

***Assessing the 2005 Guidance for School Food Authorities:  
Developing a School Food Safety Program Based on the  
Process Approach to HACCP Principles***



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## EXECUTIVE SUMMARY

The Child Nutrition Reauthorization Act of 2004 required schools to implement a Hazard Analysis Critical Control Point (HACCP) program. After the Act was passed, staff in the Office of Food Safety at the United States Department of Agriculture (USDA) developed the *Guidance for School Food Authorities: Developing a School Food Safety Program Based on the Process Approach to HACCP Principles* (hereafter referred to as the *Guidance*) to help schools implement HACCP. This *Guidance* has been in place for about seven years, but its effectiveness has not been evaluated.

The purpose of this research was to obtain feedback from state agency and district foodservice directors about how the *Guidance* has been used and how the *Guidance* can be improved. All 50 state agency directors and 2,329 randomly selected district foodservice directors in the United States were surveyed. The response rate was 52% (n = 26) for state agency directors and 12.7% (n = 296) for district directors.

### Conclusions

Based on responses to the surveys, we have concluded the following:

1. All state agency directors and most district directors used the *Guidance* in developing their food safety program.
2. The standard operating procedures included in the *Guidance* were the most useful component to both district and state directors. Most indicated they used the standard operating procedures either exactly as written or with slight modifications.
3. State and school district staff differed in their perceptions of the requirements for evaluating the food safety program.
4. Resources related to food safety training are not well known.
5. Training on food safety and implementing a food safety program continues to be necessary.

## Recommendations

These conclusions lead to several recommendations:

1. The existing *Guidance* could include the following:
  - a. How to develop a food safety program for different types of operations and functions (for example, schools that receive food from a vendor, catering, small residential child care facilities, and child care).
  - b. How to review and evaluate a food safety program. This would allow training for both state and district level staff to meet similar expectations.
  - c. More templates that could easily be adapted by school district staff.
  - d. Computerized, interactive functions.

Programs should be simple to use and minimize paperwork.

2. Standard operating procedures should be consistent with the latest version of the FDA Food Code. All FDA Food Code versions should be clearly identified in the *Guidance*; these versions should be easily available because not all states and jurisdictions use the same version.
3. New training would reenergize and refocus school district staff on their food safety programs. Training could focus on evaluating and validating existing programs and new employees. Training should be developed using a variety of formats, including DVDs, self-directed online, scripts, and webinars. Training should be provided in several languages.
4. A package of all of the food safety training materials available from the National Food Service Management Institute (NFSMI) and USDA could be developed and marketed. Respondents indicated that they have either developed training resources themselves or need training resources that are already available from NFSMI; thus, these materials need to be marketed.
5. Research is needed on behavior change and ways to motivate employees to implement good food handling practices and the food safety program.

## **ACKNOWLEDGEMENTS**

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## INTRODUCTION

School foodservice operations serve an estimated 32 million meals daily through the National School Lunch Program. While foods served in school cafeterias are generally safe, the federal government, through the Child Nutrition Reauthorization Act of 2004, has required schools to implement a food safety program based on Hazard Analysis Critical Control Point (HACCP) principles. HACCP programs are an effective way to reduce foodborne illnesses. HACCP is a system that focuses on identifying hazards and implementing critical control points within the flow of food to minimize those hazards and reduce the chances that unsafe food is served.

To assist school district administrators and foodservice directors in complying with this requirement, the United States Department of Agriculture's Food and Nutrition Services, Office of Food Safety developed the *Guidance for School Food Authorities: Developing a School Food Safety Program Based on the Process Approach to HACCP Principles* (hereafter referred to as the *Guidance*). The *Guidance* was released in 2005 and is available online (<http://www.fns.usda.gov/fns/safety/pdf/HACCPGuidance.pdf>). Since its development, the *Guidance* has not been evaluated or revised.

This research obtained feedback from both state agency directors and school district foodservice directors on the usefulness of the *Guidance* for planning and implementing food safety programs. Results will assist the Office of Food Safety in updating the *Guidance* to make it more useful for their constituents.

## Methods

### *Sample Selection*

#### *Sampling Procedures for State Agency Directors*

The seven USDA regional offices provided a current list of state agency directors in the region and their email contact information. A database of the 50 state agency directors was compiled. The population of state agency directors was included in the study.

#### *Sampling Procedures for District Directors'*

A marketing company (Market Data Retrieval [MDR], Shelton, CT) that specializes in marketing to schools and educators provided a national sample of school foodservice directors. A sample of 2,239 directors was selected, representing 50% of the database.

### *Questionnaire Development*

The purpose of the State Agency and District Directors' questionnaires (appendices A and B) was the same: to determine perceptions about the usefulness of the *Guidance* and the resources available from the National Food Service Management Institute (NFSMI) for developing a food safety program. Both surveys were developed by researchers with the Center of Excellence for Food Safety Research in Child Nutrition Programs and reviewed by staff in the Office of Food Safety, USDA Food and Nutrition Service. The final versions of the questionnaires were formatted using SurveyMonkey®. The study protocol and questionnaire were approved by the Kansas State University Institutional Review Board prior to data collection.

### *Data Collection*

Cover letters for both survey instruments described the purpose and importance of the study, requested participation, and included a link to the online survey. A copy of the cover letters sent to state agency directors is in Appendix A. Appendix B includes the cover letter sent to school directors. Participants were informed that their survey responses were confidential and that all data would be reported as aggregate data.

The School District Directors' questionnaire was distributed via email to 2,329 school foodservice directors. Of these, 2,298 emails were actually delivered, while nine were undelivered because the recipient had a full mailbox and the email was not accepted, respondents' email program blocked delivery of 13 emails, and nine directors opted out of the survey.

### ***Data Analysis***

Survey responses were downloaded from SurveyMonkey®. Descriptive statistics (frequency, percent, means, and standard deviations) were compiled for each close-ended question. Responses to open-ended questions were analyzed and coded for terms that repeated frequently. Common responses were summarized.

## Results

### *State Agency Survey*

We received 26 responses from the 50 state agencies. Twenty of the respondents became involved with implementing food safety programs immediately after the programs were mandated by the 2004 Child Nutrition and WIC Reauthorization Act.

### *Use of the Guidance Document*

Fifteen of the 26 respondents reported using the information and resources provided in the *Guidance* either as a guide or exactly as written. Of these 15 respondents, 10 used all of the standard operating procedures (SOPs) in the *Guidance* exactly as written. Responses are summarized in Table 1.

**Table 1. Extent to Which State Agency Staff Used the *Guidance* (n = 15)**

| Resources  | Frequency  |                               |                         |
|--|------------|-------------------------------|-------------------------|
|  | Not at all | Used as a guide, but modified | Used exactly as written |
| Developing your food safety program                      | 0          | 8                             | 7                       |
| Conducting training                                      | 0          | 9                             | 5                       |
| Reviewing school programs                                | 1          | 9                             | 5                       |
| Developing Standard Operating Procedures                 |            |                               |                         |
| Cooking potentially hazardous foods                      | 0          | 6                             | 9                       |
| Cooling potentially hazardous foods                      | 0          | 5                             | 10                      |
| Holding hot and cold potentially hazardous foods         | 0          | 5                             | 10                      |
| Date marking ready-to-eat, potentially hazardous foods   | 0          | 5                             | 10                      |
| Personal hygiene   | 0          | 5                             | 10                      |
| Reheating potentially hazardous foods                    | 0          | 5                             | 10                      |
| Receiving deliveries                                     | 0          | 5                             | 10                      |
| Storing and using poisonous or toxic chemicals           | 0          | 5                             | 10                      |
| Using suitable utensils when handling ready-to-eat foods | 0          | 5                             | 10                      |
| Washing fresh fruits and vegetables                      | 0          | 5                             | 10                      |
| Washing hands  | 0          | 5                             | 10                      |

### ***Use of NFSMI Resources and Training***

After the USDA released the *Guidance* and SOPs, the resources became available online through the NFSMI website. The survey gathered feedback on how state directors used the NFSMI documents. All respondents who reported using the SOPs (n =15) indicated they had downloaded the SOPs from the NFSMI website. NFSMI developed an “SOP builder” intended to help school foodservice managers and directors customize the SOPs for their school or district. Five of the state agency directors reported that they encouraged district directors to use the SOP builder, while six did not know it existed. The state directors indicated other resources they had used from the NFSMI website. Nine state directors reported using the *Developing a School Food Safety Program* workbook, seven used the slide set, 10 used the template for developing a food safety program, and five used the video.

Of the 15 who responded to these questions, only two had used NFSMI to conduct training, and three state agency staff members were unaware of NFSMI training options. One respondent mentioned attending HACCP training sponsored by NFSMI in the Mountain Plains Region. Another respondent indicated her state had five to six regional sessions in 2005 or 2006. HACCP training was offered in the fall of 2005 in one state and in district director regional meetings during the 2007-2008 academic year.

### ***Process Approach***

Thirteen of the 15 respondents indicated that staff in their state agency worked with school districts to classify menu items into the no cook, same day service, and complex food preparation categories. Twelve of the 15 reported that CCPs for each process presented in the *Guidance* were easy to understand and implement. Table 2 summarizes the usefulness of the *Guidance* in helping school districts develop a food safety program using the process approach. Most respondents thought the *Guidance* was moderately useful in all areas.

**Table 2. Usefulness of the *Guidance* in Completing Key Areas of the Food Safety Program Using the Process Approach (n = 15)**

|   | Frequency         |                   |                  |
|---|-------------------|-------------------|------------------|
|   | Not at all Useful | Moderately Useful | Extremely Useful |
| Develop procedures for documenting critical limits      | 2                 | 8                 | 5                |
| Establish monitoring procedures                         | 1                 | 11                | 3                |
| Develop corrective actions                              | 2                 | 11                | 2                |
| Develop appropriate record keeping procedures and forms | 0                 | 9                 | 6                |
| Conduct training  | 2                 | 9                 | 4                |

Most respondents indicated that they recommended that school districts use forms from the *Guidance* (Table 3). The two forms recommended less frequently were for procedures not used in all school foodservice operations. This may indicate attempts to customize the food safety plan based on the uniqueness of the school, which was a requirement.

**Table 3. Forms from the *Guidance* Recommended to School Districts (n = 15)**

| Forms                                 | Frequency |     |
|---------------------------------------|-----------|-----|
|                                       | No        | Yes |
| Food Safety Checklist                 | 1         | 14  |
| Receiving Log                         | 2         | 12  |
| Cooking and Reheating Temperature Log | 4         | 11  |
| Cooling Log                           | 6         | 9   |
| Damaged or Discarded Product Log      | 6         | 9   |
| Refrigeration Log                     | 1         | 14  |

### ***State Agency Assessment of and Guidelines for School Food Safety Programs***

Of state agency representatives who replied to this question, 16 of 21 included an assessment of the School Food Safety Program in the coordinated review effort (CRE). Criteria used by states for assessment during the CRE are in Appendix C. Most state agency representatives verify that schools have a food safety program and verify the school's documentation during the CRE. Several mentioned looking at posted health inspections scores.

Twelve of 21 agencies reported having state-specific requirements or guidelines for school districts to follow when implementing the School Food Safety Plan. Specific requirements included the following:

- Employ a licensed food manager (ServSafe® certification) on site or one for every 10 satellite operations.
- Review the items that the Department of Environment Conservation checks during Health Permit reviews
- Follow Standard Operating Procedures for school meals
- Ensure the NFSMI prototype Food Safety Plan in place with SOPs
- Follow the 2005 Food Code
- Adhere to state environmental health standards
- Develop a prototype food safety plan that includes references to the state food code and prototype monitoring logs that allows schools to note corrective actions
- Utilize a HACCP Production Record and a HACCP Manual

Eighteen respondents indicated that their state agency recommended how often a food safety program should be reviewed and updated. The frequency varied by state. For example, thirteen states recommended reviewing and updating the program annually, four indicated that it should be done as needed, and one recommended a 5-year cycle.

### ***Recommendations for Improving the Guidance Document***

Respondents provided several recommendations for improvements that would make the *Guidance* more useful for state agencies and school districts, including:

- Update SOPs to 2009 FDA Food Code requirements, e.g. minimum cook temperatures.
- Provide a streamlined version for charter schools or small schools using a caterer or purchasing vended meals.
- Supply current videos from USDA and NFSMI that illustrate calibrating thermometers, taking temperatures, recording temperatures, completing corrective action, and washing hands in a manner that will allow adequate playback (maybe on DVD).
- Generate videos on other subjects like illustrating the tasks involved in creating SOPs, including monitoring and recordkeeping.
- Provide training DVDs to the SFAs [School Foodservice Authorities] for their training needs. SFAs can use them to replace formal training.
- Provide clearer guidance on conducting a hazard analysis, including what to look for and how to identify hazards.
- Include more sample plans in the NFSMI templates

- Organize sections of the *Guidance*, like a food buying guide, to make it more user friendly and quicker to use.
- Set up the examples from the original manual so schools can use the forms themselves. (Together with a neighboring state, we created our own Process Charts. We also modified the Food Safety Checklist; to save paper, we put four weeks on one form.)
- Create a document that is interactive, allowing users to update, change, and/or type in additional information, and then save and print as needed.
- Include other effective ways to monitor critical control points (e.g., using invoices as receiving logs).
- Provide a HACCP-based Production Record.

### ***Food Safety Training***

Table 4 summarizes food safety related training opportunities provided by state agencies since 2005. Most state agencies have consistently provided HACCP training, and the number of ServSafe® or Serving it Safe trainings has been consistent since 2005. Ten of 21 respondents indicated that food safety training offerings have increased since 2004-2006, while seven indicated they have decreased.

**Table 4. Food Safety Training Opportunities Since 2005 (n = 15)**

| <b>Training</b> | <b>Frequency</b> |      |      |      |      |      |      |      |
|-----------------|------------------|------|------|------|------|------|------|------|
|                 | Not Offered      | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
| ServSafe®       | 6                | 3    | 4    | 5    | 6    | 6    | 7    | 6    |
| Serving it Safe | 3                | 8    | 8    | 7    | 7    | 6    | 4    | 4    |
| HACCP           | 0                | 14   | 14   | 12   | 13   | 12   | 14   | 14   |

Other training provided by state agencies included a 12-hour foodservice sanitation class and a 3-hour food safety basics class; annual health department training within the school for managers; annual state health inspector presentations at the state SNA conference; annual mandated Cafeteria Managers' Training workshops, including food safety; and Prometric Professional Food Manager Exam plus Review. One respondent indicated that ServSafe® training does not get good evaluations from participants.

State agency staff was asked what food safety training school district staff needed. Four respondents indicated that training was needed related to the HACCP plan. One respondent indicated that the state department of health requires each site to have a licensed food manager and that the health department does most of the training. Other state agency staff members have listed specific needs:

- Training for new directors and managers to accommodate staff turnover (continuing)
- Instruction on evaluation of HACCP Plans
- Training on use of Production Records
- Guidance on the use of time and temperature control
- Education on the use and customization of the HACCP plan as a food safety plan used on a daily basis in the kitchen and not as a policy or best practice guide
- Instruction on purchasing
- Direction on food storage for fresh fruits and vegetables
- Coaching to assist with developing individual SOPs; monitoring and corrective action for CCPs
- Resources to teach Basic Sanitation 101
- DVD with examples real life foodborne illness outbreaks to illustrate the consequences of having no HACCP plan
- Video training on signing off on and implementing a HACCP plan; incorporating Serving it Safe requirements, practices, and consequences; using thermometers for food storage areas that we can have the SFA sign off on that they have reviewed the video and have implemented the plan

One state agency indicated that they are developing on-line HACCP training. Several state agency directors indicated the need for online training modules.

State agency directors were asked to suggest what additional support they need to encourage schools to implement food safety programs. Suggestions are noted below:

- Revise the workbook for clarity and to make it more user friendly
- Provide scripted training
- Incorporate temperatures on the production record to aide in usability during environmental health inspections
- Include a checklist of the required elements that the schools must have to meet the food safety program requirements; clearly stated site-specific requirements for school settings would allow schools to evaluate the adequacy of their programs
- Inform participants of on-line training updates to keep staff properly trained
- Allow more time after the CRE to ensure schools have made all necessary updates
- Provide time and funds for staff to visit other districts

Seven respondents indicated that they needed training resources like DVDs, templates, and webinars and suggested the following additional support for training school district staff on food safety:

- Annual training template, webinar, or PowerPoint that state agency staff can view as time permits
- Scripted training
- On-site training and technical assistance
- More visual aids like DVDs
- DVD training that can be certified by the staff after viewing as a way to complete the CRE findings following an inadequate Food Safety Plan
- More templates for sponsors to use to develop and implement a Food Safety Plan. (The NFSMI class is very long. An interactive online class that allows confirmation of passing would benefit state agencies and the sponsors.)
- Food safety resources that are readily available to use in training for those who do not have time to create their own
- Online training modules for short training programs at school sites and for group in-service training
- More staff for technical assistance
- Fun and entertaining DVD for general workers on basic food safety

Respondents also mentioned resources they needed to improve food safety in school districts, particularly funding and training resources:

- Increased funding for health inspectors to inspect more than once a year
- School program specialist available for on-site training and technical assistance
- Increased numbers of food handler certified employees in school foodservice
- Expanded SOPs to cover more situations at schools: thermometers, food safety specifications for vendors for bids and purchasing of different foods and supplies, criteria for use of farm to school and school garden foods, guidelines for food allergies, and guidelines for sack lunches for field trips
- Specific Guidelines for state agency reviewers for conducting school reviews: informational handouts specific to common problems, for instance. This could prevent differences in reviews due to differences in knowledge and training.
- Additional training for staff and monies for district staff to attend training
- Online food safety (HACCP) course for food service managers to take them through the basics of food safety and describe the steps involved in creating a written HACCP plan;
- More webinars to address a variety of food safety issues
- Informative posters for strategic locations in the kitchen and employee lounge areas
- Interactive teaching for adult learners; specifically, web-based instruction that is self-paced

- More funding for meetings for district directors who want or need additional assistance with food safety

### *Healthy, Hunger Free Kids Act*

Of 19 state agency directors responding to the question about the Healthy, Hunger Free Kids Act, eight were aware of the act but needed help in implementing it. Six state agency directors were aware of the requirements and five could implement it with current information.

### ***District Foodservice Director Survey***

A total of 352 surveys were completed; 56 of these were unusable. Thus, the sample size used for data analysis was 296 district foodservice directors (12.7% useable response rate). Respondents were from all regions, 44 states and represented 2,706 schools. The demographic profile of the sample is in Table 5. The majority (53.7%) of school district directors who participated in the study had fewer than 10 schools in their district.

**Table 5. Demographic Profile of District Foodservice Directors (N=296)**

| <b>Variable</b>  | <b>Frequency (%)<sup>a</sup></b> | <b>Variable</b>                                       | <b>Frequency (%)<sup>a</sup></b> |
|--|----------------------------------|---|----------------------------------|
| <b><i>Number of schools within Director's District</i></b> |                                  | <b><i>Number of districts in each USDA region</i></b> |                                  |
| < 10 schools   | 159 (53.7)                       | Mid-Atlantic  | 42 (14.2)                        |
| 10 – 19 schools  | 34 (11.5)                        | Midwest   | 68 (23.0)                        |
| 20 – 29 schools  | 17 (5.7)                         | Mountain Plains                                       | 49 (16.6)                        |
| 30 – 39 schools  | 8 (2.7)                          | Northeast   | 21 (7.1)                         |
| ≥ 40 schools   | 16 (5.4)                         | Southeast   | 31 (10.5)                        |
|  |                                  | Southwest   | 47 (15.9)                        |
|  |                                  | Western   | 38 (12.8)                        |

<sup>a</sup> Percentages may not add up to 100% if respondents did not answer the question.

### ***Use of the Guidance Document***

Most directors (218 of 296) were already employed in their current district when the Food Safety Program was implemented following the 2004 Child Nutrition and WIC Reauthorization Act. If directors were not employed in a district when the program was implemented, they would not know how the *Guidance* was used to help set up the program. Thus, we eliminated their responses from those results, using a total sample size of 218 for that part of the questionnaire.

Table 6 reports the extent to which school district directors used the *Guidance*. Most school districts used the *Guidance* but modified it when developing their district's food safety program (73.4%), conducting training (66.2%), and reviewing their current school food safety programs (67.9%). Most directors used the SOPs exactly as written.

**Table 6. Extent to Which School District Directors Used the *Guidance* Resources (N=218)**

| Resources  | Frequency (%) <sup>a</sup> |                               |                         |
|--|----------------------------|-------------------------------|-------------------------|
|  | Not at all                 | Used as a guide, but modified | Used exactly as written |
| Developing your food safety program                      | 12 (5.5)                   | 160 (73.4)                    | 46 (21.1)               |
| Conducting training                                      | 22 (10.5)                  | 141 (66.2)                    | 50 (23.5)               |
| Reviewing school programs                                | 19 (8.8)                   | 146 (67.9)                    | 50 (23.3)               |
| Developing Standard Operating Procedures                 |                            |                               |                         |
| Cooking potentially hazardous foods                      | 13 (6.0)                   | 89 (41.0)                     | 115 (53.0)              |
| Cooling potentially hazardous foods                      | 12 (5.6)                   | 90 (41.7)                     | 114 (52.8)              |
| Holding hot and cold potentially hazardous foods         | 12 (5.5)                   | 83 (38.2)                     | 122 (56.2)              |
| Date marking ready-to-eat, potentially hazardous foods   | 14 (6.5)                   | 93 (42.9)                     | 110 (50.7)              |
| Personal hygiene   | 13 (6.0)                   | 102 (47.0)                    | 102 (47.0)              |
| Reheating potentially hazardous foods                    | 13 (6.0)                   | 78 (36.1)                     | 125 (57.9)              |
| Receiving deliveries                                     | 14 (6.5)                   | 111 (51.2)                    | 92 (42.4)               |
| Storing and using poisonous or toxic chemicals           | 14 (6.5)                   | 80 (36.9)                     | 123 (56.7)              |
| Using suitable utensils when handling ready-to-eat foods | 14 (6.5)                   | 81 (37.3)                     | 122 (56.2)              |
| Washing fresh fruits and vegetables                      | 14 (6.5)                   | 81 (37.3)                     | 122 (56.2)              |
| Washing hands  | 14 (6.5)                   | 78 (36.4)                     | 122 (57.0)              |

<sup>a</sup>Percentages may not add up to 100% if respondents did not answer the question.

### ***Use of NFSMI Resources and Training***

Approximately 60% (n=129) of the directors used SOPs downloaded from NFSMI’s website. Forty-five (20.5%) directors were unaware of this resource, and 17.9% of respondents did not use the resources even though they were aware of them. Seventy-five (34.4%) directors were unaware of *The SOP Builder*, and only 62 (28.4%) used this resource. Most directors (n=171, 79.5%) responded that NFSMI did not conduct any training in their school district.

### ***Process Approach***

Sixty-two percent of respondents indicated that their school district had classified menu items into the process approach categories. Of the respondents, 69.7% (n=152) believed that CCPs related to each process presented in the *Guidance* were easy to understand and implement. Only 10 directors (4.5%) indicated that they were not easy to understand and implement. Most respondents indicated the *Guidance* was at least moderately useful in all other areas (Table 7).

**Table 7. Usefulness of the *Guidance* in Completing Key Areas of the Food Safety Program Using the Process Approach (N=218)**

| Variable  | Frequency (%) <sup>b</sup> |                   |                  |
|---|----------------------------|-------------------|------------------|
|   | Not at all Useful          | Moderately Useful | Extremely Useful |
| Develop procedures for documenting critical limits      | 12 (5.5)                   | 70 (32.1)         | 121 (55.5)       |
| Establish monitoring procedures                         | 9 (4.1)                    | 74 (33.9)         | 118 (54.1)       |
| Develop corrective actions                              | 8 (3.6)                    | 77 (35.3)         | 117 (53.7)       |
| Develop appropriate record keeping procedures and forms | 10 (4.6)                   | 71 (32.6)         | 122 (56.0)       |
| Conduct training  | 19 (8.7)                   | 85 (40.0)         | 97 (44.5)        |

<sup>a</sup>The stem “How useful was the Guidance Document in helping schools in your district to...” was used for all questions.

<sup>b</sup>Percentages may not add up to 100% if respondents did not answer the question.

Most district foodservice directors indicated that the *Guidance* was extremely useful in developing procedures for documenting critical limits (55.5%) and in developing appropriate record keeping procedures and forms (56.0%). Fewer directors found it extremely useful in conducting training (44.5%).

Table 8 shows how often directors used the forms provided in the *Guidance*. The Food Safety Checklist was the most frequently used of these resources (88.2%). The least used resource was the receiving log, used by only 57.8% of respondents.

**Table 8. Forms Utilized by Directors from the *Guidance* (N=218)**

| Forms                                 | Frequency (%) <sup>a</sup> |            |
|---------------------------------------|----------------------------|------------|
|                                       | No                         | Yes        |
| Food Safety Checklist                 | 24 (11.0)                  | 180 (82.5) |
| Receiving Log                         | 74 (33.9)                  | 126 (57.8) |
| Cooking and Reheating Temperature Log | 43 (19.7)                  | 158 (72.5) |
| Cooling Log                           | 54 (24.8)                  | 144 (66.0) |
| Damaged or Discarded Product Log      | 66 (30.0)                  | 134 (61.5) |
| Refrigeration Log                     | 41 (18.9)                  | 159 (73.0) |

<sup>a</sup>Percentages may not add up to 100% if respondents did not answer the question.

Of those who used the checklist, 23.2% used it monthly. Other directors indicated that they use it weekly (14.4%), annually (13.6%), every 2 to 6 months (10.1%), daily (8.9%), or as needed (6.8%), while 3.4% did not recall.

Directors identified other resources they used to develop their food safety plans for the district. Table 9 summarizes the responses.

**Table 9. Additional Resources Used by District Directors (N=218)**

| <b>Sources</b>                              | <b>Frequency</b> |
|---|------------------|
| HACCP plan                                  | 13               |
| State/Local health department               | 11               |
| State Department                            | 8                |
| ServSafe® resources                         | 7                |
| Website/Webinar                             | 6                |
| Plans from peers (schools/directors)        | 6                |
| Already established plans                   | 5                |
| USDA Guidance                               | 4                |
| National/State School Nutrition Association | 3                |
| Food Safety Guide                           | 2                |
| Production records                          | 2                |
| Common sense                                | 2                |
| NFSMI                                       | 2                |
| SOPs  | 2                |
| None  | 4                |
| Unsure                                      | 2                |
| Other                                       | 7                |

### *State Agency Assessment of and Guidelines for School Food Safety Programs*

The district foodservice directors also identified specific food safety program requirements in their states. The majority (53.0%) indicated their state agencies included an assessment of the School Food Safety Program in the CRE. An open-ended question identified food safety program evaluation criteria. Responses were analyzed and coded for terms that repeated frequently. Common responses were grouped and presented in Table 10.

**Table 10. Criteria Used to Evaluate Food Safety Programs (N=218)**

| <b>Sources</b>  | <b>Frequency</b> |
|---|------------------|
| HACCP plan/Food Safety Plan                           | 42               |
| Not sure  | 9                |
| Local documents                                       | 7                |
| www.squaremeals.org (Texas Department of Agriculture) | 6                |
| ServSafe® Identified Standards                        | 3                |
| NFSMI   | 3                |

Many (n=64, 29.4%) indicated that their programs are reviewed annually. About half (n=106, 49.8%) reported that their state agency has state-specific requirements/guidelines for school districts to follow for implementing the school food safety plan.

An open-ended question asked respondents to list requirements/guidelines that states have asked directors to follow in implementing the school food safety plan. Table 11 provides their responses.

**Table 11. Requirements/Guidelines for Implementation of the School Food Safety Plan (N=218)**

| <b>Sources</b>                                    | <b>Frequency</b> |
|---|------------------|
| HACCP implementation                              | 17               |
| Not sure  | 9                |
| ServSafe®   | 5                |
| SOPs  | 4                |
| Local health department                           | 3                |
| HACCP and SOPs                                    | 2                |
| squaremeals.org (Texas Department of Agriculture) | 2                |

### ***Recommendations for Improving the Guidance***

School foodservice directors provided recommendations for improving the *Guidance*. Table 12 summarizes those recommendations. Specific comments related to areas that need improvement are in Appendix D.

**Table 12. Improvements Needed in the *Guidance* (N=218)**

| <b>Area of Improvement</b>   | <b>Frequency</b> |
|------------------------------|------------------|
| Condense/simplify            | 11               |
| More information/explanation | 7                |
| Continue to update           | 3                |
| Not sure                     | 6                |
| Not aware of the document    | 7                |
| None                         | 21               |

## ***Food Safety Training***

All respondents (N=296) said their districts currently had food safety training. The majority of directors (53.4%) indicated that the amount of food safety training offered in the district had increased since the 2004-2006 school years. Only seven (2.4%) indicated training had decreased while 112 (37.8%) said it had remained about the same.

Directors were asked specifically what opportunities for food safety training (ServSafe®, Serving it Safe, and HACCP) had been offered since 2005. Table 13 shows the frequency of training opportunities. ServSafe® and HACCP training have both increased from the 2005 school year.

**Table 13. Food Safety Training Opportunities Since 2005 (N=269)**

| <b>Training</b>        | <b>Frequency (%)</b> |              |               |               |               |               |               |               |
|------------------------|----------------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|
|                        | Not Offered          | 2005         | 2006          | 2007          | 2008          | 2009          | 2010          | 2011          |
| <b>ServSafe®</b>       | 45<br>(16.7)         | 82<br>(30.5) | 75<br>(27.9)  | 89<br>(33.1)  | 95<br>(35.3)  | 111<br>(41.3) | 124<br>(46.1) | 125<br>(46.5) |
| <b>Serving it Safe</b> | 66<br>(24.5)         | 48<br>(17.8) | 42<br>(15.6)  | 51<br>(19.0)  | 50<br>(18.6)  | 62<br>(23.0)  | 71<br>(26.4)  | 62<br>(23.0)  |
| <b>HACCP</b>           | 26<br>(9.7)          | 89<br>(33.1) | 102<br>(37.9) | 107<br>(39.8) | 115<br>(42.8) | 139<br>(51.7) | 138<br>(51.3) | 140<br>(52.0) |

Directors were also asked what other types of training were offered to employees since 2005. Responses included school district training (8) and local health department certification (8).

Directors were asked in what areas of food safety their employees needed additional training. Table 14 presents common responses.

**Table 14. Food Safety Training Needs for Employees (N=269)**

| <b>Topic</b>   | <b>Frequency</b> |
|--|------------------|
| Continuous/ongoing training/reminder   | 40               |
| Updated training program/materials (Videos, PowerPoint, etc.)                                  | 38               |
| None or little training still needed (trainings have been provided regularly)                  | 29               |
| Food handling/cross contamination/allergy/temperature and other food safety knowledge training | 19               |
| Trainings specifically for new employees   | 8                |

Directors were asked what additional support they needed to encourage implementation of school food safety programs; what additional support they needed to provide training for district staff on food safety; and what additional resources they needed within the district to improve food safety. Tables 15, 16, and 17 provide a summary of the directors' responses.

**Table 15. Additional Support Needed to Encourage Schools to Implement Food Safety Programs (N=269)**

| <b>Additional support</b>   | <b>Frequency</b> |
|---|------------------|
| None  | 43               |
| Training resources and materials (posters, PPT, DVD, CD-ROM, Internet, webinar, etc.) | 30               |
| Funding and/or time   | 16               |
| Management/HR/government (local health department)                                    | 11               |
| Simplified/updated materials  | 4                |
| Reminder of the importance of food safety   | 3                |

**Table 16. Additional Support Needed to Provide Training for District Staff (N=269)**

| <b>Additional support</b>   | <b>Frequency</b> |
|---|------------------|
| None (all support provided)   | 32               |
| Training technical support (DVD, webinar, online training, workshops) | 30               |
| Money and time  | 29               |
| Trainers and classes  | 16               |
| Updated materials   | 10               |
| Support from the district overall                                     | 3                |

**Table 17. Additional Resources Needed Within the District to Improve Food Safety (N=269)**

| <b>Additional support</b>                                    | <b>Frequency</b> |
|--|------------------|
| None (all is up to date)                                     | 26               |
| Money and time   | 26               |
| Updated technology support (DVD, CE-ROM, Internet resources) | 22               |
| Availability of training                                     | 13               |
| Training materials   | 10               |
| Equipment  | 4                |
| Administration and HR support                                | 2                |

### ***Healthy, Hunger Free Kids Act***

Approximately 29% of respondents were minimally aware that the Healthy, Hunger Free Kids Act included new requirements for food safety. Of all respondents, only 27.3% indicated they were aware of the requirements and could implement these requirements with current information. On the other hand, 30.7% of respondents indicated they were aware of the requirements but would need assistance with implementation. Thirteen percent of the respondents indicated they had no awareness of these requirements.

## CONCLUSIONS AND RECOMMENDATIONS

Based on responses of directors from state agencies and school districts, we can draw several conclusions and make recommendations on the content of the *Guidance*, distribution and availability of the *Guidance*, and training needs and resources.

### Content

The *Guidance* serves as a key resource for both state agencies and school district foodservice directors, helping them develop SOPs, classifying menu items, and integrating critical control points. Most state agencies and district directors used the *Guidance* SOPs verbatim, thus demonstrating a need for strong, relevant materials at a national level. State directors use SOPs to develop and review existing food safety programs and for training.

The NFSMI provides HACCP tools like the SOP builder. Although some state directors encourage using this tool, other state directors were unaware of this resource. State directors did not seem to fully understand the overall usefulness of this tool. Fewer than half of district directors used the SOP builder. Thus, the intent, purpose, and usefulness of the SOP builder should be further evaluated. Many respondents wanted condensed or consolidated materials. Builder and development tools that can help directors customize food safety guidelines would be useful.

SOPs should be reviewed and updated to reflect current FDA Food Code standards. State directors encourage school directors to use pre-made forms, logs, and templates; however, these forms cannot be customized nor is there any possibility for portions of the *Guidance* to be interactive. We recommend that these forms be changed to allow directors to adapt them for specific environments.

School directors also wanted to adjust forms to allow multiple days of similar observations to be tracked on a one-page form. Based on the responses, we recommend forms be condensed, simplified, and combined wherever possible.

Our results indicate that district directors use different criteria to evaluate the food safety programs within the CREs than those of state agency staff. A food safety section of the

Coordinated Review Effort could provide national guidance and clear communication about how to evaluate programs, as well as provide training for state agency staff.

### ***Distribution/Availability***

Most directors appreciated the comprehensiveness of the *Guidance* document; however, some also wanted abbreviated portions of the *Guidance* for specific situations like assisting smaller schools, charter schools, or smaller programs receiving outsourced services and food. State agency staff and school directors both want to be able to download the *Guidance*, so this feature should remain in any future updates and releases.

Directors in both samples often did not know about NFSMI training availability and resources. Efforts are needed to better communicate and market training resources provided by NFSMI to increase their use and impact.

Existing videos from both the USDA and NFSMI should be evaluated for both downloading and ease of use. Video technology remains important and useful. State directors particularly supported on-line teaching and learning opportunities for both training and disseminating information.

### ***Training***

Food safety training at all levels continues to be a need. HACCP-related training averaged only one time per state, and only about half of the state agencies offered general food safety training in any given year. About half of the district directors reported offering HACCP-related training in any given year.

When asked about training needs, both state agency staff and school district directors offered several suggestions. Both groups indicated that they needed more training opportunities, especially for new employees. They also indicated they needed resources to train others. Several respondents mentioned online training as a way to maximize training access and decrease costs. Training DVDs, scripted training, and webinars were also suggested. Several mentioned problems with streaming videos and wanted actual DVDs for training. A few respondents noted that training materials in other languages would be useful.

## **APPENDIX A: STATE AGENCY COVER LETTER & QUESTIONNAIRE**

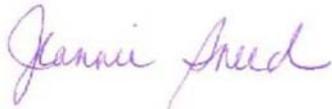
Dear State Director,

The requirement for a Food Safety Program Based on HACCP Principles has been in place since the 2004 Child Nutrition Reauthorization. USDA Food and Nutrition Service is interested in evaluating the support available for school districts and state agencies in developing these food safety programs.

The purpose of this survey is to determine how the *Guidance for School Food Authorities: Developing a School Food Safety Program Based on the Process Approach to HACCP Principles* (referred to subsequently as the *Guidance Document*) was used by your state agency to develop food safety programs in your state and to identify ways that it needs to be updated to better meet the needs of states and school districts. You can find a copy of the document at: <http://www.fns.usda.gov/fns/safety/pdf/HACCPGuidance.pdf>

Your response is very important to the success of this study. We appreciate your time and assistance. If you have any questions regarding this study, please contact Dr. Jeannie Sneed at (785) 532-5507 or Dr. Kevin Roberts at (785) 532-2399. Should you have any questions about the rights of individuals in this study or about the way this study is conducted, you may contact the Kansas State University Research Compliance Office at (785) 532-3224.

Cordially,



Dr. Jeannie Sneed  
Professor & Head  
Department of Hospitality Management  
and Dietetics



Dr. Kevin Roberts  
Assistant Professor & Director  
The Center of Excellence for Food Safety  
Research in Child Nutrition Programs

## State Agency Survey

**\*1. Were you or anyone else employed at your state agency involved with implementation of food safety programs immediately after they were mandated in the 2004 Child Nutrition and WIC authorization?**

Yes

No

Please complete the following only if you were involved with implementing the 2004 Child Nutrition and WIC Reauthorization Act requirements to implement a food safety system based on HACCP.

If you were not that person, kindly forward the original email with the link to the questionnaire to the appropriate person.

If someone is not available who helped with the 2004/2005 food safety program based on HACCP implementation, please return to question 1 and select "NO" to proceed.

**2. To what extent did your state agency use the Guidance Document as the basis for:**

|  | Not at all            | Used as a guide, but modified | Used exactly as written |
|--|-----------------------|-------------------------------|-------------------------|
| Developing state guidance?             | <input type="radio"/> | <input type="radio"/>         | <input type="radio"/>   |
| Conducting training?                   | <input type="radio"/> | <input type="radio"/>         | <input type="radio"/>   |
| Reviewing school food safety programs? | <input type="radio"/> | <input type="radio"/>         | <input type="radio"/>   |

Page 1

## State Agency Survey

### 3. To what extent did your state agency use the following proposed standard operating procedures provided in the Guidance Document when working with school districts?

|  | Not at all            | Used as a guide, but modified | Used exactly as written |
|--|-----------------------|-------------------------------|-------------------------|
| Cooking potentially hazardous foods                      | <input type="radio"/> | <input type="radio"/>         | <input type="radio"/>   |
| Cooling potentially hazardous foods                      | <input type="radio"/> | <input type="radio"/>         | <input type="radio"/>   |
| Holding hot and cold potentially hazardous foods         | <input type="radio"/> | <input type="radio"/>         | <input type="radio"/>   |
| Date marking ready-to-eat, potentially hazardous foods   | <input type="radio"/> | <input type="radio"/>         | <input type="radio"/>   |
| Personal hygiene   | <input type="radio"/> | <input type="radio"/>         | <input type="radio"/>   |
| Reheating potentially hazardous foods                    | <input type="radio"/> | <input type="radio"/>         | <input type="radio"/>   |
| Receiving deliveries                                     | <input type="radio"/> | <input type="radio"/>         | <input type="radio"/>   |
| Storing and using poisonous or toxic chemicals           | <input type="radio"/> | <input type="radio"/>         | <input type="radio"/>   |
| Using suitable utensils when handling ready-to-eat foods | <input type="radio"/> | <input type="radio"/>         | <input type="radio"/>   |
| Washing fresh fruits and vegetables                      | <input type="radio"/> | <input type="radio"/>         | <input type="radio"/>   |
| Washing hands  | <input type="radio"/> | <input type="radio"/>         | <input type="radio"/>   |

### 4. Did staff at your state agency use the following National Food Service Management Institute (NFSMI) resources?

|   | Yes                   | No                    | Unaware of resource   |
|---|-----------------------|-----------------------|-----------------------|
| Download standard operating procedures from the NFSMI website?                          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Encourage use of the SOP builder that was available on the NFSMI website?               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Know that the SOP builder existed?  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| "Developing a School Food Safety Program" workbook                                      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| "Developing a School Food Safety Program" PowerPoint slides                             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| "Developing a School Food Safety Program" Template for developing a food safety program | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| "Developing a School Food Safety Program" video   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

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## State Agency Survey

### 5. Did the NFSMI conduct any training in your state?

- Unaware  
 No  
 Yes

If YES, please provide the number and titles of training programs NFSMI presented since 2005, or since you became school nutrition program director.

### 6. Did staff at your state agency work with school districts to classify menu items into the three process categories: no cook, same day service, and complex food preparation?

- No  
 Yes  
 Unsure

### 7. Were the critical control points (CCPs) related to each process presented in the Guidance Document easy to understand and implement?

- No  
 Yes

### 8. How useful was the Guidance Document in helping school districts to:

|  | Not at all Useful     | Moderately Useful     | Extremely Useful      |
|--|-----------------------|-----------------------|-----------------------|
| Develop procedures for documenting critical limits?      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Establish monitoring procedures?                         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Develop corrective actions?                              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Develop appropriate record keeping procedures and forms? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Conduct training?  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

## State Agency Survey

### 9. Which of the following forms from the Guidance Document did your state agency recommend to school districts?

|                                       | Yes                   | No                    |
|---------------------------------------|-----------------------|-----------------------|
| Food Safety Checklist                 | <input type="radio"/> | <input type="radio"/> |
| Receiving Log                         | <input type="radio"/> | <input type="radio"/> |
| Cooking and Reheating Temperature Log | <input type="radio"/> | <input type="radio"/> |
| Cooling Log                           | <input type="radio"/> | <input type="radio"/> |
| Damaged or Discarded Product Log      | <input type="radio"/> | <input type="radio"/> |
| Refrigeration Log                     | <input type="radio"/> | <input type="radio"/> |

### 10. Does your state agency include an assessment of the School Food Safety Program in the coordinated review effort?

- No  
 Yes

If YES, what criteria (or questions) did you use to evaluate the program? If you have an online link (URL) to those criteria/questions, please provide the link.

### 11. Does your state agency have any state-specific requirements/guidelines for school districts to follow regarding implementation of the School Food Safety Plan?

- No  
 Yes

If YES, please list the requirements/guidelines in the space below or provide the online link to those requirements/guidelines.

## State Agency Survey

**12. Does your state agency make a recommendation on how often the food safety program should be reviewed and updated?**

- No  
 Yes

If YES, what is the recommendation?

**13. Do school districts in your state use the “Food Safety Program Review Checklist” provided in the Guidance Document?**

- All use  
 Some use  
 None use  
 Unsure

**14. What improvements are needed in the Guidance Document to make it more useful for state agencies and school districts?**

**15. What training opportunities related to food safety has your state agency provided since 2005, or since you have been the school nutrition program director? (Check all that apply)**

|                             | Not offered              | 2005                     | 2006                     | 2007                     | 2008                     | 2009                     | 2010                     | 2011                     |
|-----------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| ServSafe                    | <input type="checkbox"/> |
| Serving it Safe             | <input type="checkbox"/> |
| Food Safety Program (HACCP) | <input type="checkbox"/> |

Other (please specify)

## State Agency Survey

**16. Compared to 2004-06, would you estimate that the amount of food safety training provided by the state agency this past year is:**

- About the same  
 Increased  
 Decreased

**17. What training related to school food safety programs is still needed by school districts in your state?**

**18. What additional support do state agency staff members need to encourage schools to implement their school food safety program?**

**19. What additional support do state agency staff members need to provide training for school district staff on food safety?**

**20. What resources are needed to improve food safety in school districts in your state?**

## State Agency Survey

**21. To what extent do you think directors in your state are aware that the Healthy, Hunger Free Kids act includes new requirements for food safety?**

- No awareness
- Minimal awareness
- Aware, but need assistance with implementation
- Aware and able to implement with current information

**22. Please estimate the percentage of school districts in your state that have implemented a School Food Safety Program based on HACCP Principles.**

**23. How many school districts are there in your state?**

## **APPENDIX B: DISTRICT FOODSERVICE DIRECTORS' COVER LETTER & QUESTIONNAIRE**

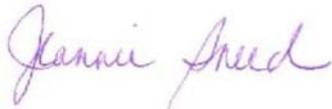
Dear Director,

The requirement for a Food Safety Program Based on HACCP Principles has been in place since the 2004 Child Nutrition Reauthorization. USDA Food and Nutrition Service is interested in evaluating the support available for school districts and state agencies in developing these food safety programs.

The purpose of this survey is to determine how the *Guidance for School Food Authorities: Developing a School Food Safety Program Based on the Process Approach to HACCP Principles* (subsequently referred to as the *Guidance Document*) was used in your school district to assist in developing the food safety program and to identify critical updates. You can find a copy of the document at:  
<http://www.fns.usda.gov/fns/safety/pdf/HACCPGuidance.pdf>

Your response is very important to the success of this study. We appreciate your time and assistance. If you have any questions regarding this study, please contact Dr. Jeannie Sneed at (785) 532-5507 or Dr. Kevin Roberts at (785) 532-2399. Should you have any questions about the rights of individuals in this study or about the way this study is conducted, you may contact the Kansas State University Research Compliance Office at (785) 532-3224.

Cordially,



Dr. Jeannie Sneed  
Professor & Head  
Department of Hospitality Management  
and Dietetics



Dr. Kevin Roberts  
Assistant Professor & Director  
The Center of Excellence for Food Safety  
Research in Child Nutrition Programs

## District Foodservice Directors

**1. Were you employed in school food service in your current district when the implementation of food safety programs took place following the mandate in the 2004 Child Nutrition WIC authorization?**

- Yes  
 No

**2. To what extent did your school district use the Guidance Document as the basis for:**

|                                     | Not at all            | Used as guide but modified | Used exactly as written |
|-------------------------------------|-----------------------|----------------------------|-------------------------|
| Developing your food safety program | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/>   |
| Conducting training                 | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/>   |
| Reviewing school programs           | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/>   |

**3. To what extent did your school district use the sample standard operating procedures (SOPs) provided in the Guidance Document when developing SOPs for schools in the district?**

|  | Not at all            | Used as a guide, but modified | Used exactly as written |
|--|-----------------------|-------------------------------|-------------------------|
| Cooking potentially hazardous foods                      | <input type="radio"/> | <input type="radio"/>         | <input type="radio"/>   |
| Cooling potentially hazardous foods                      | <input type="radio"/> | <input type="radio"/>         | <input type="radio"/>   |
| Holding hot and cold potentially hazardous foods         | <input type="radio"/> | <input type="radio"/>         | <input type="radio"/>   |
| Date marking ready-to-eat, potentially hazardous foods   | <input type="radio"/> | <input type="radio"/>         | <input type="radio"/>   |
| Personal hygiene   | <input type="radio"/> | <input type="radio"/>         | <input type="radio"/>   |
| Reheating potentially hazardous foods                    | <input type="radio"/> | <input type="radio"/>         | <input type="radio"/>   |
| Receiving deliveries                                     | <input type="radio"/> | <input type="radio"/>         | <input type="radio"/>   |
| Storing and using poisonous or toxic chemicals           | <input type="radio"/> | <input type="radio"/>         | <input type="radio"/>   |
| Using suitable utensils when handling ready-to-eat foods | <input type="radio"/> | <input type="radio"/>         | <input type="radio"/>   |
| Washing fresh fruits and vegetables                      | <input type="radio"/> | <input type="radio"/>         | <input type="radio"/>   |
| Washing hands  | <input type="radio"/> | <input type="radio"/>         | <input type="radio"/>   |

**4. Did staff in your school district use the following National Food Service Management Institute (NFSMI) resources?**

|   | Yes                   | No                    | Unaware of resource   |
|---|-----------------------|-----------------------|-----------------------|
| SOPs downloaded from the NFSMI website          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| The SOP builder, available on the NFSMI website | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

## District Foodservice Directors

### 5. Did the NFSMI conduct any training in your school district?

- Unaware  
 No  
 Yes

If YES, please provide the titles and number of training programs NFSMI presented since 2005, or since you became school nutrition program director?

### 6. As the director, did you work with schools to classify menu items into the three process categories: no cook, same day service, and complex food preparation

- Yes  
 No

### 7. Were the critical control points (CCPs) related to each process presented in the Guidance Document easy to understand and implement?

- No  
 Yes  
 Somewhat

### 8. How useful was the Guidance Document in helping schools in your district to:

|  | Not at all Useful     | Moderately Useful     | Extremely Useful      |
|--|-----------------------|-----------------------|-----------------------|
| Develop procedures for documenting critical limits?      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Establish monitoring procedures?                         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Develop corrective actions?                              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Develop appropriate record keeping procedures and forms? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Conduct training?  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

## District Foodservice Directors

### 9. Which of the following forms from the Guidance Document did schools in your district use?

|                                       | Yes                   | No                    |
|---------------------------------------|-----------------------|-----------------------|
| Food Safety Checklist                 | <input type="radio"/> | <input type="radio"/> |
| Receiving Log                         | <input type="radio"/> | <input type="radio"/> |
| Cooking and Reheating Temperature Log | <input type="radio"/> | <input type="radio"/> |
| Cooling Log                           | <input type="radio"/> | <input type="radio"/> |
| Damaged or Discarded Product Log      | <input type="radio"/> | <input type="radio"/> |
| Refrigeration Log                     | <input type="radio"/> | <input type="radio"/> |

### 10. What other resources did you use to develop food safety plans in your school district?

### 11. What improvements are needed in the Guidance Document to make it more useful for your school district?

### 12. What training opportunities related to food safety has your school district provided since 2005, or since you have been the school nutrition program director? (Check all that apply)

|                             | Not Offered              | 2005                     | 2006                     | 2007                     | 2008                     | 2009                     | 2010                     | 2011                     |
|-----------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| ServSafe                    | <input type="checkbox"/> |
| Serving it Safe             | <input type="checkbox"/> |
| Food Safety Program (HACCP) | <input type="checkbox"/> |

Other (please specify topic and when offered)

### 13. Compared to 2004-06, would you estimate that the amount of food safety training in your school district in the last year is:

- About the same  
 Increased  
 Decreased

## District Foodservice Directors

**14. What training related to school food safety programs is still needed by employees in your school district?**

**15. What additional support do you need to encourage schools to implement their school food safety program?**

**16. What additional support do you need to provide training for school district staff on food safety?**

**17. What resources are needed to improve food safety in your school district?**

**18. Does your state agency include an assessment of the School Food Safety Program in the coordinated review effort?**

No

Yes

If YES, what criteria (or questions) did you use to evaluate the program? If you have an online link (URL) to those criteria/questions, please provide the link.

## District Foodservice Directors

**19. Does your state agency have any state-specific requirements/guidelines for school districts to follow regarding implementation of the School Food Safety Plan?**

- No  
 Yes

If YES, please list the requirements/guidelines in the space below or provide the online link to those requirements/guidelines.

**20. Does your state agency make a recommendation on how often the food safety program should be reviewed and updated?**

- No  
 Yes

If YES, what is the recommendation

**21. Do schools in your district use the "Food Safety Program Review Checklist" provided in the Guidance?**

- No  
 Yes

If YES, how often do they use it?

**22. How many schools are in your district?**

**23. Please estimate the percentage of schools in your district that have implemented a comprehensive School Food Safety Program Based on HACCP Principles?**

**24. What is your state?**

State:

Page 5

## District Foodservice Directors

**25. To what extent are you aware that the Healthy, Hunger Free Kids Act includes new requirements for school food safety?**

- No awareness
- Minimal awareness
- Aware, but need assistance with implementation
- Aware and able to implement with current information

## **APPENDIX C: CRITERIA USED BY STATE AGENCIES TO EVALUATE SCHOOL FOOD SAFETY PROGRAMS**

### **State A**

Elements of HACCP Plan  
Standard Operating Procedures (SOPs)  
Menu items in the appropriate HACCP process category  
Time and temperature monitoring records  
Critical control points of food production  
Verification or review records  
Calibration records  
Training Plan  
Training logs  
Receiving logs

### **State B**

Use SMI Form (Food Safety Checklist)

### **State C**

Used with school meal initiative review compliance

### **State D**

Are satisfactory sanitation and safety practices in place and enforced?  
Does the site have a written HACCP plan?  
Does the written plan include Standard Operating Procedures (SOP's) specific to the site reviewed?  
Does the written plan categorize recipes into Processes and identify Critical Control Points?  
Is the written plan in operation? Temperature logs? Food production logs?  
Employee participation evident  
Has the site received two food safety inspections during the current school year?  
    If NO, were two food safety inspections conducted in the previous school year?  
    If two inspections were not conducted in the current or prior school year, did the SFA/school request the inspections? If NO, explain.  
Is the most recent food safety inspection report posted in a publicly visible location?

### **State E**

We asked if they had a food safety plan. They were asked if they were documenting temperatures of storage areas and food preparation. Documentation was reviewed.

### **State F**

Site specific hazard analysis, the menu items are broken down into the appropriate process approach, SOP's specific to the facility, records and logs identified in the plan, documentation of review and revision of plan at minimum annually and training logs of staff on plan.

### **State G**

Is there a written food safety program in place? Does it follow USDA guidance?  
Do observations indicate the principles of the food safety program are being implemented?  
Do employees follow USDA guidance for personal dress and hygiene?  
Are handwashing sinks unobstructed, operational, and clean?  
Are employees washing their hands properly, frequently, and at appropriate times?

Are food equipment, utensils, and food contact surfaces properly washed, rinsed, and sanitized before every use?  
Is frozen food properly thawed under refrigeration or in cold running water?  
Are procedures in place to prevent cross-contamination?  
Is food handled with suitable utensils, such as single use gloves or tongs?  
Is food cooked/maintained at the proper temperatures, and is documentation maintained?  
Are thermometers available and accurate?  
Are thermometers properly calibrated, and is there adequate documentation?  
Are thermometers cleaned and sanitized between uses?  
Are refrigerators kept clean and organized?  
Is food stored 6 inches off the floor in storage areas?  
Is all food properly wrapped, labeled, and dated?  
Is all food stored in NSF approved containers?  
Is the ambient air temperature of all refrigerators/freezers and store rooms monitored and documented?  
Are all unopened food items labeled with name and receive date?  
Are chemicals clearly labeled and stored away from food and food related supplies?  
Is the 3-compartment sink properly set-up for ware washing?  
Is the dish machine working properly? (i.e., gauges and chemicals are at recommended levels)  
Are water temperatures correct for washing and rinsing?  
Are boxes, containers, and recyclables removed from the site?  
Are the exhaust hood and filters clean and turned on when needed?  
Are the kitchen garbage cans clean and kept covered?  
Do the outside doors have screens; are they well sealed and equipped with a self-closing device?  
Is there any evidence of the presence of pests?

### **State H**

Is a written food safety program in place?  
Does the program follow USDA guidance?  
Do observations on the day of the review indicate principles of the program are being implemented? Has the site received two food safety inspections during the current school year?  
If no, were two food safety inspections conducted the previous school year?  
If not, did the SFA request the inspections?  
Is the most recent food safety inspection report posted in a publicly visible location?

### **State I**

SA staff are asked to review the SFA's HACCP-Based School Food Safety Plan to assure it includes SOPs and HACCP principles. They are also asked to evaluate if the school is implementing their established plan as written. A Food Safety Checklist for the SFA to use is included in annually updated School Food Service Compliance Document provided by the SA each year. Schools must also have two food safety inspections during each school year conducted by the local health department and the documentation of those inspections are to be posted at each eating facility. Questions to verify the SA critique are included on the SMI review instrument.

## **State J**

Review the district's HACCP Plan

## **State K**

One state has a checklist that includes the following questions with yes/no responses:

Does the district have a master Food Safety Plan?

Does the Food Safety Plan include:

Documented Standard Operating Procedures (SOPs) applicable for each site, including storage, preparation and serving of all foods in any location on the school campus?

Menu items categorized according to the Process Approach to Hazard Analysis Critical Control Points (HACCP)?

Is the SFA recording food temperatures and are critical limits listed on temperature logs and/or production records?

When corrective action is taken, is corrective action documented?

Is the Food Safety Plan reviewed and revised annually?

Are all Food Safety Plan records kept for 3 years plus the current year?

Have SFA employees had food safety training?

Is there at least one certified food manager on site with current certificates on file from a Michigan Department of Agriculture and Rural Development (MDARD) approved food safety certification course?

Are yearly in-services on food safety offered to district employees?

Did each school receive two food safety inspections this school year? Please provide documentation of inspections or requests for inspections.

Are the most current food safety inspections posted in a publicly visible location at each site?

Does the SFA own or have a contract for a separate warehouse facility for the storage of food and non-food supplies?

If YES, where is the warehouse located?

Is this warehouse licensed by MDARD?

Please have your district Food Safety Plan and all food safety inspections available for review.  
Signature of Food Service Director, Date

## **State L**

On site review of plan and SOPs. Visual observation of effectiveness. Check of temperature logs for hazardous foods and equipment.

## **State M**

Has sponsor implemented a site-based Food Safety/ HACCP Plan? Are written standard operating procedures (SOPs) available and implemented to address:

Cleaning and sanitizing equipment, utensils, and work surfaces?

Hot and cold holding temperatures of prepared food items?

Employees personal dress and hygiene?

Hand washing and disposable gloves usage?

Is the Food Safety Plan for this site followed? (Review record keeping, training, revision, and any other logs sponsor may keep.)

Are menu items grouped according to the process approach?

Are control measures and critical limits identified and documented?

**State N**

In General Area of CRE Review Form as yes and no questions.

1. Is a written food safety program in place?
2. Does the program follow USDA Guidance?
3. Do observations on the day of review indicate principles of the program are being implemented?
4. Does school complete Manager's Self Inspection Checklist?
5. Are SOPs available and utilized?
6. Are two Health Inspections conducted each year?

**State O**

Must have HACCP based SOPs at each school serving meals -Must have HACCP Production Records containing processes and completed time and temperature logs OR separate process charts and time and temperature logs

**APPENDIX D: RESPONSES FROM SCHOOL FOODSERVICE  
DIRECTORS ON METHODS TO IMPROVE THE *GUIDANCE***

*Responses are presented as submitted and have not been edited by the researcher.*

- Way too much paper. Condense, condense, condense! Are any of you managing a staff and kitchens and deliveries and service? Who could possibly fill out all the "stuff" you are suggesting. User simple, user simple, just sayin...
- Condense it!
- Continuing to update
- Do not shade anything gray like the pages 20-22, they copy as black boxes.
- Integrated Pest Management Logs. More specified SOP listing of equipment for each school and cleaning of each piece of equipment. How to break down a slicer for example. How to test sanitizing solutions (quat and chlorine) and what types of testing strips to use. What concentrations are appropriate and how often. \*\*The SMI needs to reflect that both chemical and hot water sanitization are appropriate methods of sanitization in a warewashing sink.
- Less forms, easier to monitor, less time needed
- I don't know that improvements are necessary. We just made a few shortcuts to cut down on paperwork. Instead of writing food temps down in the logbook we put them on our Daily Food Production Sheets. Cuts down on doing it twice. And when receiving food we put temps down on the invoices instead of in a logbook. Just some simple things such as these two.
- We just adapted form and combined some but used principals
- We made our own daily sheets to record all temps and sanitation procedures.
- Make us aware that the info is out there.
- Wasn't aware of the document
- I would say to down load it on the web.
- Everything could be simpler, less paper, and paperwork. I am from a small school with the same employees and I should not have to continually have to review what they already know. Some things I can see, but not everything.
- I have never seen the Guidance Document prior to receiving this survey email.
- More explanation. I had to go over the material several times in order to realize how exactly to implement the HACCP in reality.
- Simplified Layout and Design. More graphics.
- If you have additional information, since first plan was developed.
- It is a well-written, comprehensive document and provided needed tools.
- Anything to help simplify records. A stream-lined model program would be very useful. I know that USDA wants the Districts to take ownership and develop their own plans, but the time constraints School Food Service Departments are under are unreal. There is not enough time to handle the paperwork needed to govern your program and to feed the children in the time your budgetary constraints allow for labor. We either need more money for labor (not happening) or a more stream-lined approach. I really hope that some one listens to this statement.
- I think it was very useful, but as safety, health, and nutrition changes are made we need to be always aware to keep our HACCP plans current.

- I have been employed in this district for 11 years, and have recently become the new food service director here, so I am still exploring all resources available to me.
- I thought it was very helpful just the way it is. No improvements needed.
- Forms that hold more entries so that there is not so much paper to keep for 3 years
- Please keep sending out your updated information.
- No
- Realistic... How to incorporate principles into everyday documents. Stamping an invoice to record temps Food prod record columns to record PHF temps Make a combined HACCP temp log with daily things, i.e., freezer, fridge, thermometer calibration, etc. Excel forms that we can adjust to fit our needs
- I do not know. I was not aware this document existed until now.
- More information on the time factor. What is not necessary if the time factor does not occur?
- Excellent reference
- More guidance on combination foods and foods that are bought that need be reheated. Chicken nuggets, Chicken Patties, Chicken Strips etc.
- More charts that can be posted on the walls
- Templates need to be easy to individualize to the needs of each district.
- The entire approach to food safety using the no cook, same day and complex food is at first so simplistic, staff turn off when first introducing the concept. By the time you extend the concept to explaining that same day becomes complex when serving leftover, they have missed the key concepts of why group the menu items anyway. We also find it frustrating when the state reviewers come in and want to see our menu item groupings, but don't bother to ask for or even check if we have sanitation logs, temp logs, and the day-to-day proof that we observe safe food handling practices.
- I don't believe there is anything else?
- I found them to be very user friendly
- Provide logs and SOP's in Spanish and other languages as needed.
- More clarification on implementation date, review date, and date revised. Description of Facilities - more information
- It needs to be updated to current food code standards.
- Since HACCP is about documenting what we already do, we found a less cumbersome way to document without adding 10 more clipboards to the process.