

Take the Online Expressway to Food Safety

Online courses, other tools changing food safety education

By Carol Berczuk
February/March 2008 issue
Food Quality Magazine
Special Section: Food Service & Retail

The next time you make a quick stop for a hamburger, take the family out for dinner at a nice restaurant, or run into the supermarket for salad greens and a pre-cooked chicken for dinner on a busy day, think for a moment about the food on your table. How safe is it to eat?

It's a question most patrons of restaurants and fast food joints never worry about. They assume their food is quite safe. But professionals working in the retail food industry know constant vigilance is needed. "Most people just trust that the people on the other side of the counter or working in the food industry are doing a good job," says Steven R. Davis of the Retail Food Alliance (RFA; Florence, Ore.). Fortunately, that trust is usually well placed.

The fact that consumers have such faith in the nation's food supply is testimony to the daily vigilance of both the government, which develops food handling standards, and the food industry, which must carry them out. It is an important partnership. On the government's side, the Food and Drug Administration (FDA) is in charge of nearly a million restaurants and food service operations and more than 114,000 supermarkets and grocery stores. It promulgates standards for all foods, with the exception of meat, poultry, and some egg products, which are regulated by the U.S. Department of Agriculture (USDA).

But the daily hands-on safety of our retail food supply ultimately depends upon those who handle and prepare it. Teaching those millions of food handlers how to prepare food safely requires more than a set of government standards. It also calls for a way to teach those standards to a diverse and ever-changing retail food industry workforce.

This task has become even more important as national eating habits have changed. Fewer and fewer meals are cooked at home. Consumers would rather eat out—or bring ready-to-eat food home. Pre-washed salads and pre-cut fruits are big sellers, as are pre-cooked, take-out meals. Half of the nation's food dollars are spent on such convenience and deli foods.

Ensuring Food Safety

Given those facts, ensuring the safety of our food supply is vital. The costs of unsafe food—both medical and economic—can be enormous. An estimated 76 million cases of foodborne illness occur every year in the United States. In 2007, there were 300 cases of illness caused by contaminated peanut butter, which sent 50 people to the hospital. Contaminated spinach caused 206 illnesses, more

than 100 hospitalizations, and three deaths. Most foodborne illnesses are caused by pathogens such as bacteria, viruses, or parasites. Some are caused by toxins or poisons, such as insecticides or pesticides on food. Each instance of foodborne disease underscores how dependent our food supply is upon good hygienic practices.

Food safety can be summed up in its most simple form as “buying safe food, handling it at safe temperatures, and using good personal hygiene,” says Colleen Thompson, MS, RD, a registered dietitian at the University of Connecticut. She is using a USDA grant to develop a nationwide online safety course for food workers based on the standards set out by the FDA and USDA.

The “model standards,” the latest version of which is encompassed in the 2007 Food Code, are meant to provide guidance for food safety in the retail industry. They include everything from rules for proper washing, handling, and disinfecting to regulations for proper temperatures for cooking, holding, storing, and refrigerating various foods. But the FDA and USDA do not directly enforce these standards. The actual enforcement responsibility for food safety in restaurants, fast food establishments, and supermarkets falls to state and local health departments with their own regulatory, inspection, and enforcement powers.

Though the rules vary from state to state—and often in different localities within a state—most jurisdictions require at least one “certified food handler” on the premises of every food establishment at all times; this is a person who has passed a food handling course and can supervise other workers to ensure that the rules are followed. Many jurisdictions have even tighter standards than this minimal one.

Many Delivery Channels

The required certification is available through numerous channels—including local colleges throughout the country, many local health departments, and various commercial outlets. Many of these organizations offer online courses that students can access at home and online testing for certification held in a secured proctored environment. Two of the largest commercial outlets for such courses are ServSafe (Chicago) and Thomson Prometric (Baltimore). Both are widely used and well established.

The National Restaurant Association Educational Foundation’s ServSafe e-learning program offers online courses that it bills as the “anytime, anywhere food safety training option.” Students who complete the courses can then take the company’s proctored online exams, held at various test sites. Accredited by the American National Standards Institute-Conference for Food Protection (ANSI-CFP), the tests can be graded immediately to let students know their scores. According to ServSafe, it has certified more than 2.6 million food safety handlers.

Prometric sells its course materials to more than 200 clients, ranging from independent trainers, colleges, technical schools, and hospitals to restaurant chains and grocery stores. Training is traditional, which means classroom-based, with an instructor. Ed Zepeda, the company's business development manager and team leader for its food safety program, says Prometric will "probably never" take their manual online. "But," he adds, "some of our partners are taking our materials and putting them online for their students."

Most of Prometric's tests are still paper and pencil-based. But over the past 18 months, the company has been "migrating to Internet-based or computer-based testing models," Zepeda says. ANSI-accredited and securely proctored, the tests can be accessible to students anywhere who have a computer and Internet access.

Both of these companies offer well-known, respected courses, but others are trying to devise courses that are even more accessible. Colleen Thompson, MS, RD, and her colleague Ellen Shanley, MBA, RD, of the Department of Nutritional Sciences at the University of Connecticut (Storrs), have received a USDA research grant to develop a new online food safety course that they believe will minimize the difficulties many students have with current courses. "Certification is daunting," Thompson says. "The nation's largest employer is the food service industry, and many who work in it are in lower income and literacy [groups]. It's tough to ask them to do this. We're trying to find a way to get them the information in as simple a way as possible."

Many students who take these courses are foreign-born and not well educated, and they sometimes have trouble with the material's complexity. "We have instances where folks don't pass," Thompson says. "The exam is tough, and language may be a problem." She is also working on a Spanish version of the course for those whose lack of skill with English is a barrier.

Focus on Fundamentals

Thompson hopes to simplify the learning process by breaking the course into two parts. The introductory course will focus on fundamentals. "We are beginning to pilot test it," she says. "We hope that if they take this and are successful, they won't be afraid of the next course." The researchers also want to incorporate interactive video clips and games. "We are working along those lines to make learning more fun and interactive." Students who master both courses will be ready to take a national certification test.

Thompson says technology does not seem to be a barrier for her students; she has found that most of them have computers and Internet access. "These people are fairly computer savvy," she says. "The real stumbling block could be age, not computers." For that, she suggests the possibility of "grandfathering in" older employees, though they would not be eligible for advancement without certification.

Thompson is still busy devising and testing her online course and does not expect to roll it out for another 18 months. But she thinks her two-step option will prepare students for whichever national exam they decide to take upon completion. Thompson firmly believes that online courses are the future. She has compared in-class learning with online learning and has found no difference in the scores of the two groups. "We can track our students online; they can email me with questions at any time." Her verdict on online learning: "If I knew that they passed the national exam, I don't care how they learned it."

Online Food Handler Course

Offering yet another online course for food handlers, the RFA is dedicated to using "science and scientific data to create a uniform food code for the retail foodservice industry" and to "providing online food safety training to prepare students" to take the national test for certification. The RFA's Davis, an executive chef who has taught other food handling certification courses, sees several benefits in online learning:

- Students can work at their own pace;
- A computer is less intimidating than an instructor;
- Online help is readily available;
- Material can be taught in several languages;
- Material can be studied at a student's convenience; and
- Some people don't work well in classroom situations and prefer to learn alone.

What makes a good online course? Davis thinks it must be well written, clear, and simple to understand, and it must be available in languages such as Spanish, Chinese, or Vietnamese, "since many of our food workers speak these languages." Finally, he says, the online course must be written in computer code simple and fast enough for dial-up connections. "Many students live in rural areas where broadband is not available," he says.

He also thinks that online courses may actually help young people learn better. "Today's generation does not learn well the way most baby boomers had to. The video games, video logs, and multimedia tools they are exposed to on a regular basis—you need to have more interesting ways of presenting the information to have it learned quickly and remembered," Davis says.

Davis believes the RFA has accomplished all these objectives with its online food certification course. It is divided into 15 lessons studied at each student's pace. Clear graphics and illustrations help students learn the material. There are quiz questions accompanying each lesson to ensure that important points and concepts are mastered before advancing to the next lesson (See, "A Lesson on Bacterial Growth Curves," p. 47).

The \$100 course is an intensive one, with each lesson requiring about an hour to complete. The review quizzes offer feedback on each lesson. Davis says students are well equipped to take the national certification exam after

completing the RFA course. Some, he adds, have gotten perfect scores.

These courses illustrate the density and complexity of the material that must be mastered for food handler certification. It is made even more difficult, both Davis and Thompson say, by conflicting information in the USDA and FDA standards, some of which is outmoded and not scientifically based.

“They have different time and temperature tables that are using figures from the '50s,” says Davis. “The up-to-date work is not included.” This, he says, causes difficulty and confusion. Teachers must “teach to the test,” but chefs live in the real world—and “a lot of the industry is outside the law”—especially when cooking rare beef.

Thompson agrees: “The exams are very nitpicky. I think they can be frustrating and confusing.” She adds, however, that “in terms of prevention, the big picture, it is correct. Safe temperatures, safe holding, safe receiving, good basic hygiene...the big picture is so important. Keep an eye on that and you can run a top-notch facility.”

Davis says the food industry is asking the government to provide better, less confusing standards, and the government is finally taking note. With clearer guidelines more in agreement with science and actual practice, the food supply should become even safer.

Berczuk is a freelance writer based in New York City. Reach her at cberczuk@msn.com.

http://www.foodquality.com/mag/02012008.03012008/fq_03012008_SS1.html