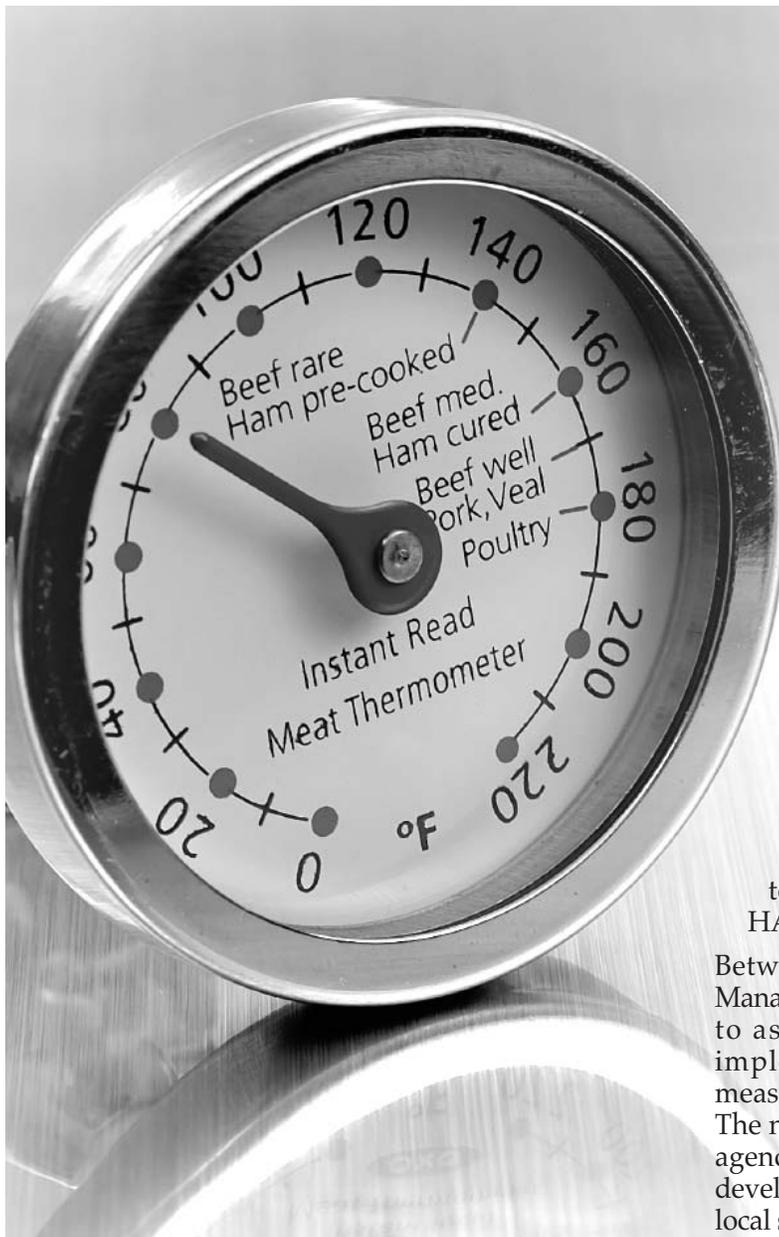




Insight

A Publication for Child Nutrition Professionals from the National Food Service Management Institute — Summer 2006

HACCP Initiatives at NFSMI: Building a Nationwide Network Dedicated to School Food Safety



OVERVIEW

Since 1999, The National Food Service Management Institute (NFSMI) has taken a leading role in studying Hazard Analysis and Critical Control Points (HACCP) implementation within schools, and utilized those findings to help schools overcome barriers associated with the use of HACCP. One of the primary barriers found was the lack of education and training opportunities and resources for foodservice managers and personnel. To help these schools succeed in their HACCP implementation, NFSMI made available many educational and training resources consistent with the

United States Department of Agriculture (USDA) guidelines, the easiest source being downloadable electronic documents from the www.nfsmi.org Web site. However, the need for direct instruction was recognized. As a result, NFSMI established a unique and personable way to facilitate HACCP education to schools - by creating a national network of HACCP trainers.

Between 1999 and 2005, the National Food Service Management Institute developed an instructor network to assist school foodservice professionals in implementing HACCP as a primary food safety measure to assure the service of safe food in schools. The network, developed in coordination with State agencies, complemented other food safety resources developed by NFSMI to provide grassroots training for local school foodservice staff.

WHAT IS HACCP?

Hazard Analysis and Critical Control Points (HACCP) is a preventative system to reduce the risk of food-borne illness through appropriate food handling, monitoring, and record keeping. HACCP differs from sanitation programs and personal hygiene programs in its focus, although, all play an important role in providing safe food. Sanitation programs focus on equipment and facilities. Personal hygiene programs focus on employees. HACCP focuses on food to prevent food safety problems. The acronym HACCP identifies two main concepts: Hazard Analysis and Critical Control Points. The typical HACCP plan is developed around seven principles:

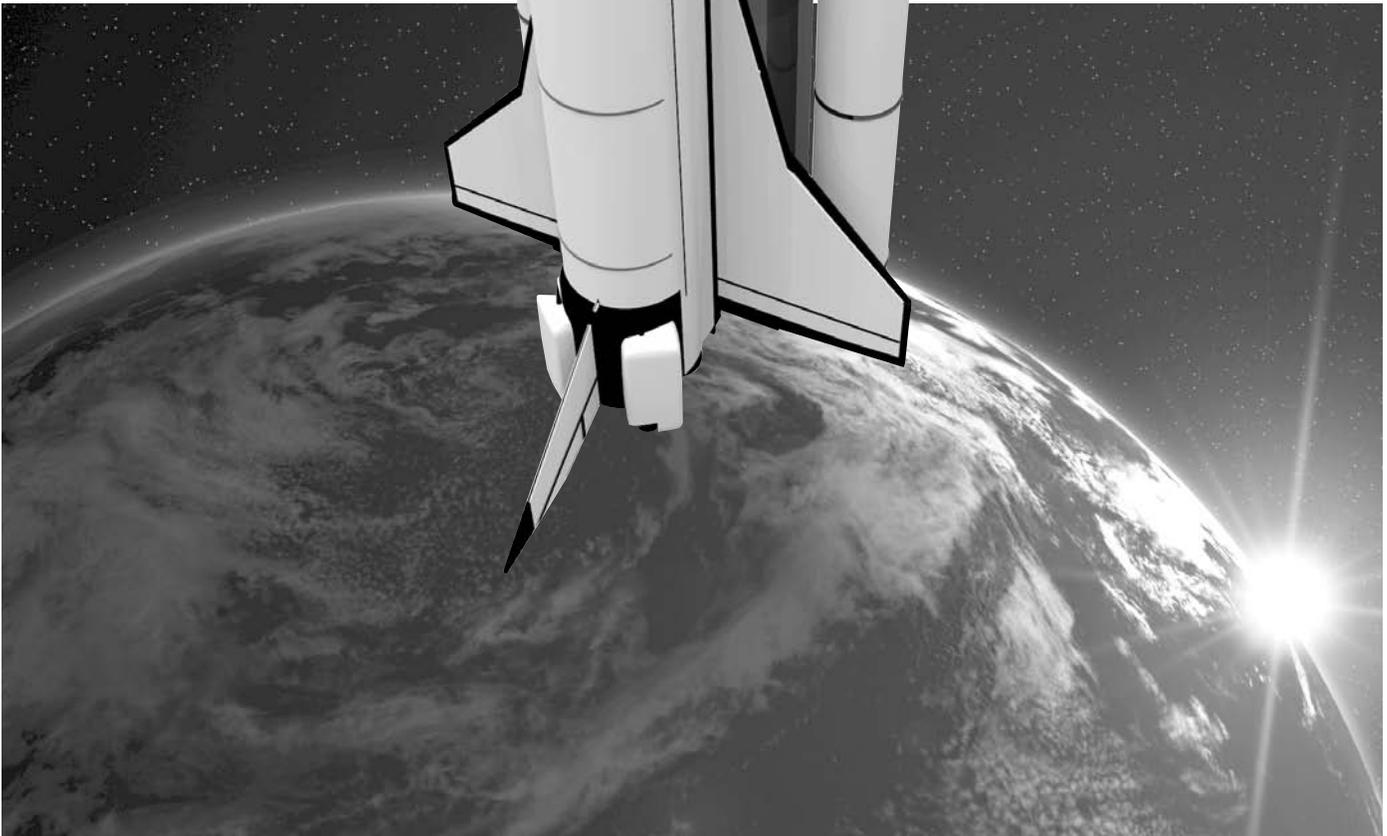
1. Identify Hazards
2. Identify Critical Control Points (CCP)
3. Establish Critical Limits
4. Establish Monitoring Procedures
5. Establish Corrective Actions
6. Establish Verification Procedures
7. Establish Record-Keeping Procedures

THE HISTORY OF HACCP

HACCP began in the early 1960s at the National Aeronautics and Space Administration (NASA). A system was needed to make sure that astronauts did not become ill from their food while they were in space. The Pillsbury Company developed the HACCP system with cooperation from NASA, Natick Laboratories of the U.S. Army, and the U.S. Air Force Space Laboratory Project Group (U.S. Department of Agriculture, 2002).

HACCP was mandated for meat and poultry processing and for seafood processing based on USDA/FDA regulations in the 1990s. Commercial foodservice operations have implemented HACCP, as well as healthcare and school foodservice operations.

Schools' interest in HACCP was spurred in 2004 when Section 111 of the Child Nutrition and WIC Reauthorization Act of 2004 (Public Law 108-265) amended section 9(h) of the Richard B. Russell National School Lunch Act. The Reauthorization Act requires that school food authorities comply with a food safety program based on HACCP principles by July 1, 2005.



Legislation

“Section 111 of the Child Nutrition and WIC Reauthorization Act of 2004 (Public Law 108-265) amended section 9(h) of the Richard B. Russell National School Lunch Act by requiring school food authorities (SFAs) to implement a food safety program. The Reauthorization Act requires that, during the preparation and service of meals, the SFA comply with a HACCP system established by the Secretary of Agriculture. The law requires compliance with this requirement by July 1, 2005.” From Hazard Analysis and Critical Control Point (HACCP) in Schools Reauthorization 2004: Implementation Memo – SP 11

HACCP RELATED ACTIVITIES BY NFSMI

Instructor Network

Under the guidance of the USDA/FDA, NFSMI designed a program to educate state level instructors in the use of HACCP resources. Later, these instructors would be able to conduct training in their home states. The result was a national network of 388 trainers.

NFSMI contracted with Kansas State University (KSU) to develop training materials suited for three target audiences: the instructor, the foodservice director, and the employee. Content of the manuals and the training sessions was determined by KSU with approval by NFSMI and USDA/FNS. NFSMI and USDA/FNS staff reviewed the materials during the development stages, and the materials were finalized after receiving feedback from participants during the 2001-2002 instructor training seminars.

Establishing an instructor network was a process with several stages of development. Below is a summary of the steps in the instructor network development:

- Provide state directors of child nutrition programs the opportunity to submit names of potential instructors,
- Conduct orientation sessions for HACCP trainers,
- Provide state directors the opportunity to request participant manuals and funds to support local training by the instructors who had attended the Orientation for HACCP Trainers at NFSMI, and
- Reimburse state agencies for expenses incurred during delivery of HACCP training sessions in their state.

In February 2001, the first Orientation for HACCP Trainers was held at NFSMI at The University of Mississippi. Initial plans were to hold four instructor orientation sessions, but demand was so great that

NFSMI held 11 sessions from 2001-2004. A total of 388 instructors representing 48 different states participated in the orientation. This high level of participation was evidence of the commitment and importance of food safety to child nutrition programs.

HACCP Instructor Orientation

- 11 Sessions
- 388 Participants
- 48 States Represented

Twenty-three states took advantage of the opportunity to request support for their local HACCP training. Training was provided to over 3,000 local foodservice personnel.

Materials and Resources Available Through NFSMI

NFSMI, in conjunction with Kansas State University, developed HACCP training materials and resources, which were the foundation for NFSMI's instructor network training efforts. These materials and resources included an instructor manual, participant manual, instructional video, and a CD-ROM containing PowerPoint presentations as well as all print materials. Also provided were the USDA *Quantity Recipes for School Food Service*, which were adapted to include critical control points (CCP). Participants in the HACCP orientation were provided a model training session and access to resources that prepared them to replicate HACCP training at the local level.

HACCP Related Projects at NFSMI

- HACCP Training Materials for Instructors (manual, video, presentations)
- HACCP Participant Materials for Food Service Directors and Employees (manual for each)
- HACCP Instructor Network
- USDA Quantity Recipes for School Food Service with CCP added
- USDA Child Care Recipes for Health and Fun with CCP added
- Standard Operating Procedures (www.nfsmi.org)

Instructor Materials*

HACCP training materials for instructors included a comprehensive HACCP manual, participant manual, instructional video, and a CD-ROM containing PowerPoint presentations as well as all print materials. Chapter topics covered included the following:

- What is HACCP?
- Foodborne Illness and Food Safety Hazards
- Preliminary Steps to Developing a HACCP Plan
- Analyze Hazards
- Identify Critical Control Points
- Establish Critical Limits

- Establish Monitoring Procedures
- Establish Corrective Actions
- Establish Verification Procedures
- Establish Record-Keeping Procedures.

Real-life applications of HACCP principles were shown in the 16-minute video. The slides and instructor notes were provided to potential instructors on a CD-ROM.

Participant Materials*

Corresponding manuals were developed for two levels of participants - Child Nutrition directors and foodservice employees. Content of the director's participant manual replicated the content of the instructor manual without answers to tests and activities. The employee manual provided simplified content and was designed for future use as a resource or reference.

HACCP Resources at NFSMI.org

Listed below are many of the HACCP-based resources NFSMI has developed in conjunction with the USDA and FDA. These documents on Standard Operating Procedures (SOPs), record keeping, and HACCP program development are available for download from the NFSMI Web site, www.nfsmi.org.

HACCP-Based Standard Operating Procedures (SOPs)

- Cleaning and Sanitizing Food Contact Surfaces
- Controlling Time and Temperature During Preparation
- Date Marking Ready-to-Eat, Potentially Hazardous Foods
- Preventing Cross-Contamination During Storage and Preparation
- Transporting Food to Remote Sites (Satellite Kitchens)

HACCP-Based Standard Operating Procedures - Record Keeping

- Cooking and Reheating Temperature Log
- Damaged or Discarded Product Log
- Food Contact Surfaces Cleaning and Sanitizing Log
- Refrigeration Log
- Thermometer Calibration Log

Developing a HACCP-Based Food Safety Program - Worksheets

- Components of a Comprehensive Food Safety Program
- Complex Food Process
- Employee Food Safety Training Record
- Summary Table for Monitoring and Verifying HACCP-Based SOP Records
- Summary of Corrective Actions for HACCP-Based SOPs

USDA Recipes

Quantity Recipes for School Food Service and Child Care Recipes for Health and Fun were modified to include Critical Control Points (CCP). Time and temperature indicators specific to individual recipes provide a mechanism for ensuring food is safe. For example, the CCP in the Spaghetti and Meat Sauce recipe is, "Heat to 155° F or higher for at least 15 seconds." The CCP for hot holding of food reads, "Hold for hot service at 135° F or higher." The recipes are available from NFSMI's Web site at www.nfsmi.org.

*Materials are no longer used by NFSMI in training and have been replaced with *Developing a School Food Safety Program Based on HACCP Principles*, which is consistent with USDA Guidance and the 2004 reauthorization of the Richard B. Russell National School Lunch Act and the Child Nutrition Act of 1966.

A SELF-EVALUATION OF THE HACCP TRAINING NETWORK

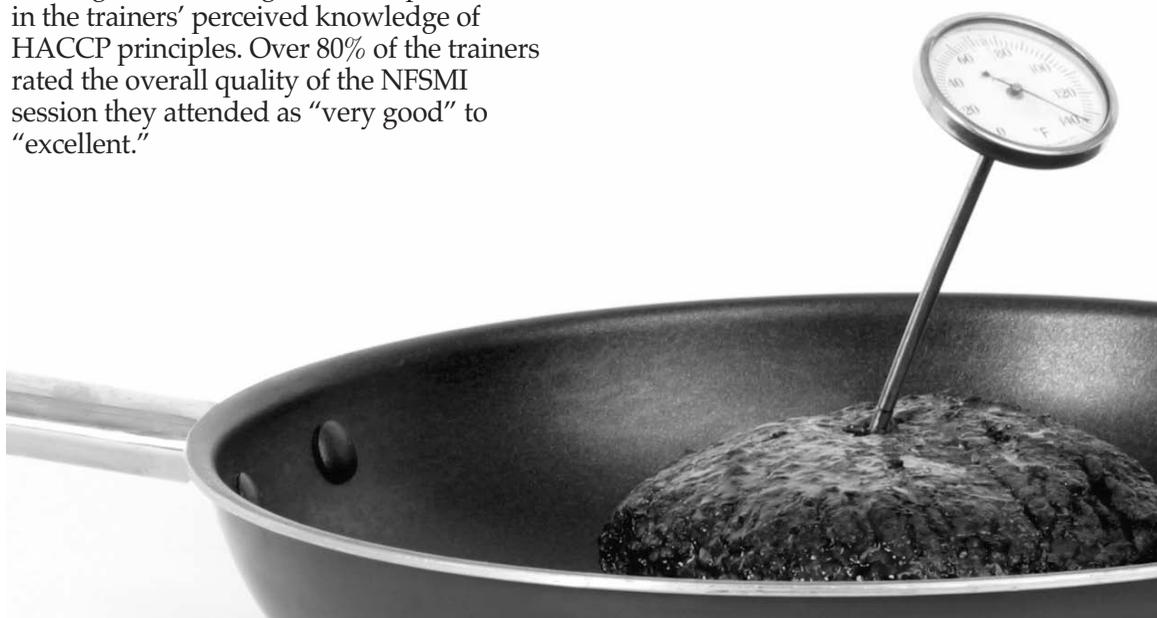
NFSMI embarked on a study to assess the effectiveness of the instructor network. Survey participants were asked to assess and evaluate the orientation for HACCP NFSMI provided (NFSMI, 2006). Over half of the participants who responded to the survey (18% response rate) indicated that they felt well prepared to train on HACCP and over three-fourths reported that they had conducted at least one HACCP training session. When knowledge of HACCP principles was compared pre- and post-training, there was significant improvement in the trainers' perceived knowledge of HACCP principles. Over 80% of the trainers rated the overall quality of the NFSMI session they attended as "very good" to "excellent."

HACCP IMPLEMENTATION IN K-12 SCHOOLS - AN NFSMI STUDY

NFSMI conducted a study to determine the extent of HACCP implementation in school foodservice (NFSMI, 2005). The overwhelming majority of respondents reported having standard or formal food safety procedures in their schools. More than half of the respondents reported that their schools had begun implementing HACCP. The lack of resources and the burden of required documentation were the most commonly reported barriers to HACCP implementation. The research report, *HACCP Implementation in K-12 Schools*, is available at www.nfsmi.org.

TRANSITIONS: 2006 AND BEYOND

As the foodservice industry changes with respect to HACCP, NFSMI has responded. The "process approach" to HACCP has been incorporated into the resources and training that NFSMI provides. Training resources have been developed to assist schools in implementation of the food safety program. Additional support for the overall food safety system includes development of standard operating procedures (SOPs), emergency readiness, food defense, and food biosecurity resources. Resources developed will be available through NFSMI's Web site, www.nfsmi.org, as deemed appropriate. NFSMI will continue to provide food safety training to assist foodservice professionals in meeting the ever changing need.



For More Information

Child Nutrition and WIC Reauthorization Act of 2004, 42 U.S.C. § 1751 (2004).

National Food Service Management Institute. (2006). *Evaluation of NFSMI HACCP training network*. University, MS: Author.

National Food Service Management Institute. (2005). *HACCP implementation in K-12 schools*. Retrieved May 1, 2006, from http://www.nfsmi.org/Information/haccp_implementation.pdf.

U.S. Department of Agriculture, Food and Nutrition Service, & National Food Service Management Institute. (2002). *HACCP for child nutrition programs: Building on the basics*. University, MS: Author.

U.S. Department of Agriculture, Food and Nutrition Service. (2005). *Hazard Analysis and Critical Control Point (HACCP) in Schools Reauthorization 2004: Implementation Memo – SP11*. Retrieved May 2, 2006 from http://www.fns.usda.gov/cnd/Governance/Reauthorization_Policy_04/Reauthorization_04/2005-01-10.pdf.

U.S. Food and Drug Administration, Center for Food Safety and Applied Nutrition. (2005). *Managing food safety: A manual for the voluntary use of HACCP principles for operators of food service and retail establishments*. Retrieved September 6, 2005, from <http://www.cfsan.fda.gov/~dms/hret2toc.html>



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Information about this and other topics may be obtained by contacting the

NATIONAL FOOD SERVICE MANAGEMENT INSTITUTE

The University of Mississippi

Telephone: 800-321-3054

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