



## **Institute of Child Nutrition Research Summary**

**Mary Frances Nettles, PhD, RD**  
**Director of Applied Research Division**  
**Institute of Child Nutrition (formerly, National Food Service Management Institute)**  
**Mary.Nettles@usm.edu**

This research has been produced by the Institute of Child Nutrition, Applied Research Division (ICN, ARD), located at The University of Southern Mississippi with headquarters at The University of Mississippi. Funding for the Institute has been provided with federal funds from the U.S. Department of Agriculture, Food and Nutrition Service, to The University of Mississippi in cooperation with The University of Southern Mississippi. The mission of the ICN is to provide information and services that promote the continuous improvement of Child Nutrition Programs such as: School Meals Programs, Summer Food Service Program, and Child and Adult Care Food Program.

The ICN Research Summary is a continuing series of summaries reporting recently completed research and research-based resources funded by the Institute of Child Nutrition.

### **Recently Completed Research**

#### **Exploring Standard Child Nutrition Key Performance Indicators**

Successful school nutrition (SN) directors must be able to decide where to focus their time and resources. Data driven decision making, utilizing key performance indicators (KPIs), is an effective approach. Several KPIs that are useful for decision making in SN programs have been identified in literature. Currently, there is a lack of research concerning SN professionals' usage or perceptions of KPIs as tools to support SN program management. Therefore, the purpose of this study was to explore SN directors' usage and perceptions of KPIs.

An expert panel of SN professionals experienced in applying KPIs was convened to discuss issues associated with utilizing KPIs in SN programs. Using the information from the expert panel discussions, a survey was developed and validated with the assistance of a review panel of SN professionals. The survey was mailed to a random sample of 700 SN directors representing the seven United States Department of Agriculture regions. Survey data were analyzed using the statistical package SPSS Version 21.0 for Windows.

The response rate for the survey was 29% (N=205). Most respondents were from districts with student enrollments between 2,000 and 29,000 (65%). More than one-third of respondents indicated that they had worked in SN programs for greater than 20 years (38%); however, the largest percentage of respondents indicated they had only been in their current position for 1 to 5 years (34%).

When respondents were asked to rate the level of understanding of SN KPIs on a three point scale (3=adequate, 2=partial, and 1=no understanding), the KPIs that received the highest mean

ratings were average daily participation ( $2.95 \pm 0.27$ ), meals per labor hour ( $2.87 \pm 0.38$ ) and cost per meal ( $2.84 \pm 0.41$ ). School nutrition directors indicated that they had access to data for calculating average daily participation (98%), cost per meal (94%), and meals per labor hour (94%). The top three KPIs used for decision making were average daily participation (91%), cost per meal (89%), and meals per labor hour (82%). When respondents were asked to rate their level of agreement with the statement “School nutrition professionals receive adequate training on KPIs,” 82% disagreed or strongly disagreed.

The findings of this study suggest that school nutrition (SN) directors’ overall access to data for calculating key performance indicators (KPIs) is good. Most SN directors believe they have access to the necessary data to calculate SN KPIs, especially average daily participation, cost per meal, and meals per labor hour. Further, most directors do not have to go outside their own departments to gather KPI data because this data is usually captured in the district SN office. The vast majority of SN directors perceive that SN KPIs provide essential information about SN programs and that they are valuable managerial tools for activities such as program evaluation and decision making. However, most of the respondents believe KPIs are undervalued by SN professionals, and most are concerned that decisions based on incorrectly interpreted KPIs can have negative consequences for an SN program.

### **NFSMI Best Practice Guide for Increasing Middle/Junior High School Student Participation and Satisfaction in the National School Lunch Program**

Past research has demonstrated that during middle/junior high school, students’ participation in the National School Lunch Program (NSLP) begins to decline, a trend that worsens throughout high school. In an effort to address this issue, the National Food Service Management Institute, Applied Research Division (NFSMI, ARD) conducted a series of multi-faceted studies. As a result, two middle/junior high school foodservice surveys were developed. The *Middle/Junior High School Participation Survey* targets students who participate daily in the National School Lunch Program (NSLP), while the *Middle/Junior High School Non-Participation Survey* targets students who participate occasionally or not at all. The *Guide for Administering School Lunch Satisfaction and Participation Surveys to Middle/Junior High School Students* was developed to provide step-by-step instructions for using the surveys and creating action plans framed around the “Continuous Quality Improvement” process.

Previous research suggested that in addition to providing survey tools to SN professionals, there is also a need to provide feasible strategies that can be used for the completion of “Continuous Quality Improvement Action Plans.” Thus, the primary objective of this project was to utilize a modified best practices research model to develop a best practice resource that SN directors can use to increase participation rates and improve middle/junior high school student satisfaction in the NSLP. To accomplish this, two expert panels of SN professionals participated in a work group session and a national review panel to systematically identify best practices for dissemination to other SN professionals.

Four practice areas that affect middle/junior high school student participation and satisfaction were identified in the survey development research. Best practice statements framed around the practice areas, “Choice,” “Customer Service,” “Food Quality,” and “Other,” were drafted based on previous NFSMI, ARD research findings. Eight SN professionals were chosen to participate

in an expert panel work group session to accomplish the following: review the wording of each best practice statement; classify statements under the appropriate research-based practice area; and group similar statements into goals. Using a guided evaluation form, expert panel members reviewed the results of the work group session. Then, members confirmed the list of best practice statements, the definitions of key words, and the formatting of the resource.

The best practice guide was then drafted using suggestions from the expert panel with regard to definitions of key terms, instructions for using the guide, and evaluation scales. A final guided evaluation was completed by a review panel composed of 14 SN directors recommended by state agency child nutrition directors based on their experience with successfully increasing student participation in the NSLP. The review panel evaluated the following: appropriate grouping of best practice statements into goals and practice areas; ease of use of assessment scales; formatting; and general content validity of the resource.

The best practice guide, *NFSMI Best Practice Guide for Increasing Middle/Junior High School Student Participation and Satisfaction in the National School Lunch Program*, contains 86 best practice statements grouped into 12 goals that support the four practice areas (“Choice,” “Customer Service,” “Food Quality,” and “Other”). There are two components to the guide, the “Baseline Assessment” and the “Progress Review.” Both are provided to assist SN professionals in evaluating operational performance based on the best practice areas.