

# Food Safety Training Needs Assessment Survey

Prepared for

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by

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# Food Safety Training Needs Assessment Survey (FSTNAS)

## Abstract

### **Project objective and design:**

*The goal of the Food Safety Training Needs Assessment Survey is to use information from child nutrition personnel to design training programs and materials to continuously improve food safety attitudes and practices in child nutrition programs.*

Information was gathered through a 33-question survey with questions targeting food safety practices, food security practices, and training parameters. The survey questionnaire was developed with input from an NFSMI-appointed task force of child nutrition program directors and managers, including personnel from the National School Lunch and School Breakfast Programs (NSLP), the Summer Food Service Program (SFSP), and the Child and Adult Care Food Program (CACFP). The survey was written at a 6.8 grade reading level and took approximately 30 minutes to complete. It was designed as a self-mailer and required no identifying information. A computer version of the survey was available, but it was answered by three participants. Surveys were distributed by CACFP, SFSP and NSLP directors to their personnel.

The sampling unit for the study was geographically described as the area defined by a public school district or school food authority (SFA). All child nutrition programs, including NSLP, CACFP (frequently represented by Head Start programs) and SFSP within the geographic range of the SFA were included in the sampling unit. Potential unit participants included districts with 4-25 schools. Sample stratification was based on percentage of school lunch meals within the U. S. Department of Agriculture (USDA)

Food & Nutrition Service (FNS) Region, i.e., if X% of the meals served in NSLP were served in FNS Region Y, then X% of the districts were selected from Region Y. Data for these calculations were based on USDA reports on numbers of school lunches served for School Year 2003, the most current data available at the time the study was conducted. The target set for the study included 144 school districts in 40 states. Actual responses were received from 1174 participants from 121 districts in 33 states. The school districts participating in the study had a total student population of 251,230 (National Center for Education Statistics, n.d.). Respondents were from every USDA region: Mid-Atlantic (7.5%), Mountain Plains (8.0%), Midwest (7.8%), Northeast (5.9%), Southeast (50.2%), Southwest (15.2%), and West (4.0%). The Mountain Plains and Southwest region representation approximated the original estimated participation (8.3% and 14.6%, respectively). Mid-Atlantic, Midwest, and Northeast representation was about half of estimated (12.5%, 16.7%, and 10.4%, respectively) participation. Of the 1174 participants, 75 (6.4%) self-reported working in a CACFP or Head Start, 110 (9.4%) self-reported working in SFSP, and 1096 (93.4%) self-reported working in NSLP; multiple responses were permitted for personnel with multiple program responsibilities.

### **Primary Findings:**

Appropriate use of thermometers and temperature recording were the primary indicators for good food safety practices.

- Nationally, most respondents reported that there were food thermometers in their work kitchens (87.7%/1029 respondents), that they knew where the thermometers were (81.2%/953 respondents) and that the thermometers were in working order

(86.3%/1010 respondents). There were no differences reported in thermometer access by child nutrition program. (See page 25 and Tables 14, 15.)

- Nationally, responses were high (above 70% “always” or “most times”) for measuring temperature of cooked meat before it is removed from the cooking unit, using a thermometer to check refrigerator, freezer and storage room temperatures, and cleaning/sanitizing thermometers after use. (See page 26 and Table 20.)
- Nationally and in every region, thermometers were used less often to measure temperatures of other hot foods, such as lasagna or mashed potatoes, than to measure temperatures of meats before they were removed from cooking units ( $p < .000$ ). Additionally, thermometers were used less often to measure serving temperatures than to measure temperatures of foods before they were removed from cooking units ( $p < .000$ ), and serving temperatures of hot foods were measured more frequently than temperatures of cold foods ( $p < .000$ ). (See page 26 and Table 20).
- Nationally, about half of respondents reported “always” or “most times” recording temperatures when they measure them, and about a quarter reported “sometimes” or “never” recording temperatures when they measure them. (See page 27 and Table 20.)
- There were no significant differences in thermometer use by child nutrition program category. However, there were some differences by self-reported job description. (See pages 27-28 and Tables 21 and 22.)

The primary measures for supervisory actions were related to how personnel responded to lapses in thermometer use and temperature recording.

- The most common responses to supervisory actions related to inappropriate use of thermometers or inappropriate recording of temperatures were to provide immediate feedback or to do nothing; recording infractions was uncommon. (See pages 28-31 and Tables 23, 24, and 25.)

Measures of security included asking respondents who was allowed unsupervised in food storage, preparation, and service areas; how food deliveries are handled; and how food is checked before food is transferred to the child nutrition facilities' care.

- Over half of respondents reported that their facilities had self-serve areas. Although the quality of the monitoring cannot be assessed by questionnaire, data suggest that monitoring is common in programs that have self-serve areas. (See page 31 and Tables 26, 27, and 28.)
- Other than working food service employees, maintenance workers (school employees) (54.1%), salesmen/delivery personnel (40.5%), principal/other administrator (39.5%), repair personnel/contractors (29.8%), teachers/coaches (15.7%), office staff (13.2%), school nurse/counselor (11.1%) were allowed unsupervised in food service areas. Others, including day care children/students, parents/volunteers, relatives of food service employees/home providers, postal employees, and off-duty food service employees were listed by fewer than 10% of the respondents. Nine percent of the respondents (91 respondents) reported that no one was allowed in the food service area unsupervised.

- Most report that food is seldom or never left unattended on the loading dock (over 76%/851 respondents) and that the delivery person seldom or never takes food into the storage area before employees check it (66%/721 respondents). However, salesmen/delivery personnel are allowed unsupervised in food service areas (40.5%/429 respondents), and over 15% (180 respondents) reported that food is “always,” “most times,” “usually,” or “sometimes” left unattended before employees arrive at work. (See page 32 and Tables 29, 30, and 31.)
- Over half of respondents who report that they have knowledge of food deliveries responded that package integrity and food temperatures are assessed before food deliveries are accepted. However, approximately 15% reported that temperatures are “seldom or never” checked before milk and other dairy products, frozen foods, or chilled products such as meats or salads are accepted (Table 32). These responses are not different by child nutrition program (Table 33). (See page 33 and Tables 32, 33, and 34.)

Questions on educational materials focused on use of food safety materials available from NFSMI, characteristics of useful food safety materials, and the role of food safety materials in training.

- When asked to list the top three needs to improve food safety in their facilities, only three factors were included by 20% or more of participants: more time for training, more personnel hours, and better/more training materials. (See page 34.)
- With few exceptions, over two-thirds of respondents did not know that NFSMI materials with food safety content were available and fewer than 15% reported

using any NFSMI materials (except USDA recipes) “often.” (See page 34 and Tables 35 and 36.)

- Respondents reported that useful materials were “easy-to-read,” “cover the topics I need,” and are “interesting.” Being “too long,” “boring,” and “too old” limited usefulness. Also, respondents had few suggestions for additional topics for materials, and few external materials were used “routinely.” (See pages 34-36.)
- “Better/more training materials” was ranked third in the “top three (3) needs to improve food safety in your facility.” (See page 35.)

Food safety training issues focused on training accomplishments over time, preferred training methods, and training barriers.

- Over 75% of the respondents (950 respondents) report having participated in food safety training within the past year. (See page 36 and Tables 39, 40 and 41.)
- Respondents generally reported that they preferred training that was face-to-face, on-the-job in segments of 30 minutes or less. They were also positive about short workshops scheduled on work days that work was not scheduled, such as teacher work days. (See page 37 and Tables 42, 43, 44, 45, and 46.)
- While about half of respondents report that their facilities provide on-the-job training, fewer than a third report that other types of training (pre-service training, remedial training, or renewal training) are available on-site. (See page 37 and Table 47.)
- Respondents reported the following barriers to training in food safety and security areas (highest importance to lowest): employees must be paid for training time, and it is not planned in the budget; employees must be trained outside of normal

work hours, and their schedules do not permit the extra time; there is little interest in training; rapid turnover of employees reduces value of training; lack of follow-up/reinforcement reduces value of training; participants do not concentrate on training; there are not many expert trainers; materials to meet specific needs are not available; materials are difficult to read. (See pages 37-38.)

**Needs:**

To have continuous improvements in food safety all employees must be invested in creating a safe food environment. This requires that all employees know the food safety behaviors necessary for their own positions and be willing to be a part of the monitoring of the food service environment. This requires collegial monitoring instead of simply implementing inspection by external reviewers. Collegial (community) monitoring can be supported by food safety training on a routine schedule, food safety reminders, and training in community monitoring and coaching. The respondents report preferring on-the-job coaching, demonstration, and one-on-one help, but survey results show that immediate feedback is not routinely given when poor food safety practices (largely involving temperatures) are observed. The support for on-the-job, short training is supported by the relatively more frequently reported use of food safety posters and 10-minute lessons compared to other food safety resources available through NFSMI, even when other materials are available at low- or no-cost. Respondents listed the need for more paid personnel hours and more time for training as significant barriers to food safety.

**Suggested short-term training interventions:**

Based on survey findings, short-term training interventions require three components.

- First – reconstruction of available training materials to develop short (preferably 30 minutes or less) training aids. These aids could include items such as posters, which respondents reported using more frequently than other materials. Continued inclusion of food safety handling information on recipes would also contribute to food safety reinforcement.
- Second – developing training on collegial community monitoring to involve all personnel in food safety improvement has the potential for meeting the training preferences of personnel, i.e., face-to-face, on-the-job coaching demonstration and one-on-one help. This could have the further benefit of having line personnel contribute ideas for training topics.
- Third – HACCP and food security programs need to be supported in food safety program training interventions. For example, the records required for effective HACCP programming are not a priority, based on survey responses. Also, food service areas may be open to intrusion when they are unsupervised, which is not uncommon. These issues are designed to make food safety more visible and more accountable, important factors in our current environment.

**Suggested longer-term training goal:**

As the workforce changes, respondents may be more receptive to training via other delivery systems. Because availability of training time and training needs for individuals differ, NFSMI is encouraged to begin looking at developing engaging,

interactive training for remediation and certification of line supervisors, managers,  
and line staff.