

Food Safety: Improving Compliance of a Certified Food Manager Program

2010-2011

Environmental Public Health Leadership Institute Fellow:

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EXECUTIVE SUMMARY:

Food safety is a priority in today's society resulting from the response to the numerous product recalls and foodborne illness outbreaks. The expectation of the consumer is safe and wholesome food whether purchased from a farm, grocer, or restaurant. To ensure that consumers are served safe and wholesome food, Louisville Metro has passed a Certified Food Managers Ordinance. This ordinance ensures that all food service establishments within Louisville Metro have employees who are trained in food safety. A certified food manager is also expected to be on site during all hours of operation; however, all facilities may not be compliant with this expectation of the ordinance. If this is true, the lack of personnel trained in food safety could place consumers at a greater risk for foodborne illness. For example, a study conducted by S. Cates (2008) on food establishment inspections, suggests that the presence of a certified food manager is protective for most types of critical violations.¹ Additionally, fewer certified personnel also imposes additional work on food safety inspectors requiring them to follow-up on compliance with the Certified Food Managers Ordinance.

Collaboration between regulators, educators and food service operators led to the development of a survey to determine the barriers to compliance with the ordinance. The survey was administered to food service establishments within Louisville Metro. This collaboration also led to a belief that there is a need for some quality assurance to determine the effectiveness of the certified food manager program. Results of the survey concluded that 90% of operators believe that food safety is the most important aspect of food service operations; however, nearly half of those surveyed felt compliance was difficult to obtain. According to the survey the main barriers to compliance with the Certified Food Managers Ordinance were employee turnover, inconvenient course dates, times and locations, and the difficult registration process.

One of the goals of this project is to improve food safety by identifying and addressing barriers to compliance of the Certified Food Manager Ordinance. This includes a continuous quality improvement program that would ensure and maintain the effectiveness of the certified food managers program. The project also addresses the barriers associated with the course and its registration process. Solutions to these barriers include creating online registration capability, and providing more convenient dates, times and locations for classes. Furthermore, highlighting the program and its goals as part of a public education campaign may create a greater demand for this certification compliance from the public. By ensuring that all facilities have their staff properly trained as Certified Food Managers, we can better ensure these establishments maintain compliance with our local ordinance, thus reducing consumers' risk of foodborne illness.

INTRODUCTION/BACKGROUND:

Problem Statement:

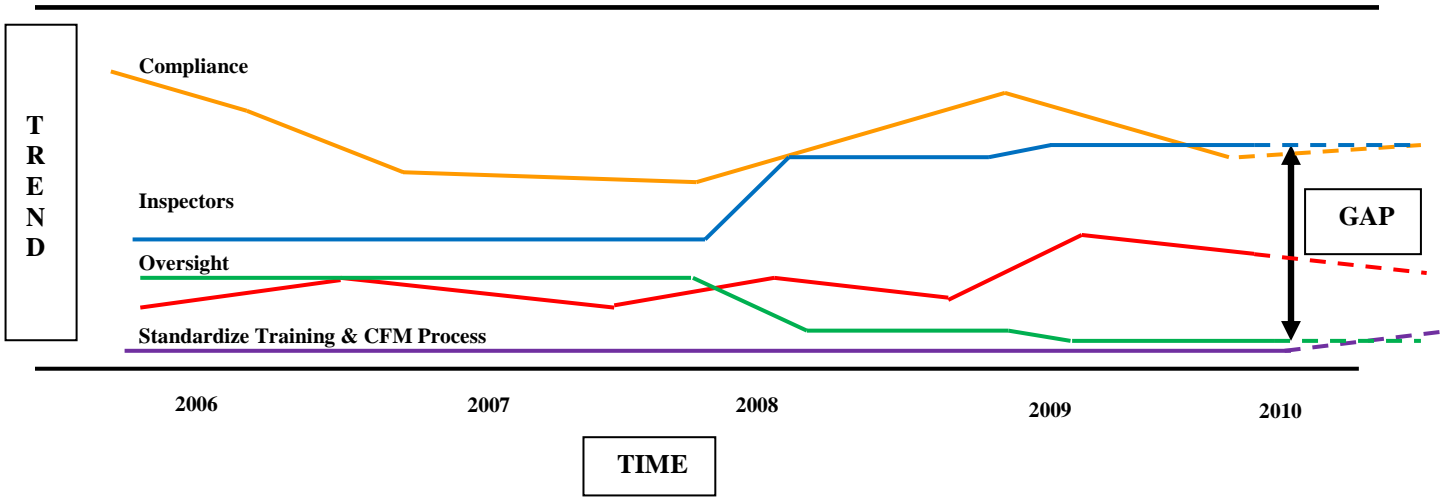
Why, despite having a Certified Food Manager Ordinance does there continue to be noncompliance among food service establishments in Louisville Metro?

The mission of the Division is to protect, promote, and preserve the Environmental Health of the Community. Over the past few years, high-profile, national outbreaks related to various foods, from

spinach and peanut products to eggs, have underscored the need to make continuous improvements in food safety.² These foodborne illnesses are a burden on public health and contribute significantly to the cost of health care. In 2006, the Centers for Disease Control and Prevention (CDC) received reports totaling 1,270 foodborne disease outbreaks, which resulted in 27,634 cases of illness and 11 deaths.³ The Food Hygiene Program works to ensure food safety through education and enforcement of the Kentucky State Food Code and the local Certified Food Managers Ordinance.

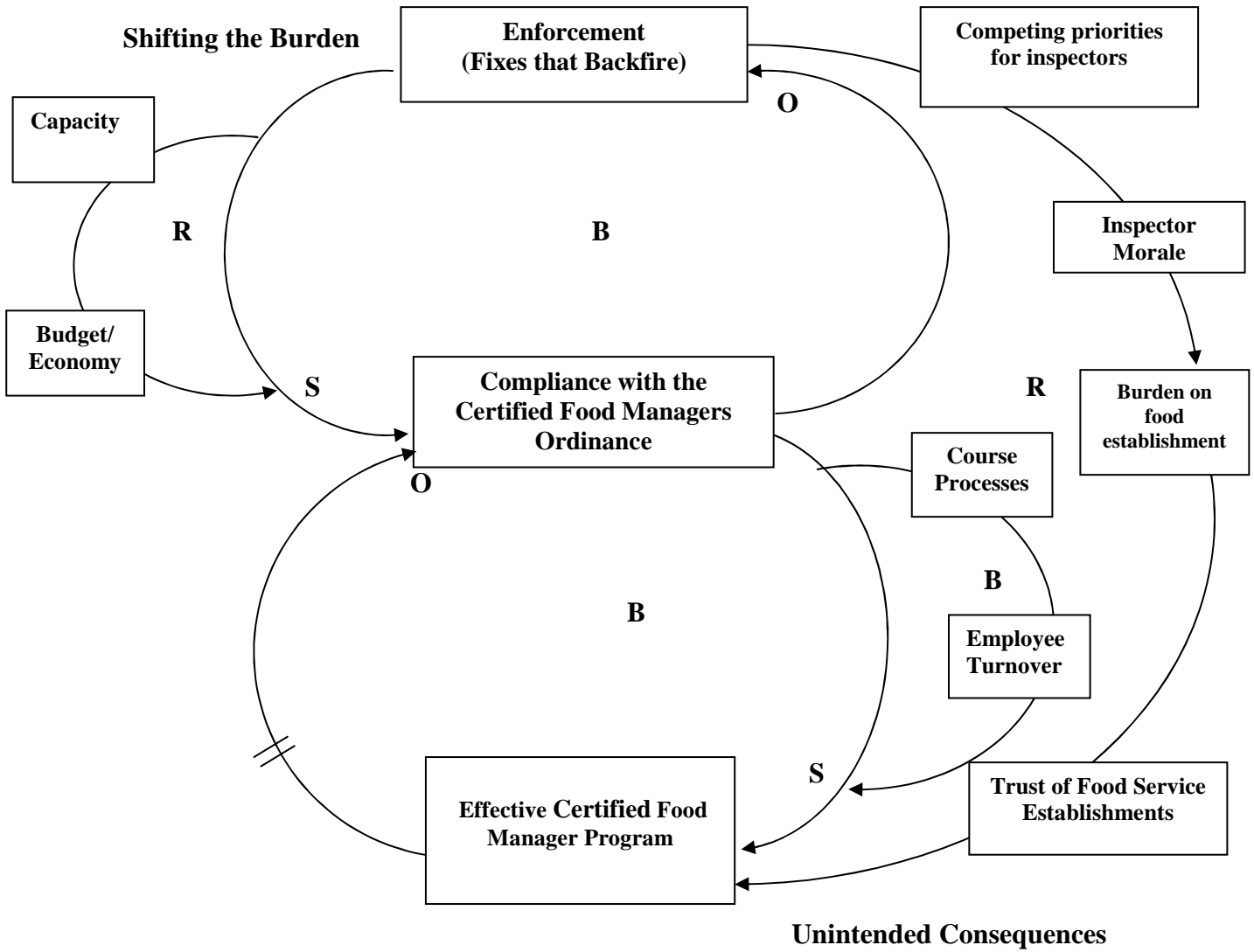
The Certified Food Manager's Ordinance was passed in 1989 as the result of a foodborne illness outbreak in the community. Recent data from the Centers for Disease Control and Prevention show that one in six people in the United States suffer from food-borne illness each year.² The Certified Food Managers Program was designed to ensure that every food service establishment had workers on duty during all hours of operation that were competent in food safety. Since its' inception, the program has had a standardized process for enforcement which is taught to inspectors during their initial training period. The Division has performed no evaluations on the effectiveness of the program and has only focused on enforcement. A recent review of food service inspections conducted at establishments within Louisville Metro showed that approximately 25% were noncompliant with the local Certified Food Manager Ordinance.

Behavior Over Time Graph:



- Regulation and Enforcement
- Oversight of inspectors
- Standardized CFM Training and Processes
- Compliance with CFM Ordinance
- Number of Inspectors

Causal Loop Diagram and applicable Archetypes:



10 Essential Environmental Health Services: This project seeks to enhance the following three Essential Environmental Health Services in Louisville Metro:

3. **Inform, Educate and Empower (Policy Development)** people about environmental health issues.

Initially we will educate the public on the Certified Food Manager Program through the Health Matters television program and print media. We will also inform the public of the local Certified Food Manager ordinance and the importance of educated food service workers in the prevention of foodborne illness. This will empower the public by enabling them to make better educated decisions about where they dine in the community, similar to the success observed with our Food Hygiene Program's ABC placarding regulation for restaurants. As a result, the public may begin to demand that their favorite food service establishments have certified workers on site.

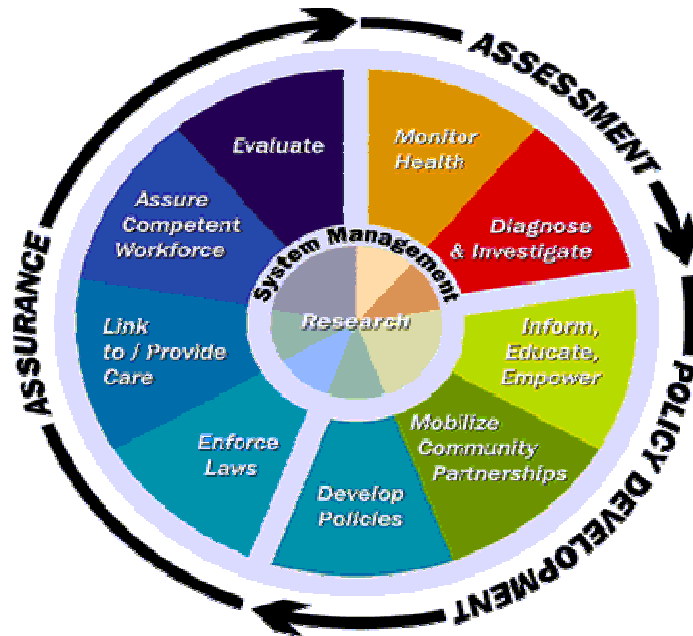
We will also better educate food establishment owners, operators, and service workers on the history of the Certified Food Managers Program and its ability to create a workforce that is competent in food safety. The educational campaign will also be accomplished with the use of Metro TV, collaboration with the Kentucky Restaurant Association, and the distribution of informational brochures for food establishments.

6. **Enforce (Assurance)** laws and regulations that protect environmental health and ensure safety.

We will work to ensure standardized enforcement of the ordinance and will also ensure inspector's have the necessary resources and tools to effectively enforce the ordinance. However, our goals are now to move from a focus of strictly enforcement to also incorporate education as a means to facilitate greater compliance.

9. **Evaluate (Assurance)** the effectiveness, accessibility and quality of personal and population based environmental health services.

Through the project, we will develop tools to effectively evaluate all aspects of the Certified Food Managers Program ensuring barriers to compliance are determined and addressed on a routine basis. The course material and delivery will be updated as needed to improve quality and effectiveness of the program. Additional, date, times and locations were added for the course to improve accessibility for food service workers.



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National Goals Supported

Healthy People 2020

One of the goals of the U.S. Department of Health and Human Services Healthy People 2020 is to improve food safety and reduce foodborne illnesses. There are two objectives within Healthy People 2020 that this project seeks to support:

1. Reduce infections caused by key pathogens transmitted commonly through food.
2. Improve food safety practices associated with foodborne illness in foodservice and retail establishments.⁴

This project will help to ensure that all food service establishments in Louisville Metro have food service workers that are knowledgeable in food safety. The project will also ensure competency in safe food handling practices.

National Strategy to Revitalize Environmental Public Health Services

The objective of the CDC's strategic plan is to enhance and revitalize environmental public health services to address the broad range of issues facing the nation. There are two goals within this plan that this project supports:

Goal IV (Communicate and Market) Improve communication and information sharing among environmental public health agencies, communities, strategic partners, other stakeholders and better market environmental public health services to policy makers and the public.

Objective IV-B: Support educational approaches and models of best practices to gain community support and participation in addressing environmental public health service issues, concerns, and best models to organize, deliver, and market environmental public health services.⁵

The project improves communication and information sharing between Louisville Metro Public Health and Wellness, Food Service Establishments, and the public to market the Certified Food Manager Program. This will draw support for the program with the public and help to increase compliance with food service establishments.

Goal VI (Create Strategic Partnerships) Foster interactions among agencies, organizations, and interests that influence environmental public health services.

Activity VI-AI-3: Develop mechanisms for regular communication and coordination among stakeholders.⁵

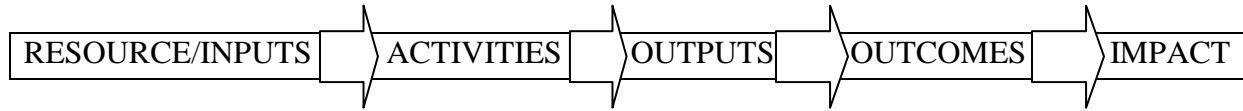
The project fosters collaboration between Louisville Metro Public Health and Wellness, the Kentucky Restaurant Association, and the Certified Food Manager course instructors to routinely evaluate the effectiveness of the program.

Environmental Health Competency Project: Recommendation for Core Competencies for Local Environmental Health Practitioners

There are three main categories which comprise the Core Competencies for Local Environmental Health Practitioners: 1) assessment, 2) management and 3) communication. This project seeks to support assessment by evaluating the effectiveness of procedures, interventions, and programs.⁶ The Certified Food Manager Program was evaluated to determine the barriers to compliance. The information obtained from the evaluation will allow for the implementation of interventions in an attempt to improve compliance outcomes.

Project Logic Model:

GOAL: Improve the compliance rate of the certified food manager ordinance.



RESOURCE/INPUTS	ACTIVITIES	OUTPUTS	OUTCOMES	IMPACT
<p><u>Partners:</u></p> <ul style="list-style-type: none"> • Martha Gregory & Assoc. • KY Restaurant Assoc. • KY Grocers Assoc. • Louisville Originals • Food Inspectors • Health Education/Promotion • Food Service Establishments • Certified Food Managers <p><u>Financial:</u></p> <ul style="list-style-type: none"> • Food Hygiene Program • Health Educator/Promotion • Teaching Resources • Partners • Translation Services <p><u>Supplies:</u></p> <ul style="list-style-type: none"> • Inspectors • Supervisors • Health Educators • Translation Services • Office Supplies/Equipment 	<p><u>Research:</u></p> <ul style="list-style-type: none"> • Collect compliance data • Collect inspection failure data <p><u>Survey:</u></p> <ul style="list-style-type: none"> • Food Service Est. regarding the course and compliance with the ordinance. • Food Inspectors regarding challenges of enforcement. <p><u>Analysis:</u></p> <ul style="list-style-type: none"> • Trends in compliance data. • Trends in enforcement. • Link between compliance and critical violations. • Barriers to compliance <p><u>Education:</u></p> <ul style="list-style-type: none"> • Educational campaign for food service establishments. <p><u>Partnership:</u></p> <ul style="list-style-type: none"> • Meet with partners to discuss program and compliance. 	<ul style="list-style-type: none"> • Policy changes implemented/resources developed to address barriers. <ul style="list-style-type: none"> • Standard enforcement process for inspectors. • Tools for inspectors to use to overcome challenges. <ul style="list-style-type: none"> • Educate food service establishments on importance and advantages of having CFM on staff. <ul style="list-style-type: none"> • Build collaboration with partners. 	<ul style="list-style-type: none"> • Improved compliance with ordinance. <ul style="list-style-type: none"> • Decrease in time spent on enforcement. • Increase in time spent on routine inspections. • Standardized enforcement of the ordinance. <ul style="list-style-type: none"> • Increase the number of certified food managers in the community. <ul style="list-style-type: none"> • Trust of Regulatory agency within the food service facilities. 	<ul style="list-style-type: none"> • Compliance with the certified food manager ordinance. <ul style="list-style-type: none"> • Improved inspection outcomes. • Safer food service establishments in Louisville.

PROJECT OBJECTIVES/DESCRIPTION/DELIVERABLES:

Program Goal:

To reduce the risk of foodborne illness within the community by improving compliance rates of the Certified Food Managers Ordinance within food service establishments.

Health Problem:

The CDC estimates that each year roughly 1 out of 6 Americans (or 48 million people) will become ill resulting in 128,000 hospitalizations and 3,000 deaths from foodborne diseases. Food service workers properly trained in food safety is an important component in the prevention of foodborne illness.

Outcome Objective:

By March 1, 2013 decrease the number of establishment with critical violations noted on routine inspections.

Determinant:

The number of establishments without certified food managers on duty during all hours of operations.

Impact Objective:

By March 1, 2012 will increase compliance with the Certified Food Managers Ordinance by 5%.

Contributing Factors:

1. A lack of resources available to evaluate the program
2. Lack of recorded and/or accurate data
3. Lack of resources available to enforce the ordinance
4. Lack of partnership with the retail food industry and the public
5. Course processes including application, registration and course
6. Course location
7. Course curriculum including language barriers

Process Objectives:

1. By August 1, 2010 will complete the collection and evaluation of certified food manager compliance data for the past 2 years.
2. By September 1, 2010 will meet with the Health Education and Promotion Division and develop an educational campaign for food service establishments on the importance of the Certified Food Manager Program.
3. By September 1, 2010 will meet with representatives from the Kentucky Restaurant Association, Louisville Originals and the Kentucky Grocers Association to discuss compliance rates.
4. By October 1, 2010 will complete and evaluate responses to survey of food service establishments regarding compliance with the certified food manager ordinance.

5. By November 1, 2010 will develop and forward to Health Department Administration recommended policy, if needed, regarding the Certified Food Manager Ordinance.
6. By January 1, 2011 will implement policy changes and distribute compliance resources and educational material to food service establishment.

METHODOLOGY:

Events and Activities:

Event: Course Compliance Evaluation

Activities:

- Completed evaluation of compliance rates within food service establishments.
- Viewed each inspection individually to determine compliance.

Event: Collaboration

Activities:

- Met with representatives from the Kentucky Restaurant Association and discussed barriers to compliance with the Certified Food Managers Ordinance.

Event: Conducted Surveys

Activities:

- Developed a survey to determine establishment thoughts on the importance of food safety and barriers to compliance.
- Met with Food Hygiene Environmentalists to discuss the process for distribution and collection of the surveys.
- Analyzed the data collected from the surveys.

Event: Implemented program improvements

Activities:

- Improved course material by updating from the 1976 Revised FDA Food Code to the FDA 2005 Model Food Code.
- Improved instructional tools by converting from an overhead projector to a full power point presentation.
- Met with course contractor to discuss registration, course confirmation, and course location concerns.

Event: Course Evaluation

Activities:

- Working with the U of L School of Public Health to evaluate the rate of inspection failure within food service establishments that lack a Certified Food Manager.
- Examine the pass/fail ratio.
- Evaluate the number of applicants per quarter.
- Evaluate the test questions and correlate the number of incorrect answers with violations of the food code found within establishments during inspections.
- Evaluate the Certified Manager Course 3rd party contract to determine changes needed to improve the course.

RESULTS:

The evaluation of our inspection data revealed that only 75% of the food service establishments within Louisville Metro are in compliance with the Certified Food Manager Ordinance (CFMO). Unfortunately, the data also suggest there is insufficient data collection and tracking of all the certified manager data within the Environmental Health Management Information System (EHMIS) computer program. Recent collaborations with the state contracted information technology company, CDP, have resulted in improvements with the EHMIS system to ensure better collection and tracking of our certified manager data. Nevertheless, according to the information we have, there still appear to be some work that needs to be accomplished to assure a greater percentage of restaurants are in compliance with the CFMO.

The results of the food service establishment's survey suggested that the primary barriers to compliance with the CFMO are employee turnover, the need for additional course dates, times, and locations, and the difficult registration process. These results suggest there are several procedures associated with the Certified Food Manager program that could be improved to facilitate access to the curriculum. By eliminating these barriers and making it easier for individuals to take the Certified Food Manager course, the expectation is improved compliance rates with the CFMO.

The Certified Manager course curriculum was recently updated to reflect the States adoption of the FDA 2005 Model Food Code. A preliminary meeting was recently held with the instructor of the course to propose changes to course registration and the confirmation process as well as adding additional dates, times, and location for the classes. The new contract will reduce barriers to the Certified Food Managers program by mandating the following:

- 1) A confirmation of registration sent to each student.
- 2) The capability to use online registration.
- 3) Additional classes must be available on one weekday evening and one weekend morning on a quarterly basis.

The presentation format has been replaced with a new, more vibrant power point presentation. The presentation has also been revised to make learning more fun and conducive with the new curriculum. The contractor is now expected to provide equipment compatible with course material including a computer, projector, and viewing screen.

CONCLUSIONS/NEXT STEPS:

The expectation of today's consumer is safe and wholesome food when dining at local establishments and the primary goal of this project was to examine whether compliance with the Certified Food Manager Ordinance (CFMO) also related to better food safety. It was believed that a lack of food safety knowledge would increase risk within the food service community, because recent research suggests that having a Certified Food Manager on site provides for greater food safety. However, preliminary results suggest that we must first address potential barriers that might prevent establishments from consistently complying with this ordinance.

In the past, the Louisville Metro Department of Public Health and Wellness has typically used enforcement of the Certified Food Manager Ordinance alone to ensure compliance; yet, enforcement alone has not been effective at improving compliance rates. Although the Certified Manager Program appears to be a useful tool within Public Health, this project suggests a need for streamlining the registration process and creating better access to the program course. Furthermore, collaborative efforts with food service operators and other partners should improve these processes. By creating greater collaboration with our partners, we should be able to eliminate many of the barriers that have been identified and help ensure greater compliance.

Once all of the barriers to compliance have been addressed, only then will we be able to effectively evaluate the program to determine whether the presence of a Certified Food Manager improves food safety within Louisville Metro. The next step with this project will be to complete the evaluation of the effectiveness of the program and to address remaining barriers by completing the following:

- Develop and implement a tool to evaluate all aspects of the Certified Food Managers Program on an annual basis.
- Determine the effectiveness of the program.
- Determine the resources needed to effectively enforce and supervise the program.
- Work with the University of Louisville School of Public Health to evaluate the rate of inspection failure within establishments that lack a Certified Food Manager.
- Examine the course pass/fail ratio.
- Evaluate the number of applicants per quarter.
- Evaluate the test questions and correlate the incorrect answers with violations of the food code found within establishments during inspections.
- Evaluate the Certified Manager Course 3rd party contract to determine additional changes needed to improve the course.

LEADERSHIP DEVELOPMENT OPPORTUNITIES:

Kelly D. Monahan

The Environmental Public Health Leadership Institute has been an extremely rewarding experience. The Institute gave me the opportunity to network with some of the most dedicated and passionate Environmental Health professionals from across the country, creating invaluable relationships. In addition, I learned a tremendous amount about myself through peer and self assessment tools. The knowledge obtained from these tools has been invaluable to both my personal and professional development. A systems thinking approach to problem solving was taught giving me additional tools to assist in addressing challenging environmental health concerns within my community. The mentors were extremely knowledgeable and approachable helping me to better understand and put into practice the leadership skills and concepts learned throughout the year. It has been an honor and privilege to have been given the opportunity to participate in this exceptional fellowship program.

ABOUT THE EPHLI FELLOW

Kelly D. Monahan, R.S.

Ms. Monahan has been with the Environmental Division of the Louisville Metro Department of Public Health and Wellness for 13 years. She is currently an Environmental Health Manager overseeing the Food Hygiene, Public Facilities, Onsite and Waste Water Treatment Programs. Her responsibilities include strategic planning, budgeting, quality assurance and managing a staff of 27. She is also responsible for the oversight of the Division's internship program. She began her career in Environmental Health in 1997 as an Environmental Health Specialist and has worked in the hazardous material, lead poisoning and prevention, housing and public facilities programs.

Ms. Monahan is a member of the Kentucky Association of Food, Milk and Environmental Sanitarians and a 2005 graduate of the Kentucky Public Health Leadership Institute. She received a bachelor's degree in Biology from the University of Louisville.

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