Did you know that a droplet of raw chicken juice splashed off raw chicken during washing can travel nearly three feet (Everis & Betts, 2008)? If restaurants don’t take care to avoid cross contamination, raw chicken juice can also drip or splash onto other foods during preparation. If it gets onto ready-to-eat foods or food contact surfaces, the consumer can ingest harmful bacteria present in the raw chicken juice and get sick with campylobacteriosis, salmonellosis, or other foodborne illnesses.

In 2011, 72% of raw chicken breasts tested in California were infected with Campylobacter (National Antimicrobial Resistance Monitoring System, 2011). With nearly three-quarters of chicken infected with Campylobacter, the opportunities for cross contamination are numerous. In San Mateo County, the incidence of campylobacteriosis in 2011 was 34.94 per 100,000 persons (California Department of Public Health, 2011), more than twice the national incidence. San Mateo County Environmental Health decided to take action to protect against Campylobacter infections associated with restaurants. Specifically, we plan to reduce the number of infections by providing restaurants with high-quality training manuals that operators can use to train employees on how to handle raw chicken safely. As part of the Centers for Disease Control and Prevention’s Environmental Health Specialists Network (EHS-Net) cooperative agreement, San Mateo County produced a “Campy Training Kit” that includes a training manual, quick reference cards, video, posters, shelving label, and a thermometer (Figure 1). The materials were produced in English, Spanish, and Chinese, the three most prevalent languages spoken in restaurants in San Mateo County.

**Campy Training Kit: Description**

The Raw Chicken Handling Training Manual for Owners and Managers is a three-ring binder aimed at getting managers directly involved in training food workers. It consists of three parts: management, raw chicken handling, and training and self-inspection checklists. The management section instructs managers on how to use the manual and offers tips to teach food workers effectively. The second section provides an overview of the problem with raw chicken and how to properly store, prepare, and cook it. The last section offers three active managerial control tools to ensure appropriate equipment for safe chicken handling is available, employees are trained, and a safe preparation environment is maintained daily with opening and closing checklists.

The quick reference cards offer a smaller abbreviated version of the content of the manual.
Campy Training Kit

Kit contains raw chicken handling training manual, quick reference cards, training video, refrigerator shelving label, and thermometer.

FIGURE 1

Campy Training Kit

FIGURE 2

Bilingual Posters on Safe Chicken Handling (English/Spanish and English/Chinese)

The effectiveness of the Campy Training Kit is being measured by surveys conducted before and after delivery. The surveys include observation of storage, preparation, and cooking of raw chicken in addition to a food handler and manager interview. Seven hundred restaurants in San Mateo County were selected to receive the kits and were placed into one of three study groups: intervention-full, intervention-lite, or control. Presurveys were conducted by San Mateo County environmental health specialists (EHS) in fall 2013. The intervention-lite group received a hand-delivered Campy Training Kit; the intervention-full group also received a hand-delivered kit, as well as an in-person training with an EHS. This training provided an introduction to the kit and taught managers how they could implement the training with food workers. The postsurveys were conducted in early 2014; at that point, the control group received their kits.

The data are currently being analyzed to measure how effective the Campy Training Kit is at improving how raw chicken is handled to avoid cross contamination. We will also determine if any difference occurred in the effectiveness between study groups. Anecdotal evidence suggests the kits were well received by the restaurants, and employees appreciated having access to free thermometers and other training materials.
A final report will be completed by December 2014 and will be posted on San Mateo County Health System’s Web site.

Although all of the material focused on safe handling of raw chicken, the concepts are applicable to other raw proteins. Similarly, the content of this project was focused on the reduction of Campylobacter, but reductions in other foodborne illnesses commonly associated with raw chicken, such as Salmonella and E. coli, are expected. For electronic copies of the training materials, visit http://www.smchealth.org/campy.

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References
