Service (FNS), provide nutritious and well-balanced meals to millions of children daily. In January 2012, consistent with requirements set forth in the Richard B. Russell National School Lunch Act (NSLA), the USDA published a final rule, Nutrition Standards in the National School Lunch and School Breakfast Programs (77 FR 4088),¹ that updated the meal patterns and nutrition standards for the NSLP and SBP to reflect the Dietary Guidelines for Americans. One provision of the updated standards required the gradual reduction in sodium content of the average weekly school meals offered in the NSLP and SBP by meeting progressively lower sodium targets over 10 years. Sodium Target 1 went into effect in school year (SY) 2014-2015. At the time of the study, from January 2016 to June 2017, Target 2 was scheduled to take effect in SY 2017-2018. In November 2017, after data collection ended, the USDA published an interim final rule, Child Nutrition Programs: Flexibilities for Milk, Whole Grains, and Sodium Requirements (82 FR 56703),² that retained Target 1 as the regulatory limit through SY 2018-2019.

The Successful Approaches to Reduce Sodium in School Meals Study was designed to provide information on (1) the market availability of foods that meet the sodium standards for school meal programs set by regulation in 2012, (2) the strategies most often used by schools that have met the sodium targets, and (3) the technical assistance needs of schools and districts working to develop lower sodium menus.

Methods

Data were collected in two phases. Phase one, in early 2016, included a focus group and key informant interviews with a total of 16 food industry representatives from 13 companies that provide food

to schools. Phase two, in mid-2017, began with a web survey to identify public school food authorities (SFAs) for in-depth interviews. The survey was sent to a stratified random sample of 616 SFAs, based on SFA size. Based on the survey responses, the study team conducted brief follow-up telephone interviews to inform the selection of 36 SFAs for in-depth interviews from among those reportedly meeting sodium Target 1 and close to or meeting Target 2. The final 36 SFAs were purposively selected to reflect the use of innovative sodium reduction practices while ensuring variation in geographic location, urbanicity, and district size. From these 36 SFAs, in-depth interviews were completed with 118 SFA directors, school employees, local food suppliers, and community-based stakeholders (hereafter, referred to as "SFAs").

The study team analyzed the survey responses and interview data to identify the key processes, challenges, and successes that food manufacturers, food service management companies, and SFAs experienced while working to meet sodium targets. The report summarizes these findings and provides information on the technical assistance recommended by SFAs and the food industry to meet the sodium standards for school meals.

Findings

A large variety of products that meet current sodium standards are available for use in school meals. Food industry representatives reported that they were able to provide lower sodium items to help SFAs meet Target 1 because they had adequate lead time for research and development and minimal reformulation of products was required. However, many suggested that it would be challenging to achieve sodium levels beyond Target 2.

Most SFAs reported having access to a range of lower sodium items through procurement channels, including the USDA Foods Program (USDA Foods), USDA Department of Defense Fresh Fruit and

¹[federalregister.gov/documents/2012/01/26/2012-1010/nutrition-standards-in-the-national-school-lunch-and-school-breakfast-programs](https://www.federalregister.gov/documents/2012/01/26/2012-1010/nutrition-standards-in-the-national-school-lunch-and-school-breakfast-programs)

²[federalregister.gov/documents/2017/11/30/2017-25799/child-nutrition-programs-flexibilities-for-milk-whole-grains-and-sodium-requirements](https://www.federalregister.gov/documents/2017/11/30/2017-25799/child-nutrition-programs-flexibilities-for-milk-whole-grains-and-sodium-requirements)

Vegetable Program (USDA DoD Fresh), and collective purchasing agreements. Smaller and rural SFAs reported that participation in food buying co-ops or group purchasing organizations helped them to increase their purchasing power and overcome challenges in procuring lower sodium items.

SFAs that had met or were close to meeting Target 2 employed multiple strategies. Nearly half of the SFAs in the study reported using a combination of three primary strategies to reduce sodium in school meals:

- Maximizing participation in USDA Foods and USDA DoD Fresh procurement programs
- Effective menu planning, and
- Changing food preparation methods

Effective menu planning practices included incorporating more fresh and/or frozen fruits and vegetables and other lower sodium products into meals, while changes to food preparation methods included cooking with more herbs and spices and maintaining or increasing the use of scratch cooking.

Other common strategies included involving stakeholders (students, staff, parents, and community members) to gain acceptance of lower sodium items, attending trade shows with food suppliers, and working directly with vendors.

Taste testing was the most commonly used approach for gaining student acceptance of lower sodium items. SFAs reported experiencing challenges in gaining student acceptance but that they were often successful when using a combination of supportive approaches such as:

- Performing taste tests to identify preferences
- Tailoring menu options to cultural and regional preferences
- Promoting healthy food choices through education and communication materials, and
- Implementing menu changes incrementally

Many SFAs also engaged parents, staff, and community members in taste tests, nutrition education, and other promotional activities to increase buy-in.

School type, SFA size, and urbanicity influenced the perceived effectiveness of sodium-reduction strategies in schools. SFAs perceived high school students as less receptive to lower sodium alternatives due to established taste preferences and easy access to off-campus food; they reported fewer barriers to student acceptance among elementary school students. SFA size and urbanicity were associated with SFAs' abilities to procure lower sodium foods and to utilize effective menu planning strategies. Small, rural SFAs

reported fewer resources available for purchasing and preparing lower sodium foods, while large, urban SFAs were able to procure more low-sodium items at a lower cost and reported having access to a larger number of suppliers, which enabled them to use more effective menu planning strategies.

Barriers to successful implementation of sodium-reduction strategies included staffing, storage, and other resource constraints. SFAs noted that incorporating more fresh and/or frozen produce and other lower sodium foods into school meals required adequate storage space and cafeteria equipment as well as increased staff time and food preparation skills. Large and urban SFAs were more likely than small and rural SFAs to have these additional resources available to facilitate sodium-reduction efforts.

Additional communication and guidance to support implementation of the sodium standards were the most frequently requested technical assistance resources. Food industry representatives and SFA-based stakeholders reported that existing training and technical assistance resources provided by the USDA, State agencies, and other organizations helped them keep abreast of changing regulations and taught them new techniques to achieve the lower sodium targets. SFAs also noted that food suppliers were a major source of technical assistance, helping them find lower sodium products and develop menus, recipes, and marketing materials.

Nonetheless, participants expressed a need for additional information on the safety, functionality and health benefits of lower sodium items, as well as enhanced planning and communication with stakeholders; tailored communication materials for diverse audiences; additional lower sodium recipes and modification guidance; and resources to support investments in equipment and skilled labor.

For More Information

Gordon, E., Morrissey, N., Adams, E., et al. *Successful Approaches To Reduce Sodium in School Meals Study*. Prepared by 2M Research and Abt Associates., Alexandria, VA: U.S. Department of Agriculture, Food and Nutrition Service, Office of Policy Support, June 2019. Project Officer: Holly Figueroa. Available online at: www.fns.usda.gov/research-and-analysis.