

Food Safety Training and Certification Vision for Federal, State,  
Local, Territorial, and Tribal Regulators <sup>1,2,3</sup>

July 2010



## Food Safety Training and Certification Vision for Federal, State, Local, Territorial, and Tribal Regulators

### **PURPOSE**

The Food and Drug Administration (FDA), the Centers for Disease Control and Prevention (CDC), the United States Department of Agriculture (USDA), and the Department of Homeland Security (DHS) in collaboration with their state, local, territorial and tribal regulatory public health counterparts have been partnering to establish an integrated national food safety system. A critical component of this Integrated Food Safety System is providing a capable, knowledgeable, and skilled workforce conducting work that is comparable at all levels. This workforce should consist of personnel involved in all aspects of food safety including inspection, compliance, laboratory analysis, epidemiological investigation, emergency response, as well as those involved in leadership and management.

### **GOALS**

- Develop and implement a national food safety training system that provides the knowledge and skills needed to perform job functions to regulators and public health partners at all levels
- Develop and implement a national certification system to help assure both uniform and consistent performance of staff involved in all aspects of food safety including inspection, compliance, laboratory analysis, epidemiological investigation, and emergency response at the international, federal, state, local, territorial and tribal levels.

For this training and certification system to be successful, federal, state, local, and tribal regulators:

- Must have a clearly defined set of core knowledge and skills to do their jobs;
- Must routinely maintain and update their knowledge and skills on cutting edge technology, emerging scientific issues, changes in laws, new regulatory requirements and /or interpretations and global issues that impact the food safety system; and
- Must ensure a consistent, uniform, and quality workforce at all levels which may be accomplished through the use and implementation of a certification system.

### **AN INTRODUCTION TO THE TRAINING SYSTEM**

Federal agencies including FDA, CDC, USDA, and DHS in close collaboration with stakeholders from regulatory and public health associations and state and local health agencies will help provide the strategic direction needed for the training system. This collaboration will be used to define the essential knowledge and skills underlying the various career tracks (e.g., investigator, analyst, outbreak investigator, compliance officer and manager), the training standards, and the curriculum for each track. Each federal agency listed above will provide strategic direction in the food safety areas they are directly responsible for. Areas of strategic direction and responsibility are shown in the following table:

<b>Federal Agency</b>	<b>Areas of Responsibility</b>
Food and Drug Administration	Non meat and poultry foods, good agricultural practices, cooperative programs (retail food, dairy, and shellfish), feed, health of food producing animals and environmental investigations of foodborne illness outbreaks
US Department of Agriculture	Meat, poultry, and eggs (dried, frozen, and liquid)
Centers for Disease Control and Prevention	Foodborne disease investigation and Epidemiology
Department of Homeland Security	Protection of intentional attacks on the food supply at all levels (e.g., from farm to fork)

“Food Safety Training Institutes” will need to be established to serve as the administrative section of the training system. Functions served by the institute(s) may include, but are not limited to registration of students, maintenance of training records, and coordinating development and delivery of training. Additionally, the institute(s) may also deliver training that is not currently being provided elsewhere and serve as a place to develop trainers from other agencies.

A network of “Centers of Excellence” (COE) will need to be established to develop and provide needed training. These Centers will be competitively identified by the above mentioned federal agencies and their partners and may consist of representatives from academia, associations, and public health agencies. The COE will be considered the experts in both content and adult learning and delivery. It should be noted that more than one entity may be selected to develop and deliver training in a given subject area. The COE will focus primarily on the journey and technical expert levels to provide the knowledge and skills in the areas of science and technology. Food safety regulatory agencies may continue to be responsible for “entry level” training; however, if there is a need to have a national provider of that training, a Center of Excellence could be established for that purpose. Additionally, a Center of Excellence focused on management and leadership to assist in the development of middle and upper management staff responsible for food safety should also be established.

Funding for the Food Safety Training Institutes and Centers of Excellence may come from FDA, USDA, CDC, and DHS through funds directly associated with the Integrated Food Safety System funding proposal.

### ***Core Curriculum Development***

FDA, USDA, CDC, and DHS will need to form independent advisory councils consisting of training and development experts as well as subject matter experts representing regulatory and public health associations and state, local, territorial, and tribal agencies. Each federal agency advisory council will focus in the food safety areas they are directly responsible for as indicated in the above table. The advisory councils will be responsible for defining the core competencies needed to fulfill the regulatory responsibilities, including all direct and indirect responsibilities of the federal agencies, and state, local, territorial and tribal partners for each job identified.

The councils’ first goal will be to conduct a job task analysis (JTA) to define the competencies that will form the foundation of the training programs and will focus on information needed to identify both training and certification requirements. The JTA will be conducted for all career tracks overseen by each of the council. Career tracks will be divided into entry level, journey level, technical specialist/master, and leadership levels based on the complexity of the work.

Once the job task analysis is completed, the knowledge and skills identified will be translated into a curriculum of training courses and job experiences. The current and emerging training needs of staff will be regularly assessed by the food safety training institute(s). Completion of the curriculum will confirm that the individual has been provided the knowledge and skills needed to competently complete the assigned day to day work.

### ***Standards***

In addition to curriculum development, the councils will set standards of quality for the training delivered. The standards will follow an accepted set of international standards such as the International Association of Continuing Education and Training and/or the American National Standards Institute. These training standards will be correlated with other existing standards (e.g. Retail Foods Program Standards and Manufactured Foods Regulatory Program Standards).

### ***Development and Delivery***

The training courses may be developed and delivered by entities (agencies, associations, academia, and training companies) that follow the prescribed content and meet the standards set by the appropriate council. Training will continue to be delivered by existing providers, such as federal, state, local, territorial and tribal agencies, academia, associations and private training companies. However, the identification of new training providers is vital to the development and delivering of new training beyond what is presently provided. Regulatory curriculum should continue to be provided by federal, state, local and tribal agencies that cover their individual, specific programmatic guidance and needs. These agencies may provide technical and management training; however, scientific, technical and management/leadership training should be primarily developed and delivered by non-government institutions (e.g., academia, associations, and private companies).

The FDA, USDA, CDC, and DHS will post core competencies and knowledge and skills for each career track which require development and delivery of training. And, as mentioned above, “Centers of Excellence” will then be responsible for course development and delivery.

The training delivered will use varied blended learning formats utilizing the appropriate delivery mechanism. It is expected that most training will be delivered via distance learning due to the wide geographic distribution of the students. Examples of distance learning include, but are not limited to webinars, and synchronous/asynchronous computer based training, and pod casts. Some skills or knowledge based training (e.g. hands on laboratory, inspection exercises, leadership interactions) will require a traditional class room setting. The formats will be combined as needed to assure the most efficient transfer of knowledge and skills.

While the new training system is being developed, existing training will continue to be used. All current training programs that meet the desired learning outcomes will be recognized and updated as needed. This approach will weave together available sources of training. Examples of existing training include: academic institutions teaching science and technology; FDA providing prerequisites for entry or basic level food manufacturing and retail food training through the FDA’s Office of Regulatory Affairs Online University (ORAU) web-based courses; federal, state, local, territorial and tribal agencies teaching a wide spectrum of courses; AFDO teaching the “Application of Basics of Inspection and Investigation” course; and NEHA teaching its investigating foodborne illness course.

It is critical that lessons learned in training be immediately applied in real life on the job in order for the learning process to be completed. Therefore for each training experience, a post course application or “hands-on” opportunity will be developed for the student to complete.

### ***Updates***

While it is critical that a system be developed to deliver established core knowledge and skills, it is equally important that the training system has a mechanism to regularly address the need for timely technical and regulatory updates. Each Center of Excellence, at the direction and/or with the concurrence of the federal councils, will be expected to develop and deliver technical, regulatory, or scientific updates while regulatory agencies will deliver updates on the regulatory process. The updates will use the most appropriate delivery mechanism available. Most updates may be delivered via distance learning.

### ***Administration***

It will be necessary to identify the training needs of staff in the various regulatory agencies that make up the Integrated Food Safety System. Once these needs are established, all model curricula and associated course offerings should be posted and available on the internet for global access. This will allow access to registration procedures and details to all prospective students. After successfully completing courses, all registered student records will be kept and maintained by the “food safety training institute(s)”. The already existing International Food Protection Training Institute (IFPTI) may be a logical choice to provide these initial administrative services with the potential for additional institutes in the future. In order to fulfill these responsibilities, it will be necessary for the institute(s) to utilize the capabilities of a robust learning management system to manage student data.

### ***Funding***

Federal, state, local, territorial and tribal agencies currently invest resources (e.g., people and money) in the training and development of their staff. It is expected that these agencies will continue with those investments. Additionally, associations, academic institutions, and private training companies currently deliver free and “for a fee” training. Again, it is expected that these efforts will continue. The new proposed training system will serve to complement these existing efforts and will focus on delivering higher level training that presently is not available. Providing higher level training to better prepare the food safety regulator will serve to “raise the bar” of present day performance. Federal agencies (e.g., FDA, USDA, CDC, and DHS) may provide funding to the Centers of Excellence and to the food safety training institute(s) to develop and delivery training as well as to administer the training system to defray costs for federal, state, local territorial and tribal regulators to access and complete training. These funding efforts will serve as an incentive to agencies to have their staff take advantage of the new training opportunities and in turn provide their employees with the appropriate tools, knowledge, and skills to needed complete their assigned job tasks at a high level.

### ***Audits***

The federal agencies or designated external body will regularly audit the Centers of Excellence, food safety training institute(s) and other providers in the system to assure the work is consistent with applicable quality and funding standards.

## **AN INTRODUCTION TO THE CERTIFICATION SYSTEM**

While training provides the opportunity to learn, certification will be necessary to ensure that the food safety professional can function at an acceptable level.

The certification system will be managed by **DISTINCTLY DIFFERENT COUNCILS** from the councils that manage the training system. As with the training system, the certification system will have a separate council for FDA, CDC, USDA, and DHS related personnel. The four certification councils will be led and managed by representatives from the appropriate federal agency and will include state, local, territorial and tribal input through associations. Members of the certification council may not also be members of the training system councils.

The certification councils will identify which career tracks (e.g., investigator, analyst, disease investigator, compliance officer, manager) require certification and will establish the pre-requisites (e.g., training and experience required to sit for the specific certification exam or participate in the performance audit, as required) to obtain certification. All training and experience requirements will be based on the results of the job task analysis conducted in support of the training councils.

The certification councils will identify and collectively agree on a food safety certification body(s) similar to the food safety institute(s) established for the training system. The food safety certification body(s) will develop the certification requirements and administer the certification program.

Certification and training will be autonomous, but will work in parallel through a common job task analysis and associated studies. These two branches must have a clear separation of roles and responsibilities, but also have a common goal to continually improve the quality of these programs.

### ***Career Tracks***

The certification councils will identify which career tracks require certification and the level of certification(s) that will be offered (e.g., entry, journey, technical specialist/master and leadership). These levels will be linked to the training associated levels.

### ***Development of Certification***

Certification will help ensure that staff is equipped with the needed knowledge, skills, and tools to perform their job at the appropriate level of difficulty. The federal councils will identify and agree collectively on the entity that will administer the certification systems/programs. This can be equated to the training system's food safety training institute. For now, this entity will be labeled as a "food safety certification body". There may be a need for a separate certification body for FDA, CDC, USDA, and DHS related certification activities. The certification body will be funded by the federal agencies to develop the specific certification requirements for each career track and administer the certification program(s). The certification body will have access to the job task analyses completed by the training system councils. The initial job task analyses will be directed toward both training and certification. The certification pre-requisites will include defined training and on the job experiences (including mentoring and mock audits). The certification will be designed as a knowledge-based, performance-based, or simulated type of assessment. Any assessment used must adhere to sound psychometric principles of validity, reliability, and fairness.

The certification will be founded on a valid and defensible JTA which will help support the training and certification programs during instances of dispute and other challenges. Development of the assessment instrument is an iterative, on-going process. It requires on-going review, item development, psychometric testing, evaluation of test specifications, standard setting for mastery levels, and other necessary developmental procedures. The method of delivery will affect the cost associated with the method of certification and the scalability of that method. Computer based and paper and pencil assessments are the most common mechanisms used. However, computer adaptive testing (CAT) is currently the most scalable and cost efficient method and should be strongly considered when choosing an assessment instrument. Outsourcing the administration of the exam to reputable organizations or businesses that use CAT is possible and will allow for mass scalability while also limiting the cost of certification.

The federal council will need to consider on a case-by-case basis the merits of existing certification/credentialing programs, when possible, rather than developing new programs for specific career tracks. These existing programs will have to meet all the requirements of the food safety system certification program.

### ***Administration***

The food safety certification body will post requirements, review applications for certification, develop the assessment tool(s) to determine certification, administer all assessments leading to certification, update the assessments used as needed, and develop, track and approve the maintenance requirements for an individual to maintain their certification.

### ***Standards***

The certification system and/or program will be based on an international consensus standard such as ANSI's Standard for Personnel Certification (ANSI/ISO/IEC 17024) or other recognized international standard identified by the Certification Council.

### ***Records and Security***

The certification system and/or program must have the capability to maintain records for all certification candidates. This includes the capability to track completion of initial certification requirements AND continuing education/maintenance activities. The records and/or learning management system used by the certifying body will be in sync with the records maintained by the training system and other integral systems as deemed necessary by the Certification Council. Security of test items and records is of utmost importance as it relates to testing and certification. Any learning management system used must be in compliance with international consensus standards such as ANSI Standard for Personnel Certification (ANSI/ISO/IEC 17024). Additionally, examinations and individual test items must be protected or safeguarded in order to preserve the integrity of the exam.

### ***Audit***

The federal agency(s) will regularly audit the food safety certification body to assure standards of performance are met. The frequency or time table for the audits will be in agreement with that required by an international consensus standard such as ANSI Standard for Personnel Certification (ANSI/ISO/IEC 17024).

## **CURRENT STATUS, CONCLUSIONS, AND RECOMMENDATIONS**

In August, 2008, the Food and Drug Administration (FDA) hosted a 50 state meeting with food and feed safety and defense regulatory agencies to identify critical food and feed safety and defense issues that FDA should address. Four work groups were created as a result of that meeting to address those issues. One of the work groups formed was the 50 State Training Work Group (WG). The WG is comprised of members from state and local food and feed safety and defense regulatory agencies from across the country.

The charges to the WG include conducting a Job Task Analysis (JTA) for all food safety and defense jobs to provide a basis for developing the training curriculum needed to prepare food safety and defense regulatory staff to competently perform their jobs and to review existing training and curriculum to identify gaps in existing training programs. As a starting point for this project the WG focused its efforts on identifying the competencies food and feed inspection staff should have at two years of experience. The WG divided the food and feed safety and defense inspection competencies into three areas: Raw (e.g., on farm fruit, vegetable, produce production and processing), Retail Foods, and Manufactured Foods or Feed.

The WG put out a call for information to all entities employing food safety personnel and requested four specific types of information which included:

1. Job descriptions for food and feed safety and defense inspection staff with two years of experience categorized by type (Raw, Retail Food, Manufactured Foods or Feed),
2. Food and feed safety and defense training courses used in your jurisdiction including the course title, objectives, and owner,
3. Curriculum a new food and feed inspector follows for the first two years of employment categorized by type (Raw, Retail Food, Manufactured Foods or Feed) and,
4. Names, contact information, position and area of specialization (e.g., Seafood HACCP, Low Acid Canned Food), years of experience, and brief rationale for status as a subject matter expert (SME) categorized by type (Raw, Retail Foods, Manufactured Foods or Feed).

Concurrent to the creation of the 50 State Training Workgroup, the Association of Food and Drug Officials was able to obtain a grant from the Kellogg Foundation to establish a food safety training institute, which is now called the International Food Protection Training Institute (IFPTI). Currently, IFPTI has an established Board, Advisory Council, University Affiliate Network, Executive Director, Curriculum Development Branch, Curriculum Delivery Branch, a Regulatory Liaison, an Evaluation and Assessment Branch, a Communications Director, and a Finance and Administration Branch.

IFPTI's goal and/or mission is to "deliver career-spanning food protection training for state and local food protection professionals to assure competency and equivalency in meeting established U.S. federal food safety standards." Because of the similar goals of the 50 State Workgroup and IFPTI, a partnership was created between the two entities. Information collected from the WG's call for information was shared with IFPTI who is currently in the process of creating a list of competencies as well as career-spanning curriculum addressing these defined competencies. Additionally, IFPTI is in the process of collecting information on food safety related trainings that already exist. These existing trainings may be incorporated into the curriculum and will also help identify any gaps in training courses that still need to be developed.

While much has been accomplished since the start of this project in 2008, there is still much to be done. Next steps include:

1. Conduct a job task analysis
2. Finalize competencies
3. Finalize curriculum based on the competencies
4. Creation of the Certification System

The goal of the food safety system is to "Protect the public's health through an integrated national food protection system that assures the safety of the U.S. food supply." This cannot be accomplished without good frontline people ensuring that our food is safe. However, we must provide our food safety professionals with tools, knowledge, and skills that they need in order to accomplish this very important task. Training and certification is the key to achieving this goal.



1. Gary German, Director (Retired), Office of Regulatory Affairs, Division of Human Resource Development, United States Food and Drug Administration, Principal Author, November, 2009.
2. Accepted and Adopted by the Partnership for Food Protection-50 State Training and Certification Work Group, November, 2009; Ft. Worth, Texas.
3. Approved By PFP-TCWG for Submittal to the Partnership for Food Protection-50 State Coordinating Committee, August, 2010; Denver, Colorado.

**Exhibit 1**

# Training Workgroup (TWG)

## “Vision” Pictorial:

### Integrated Food Safety Training and Certification Systems

