



Family and Consumer Sciences Extension

-Reducing the Risk of Foodborne Illness 2003

Putting Knowledge to Work for Georgia Families

The University of Georgia

Cooperative Extension Service

The Problem

- An estimated 76 million Americans become ill from foodborne illness each year, resulting in 325,000 hospitalizations and 5,000 deaths (source:4). The Economic Research Service (ERS) estimates the cost of foodborne illness from five foodborne illnesses alone at \$6.9 billion per year (source:3).
- ERS estimated costs for a single case is \$2126 for salmonellosis, but this increases to \$13,117 for cases involving hospitalization. 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 (3).
- In the latest data available from CDC, Georgia had the highest incidence of salmonellosis of all 9 sites monitored by CDC's FoodNet system (source:2).
- 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.
- Georgia currently does 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 a recent 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 by 82%, and other practices indicated a high rate of unsafe behaviors (1).
- 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 educational programs improve knowledge of the causes of foodborne illness and recommended food handling practices.
- By identifying and controlling critical steps in food preparation at home and in foodservice, 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 implementation of HACCP (Hazard Analysis Critical Control Point) systems for foodservice managers; offer *ServSafe*® 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

- Over 30,300 educational contact hours in food handler education were provided to 7,003 program participants. Almost 19% of the food handler extension programs were delivered to educate commercial and institutional food handlers.
- The *ServSafe*® food safety program provided nearly 4,970 educational contact hours to 1,116 Georgians. Over 54% of them were commercial or institutional food handlers.
- Over 2,500 contact hours of food safety education were provided to 1,976 adult and youth consumers.
- Over 4,980 educational contact hours in home food preservation were provided to 1,405 program participants.
- Media was a major strategy for food safety education; food safety articles in newsletters reached over 728,800 people; radio spots were broadcast to a listening audience of over 2.2 million; newspaper columns went to a circulation of nearly 1.5 million; television programs were targeted to over 438,700; and exhibits reached over 2,500 people.

Impact on Georgians

- Almost 97% of participants said that the food safety training program was helpful to understand food safety concepts.
- Almost 80% of the foodservice managers who participated in the *ServSafe*® manager training program improved their food safety knowledge. The comparison of their pre and post test means indicates that the knowledge improvement was significant. Nearly 83% of the managers were confident in their ability to use the gained knowledge to improve the food safety in their establishments. Each of the trained managers provides foodservice to 740 customers daily on average and makes impact on their health.
- Nearly 95% of the foodservice employees who participated in the *ServSafe*® food safety education program 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.
- Almost 91% of the Georgians who participated in food safety education programs significantly improved their food safety knowledge.
- Participants in food safety extension programs said that they plan to apply improved food safety practices: For instance, 88% of the participants planned to use a thermometer to test the internal temperature of foods when cooking; 94% of the participants planned to follow recommended thawing practices; 97% of the participants planned to improve their hand washing practices; 98% of the participants planned to use separate cutting boards for meat and produce; and 90% of the participants planned to reheat leftovers to a rolling boil and solids to 165⁰F before serving.
- Additionally, the participants who completed the *ServSafe*® food safety program emphasized their preparedness to secure the safety of food. For instance, after training, a participant said, *"I will hold all employees to the standards that I already knew and to the standards that I learned today. They are to follow these safe-food practices 100% of the time without fail."*

Source:

1. 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
2. Centers for Disease Control and Prevention. 2003. Preliminary FoodNet Data on the Incidence of Foodborne Illnesses - Selected Sites, United States, 2002. Morbidity and Mortality Weekly Report, Vol. 52 (15): 340-343.

3. Economic Research Service/U.S. Dept. of Agriculture. 2003. Economics of Foodborne Disease. <http://www.ers.usda.gov/Briefing/FoodborneDisease/>

4. 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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