

**Food Safety Education Survey
State Level
Research Report**



Research conducted by

**The Center for Educational Research and Evaluation
The University of Mississippi
University, Mississippi**

**Maxine Harper, Ed. D., Educational Research Analyst
Kathleen Sullivan, Ph. D., CERE Director
Kay Hightower, Research Assistant**

June 2002



**National Food Service Management Institute
The University of Mississippi**

Building the Future Through Child Nutrition

Location

The National Food Service Management Institute (NFSMI) was established by Congress in 1989 at The University of Mississippi in Oxford as the resource center for Child Nutrition Programs. The Institute operates under a grant agreement with the United States Department of Agriculture, Food and Nutrition Service. The NFSMI Applied Research Division is located at The University of Southern Mississippi in Hattiesburg.

Mission

The mission of the NFSMI is to provide information and services that promote the continuous improvement of Child Nutrition Programs.

Vision

The vision of the NFSMI is to be the leader in providing education, research, and resources to promote excellence in Child Nutrition Programs.

Programs and Services

Professional staff development opportunities and technical assistance to facilitate the management and operation of Child Nutrition Programs are provided through:

- ◆ Educational References and Materials
- ◆ Information Services
- ◆ Workshops and Seminars
- ◆ Teleconferences and Satellite Seminars
- ◆ Applied Research

Administrative Offices

Education Division

The University of Mississippi
P.O. Drawer 188
University, MS 38677-0188
Phone: 800-321-3054

Applied Research Division

The University of Southern Mississippi
Box 10077
Hattiesburg, MS 39406-0077
Phone: 601-266-5773

<http://www.nfsmi.org>

Introduction

Food safety has become a primary concern throughout the food service industry. During the past decade, a number of educational initiatives have taken place to assist food service professionals in understanding and implementing safe food handling procedures. These initiatives have been undertaken by professional groups, universities, and by federal, state, and local agencies.

Under a cooperative agreement with the U. S. Department of Agriculture, The National Food Service Management Institute (NFSMI), in collaboration with the Center for Educational Research and Evaluation (CERE) at The University of Mississippi, conducted a survey of states to examine food safety education and inspection activities within Child Nutrition Programs.

The survey addressed topics such as food safety training programs being used for Child Nutrition, sources of food safety information, methods of distribution, providers of food safety information/education, target audiences for food safety training, goals and content of food safety education, materials and resources, amount of time provided for food safety training, number of personnel trained per year, frequency of health/sanitation inspections, areas of food safety considered most important, and helpful resources in providing education in food safety practices.

The findings of this survey, in addition to the results of a survey of federal agencies conducted by the Centers for Disease Control and Prevention, will provide information on the scope of food safety education activities. This information can be used to assess gaps that may exist in providing food safety education for the Child Nutrition Programs.

Methodology

Researchers from CERE made preliminary phone contact with personnel from nine states to determine which agencies are involved in food safety training in each state and which agencies are responsible for food safety inspections in schools. Following the preliminary telephone interviews, the researchers sent e-mail messages to the individuals previously contacted by phone. The e-mail messages requested responses to 13 questions pertaining to the provision and distribution of food safety training and information, as well as specific information regarding the food safety training programs being offered within the state and the frequency with which food safety inspections are conducted.

Based on the responses to these questions, a draft survey instrument was designed by researchers at CERE. Following initial editing by NFSMI, the survey instrument was submitted to and reviewed by the Food and Nutrition Subcommittee of the Education Information Advisory Committee, Council of Chief State School Officers. This committee made design changes that incorporated response matrices into numerous items

of the instrument. This format elicited information regarding not only school districts but also other Child Nutrition Programs, including child and adult care facilities. In its final form, the survey instrument consisted of a demographics section followed by 13 items, the last two having open-ended responses.

The survey was designed to be completed by the agency that has primary responsibility for food safety education of Child Nutrition Program personnel. Therefore, survey recipients were directed to forward the survey to the appropriate person in the event that the receiving agency was not the primary source. The survey was submitted by mail and by e-mail, with a cover letter from NFSMI Executive Director, Dr. Jane Logan, to Child Nutrition Program Directors from the 50 states, as well as the District of Columbia and three outlying territories, including Guam, Puerto Rico, and the Virgin Islands. Responses were to be returned by mail, fax, or e-mail to the researchers at CERE. Two reminder e-mail messages were sent by Dr. Logan to non-respondents.

Results

Response Rate

Of the 54 surveys sent, 47 were returned with responses. This 87% response rate is considered relatively high. However, some items, particularly those with response matrices, were only partially completed by some respondents. Georgia did not return responses to items 11-13, the last page of the survey. No responses were received from the District of Columbia, Guam, the Virgin Islands, New Mexico, Kansas, or Utah. A completed survey was received from Indiana after results had been tabulated. Therefore, responses from this state are not included in this report.

Respondent Demographics

Survey respondents had a variety of titles, but most listed their agency as the (State) Department of Education or Public Instruction. Iowa's Bureau of Food and Nutrition responded to the survey, as did New Hampshire's Bureau of Nutrition Programs and Services and South Dakota's Child and Adult Nutrition Services – DECA. New Jersey's responding agency was the Department of Agriculture, and Minnesota's responding agency was the Department of Health.

Item Responses

Following are the results of the survey by item, with the number and percent of states marking the item as a "yes." In calculating percentages, 47 was used as the total number of states in the responding sample, with Puerto Rico being counted as a "state" in this report.

Item 1: What food safety training programs are being implemented for Child Nutrition Programs in your state?

Training Programs	Yes #	Yes %
<i>Serving It Safe</i>	31	67%
HACCP	30	64%
ServSafe® curriculum offered by the National Restaurant Association Educational Foundation	27	57%
Food handlers training programs provided by local health Departments (see data sheet for names and titles)	18	38%
Other (see data sheet for names and titles)	18	38%
Food safety training courses offered on CD-ROM or video (see data sheet for names and titles)	4	9%
Restaurant Association food safety training classes (see data sheet for names and titles)	2	4%

More than half the respondents reported using *Serving It Safe*, *ServSafe®*, and/or HACCP as a training program. Many states reported using more than one training program. Only one state, Alabama, did not indicate use of a training program at this time. Notably, 38% of the respondents reported using other training programs, as detailed on the accompanying data sheet.

Item 2: What sources does your state agency use to obtain food safety information for food service operations?

Information Sources	Yes #	Yes %
Food and Nutrition Service (USDA)	39	83%
American School Food Service Association (ASFSFA)	34	72%
National Food Service Management Institute (NFSMI)	34	72%
State Universities / Cooperative Extension Service	33	70%
Local health department	31	66%
Food Safety and Inspection Service (USDA)	28	60%
State Department of Public Health	28	60%
Food and Drug Administration (FDA)	26	55%
National Restaurant Association (NRA) Educational Foundation	24	51%
Food and Nutrition Information Center (FNIC)	21	45%
State Department of Agriculture	16	34%
Other (see data sheet for names and titles)	9	19%
State Department of Human Services	8	17%

The most common sources of food safety information reported by respondents were the Food and Nutrition Service (USDA), American School Food Service Association (ASFSFA), and National Food Service Management Institute (NFSMI). Each was used by more than 70% of the states responding.

Item 3: How does your agency distribute food safety information/education within your state to each area of the Child Nutrition Program? Check all that apply.

*Target Audience	School Districts			Residential Child Care Institutions		Child Care Centers		Child Care Homes	Adult Care Facilities	Non-School District Summer Food Sponsors	
	D	M	S	M	S	M/C	Staff	Provider	Provider	M	Site Staff
Mail	41 87%	23 49%	18 38%	32 68%	13 28%	27 57%	19 40%	26 55%	20 43%	27 57%	11 23%
State agency sponsored workshops	39 83%	34 72%	31 66%	33 70%	22 47%	26 55%	23 49%	17 36%	19 40%	27 57%	12 26%
State monitoring staff visits	34 72%	27 57%	24 51%	27 57%	19 40%	23 49%	18 38%	17 36%	16 34%	22 47%	15 32%
Websites	24 51%	16 34%	13 28%	17 36%	12 26%	15 32%	14 30%	13 28%	10 21%	16 34%	9 19%
CD-ROM or Video	14 30%	9 19%	8 17%	7 15%	3 6%	5 11%	5 11%	4 9%	5 11%	9 19%	3 6%
Satellite teleconferences	13 28%	9 19%	9 19%	5 11%	3 6%	4 9%	2 4%	2 4%	1 2%	4 9%	3 6%
Other (see data sheet for descriptions)	12 26%	10 21%	10 21%	8 17%	5 11%	5 11%	4 9%	6 13%	4 9%	5 11%	4 9%
No response or N/A	0 0%	4 8%	4 8%	7 15%	11 23%	10 21%	13 28%	13 28%	20 43%	10 21%	15 32%

*D-director, M-manager, S-site staff
M-manager, S-site staff
M/C-manager cook, S-site staff
Provider
Provider
M-manager, S-site staff

Regardless of program area, the most commonly used information distribution methods were mail, state agency sponsored workshops, and state monitoring staff visits. It should be noted, however, that Child Nutrition Program areas other than school districts had a “no response” or “N/A” rate of 15% or higher (no method of distribution marked). It is not known whether these areas were not applicable to the responding agency or to the responding state or whether they were simply not addressed.

Item 4: Who provides food safety information/education for Child Nutrition Programs in your state? Check all that apply, and asterisk (*) the primary provider for each CNP area.

	School Districts	Residential Child Care Institutions	Child Care Centers	Child Care Homes	Adult Care Facilities	Non-School District Summer Food Sponsors
State Dept. of Education	40 85%	35 74%	27 57%	23 49%	21 45%	30 64%
Local departments of health/sanitation	37 79%	24 51%	22 47%	14 30%	17 36%	22 47%
State Dept. of Health	30 64%	22 47%	16 34%	11 23%	13 28%	16 34%
Cooperative Extension Services	27 57%	12 26%	14 30%	12 26%	6 13%	9 19%
Commercial sponsors (e.g., food industry manufacturers, brokers, etc.)	15 32%	8 17%	3 6%	1 2%	1 2%	4 9%
State Dept. of Agriculture	15 32%	7 15%	6 13%	4 9%	4 9%	5 11%
Private consultants	8 17%	2 4%	1 2%	1 2%	1 2%	2 4%
Other (see data sheet for descriptions)	7 15%	1 2%	3 6%	5 11%	2 4%	2 4%
Sponsors coordinated by USDA	6 13%	2 4%	3 6%	4 9%	1 2%	2 4%
No response or N/A	0 0%	6 13%	9 19%	10 21%	14 30%	7 15%

For all Child Nutrition Program areas, the State Department of Education was the most commonly indicated provider of food safety information/education. For all areas except Adult Care Facilities, the State Department of Education was also the most commonly indicated primary provider of such information. Most respondents who addressed the primary information/education provider for Adult Care Facilities marked either the State Department of Health or local departments of health/sanitation. However, across all areas, 40% to 57% of the 47 respondents did not indicate a primary provider of food safety information/education.

Item 5: Within the Child Nutrition Program in your state, what are the target audience(s) for food safety training?

	School Districts	Residential Child Care Institutions	Child Care Centers	Child Care Homes	Adult Care Facilities	Family Day Care	Non-School District Summer Food Sponsors
Foodservice Managers	44 94%	27 57%	11 23%	7 15%	9 19%	7 15%	22 47%
Foodservice Directors	43 91%	29 62%	13 28%	8 17%	11 23%	8 17%	28 60%
Foodservice Assistants/ Employees	38 81%	19 40%	11 23%	5 11%	9 19%	5 11%	18 38%
Foodservice staff at residential child care facilities	11 23%	28 60%	4 9%	5 11%	3 6%	4 9%	8 17%
Child Care Center Directors	6 13%	3 6%	29 62%	13 28%	15 32%	10 21%	5 11%
Child Care Center Staff	5 11%	5 11%	24 51%	14 30%	12 26%	8 17%	5 11%
Other (see data sheet for descriptions)	4 9%	1 2%	2 4%	8 17%	3 6%	3 6%	6 13%
No response or N/A	1 2%	6 13%	11 23%	18 38%	21 45%	24 51%	12 26%

Foodservice Directors, Managers, and Assistants/Employees or Staff were indicated as the main target audiences for training in School Districts, Residential Child Care Institutions, and Non-School District Summer Food Sponsors of most responding states. For Child Care Centers, Directors and Staff were the major target audiences. Other areas (Child Care Homes, Adult Care Facilities, and Family Day Care) had “no response” or “N/A” rates of 38% to 51%. Again, it is not known whether these areas were not applicable to the responding agency or to the responding state or whether they were simply not addressed.

Item 6: What are the goals of food safety education provided by the State Agency for Child Nutrition Program areas in your state? Check all that apply.

Goals of Food Safety Education	Yes #	Yes %
To teach appropriate methods of ensuring sanitary food handling (hand washing, use of hair nets, etc.)	45	96%
To teach appropriate food handling techniques (storing, washing, serving, disposing, etc.)	44	94%
To teach methods of preventing cross-contamination	43	91%
To teach importance and procedures to control temperatures properly	43	91%
To teach appropriate steps in food production and preparation	40	85%
Teach hazard analysis critical control point systems	34	72%
Other (see data sheet for names and titles)	8	17%

The goals listed on the survey were applicable to 72% to 96% of the responding states. The most widely adopted goals were those of teaching appropriate methods of ensuring sanitary food handling and teaching appropriate food handling techniques (storing, washing, serving, disposing, etc.). However, almost all responding states had goals related to basic food safety issues.

Item 7: (a) What is the content of food safety education for Child Nutrition Program areas in your state?

	School Districts	Residential Child Care Institutions	Child Care Centers	Child Care Homes	Adult Care Facilities	Family Day Care	Non-School District Summer Food Sponsors
Serving It Safe	33 70%	23 49%	15 32%	9 19%	11 23%	9 19%	15 32%
HACCP	32 68%	18 38%	10 21%	3 6%	6 13%	2 4%	12 26%
Local Health Requirements	30 64%	19 40%	17 36%	12 26%	13 28%	9 19%	15 32%
Food Code	28 60%	19 40%	14 30%	7 15%	11 23%	6 13%	15 32%
ServSafe®	28 60%	18 38%	12 26%	7 15%	7 15%	6 13%	12 26%
State-developed Curriculum	17 36%	9 19%	7 15%	3 6%	6 13%	1 2%	8 17%
Locally-developed Curriculum	4 9%	2 4%	3 6%	2 4%	3 6%	1 2%	2 4%
Agenda Attached	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%

Item 7: (a) What is the content of food safety education for Child Nutrition Program areas in your state? (continued)

	School Districts	Residential Child Care Institutions	Child Care Centers	Child Care Homes	Adult Care Facilities	Family Day Care	Non-School District Summer Food Sponsors
Other (see data sheet for descriptions)	5 11%	2 4%	5 11%	5 11%	3 6%	3 6%	1 2%
No response or N/A	1 2%	11 23%	14 30%	20 43%	19 40%	21 45%	11 23%

The majority of responding states included *ServSafe*, HACCP, *Serving It Safe*, Food Code, and/or Local Health Requirements in the food safety education content for their school districts. Child Nutrition Program areas other than school districts were addressed by fewer respondents, resulting in relatively high “no response” or “N/A” percentages.

- (b) **List the titles of state and local curricula.** (see data sheet for names and titles)
- (c) **Are these materials available for use by others?** 19 (40%) yes.
- (d) **If yes, how are they made available?** (see data sheet for descriptions)

Item 8: What materials and resources are used for food safety training programs? Where appropriate, please specify name/location. (see data sheet for names and locations)

Resources Used for Food Safety Training	Yes #	Yes %
USDA developed materials (e.g., FightBAC, etc.)	37	79%
“Serving It Safe” manual and assistant handouts	31	66%
NFSMI developed materials	29	62%
Videos	25	53%
ServSafe® materials	24	51%
Health department materials	22	47%
Government websites	18	38%
Other (see data sheet for names and titles)	12	26%
Computer software	5	11%

The majority of responding states used USDA developed materials (e.g., FightBAC, etc.), “Serving It Safe” manual and assistant handouts, NFSMI developed materials, Videos, and/or ServSafe® materials, with the latter two being reported by slightly more than 50% of the states.

Item 9: Approximately how much time per year is provided for food safety training for each area of the Child Nutrition Program sponsored by your state? (number of hours/year)

	School Districts	Residential Child Care Institutions	Child Care Centers	Child Care Homes	Adult Care Facilities	Non-School Food Authority Summer Food Programs
Less than one day	5 11%	10 21%	19 40%	19 40%	14 30%	21 45%
One to three days	16 34%	14 30%	8 17%	4 9%	5 11%	6 13%
Four to seven days	11 23%	6 13%	2 4%	1 2%	2 4%	1 2%
More than seven days	6 13%	4 9%	1 2%	1 2%	1 2%	0 0%
Other (see data sheet for descriptions)	3 6%	2 4%	2 4%	2 4%	2 4%	2 4%
No response or N/A	3 6%	6 13%	12 26%	15 32%	17 36%	9 19%

School districts on average received more food safety training time per year than did other CNP areas. Whereas in most states, school districts commonly received one to seven days of training, other CNP areas commonly received less than one day of training, with the exception of residential child care institutions, which received one to three days of training in 30% of the responding states. It should be noted that for most areas in which less than one day of training was the most common response, there was also a relatively high "no response" or "N/A" percentage.

Item 10: Please estimate the number and percentage of persons working in your state's Child Nutrition Program who attend training programs in food safety sponsored by state agencies / state personnel each year.

Number (range): 0 - 3600
Did not respond: 10 (21%)

Percentage (range): 0 - 100 %
Did not respond: 13 (28%)

This item appeared to be interpreted differently among the respondents. Some may have interpreted the item as referring only to those persons working in the state office, while others appeared to report statewide numbers. The "no response" rate was relatively high as well, indicating possible confusion about this item or lack of adequate information to respond.

Item 11: Specify the number of times per year each of the following departments/agencies conducts health/sanitation inspections in the listed areas of the Child Nutrition Program. Please write N/A where the question is not applicable.

	School Districts	Residential Child Care Institutions	Child Care Centers	Child Care Homes	Adult Care Facilities
Local health department	1 to 4 per year, once every 3 years	None, 1 to 3 per year to once every 3 years	None, 1 to 4 per year to once every 3 years	None, 1 to 3 per year to once every 3 years	1 to 4 per year to once every 3 years
State CNP Staff	None, once a year to once every 5 years	1 to 3 per year to once every 3 years	None, 1 to 2 per year to once every 3 years	None, 1 to 3 per year to once every 10 years	None, once a year to once every 2-3 years
Private contractors	N/A	N/A	N/A	N/a	N/A
National Environmental Health Association	N/A	N/A	N/A	N/A	N/A
Other (see data sheet for descriptions)	1 to 2 per year, if applicable	Once a year to once every 2 years, if applicable	Once a year to once every 4 years, if applicable	1 to 3 times per year to once every 2 years, if applicable	None, once a year to once every 4 years, if applicable
Number of states that did not report that any agency inspects this type of facility	5	13	14	24	19

Within each cell above is the range of responses received, with the exception of the final row, which has the number of states not responding with regard to each Child Nutrition Program area. In most states, food safety inspections are conducted by the local health department at least once a year for most Child Nutrition Program areas. No states reported inspections by private contractors or by the National Environmental Health Association. Respondents noted a range of frequencies with which health/sanitation inspections are conducted by “Other” departments or agencies, though many respondents (13 to 24) did not address inspections by agencies other than the local health department. The following states did not report inspections by any agency: Alabama, Georgia, California, Oklahoma, and Wyoming. A series of data sheets accompanying this report provides additional detail on the frequency of inspections by all agency types listed in within this item by state. Also included on the data sheet are comments from several states providing more detail regarding their inspection procedures.

Item 12: What areas of Food Safety do you feel are most important?

As an open-ended question, this item contained a variety of responses. However, many of the responses used different terminology to discuss the same topic. There were also many topics that overlapped. Following is a list and discussion of the topics, in order of number of responses (from greatest to least) regarding each topic.

The most frequently mentioned area (written in by more than 20 respondents) was Temperature Control, including thawing of frozen foods, cooking temperatures, holding temperatures, serving temperatures, storage temperatures, and the inclusion of time as a factor in temperature control.

The next most popular area was Cross-Contamination. Although it was most often referred to simply as "cross-contamination," several respondents mentioned specific facets of cross-contamination, including bare hand contact of ready-to-eat foods.

Hand washing, a natural companion to the issue of Cross-Contamination, was mentioned by more than 10 respondents. Nine respondents mentioned Personal Hygiene, which includes clean hands. Sanitation and sanitizing were also listed as very important in food safety education. Several respondents mentioned food handling and storage.

HACCP was mentioned by five respondents. This response overlaps many of the areas already mentioned.

A few items were mentioned once. These included: documentation; identification and awareness of food-borne illness; pest control; proper use of gloves; training of student employees; and exclusion/restriction.

Item 13: What resources would be most helpful in educating Child Nutrition personnel in food safety practices?

This was an open-ended question with a variety of responses. The responses fell into two categories: 1) existing resources that are helpful, and 2) desired resources.

The most frequently mentioned existing resource was Serving It Safe. Some suggestions for making this program even better were included. One respondent said, "Expand it, translate it, and multi-media enhance it." Another requested a Serving It Safe Manual as well as videos and true stories for a 6-hour general training. Yet another felt that Serving It Safe could be updated and expanded to include HACCP.

HACCP was another frequently mentioned resource, with suggestions for improvement. One mentioned a 16-hour training for HACCP. Another would like to see "HACCP training programs designed to determine resources and provide implementation tools for HACCP." The respondent said, "I am told by the county Food Services

Directors that limited facilities and staff in most of our schools prevent the implementation of HACCP.”

ServSafe was mentioned three times as a valuable resource, while Fight BAC! was mentioned twice.

The list of desired resources was long. Videos were one of the most frequently mentioned items. Specific ideas included developing 15-minute videos on a variety of topics; a video on safe food transporting; a video for schools to use when training food service substitutes, new employees, and student employees. One respondent would like to see a food safety video for the child care center setting with limited size kitchens and/or storage areas. Yet another suggested a sequel to “Food Safety Is No Mystery” to include HACCP.

“Quick and simple” was also a theme. Several respondents wanted to be able to find simple, easy to read, and concise materials for 10-20 minute training sessions. Still others mentioned posters as helpful and as popular with food service personnel. One-page handouts on various topics were mentioned a few times. One person suggested “magnets for refrigerators on storage temperatures.” Pamphlets, workbooks, and take-home materials were also mentioned. Several respondents suggested providing bilingual materials for non-English speaking employees.

Use of technology in training was mentioned many times. More frequent satellite seminars by NFSMI; use of interactive, self directed CD-ROM training; PowerPoint presentations; distance learning programs; self-study via the Internet; and multi-media presentations were all included. Another technology suggestion was to create and distribute an electronic food safety newsletter.

Yet another technology-related request was: “An annual one to three hour lesson plan on CD-ROM with updates in Food Safety area, including handouts, etc. for quick copy and distribution – OR – lesson plan sent via e-mail to us so we could forward to directors.”

Two respondents mentioned practical application of principles. One respondent would like to find some training to assist food service staff in preparing packaging information for items like sandwiches that are prepared and packaged on-site.

Material covering all of the important food safety topics geared to small and home-based day cares was another request.

One respondent expressed a need for ideas to encourage employees to embrace food safety principles instead of trying to get around them. Specifically, this individual wrote, “How can I help people ‘buy-in’ to their importance?”

More material designed for use in presenting to large groups was mentioned. Updates and refresher courses were suggested as well.

Another respondent wanted to see the creation of games to use in teaching and reinforcing food safety principles. Yet another requested lesson plans on food safety principles to use in K-12 classrooms.

Some respondents' ideas related to funding for equipment and materials, including "laptops at each site," "assistance in purchasing materials," and "federal (CDC et al.) grants."

Finally, two respondents were emphatic in their opinion that there were plenty of resources and that no new ones were needed. One of those individuals, however, expressed a need for more time to use what they had. A few others stated a need for more time; for example, among respondent comments was the need for "staffing and time for both trainers and those being trained" and "time to monitor and remind staff of practices."

Summary and Conclusions

The Food Safety Survey elicited responses from 47 out of 54 "states" and yielded a broad mix of information pertaining to the delivery of food safety education to Child Nutrition Programs (CNPs) at the state level. Because the survey was submitted to CNP Directors primarily within each state's Department of Education, the results can be presumed to reflect more closely and more completely the knowledge and operating base of that department. This presumption is supported by the higher percentage of responses to item components that relate to school districts than to those related to programs in child and adult care facilities and other settings that might be more closely associated with other state agencies, such as departments of health, or with local agencies. In fact, the relatively high "no response" rate for CNP areas other than school districts indicates a need for caution when generalizing the results of the survey to include all CNP areas.

With regard to training programs, more than half the respondents reported using *Serving It Safe*, *ServSafe*®, and/or HACCP, and many states reported using more than one training program. Only one state, Alabama, did not indicate use of a training program at this time. The most common sources of food safety information reported by respondents (more than 70%) were the Food and Nutrition Service (USDA), American School Food Service Association (ASFSA), and National Food Service Management Institute (NFSMI). The most commonly used information distribution methods selected by survey respondents from a list of seven methods were mail, state agency sponsored workshops, and state monitoring staff visits.

For all Child Nutrition Program areas, the State Department of Education was the most commonly indicated provider of food safety information/education. For all areas except Adult Care Facilities, the State Department of Education was also the most commonly indicated primary provider of such information. For Adult Care Facilities, the most common primary provider was either the State Department of Health or local

departments of health/sanitation. However, across all areas, 40% to 57% of the 47 respondents did not indicate a primary provider of food safety information/education.

Foodservice Directors, Managers, and Assistants/Employees or Staff were indicated as the main target audiences for training in School Districts, Residential Child Care Institutions, and Non-School District Summer Food Sponsors of most responding states. For Child Care Centers, Directors and Staff were the major target audiences.

The most widely adopted food safety education goals were those of teaching appropriate methods of ensuring sanitary food handling and teaching appropriate food handling techniques (storing, washing, serving, disposing, etc.). These goals were reported by 96% and 94% of the respondents respectively. However, almost all responding states had goals related to basic food safety issues.

The majority of responding states included *ServSafe*, HACCP, *Serving It Safe*, Food Code, and/or Local Health Requirements in the food safety education content for their school districts. In addition, the majority of responding states used USDA developed materials (e.g., *FightBAC*, etc.), “*Serving It Safe*” manual and assistant handouts, NFSMI developed materials, Videos, and/or *ServSafe*® materials.

School districts on average received more food safety training time per year than did other CNP areas. Whereas in most states, school districts commonly received one to seven days of training, other CNP areas commonly received less than one day of training, with the exception of residential child care institutions, which received one to three days of training in 30% of the responding states.

Survey respondents in most states reported that food safety inspections were conducted by the local health department at least once a year for all Child Nutrition Program areas. Less information was provided with regard to other agencies that may conduct inspections.

With regard to areas of food safety considered most important, the most frequently mentioned area was temperature control. The next most popular area was cross-contamination, followed by hand washing and personal hygiene. Sanitation and sanitizing were also listed as very important in food safety education. Food handling and storage received several mentions each, and HACCP was mentioned by five respondents.

With regard to helpful resources, several existing resources were listed, including *Serving It Safe*, HACCP, *ServSafe*®, and *FightBAC*. Respondents gave suggestions for improving *Serving It Safe* and HACCP to make them more widely applicable and more easily implemented. Among the list of desired resources were videos, brief and simple printed materials, and more technology-based training, including more frequent satellite seminars by NFSMI; use of interactive, self directed CD-ROM training; PowerPoint presentations; distance learning programs; self-study via the Internet; multi-media presentations; and an electronic food safety newsletter.

The results of this survey reveal both commonalities and unique features of food safety education delivery among the states' Child Nutrition Programs. The results also suggest that state CNP Directors may be more knowledgeable about school-based operations and less familiar with CNP areas that are not related to school districts. Personnel at the national level may use the information from this survey to determine which components of food safety education need to be strengthened and/or expanded for use by more states.

This project has been funded at least in part with Federal funds from the U.S. Department of Agriculture, Food and Nutrition Service through a grant agreement with The University of Mississippi. The contents of this publication do not necessarily reflect the views or policies of the U.S. Department of Agriculture, nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government.

The University of Mississippi complies with all applicable laws regarding affirmative action and equal opportunity in all its activities and programs and does not discriminate against anyone protected by law because of age, color, disability, national origin, race, religion, sex, or status as a veteran or disabled veteran.