



# Family and Consumer Sciences Extension

## *-Reducing the Risk of Foodborne Illness 2005*

### **Learning for Life**

The University of Georgia Cooperative Extension

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### ***The Problem***

- An estimated 76 million Americans become ill from foodborne illness each year, resulting in 325,000 hospitalizations and 5,000 deaths (1). The Economic Research Service (ERS) estimates the cost of foodborne illness from five foodborne illnesses alone at \$6.9 billion per year (2).
- According to the USDA Economic Research Service, the estimated costs for a single case of salmonellosis is \$ 2,126, but this increases to \$13,117 for cases involving hospitalization. The economic burden to the U.S. for all foodborne salmonellosis is \$2.9 billion annually. The economic burden of acute listeriosis in the U.S. is estimated at \$2.3 billion. ERS estimates that, each year in the U.S., foodborne *E. coli* O157:H7 disease costs \$659.1 million to society and foodborne *E. coli* non-O157 STEC disease costs \$329.7 million for a combined total of \$988.8 million (2).
- In the latest data available from CDC, Georgia had the highest incidence of salmonellosis of all 10 sites monitored by CDC's FoodNet system (3).
- Infants, young children, the elderly and those with weakened immune systems are most at risk of serious complications. These may include kidney failure, seizures, strokes, heart complications and death.
- In 2005, Georgia did not have state-mandated training and certification of restaurant foodservice personnel, but easily accessible voluntary training at the local level is in demand. Employee turnover rates are very high so the need is continual.
- In an in-home study of consumer food handling practices, only 52% washed hands prior to food preparation, with less than 5% washing as recommended. Only 3% used a thermometer to determine doneness of a hamburger, with only 1% using it correctly. Chicken was undercooked 82% of the time, and other practices indicated a high rate of unsafe behaviors (4).
- Children may not be taught adequate ways to reduce foodborne illness at home, yet these children are the future food handlers in our society.

### ***Research-based Solutions***

- Food handler training programs improve knowledge of the causes of foodborne illness and recommended food handling practices.
- By identifying and controlling critical steps in food preparation, a high percentage of foodborne illness can be prevented.

### ***Extension's Role***

- Provide consistent, accessible food safety and sanitation education for foodservice employees and both youth and adult consumers.
- Provide education in safe food handling and HACCP (Hazard Analysis Critical Control Point) principles for foodservice managers; offer *ServSafe*<sup>®</sup> certification.
- Provide training that fulfills state requirements for employee training in the school nutrition program, personal care homes, child care facilities and other institutional settings.

### ***Extension's Contribution to Solving the Problem***

- More than 19,600 educational contact hours in food handler education were provided to 2,408 foodservice personnel. This includes 9,162 educational contact hours provided to 741 foodservice managers who received the *ServSafe*<sup>®</sup> manager training and 5,939 educational contact hours provided to 736 foodservice workers who received the *ServSafe*<sup>®</sup> employee training.
- Nearly 6,765 educational contact hours of food safety education were provided to 10,597 consumers, families, and youths. Fifty-seven percent of them were at risk or low-income Georgians.

- Nearly 550 educational contact hours in home food preservation were provided to 755 program participants.
- Media was a major strategy for food safety education: 274 exhibits reached over 5,300 observers; 5 radio spots were broadcast to a listening audience of over 66,200 people; 56 newspaper columns went to a circulation of nearly 800,000 readers; web materials reached over 1.7 million users.

## ***Impact on Georgians***

- Of the foodservice employees who participated in the *ServSafe*® food safety education program, 97% improved their knowledge. The participants significantly improved their knowledge in five food safety areas: recognizing hazardous food situations, receiving and storing food safely, preparing and serving food safely, preventing contamination and personal hygiene. The *ServSafe*® Employee Training program provided certificates to 651 foodservice workers in 2005. After training, more than 98% of the participants expressed their preparedness to follow recommended food safety practices such as washing their hands with warm running water and soap for at least 20 seconds before working with foods.
- Additionally, the participants who completed the *ServSafe*® employee food safety program emphasized their preparedness to secure the safety of food. For instance, after training, a participant said, *“I am planning to be more careful in the handling of raw meat. Check areas more closely for proper sanitation practice. Be more aware of the proper handling of all food. Be more aware of how foods may be contaminated.”*
- The *ServSafe*® Manager Training program certified 484 food service managers in 2005. More than 95% of the food service managers who completed the *ServSafe*® training planned to implement recommended food handling practices in their food establishments. For example, 97% of the participants said that they plan to train and monitor employees on proper hand washing procedures; 96% planned to have written standards for personal hygiene; 97% planned to train and monitor employees to recognize food spoilage and unsafe foods; and 98% planned to train and monitor employees on cleaning and sanitizing equipment and dishware. At the end of the training, participants emphasized their preparedness to apply gained knowledge to train others, for example a manager said, *“I plan to teach my staff about the different kinds of bacteria and viruses. Teach them how to correctly wash their hands, correct time and temperature of foods, and how to prevent cross-contamination.”*
- Of the general public who participated in food safety education program, 92% said that it was helpful for them to learn about food safety practices. More than 90% of the participants said that they intend to follow recommended food safety practices. For example, 97% said that they intend to wash their hands with warm running water and soap for at least 20 seconds before working with foods; 91% said that they intend to use a food thermometer to decide whether meat is done when they cook meat, poultry or fish; and 94% said that they intend to thaw food either in the refrigerator, in cold running water, or in the microwave right before cooking.

## ***Economic Impact on Georgians***

- **The total value of *ServSafe*® Manager Certification Training to foodservice establishments in Georgia was approximately \$12.1 million in 2005.**

## ***Sources***

1. Mead, P.S., et al. (1999). Food-Related Illness and Death in the United States. *Emerging Infectious Diseases*, Vol. 5 (5): 607-625.
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3. Centers for Disease Control and Prevention. 2005. Preliminary FoodNet Data on the Incidence of Infection with Pathogens Transmitted Commonly Through Food, 10 Sites, United States, 2004. *Morbidity and Mortality Weekly Report*, Vol. 54 (14): 352-356.
4. Anderson, J.B. 2002. What consumers say they do...What they actually do: A comparison. *Proceedings, Thinking Globally, Working Locally: A Conference on Food Safety Education*. [http://www.fsis.usda.gov/orlando2002/presentations/janderson/janderson\\_text.htm](http://www.fsis.usda.gov/orlando2002/presentations/janderson/janderson_text.htm)

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