

# The Food Safety Educator

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## Educational Program Builds on Success, Breaks New Ground

The Food Safety and Inspection Service (FSIS) is breaking new ground applying commercial marketing techniques to increase the impact of food safety education programs.

According to Susan Conley, director of food safety education for FSIS, “social marketing has been the foundation of our campaign to promote the use of food thermometers. Today, we’re taking that work to another level by utilizing geo-demographic databases and modeling programs to fine-tune our target audience and educational messages.”

In the social sector, most audience segmentation has traditionally focused on elements such as race or gender. FSIS is utilizing a “psychographic” approach used by commercial marketers that identifies audiences based on elements such as “lifestyles and values,” as well as geographic location. The result? Marketers—and educators—can pinpoint the profile and location of consumers most open to their message.

Conley reported on the agency’s work at the 12th annual conference on Social Marketing in Public Health in June 2002.

In a general session, conference co-chair Dr. Carol Bryant pointed to the FSIS initiative, calling the modeling program “one of the most sophisticated audience segmentation programs in the country. With tools like these, we can define sub-segments of our population and target messages more effectively than ever before.”

This program, Conley says “is the latest in our efforts to be innovative and aggressive in finding the most effective ways of communicating, educating, and actually *changing* behaviors.”



*“...just because it’s a tough sell doesn’t mean it’s a no sell.”*

In a breakout session at the conference, Conley explained the history of the campaign—how social marketing concepts were applied in early phases and where the campaign is headed today.

### Tackling the Tough Sell:

FSIS first began to explore social marketing applications when the agency began designing the campaign to increase consumer use of food thermometers in 1998.

As Conley explained to conference attendees, “We asked consumers if they would use a food thermometer. And most said to us in no uncertain terms: ‘no way.’”

“But as one social marketing expert said to us at the time—just because it’s a tough sell doesn’t mean it’s a no sell. You just need to figure out how to get the right message to the right people at the right time. That’s where social marketing comes in.”

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## The Background:

There is no question, encouraging consumer use of food thermometers is a challenging task. But it is also a behavior change that can have significant impact in terms of reducing illness, especially among children.

While most consumers tend to believe they can just “tell” when their food is done, science says “not so fast.”

Research has shown that color of meat is not a reliable indicator that it is “done.” One out of 4 hamburgers turns brown before it reaches a safe temperature.

Is that significant? Hamburgers can be a leading cause of illness from a deadly bacteria called *E. coli* O157:H7. Children can be particularly susceptible to this pathogen.

Determined to tackle this problem, the FSIS food safety education staff pulled together a team to strategize a new approach for reaching consumers.

To do this, social marketing concepts were used at every stage in the development of this campaign. “At some points we applied the ideas ourselves in more informal ways by using focus groups. At other points we contracted out with professionals to get their input and insight.

“At every step of the way, however, we learned valuable lessons about listening to our consumers and changing and shaping our messages based on what they told us,” Conley explained during her presentation.

## Listening:

In 1998, existing survey data showed that less than 50 percent of American cooks owned food thermometers. They used them primarily to check large cuts of meat, like holiday turkeys. Only 3 percent reported that they used food thermometers to check small items like hamburgers.

But FSIS decided to go to the source: starting in 1998, 24 focus group sessions were conducted throughout the country gathering insights and opinions from more than 200 people. Each focus group was selected to represent a demographic segment, with groups selected by age and educational background. The sessions provided a rich portrait of potential audiences and generalized conclusions.

Focus group research confirmed that:

- consumers use color of meat and “intuition” to test doneness,
- knowledge and use of thermometers was limited, and
- enthusiasm for using a thermometer was low.

Overall, consumers felt they had been cooking for years without ill effects and just didn’t need to bother with “more hassle.” “But there *was* a glimmer of hope,” Conley said. “Two groups of people indicated that they might change their behavior.

“We found that parents of young children were most likely to change behavior—but for their children only.

“We also found a segment of cooks interested in quality food preparation—and not overcooking,” Conley reported.

As a result of the listening sessions, FSIS decided that the first phase of the campaign would target information to the general public in order to raise awareness—with sub-set messages stressing benefits for parents and quality cooks.

## Applying the Four “Ps”

As Conley explained to the conference attendees, with the audience in mind, the campaign planners focused on the next phase of social marketing, the four “Ps”: product, price, place, and promotion.

### Product:

In this case, the product is a behavior—use a food thermometer with everyday meals.

### Price:

The price was well established—the hassle factor and actual cost of purchasing a thermometer. What to offer in “exchange?” Parents could ensure the well-being of their children. Quality cooks could trade-off the hassle for the certainty of a quality product.

### Place:

What places would be most effective for the message? For this campaign there were a number:

- Point of purchase—grocery stores, kitchen supply stores.
- Information sites—cook books, magazines, food sections of the newspaper, TV chefs, Web sites, parents’ magazines.
- Psychological places—at what point in life might a person be most open to the message? For this campaign, the answer was parents of young children and quality cooks.

### Promotion:

The strategists resolved to create materials designed to do a number of things:

- Create awareness among the general population that might not be willing to change, but would contemplate change.
- Target information to people most likely to change (“early adopters”)—parents of young children and quality cooks.
- Partner with industry to promote the message AND influence product development that was more “user-friendly.”

### Creating awareness:

In May 2000, the thermometer education campaign was launched with a national media event, release of an animated public service announcement, creation of a special Web site, and distribution of 50,000 packets to educators and partners across the country.

The educational materials, which had been focus-group tested, introduced the Thermy™ messenger and the

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theme “It’s Safe to Bite When the Temperature is Right.”

“Partnerships were the hinge of this campaign. We partnered with key players throughout the country: grocery stores, thermometer manufacturers, extension educators, public health professionals, even food producers,” according to Conley.

Grocery stores were on board from the start: displays were set up by meat counters, Thermy™ logos were printed on grocery bags, and in-store demonstrations brought it all to life. The message: using food thermometers is easy, guaranteeing quality food and safety for kids.

Thermometer manufacturers were equally enthusiastic. They formed an association and worked with FSIS distributing materials AND changing their thermometers to make them easier to use and technologically appealing.

The results are visible in every housewares aisle in the country. Today’s food thermometers are high tech and easier to use than ever. And the bottom line for manufacturers: thermometer sales have grown by 10 to 20 percent per year.

#### **Listening again/ refining goals:**

“We definitely felt we succeeded in the first phase of our campaign,” Conley said, “and we also knew this was just the beginning.”

Phase two of the campaign is focusing on audience segmentation, honing in on people most likely to change behavior—parents of young children.

In 2001, FSIS contracted for a new series of focus groups comprised entirely of parents of young children.

At the same time, FSIS began working with social marketing experts to learn more about audience segmentation and fine-tuning their social marketing approach. With guidance from the experts, the staff identified a more specific mission: Increase the use of food thermometers by parents of children under age 10 to reduce the

incidence of foodborne illness.

In addition FSIS refined its goals for this audience, including: increase awareness of the need to use food thermometers, increase intention to use food thermometers, increase sales of food thermometers, and increase trial usage of thermometers.

#### **Using new demographic approaches:**

In addition to redefining their mission and goals, the staff also began exploring new social marketing applications regarding audience segmentation.

“Now we are moving into new territory,” Conley said, describing the use of geo-demographic modeling and psychographic profiling. “We thought we knew what audience segmentation was before. But the modeling program has shown us how much more detailed and focused audience segmentation can be.”

Traditional efforts to segment audiences based on broad demographics such as gender and race don’t take advantage of sophisticated demographic modeling programs that have been developed by commercial concerns. These modeling programs allow other factors to be considered, including values and lifestyles: factors which are key in determining who might be receptive to your message.

The geo-demographic modeling program utilized by social marketers for the thermometer campaign takes audience segmentation one step further and identifies localities where like-minded people live. In the words of the old adage: “birds of a feather flock together.”

A geo-demographic database allowed FSIS to narrow its focus from all parents of young children in the country to 28 “neighborhoods” with high concentrations of children under age 10.

Those neighborhood types were then segmented again. Using an allocation matrix, these groups were

assessed to determine which type of neighborhood had people most likely to change behavior and what would be the impact of that behavior change.

There was a clear answer: a type of neighborhood dubbed “The Boomburbs.” These are suburban neighborhoods with working parents. Culturally, the parents are “information seekers” and open to new technologies. Behaviorally, these parents are also more inclined to undercook their food, inadvertently putting their children at risk.

“This group is an ideal target audience—and our traditional education programs may not be reaching them.

“They are open to information, open to change, and we have a message that matters for their children.

“This population also tends to be a trend-setting group—if we can change their behaviors, it will ripple out from them to others,” Conley explains.

#### **What’s next:**

In the coming year, FSIS will conduct focus group testing with “Boomburb” parents as well as observational studies.

“We’ll be identifying barriers to behavior change, and we’ll be finding bridges,” Conley says. Based on that research, FSIS will develop new materials. New distribution mechanisms will also be explored as well as evaluation mechanisms that can be built into the program.

“There are lessons to be learned here for all educators. We’re seeing how social marketing can be used to redefine audiences and refine messages. We’re using state-of-the-art technology, and we are aiming for results: behavior change that will reduce illnesses and save lives,” Conley said. Stay tuned! ●

**All research reports on the thermometer campaign can be accessed through: <http://www.fsis.usda.gov/OA/research/research.htm>**

# Fight BAC!®

Folks all over the country are busy fighting BAC! The following articles are just a sample of what this country's BAC fighters are up to:

## Award-winning Video Features "Smart Kids"

### For Kids K-3

This educational program has all the sizzle of a Saturday morning cartoon show. It has everything it takes to make it a hit with the kids: heroes and villains, humor, rap songs, and Fight BAC!® chants!

The program was produced through a long-distance partnership involving several universities under a grant from the U.S. Department of Agriculture's Cooperative State Research, Education, and Extension Service. They also worked in cooperation with the Partnership for Food Safety Education and federal agencies.

The project's manager was Judy Harrison with the University of Georgia, College of Family and Consumer Sciences. She was the person who assembled a team of experts with the vision and skills to make it all come together.

The result is a program designed for kindergarten through third grade.

*Smart Kids Fight BAC!™* features an award-winning, 15-minute animated video that is guaranteed to grab the kids' attention.

In addition to the video, the program also includes two activity books—one for children in kindergarten/first grade; one for second/third grade—and teachers' guides for both.

And that's not all: there's a fabulously fun picture book for kids called *He's BAC! A Children's Guide to Keeping Food Safe*. The

picture book features the same hero characters and the same messages as the video. It all works together and it's great.

Once you've seen the video, you know the kids will love this program. In the video, Mrs. Terkel's class at Smart Elementary School gets sick after going on a picnic. To the chagrin (and disgusted delight) of their classmates, they get sick right there in school!

The drama class decides to teach the whole school about food safety by putting on a play in four acts. Each act focuses on one of the four key Fight BAC!® messages: clean, separate, cook, and chill.

With that pesky BAC! character surfacing in each act, a hero character comes in to save the day and teach the kids how to Fight BAC!®

As the curtain comes down, the kids in the audience rise up chanting Fight BAC!®

Cooperators in the project include Mississippi State University, North Carolina State University, the U.S. Department of Agriculture's Food Safety and Inspection Service, and the U.S. Food and Drug Administration. ●

Ordering information:

You can purchase complete kits for both kindergarten/ first grade and second/third grade for only \$40. Or, you can buy the programs separately for \$30 a piece. Send check or money order payable to the University of Georgia to:

Family and Consumer Sciences  
Extension  
The University of Georgia  
Attn: Elizabeth Barnes  
206 Hoke Smith Annex  
Athens, GA 30602-4356

Clean



Separate



Cook



Chill



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## Solving “Cases” With the Food Detectives! <http://www.fooddetectives.com>

### For Kids 8-12



Could it *possibly* be...*fun* to learn?

Most kids don't think so. But watching kids navigate through the Internet for hours visiting game-based Web sites, Barbara Chamberlin thought “there's got to be a way to make a Web site kids visit for the fun of it—while also learning.”

Could she take the best of the pizzazz from “hot” Web sites for kids and slip in some education?

Luckily for food safety educators—and kids—Chamberlin decided to take on that challenge. The result? A Web site with skyscraper fun quotient and solid-as-a-rock food safety education.

Chamberlin was perfectly positioned to develop the program. Her background in educational software development with the Cooperative Extension Service had led her to doctoral work at the University of Virginia studying how children learn while “playing” on computers-and developing and testing this Web site.

The project was supported by a grant from the U.S. Department of Agriculture's Cooperative State Research, Education, and Extension Service.

According to Chamberlin, “One of the keys to an effective Web site is interaction. You can have a high-graphic site with videos, but unless it grabs the kid and encourages them to ask questions, the interaction is of little value. The child needs to *interact* with the program, to connect the dots, make the leaps—and *learn!*”

Another reason for the high fun quotient on the new Web site, says Chamberlin, is that the site is designed for “free time learning. Kids aren't required to use it as part of their homework assignments, so it's got to be more fun. It has to be able to compete with TV, the Web, and Play Station.”

As project manager, Chamberlin put together a team that included graphic artists, a programmer, and even a composer/singer. They strategized, they pilot-tested, and they came up with a winner: *The Food Detectives Fight BAC!*<sup>TM</sup>

It's got music videos! It's got mystery! It's got games! You can even design and make your own stickers!

It also has “education.” But it's so carefully blended in with the fun that you barely notice.

For instance, each food detective represents a key safe food handling message:

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*“The child needs to interact with the program, to connect the dots, make the leaps--and learn!”*

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- cooking food to a safe temperature,
- cleaning hands, counter tops, and dishes;
- keeping raw food and meat separate from cooked meat and vegetables; and
- keeping food cold.

By clicking on each of the food detectives, kids learn more.

Then, with the food detectives in tow, kids will Fight BAC!<sup>®</sup> as they work their way through a series of “cases:”

- **The Case of the Kid Who Knew Enough:** Kids get to exercise their creativity and design their own stickers! The topics are key safe food handling reminders. Won't Mom and Dad be impressed when they see a “Chill” sticker on the refrigerator? Perhaps they may even learn a little from their kids.
- **The Case of the Filthy Fingers:** This is an interactive “board” game; kids answer questions along the way about when to wash your hands. How high can you score? (Adults may be found playing these games on the sly.)
- **The Case of Good Food Gone Bad:** By safely handling food while making snacks and meals, kids can prevent foodborne illness. This game of concentration offers hints and a few jokes as well!

(continued next page 6)

- **The Case of the BAC! that Kept Growing:** In this arcade-style game, kids shoot to kill bacteria, reviewing the ways bacteria can be killed or its growth slowed. After all of the other cases have been solved, kids can design and print their own certificates.

**There's also a Web page just for parents.**

When that rainy day comes and everyone's indoors, there are games kids can play on their own AND there are games and experiments parents can direct. For instance:

- **Soapy Solutions:** experiment with different handwashing strategies to learn the most effective way to kill bacteria.

- **Be a Good Egg:** Cook eggs at different lengths of time to investigate the effect heat has on eggs.

There are also suggestions for making posters and bookmarks.

According to Chamberlin, while the final evaluation is still underway, initial evidence shows kids are learning and enjoy the site so much they would recommend it to their peers.

"We don't have the budget to advertise this site on TV or on the back of cereal boxes, so we are really hoping educators can help promote the Web site.

"It really shows the educational potential of interactive Web sites," Chamberlin said.

And coming soon: *The Food Detectives Fight BAC!*<sup>TM</sup> in Spanish! ●



## **You've Got IMPACT!**

You know in your heart that fabulous programs like these make a difference. How could they not?

But now you can *measure* that difference.

With a click of the computer mouse and the soft clatter of a few keyboard strokes, you can capture INSTANT feedback on your education programs.

That's because the Partnership for Food Safety Education (sponsors of the Fight BAC!<sup>®</sup> program) now has a survey instrument available to you online. And as a bonus, you'll also find a data entry tool. Analyzing the effectiveness of your food safety education program has never been easier.

### **The survey instrument:**

The survey instrument features 23 targeted questions

designed to let you assess the knowledge and skills of people participating in your program before and after training. The questions go to the heart of safe food handling by assessing knowledge and behavior concerning the four key Fight BAC!<sup>®</sup> messages: clean, separate, cook, and chill.

The project was conceived by the Food Safety and Inspection Service education staff. It was developed under a contract with the nationally recognized firm, Research Triangle Institute (RTI). All of the questions on the survey instrument were vetted with the help of Cooperative Extension educators and tested with focus groups by RTI.

And a data entry tool:

Okay, you've administered the survey, but how do you quantify

the results? In the old days, we set up our own spread sheets, pulled out the calculator and went to work.

Today, its easy.

If you have Microsoft Excel 97 (Version 8.0 or higher) loaded on your computer, you are all set. Download our survey tool and you'll be able to input your data and the survey tool will analyze all the findings for you!

The data entry tool will instantly figure percentages for each question from the survey. For example, you'll instantly know the percentage of people surveyed who used a food thermometer to check grilled hamburgers!

Are you ready?

Go to: <http://www.fightbac.org> ●

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## USDA Under Secretaries Team Up for Teleconference to Schools

Two U.S. Department of Agriculture (USDA) Under Secretaries recently teamed up in a live teleconference designed to encourage food service personnel to anticipate and plan for food recalls.

Under Secretary for Food Safety Dr. Elsa Murano joined Under Secretary for Food, Nutrition, and Consumer Services Eric Bost for the August 2002 teleconference sponsored by the National Food Service Management Institute. The interactive teleconference was also available by Web cast.

The teleconference was introduced by Bost and Murano, who commended food service employees for their dedication and explained how the two agencies are working together to ensure food safety in schools.

"We wanted to make sure that you understand that this is an issue that affects both of our agencies and all our customers," Bost said, "and the only way to find solutions and practical procedures is by working as a team."

Bost noted that each school day, more than 27 million lunches and 7½ million breakfasts are being served in more than 98,000 schools across the country."

The teleconference was designed to encourage schools to develop appropriate action plans to remove potentially hazardous commodity food products from schools.

To assist schools in developing those plans, Bost announced the release of a new publication titled *Responding to a Food Recall* prepared by the National Food Service Management Institute (NFSMI).

According to project coordinator Theresa Stretch from NFSMI, in addition to the publication, resources include a leader guide, educational brochures, and a poster.

These materials are being distributed to approximately 76,000 schools across the country. They are also

accessible through the Web: <http://www.nfsmi.org/>

Under Secretary Murano emphasized the on-going efforts to ensure the safety of food in schools, noting that 7,600 Food Safety and Inspection Service inspectors are working across the country to make sure that industry meets federal safety standards.

In addition, Murano explained that USDA has the authority to hold or recall any product purchased for the National School Lunch Program "that we even suspect might be unsafe."

Murano also pointed to educational campaigns designed to teach safe food handling and cooking techniques generated by the Food Safety and Inspection Service and distributed by the Food and Nutrition Service to schools throughout the country,

In spite of a multitude of safety precautions, however, Murano noted that "it isn't always easy to control bacteria on raw products, and that's why we depend on food service professionals like you to properly handle and prepare the food that is served to our children."

"We depend on you," she concluded, "to help us in our job of providing the healthiest meals possible for our children. Our two agencies...no matter how many regulations we impose, no matter how many inspectors we send into the field, and no matter how many publications we produce, can't do this job without your total support and commitment." ●

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*"We depend on you," she concluded, "to help us in our job of providing the healthiest meals possible for our children." Under Secretary Elsa Murano*

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## International Programs Gain HACCP Insights



Dr. Merle D. Pierson, deputy under secretary for Food Safety with the U.S. Department of Agriculture (USDA), is an internationally recognized expert on the Hazard Analysis and Critical Control Points (HACCP) system, which has transformed the American food industry by identifying and controlling food safety hazards.

Pierson is now overseeing policies and programs for the Food Safety and Inspection Service (FSIS) with special responsibilities for representing U.S. food safety interests in the international community.

Prior to his appointment to USDA in February 2002, Pierson served as professor of food microbiology and safety at Virginia Polytechnic Institute and State University (VPI). He has authored or co-authored more than 100 journal articles and 7 books, and presented numerous workshops on HACCP and food safety.

*Q. Why is it important to the average consumer that FSIS is working with the international community?*

*A. Americans today are consumer more food than ever that is produced internationally--not only fruits and vegetables, but also meat, poultry, and fish.*

We have stringent requirements for imported meat and poultry. International producers must meet the same high-level food safety standards that we use in this country. But we are also concerned about helping other countries improve the safety of the food they consumer locally.

HACCP is an important tool and can help raise the bar of food safety standards for all countries. HACCP has played a vital role in helping to reduce rates of foodborne illness in the United States, and we want to facilitate its application internationally. To make this goal a reality, we work hand in had with a variety of international organizations, including the Codex Alimentarius Commission, which is sponsored by the World Health Organization and the Food and Agricultural Organization.

Codex promotes international guidelines and standards for food safety and ensures fair trade. It also identifies food safety problems and facilitates scientific exchange to help find solutions.

*Q. HACCP seems like a useful concept for developed countries, but how can developing nations make use of such sophisticated food safety applications?*

*A. HACCP is a concept that is flexible--it can be used for managing food safety by very complex and large producers as well as small producers. FSIS has been able to help both small and large plants adapt HACCP to their needs. It can work the same way for developing countries.*

We are encouraging developing countries to take a more active role in organizations such as Codex. We recognize that our guidance must be relevant to reality.

For instance, in both developed and developing countries, it is essential that fundamental issues such as basic sanitation be properly ad-

ressed. This serves as the foundation on which HACCP for food safety is implemented.

Participation in Codex, and concepts such as HACCP, are important for both developed and developing countries as they seek to be players in the international trade

The benefit for us? Further assurance that countries exporting foods to the United States meet our food safety requirements.

More information on international food safety is available from the U.S. Codex office. Go to: <http://www.fsis.usda.gov/OA/codex/index.htm> ●

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## newsbriefs

### ■ Food Safety Technologies

Beginning this year, the Food Safety and Inspection Service (FSIS) will be putting new emphasis on educating consumers about new technologies, including irradiation, that can improve the safety of foods.

This educational emphasis is directed in part by 2002 Farm Bill legislation which mandates this educational program.

According to Susan Conley, director of food safety education for FSIS, "we have had a long-standing commitment to consumer education and today's technologies offer consumers new choices. We want to help consumers understand those choices. Technologies, like irradiation, have been widely endorsed by world health experts, yet consumers are not necessarily clear on the benefits. Our new educational emphasis on technologies will seek to help consumers make informed decisions." ●

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## ■ Irradiation in Action

Did you know?

- 90,000 metric tons of spices and dried vegetable seasonings were irradiated for commercial purposes in 20 countries in 2000.
- For the past 2 decades, Belgium, France, and the Netherlands have irradiated frozen shrimp, frog legs, and spices.
- Irradiated strawberries stay unspoiled for up to 3 weeks, versus 3 to 5 days for untreated berries.
- In May 2000, 84 supermarkets in the United States offered irradiated food for sale. A year later the number had grown to 2000.

These facts and more can be found in a new publication, *Food Irradiation, a Global Food Safety Tool*, produced by the International Food Information Council Foundation in collaboration with the International Consultative Group on Food Irradiation.

Copies are available on the Web. Go to: <http://www.ific.org/proactive/newsroom/release.vtml?id=20641> ●



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