Education and Training to Prevent Problems in Food Protection: Experience in the Nation’s Capital

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ABSTRACT

Public health scientists are increasingly recognizing that the foundation of food sanitation practice in foodservice establishments is, to a large extent, based on the knowledge, attitude and behavior of the foodservice worker. Accordingly, regulatory agencies throughout the United States are renewing their interests in training and certification of foodservice workers. This article outlines the fundamental strategy of the education and training program in the nation's capital.

Training of foodservice personnel is not a new activity for state and local food control agencies. As early as 1938, the Flint, Michigan Department of Public Health started foodservice training classes, and a year later amended the food ordinance to require mandatory attendance at semi-annual instruction seminars. In the same year the Texas State Health Department and the Texas Department of Vocational Education developed training courses incorporating all of the essentials of sanitary foodservice.

At the national level, interest in foodservice training was clearly expressed in the 1943 edition of the Ordinance and Code Regulating Eating and Drinking Establishments, recommended by the United States Public Health Service. The Code urged and encouraged regulatory agencies to institute training for foodservice workers.

Adams (1) suggests that these earlier interests in foodservice training were the result of a change in policy regarding the medical examination of foodservice personnel which occurred in 1937 when Dr. William Best of the New York City Health Department presented a paper on routine physical examinations to the American Public Health Association.

In his very comprehensive paper, Dr. Best questioned the efficacy of routine physical examinations, pointing out that, generally, such examinations were of a cursory nature, they did not reveal conditions that might be conducive to the transmission of diseases through food, they gave no assurance that persons examined would remain free of communicable diseases during the tenure of the certificate and they were not commensurate with the public health benefits obtained.

NEED FOR TRAINING

While some state and municipal health agencies still require “food handlers’ examinations,” it is increasingly recognized that the foundation of food sanitation practice is not inspection and enforcement, but the knowledge, attitude, and behavior of the foodservice worker. At least three reinforcing factors constitute the basis for this conclusion (2).

In the first place foodservice involves personal contact by humans, a contact which in so many instances occurs at a stage in processing after which destruction of pathogens is no longer possible without altering the flavor of the food product. A second difficulty arises from the fact that contamination at the preparation and service levels is, in general, related more to habits and practices of foodservice personnel than to equipment and the physical plant. A third problem is that very often food is not served by professional foodservice personnel, but by volunteers who are working under physical conditions not primarily designed for dispensing food. This is illustrated by the large number of outbreaks of food intoxications and food infections traced to church suppers, picnics and improvised banquets.

Within this context, food scientists and regulatory agencies are concerned about the continuing prevalence of gastroenteritis or gastroenteritis-like illnesses, many of which are traceable to substandard foodservice practices, the increasing gap between changes in the food industry and the resources available to evaluate and control food-associated hazards.

Since there is ample scientific evidence of the need to establish more effective multiple barriers to the transmission of pathogenic organisms through environmental vehicles such as contaminated food, we have renewed our interest in a system—training and certifica-
tion—through which foodservice workers can be informed and motivated to take an active part in preventing food contamination and, at the same time, improve the esthetic aspects of foodservice hygiene and sanitation.

Moreover, efforts have been made by several governmental agencies, educational institutions and technical trade associations to inform consumers, foodservice workers and the food industry about the scientific and epidemiological basis for preventing foodborne illnesses.

An extensive list of short-term, specialized training courses is offered by several agencies. Curricula for training at the college level have also been recommended. Numerous technical and nontechnical articles and manuals have been published, and the National Center for Disease Control has done much to stimulate interest in food protection through publication of surveillance reports.

Seizure of contaminated food products by enforcement agencies has also gained the attention of the food industry and consumers. This action has helped to sensitize and motivate them. There remains, however, much to be done in crystallizing this interest into a comprehensive national training program, thus sustaining the effort on a long-term basis.

PLANNING AND IMPLEMENTATION

Against that broad background, allow me to outline what we in the District of Columbia have attempted to do and what we have learned in an effort to bring about more effective participation of the food industry in protecting consumers from food infection and food intoxication.

First, a responsive legislative body, the District of Columbia City Council, after maximum support and cooperation from the foodservice industry and a full spectrum of consumer groups, amended the D.C. General Food Regulations to require training and certification of foodservice managers. It also required a refresher training course every 3 years following the initial course. The regulations further stipulate that the training program may be provided by the food industry or any other person or group of persons qualified to conduct a training program which is prescribed by the District of Columbia government.

Here one may logically ask why is it necessary to make training and certification mandatory? Hanlon (3) provides a partial answer. Referring to the mass of mandatory requirements in the field of milk and food control, he states:

"Undesirable as this situation undoubtedly is, all will agree that certain types of legal controls are necessary. It is obviously important for a community to exercise some control of those who produce and handle its food and milk supplies. This has repeatedly been upheld by the courts."

Therefore, compulsory regulations, such as mandatory foodservice training and immunization requirements, are often important in protecting community health. They also encourage desirable and long-lasting changes in behavior. This judgment further recognizes that all educational efforts are designed to promote individual dignity and responsibility, as well as community solidarity. Education and training for foodservice workers are designed, on the same basis.

In addition, our experience and that of other state and local governments indicate that voluntary programs have not been successful in attracting a significant number of foodservice workers. The dubious assumption was made that individuals who voluntarily attended training courses would in turn pass this information along to others. But this expectation was not brought to fruition.

Before we could proceed to implement a training program, it was necessary to obtain more information on our target population and to collect certain baseline data required for future evaluation and program revision. This data-gathering phase required a careful analysis of the Washington, D.C. foodservice industry, including a study of in-house environmental management practices, hours of operation, staff size, distribution per work-shift and the characteristics, communication, exposure and behavior of the foodservice workers. All of this information had to be known before we could intelligently plan, implement and evaluate a foodservice training program. Without such knowledge it is extremely difficult to judge the applicability of different training strategies to the target foodservice population.

For example, some adults may effectively respond to the often-used pure lecture strategy. Others may be more motivated by self-instructional materials, single games or exercises, computer-assisted problems or simulations. As a result those who benefit from education services—the target population—should be involved very early in identification of need and in determination of what actions should be undertaken in the training process.

We should emphasize that educational aspects of food protection are too important to be allowed to occur by chance or haphazardly; planned educational intervention should transpire as the result of carefully conceived goals and objectives, realizing the maximal gains received from potential educational situations. Not only should basic hygiene and sanitation facts be the focus of training, but also an understanding of human motivation and behavior, as well as information concerning the cultural background of the foodservice worker, must all be incorporated in this process for successful communication.

While much careful planning was needed to determine the technical points to be emphasized in our foodservice training program, the more difficult problems related to (a) devising acceptable effective means for educating audiences having diverse backgrounds and interests, and (b) generating a desire to use the information on a day-to-day basis. With the necessary background
information, we assembled the applicable subject-matter and designed a minimum course which could be offered by qualified organizations.

The initial training courses were conducted by an accredited academic institution. Later, the foodservice industry and several other accredited institutions implemented training programs. To date some 700 separate classes have been conducted as part of their continuing education services.

For the convenience of the trainees, classes are held at several readily accessible locations and at different time periods, ranging from early morning to late evening. Obviously all foodservice workers cannot attend the same course but generally there is a lull in business between meals when some workers can be relieved to attend classes.

Using our role as a catalyst in solving food protection problems and our knowledge of community resources, we felt uniquely able to give impetus to the foodservice industry, to academic institutions and others in implementing appropriate, acceptable and effective training programs. We assist in registration, maintain records of attendance, monitor examinations, award certificates of recognition to those successfully completing the course, publicize the courses to arouse interest and encourage participation by the foodservice workers, as well as create a public awareness of the food protection program. These activities have been of real value to the process of the program and we have utilized them to the fullest extent.

Involvement of non-governmental forces in the program was based on the premise that training and education should be left to those agencies and institutions that are most suitable to do the job. It is also consistent with the general view that non-governmental institutions should be used to the maximum extent to achieve governmentally determined objectives.

As a consequence, rather than attempt to provide training, we concentrate upon our important roles as community health analysts, counselors and catalysts, to insure involvement of consumer groups in planning, implementation and evaluation.

In addition to the classroom instruction, provisions are made for “self-teaching” of individual employees on a schedule compatible with their other responsibilities. This programmed instruction is particularly useful where large numbers of workers need training in specific skills and procedures such as are required for sanitary preparation, service and holding of food.

Development of the instructional material requires great skill and much effort, but once done, the “self-teaching” course can be given with minimal supervision. Our thrust from the outset was not to teach the “dos” and “don’ts” of foodservice sanitation, but to sensitize, educate and motivate food workers. The mere act of presenting “dos” and “don’ts” or “hows” accomplishes very little.

A foodservice worker must fully understand the microbiological and chemical aspects of food poisoning and the principles of multiple barriers in preventing the transmission of bacteria and toxic chemicals from source or reservoir to host by way of the food chain. Accordingly, he or she must know why hot water of 185°F is necessary in the final rinse cycle of the mechanical dishwasher and must appreciate the fact that a quick rinse of contaminated hands is not adequate to prevent transmission of the contaminants to foods and beverages.

We believe this approach is paying some measurable dividends. Our field inspectors tell us, and we have adequate evidence, that communication with restaurant operators is much better than it was before mandatory training and we are receiving positive feedback from the members of the Washington Restaurant Association.

In addition to our primary training in foodservice sanitation we are finalizing plans for an advanced training program—the refresher course. This course will focus on a mutual participation model in which foodservice managers will be trained to carry out their own evaluation of foodservice practices with periodic consultations or direct contact with the regulatory agency.

To assist in this effort we have developed a special workbook as a guide to good internal management and self-evaluation. We are field testing this publication and it will prove to be a useful and practical tool for the daily management of foodservice facilities.

**EVALUATION**

Finally, in this era of accountability and evaluation there are demands from all sides for some measure of outcome and cost of training and certification. The design of a sound system of evaluation may be one of our most complex tasks. How do we measure results when we are concerned about change in human attitudes and behavior?

We have learned that it is possible to measure these changes through accumulation of good base-line data. Gathering the data, as tedious as it may be, must be a major concern of the training institutions and the regulatory agency. We must avoid, as much as possible, the meretricious use of the “numbers game”—the frustrating, but usually necessary attempt to express a series of complicated behavior changes, i.e. foodservice practices and attitudes, in numbers alone.

Did the foodservice worker change his or her attitude and behavior toward food preparation and service? Does he or she understand the value of refrigerating prepared foods such as salads, hash or leftovers in shallow pans? Did the foodservice manager develop a self-inspection program? Does he or she maintain an effective cleaning and preventive maintenance program? The numbers in answer to these questions may be small, but meaningful. However, along with numbers, individual episodes of major improvements in foodservice practices or case histories of problem-solving techniques by the food worker should be sought.
The introduction of other variables, such as inspections, publicity, change in management and incentive awards, which we offer in the District, may account for improvements or changes in behavior, and also make evaluation difficult.

An elementary yet frequently overlooked point is that foodservice managers differ in the value they place on health and food sanitation. The difference sharpens upon reaching specific objectives that compete or even conflict with other objectives such as realizing maximum profit from the noon meal, when most customers are pressed to eat their lunch within an hour and return to work. Thus, large volumes of food may be prepared well in advance of the meal regardless of the lack of adequate storage space (i.e. refrigeration or steam tables) to maintain necessary temperatures.

In this connection a waitress/waiter may be advised to take short cuts, which are inconsistent with good foodservice practices, to accommodate the profit motives.

CONCLUSION

These, then, are some of the dimensions of our experience in planning and implementing a training and certification program for foodservice personnel. Our concerns encompassed improvements in foodservice practice, reforms in consumer health protection and improved relationships among the consumer, the industry and the regulatory agency.

In this setting sound educational planning required a strategy based on an analysis of the target population and the complexities of foodservice management in a highly compacted urban center. Moreover, societal decisions regarding food protection and foodservice sanitation extend far beyond the regulatory agency or the health service system per se. The decision, as to what resources can be allocated, often depends on social opinion as to what is desirable and on professional judgement as to what is effective.

But as concern about food protection deepens and the time for more intensive public and private actions draws near, it would be reassuring to know that there exists in the foodservice system a cadre of workers who possess a fairly clear and coherent definition of food sanitation problems and a general theory of action for managing these problems.

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REFERENCES