

Wake County, North Carolina

**Report on the Occurrence of Foodborne Illness
Risk Factors in Selected Institutional Foodservice,
Restaurant, and Retail Food Store Facility Types**

2015

Prepared by Wake County Environmental Services, Environmental Health & Safety Division

CONTENTS

I. EXECUTIVE SUMMARY

II. INTRODUCTION

- A. Background
- B. Purpose
- C. Study Design and Objectives

III. METHODOLOGY

- A. Selection of Facilities
- B. Random Selection of Establishments
- C. Selection of Data Collectors
- D. Geographical Locations
- E. Baseline Data Collection Procedure
- F. Base Data Collection Form
- G. Quality Control
- H. Average Time Per Data Collection

IV. RESULTS AND DISCUSSION - SUMMARY

- A. Institutional Food Service - Hospitals
- B. Institutional Food Service - Nursing Homes
- C. Institutional Food Service - Elementary Schools
- D. Restaurants - Fast Food
- E. Restaurants – Full Service
- F. Retail Food Stores – Delis
- G. Retail Food Stores – Meat Markets
- H. Retail Food Stores - Produce
- I. Retail Food Stores - Seafood

V. RECOMMENDATIONS

- A. Recommendation for the Foodservice and Retail Food Store Industries
- B. Recommendation for Regulatory Retail Food Protection Programs

APPENDICES

Appendix A	Data Summary – Hospitals
Appendix B	Data Summary – Nursing Homes
Appendix C	Data Summary – Elementary Schools
Appendix D	Data Summary – Fast Food Restaurants
Appendix E	Data Summary – Full Service Restaurants
Appendix F	Data Summary – Deli Departments/Stores
Appendix G	Data Summary – Meat and Poultry Markets/Departments
Appendix H	Data Summary – Produce Markets/Departments
Appendix I	Data Summary – Seafood Markets/Departments
Appendix J	Data – All Facilities
Appendix K	Data – IN Compliance
Appendix L	Data – OUT Compliance
Appendix M	Risk Categorization of Food Establishments
Appendix N	2015 Reference Sheet
Appendix O	2015 Data Collection Form
Appendix P	Resources – Web Site Locations for Referenced Documents

I. EXECUTIVE SUMMARY

Wake County 2015 Risk Factor Study: *Report on the Occurrence of Foodborne Illness Risk Factors*

I. Background

Wake County Government's Food Lodging Institution Section (FLIS) protects the public health through the enforcement of State rules and regulations enacted for safe and sanitary construction and operation of regulated food service establishments. There are over 3,200 regulated food service establishments currently operating in Wake County, increasing by 7% since 2010.

II. FDA Voluntary Food Regulatory Program Standards

In Wake County, the regulation of food service establishments is based on the North Carolina Rules for Food Service Establishments. The State of North Carolina adopted the 2009 FDA Food Code in 2012. Wake County Government's Food Lodging Institution Section enrolled in the FDA Voluntary Food Regulator Program Standards (Program Standards) in 2008. The purpose of the Program Standards is to provide a national benchmark for:

- Retail food program managers to evaluate their own programs, and
- Regulatory agencies to improve and build upon existing programs

In 2010, as part of the program standards, Wake County completed a survey to assess the frequency of foodborne illness risk factors in food service establishments. The survey identified risk factors based on the 2009 FDA Food Code. The 2010 survey provided the baseline assessment of the occurrence of foodborne illness risk factors in the County's regulated food service establishments. The same survey was completed in 2015 and provides a comparison of foodborne illness risk factors.

III. Risk Factor Study

The 2015 risk factor study evaluated 447 randomly selected food service establishments representing nine different types of facilities. The survey focused on food preparation practices and employee behaviors most frequently reported to the Centers for Disease Control and Prevention (CDC) as contributing to foodborne illness outbreaks. The contributing risk factors are:

- Food from unsafe sources
- Inadequate cooking
- Improper holding/time and temperature

- Contaminated equipment/prevention of contamination
- Poor personal hygiene

During the study, Wake County staff talked with managers and made observation of kitchen practices. For each of the nine facility types, evaluators evaluated compliance with the 2013 FDA Food Code.

IV. Survey Findings

The 2015 Wake County risk factor survey identified that overall the percentage of IN compliance risk factor categories improved from the 2010 baseline risk factor study as shown in the chart below.

Risk Factors IN compliance	AVERAGE	
	2010	2015
Food Source	95%	96%
Inadequate Cooking	91%	94%
Improper Holding	57%	66%
Contamination	87%	88%
Personal Hygiene (*12a and 14a compared)	82%	90%
Other items of interest		
Certified Food Protection Manager Present	42%	72%
Employee Health Policy (17a only)	10%	66%
Cold Holding	48%	56%

*12a and 14a are the 2009 Food Code (12b and 14b are the 2013 Food Code)

Overall, there is greater compliance in all CDC risk factor categories. Although presence of certified food protection managers (CFPM) and compliance with employee health policy are not risk factors, there may be a causal relationship to overall improvement in the CDC risk factors.

In 2015, the most commonly observed OUT of compliance risk factors were:

- Improper Holding (35% out of compliance)
- Protection from Contamination (12% out of compliance)

For the improper holding risk factor category, the most common individual OUT of compliance survey items were:

- Improper cold holding of potentially hazardous food (Item 7a) (44% out of compliance)
- Inadequate date marking of refrigerated ready-to-eat foods (Items 9a-9d) (36% out of compliance)

Based on the survey findings the following individual items, within a risk factor category, should be targeted for priority education and outreach:

Individual Data Item from survey	Risk Factor Category	Percent OUT of compliance with 2009 Food Code
Cold Hold (41°F) (item 7A)	Improper Holding	44%
Discard ready-to-eat TCS (item 9B)	Improper Holding	41%
Date marking opened commercial containers (item 9C)	Improper Holding	36%
Food contact surfaces (item 11A)	Contamination	31%

V. Recommendations

The common goal of industry and regulatory agencies is to protect public health by reducing or eliminating risk factors that contribute to foodborne illness. The study indicates there has been significant improvement over the five year period in all risk categories, and shows that improper holding remains the risk factor of most concern. Wake County health inspections and educational activities should focus on this risk category. The County's participation in FDA's Program Standards will provide guidance for identifying those risk factors that should be given priority for inspection, education and enforcement.

II. INTRODUCTION

A. Background

The U.S. Food and Drug Administration (FDA) is responsible for setting standards for safe production of foods and advising state and local governments on food safety standards for institutional food service establishments, restaurants, retail food stores and other food establishments. Adoption of the FDA Food Code at the state, local and tribal level has been a keystone in the effort to promote greater uniformity.

North Carolina's "Rules Governing the Sanitation of Food Establishments," were initially adopted in 1976, and based on the 1976 "Food Service Sanitation Manual Including a Model Food Service Sanitation Ordinance." In 2009, Wake County conducted an assessment of North Carolina rules as compared to the 2005 FDA Food Code. At that time, North Carolina rules addressed 3 of the 11 key public health interventions and controls for risk factors that contribute to foodborne illness. In addition, the general retail practices of North Carolina rules were 46% compliant with Good Retail Practices of the 2005 FDA Food Code. In 2012, the State of North Carolina adopted new rules based on the 2009 FDA Food Code. The 2012 NC Food Code addresses 8 of the 11 key public health intervention/risk factor categories and is 96% compliant with the Good Retail Practices of the 2013 FDA Food Code. The reduction in risk factors may be attributed to the improvement in regulatory foundation.

Wake County enrolled in the FDA Voluntary National Retail Food Regulatory Program Standards (Program Standards) in February 2008, and currently meets 6 of the 9 standards. Through its involvement with the Program Standards, Wake County is focusing more on identifying and correcting risk factors during routine inspections.

Wake County conducted a baseline risk factor study in 2010. A follow up risk factor study was completed in 2015. The factors surveyed in each risk factor study included:

- Food from unsafe sources
- Inadequate cooking
- Improper holding temperatures
- Contaminated equipment
- Poor personal hygiene

Data for the 2010 baseline study was obtained from 458 total inspections of institutional food service establishments, restaurants and retail food stores, consisting of 8,861 observations. Data for the 2015 Risk Factor Study was obtained from 447 total inspections of institutional food service establishments, restaurants and retail food stores, consisting of 8,596

observations. This report is provided to regulators and industry to focus greater attention on out-of-compliance risk factors.

B. Purpose

The purpose of the Wake County 2015 Risk Factor Study is to compare 2015 data to the 2010 baseline study so that industry and regulatory agencies can measure behavioral changes that directly relate to foodborne illness. In addition, the study is comparable to the national risk factor data.

The 2015 Wake County Risk Factor Study serves two purposes:

1. To identify risk factors most in need of priority attention and develop strategies to reduce their occurrence.
2. To evaluate trends over time and determine whether progress is being made toward reducing the occurrence of foodborne illness risk factors.

Based on the design and sample size, the Wake County 2015 study results are valid for comparison with Wake County's 2010 baseline study and previous national studies on the "Occurrence of Foodborne Illness Risk Factors."

C. Study Design and Objectives

This study contains nine separate reports of data analyses, one for each of the nine different facility types. The target industry segments for this project are institutional foodservice, restaurants, and retail food stores. Of the nine facility types, three were associated with institutional foodservice – hospitals, nursing homes, and elementary schools (K-5). The restaurant industry segment was comprised of two facility types – fast food and full service. Four facility types were departments of retail food stores and independent specialty operations related to deli, meat and poultry, seafood, and produce.

The objective of this study is designed to improve food preparation practices and employee behaviors within institutional food service establishments, restaurants, and food stores.

III. Methodology

In order to detect trends of improvement and/or regression from the 2010 baseline measurements, it was critical that the methodology used to collect data, as well as the study design, remained consistent for each data collection. The following sections of the report present an overview of the methodology used in this study.

A. Selection of facilities

For this study, nine facility types were chosen from three different segments of the foodservice and retail food industries. The selected industry segment samples provided coverage of general and highly susceptible populations, and also covered most of the industry segments regulated by the retail food inspection program. Highly susceptible populations are defined as a group of persons who are more likely than other individuals to experience foodborne illness because of their current health status or age.

The chart below reflects the 3 industry segments and 9 facility types selected for the survey. Sample sizes (n) for each type are shown. Using FDA's Data Collection Manual (2003), Wake County randomly determined the appropriate sample size to achieve statistical significance for each type facility for each industry segment, and randomly selected 447 facilities for the survey.¹

Industry Segment	Facility Type
Institutions	Hospitals (n=6) Nursing Homes (n=33) Elementary Schools (n=57)
Restaurants	Fast Food Restaurants (n=87) Full Service Restaurants (n=87)
Retail Food Stores	Delis (n=57) Meat Markets (n=59) Produce Departments (n=38) Seafood Markets (n=23)

Selection Criteria: Using the list of operating facilities in the county, each facility was categorized according to type and risk category (Appendix M). Using the definitions on the following pages, each establishment was categorized as a facility type. For each facility type, the following logic was used to select the group for consideration in the sample:

- **Hospital** food service establishments (n=6) were selected from those facilities that served each of the County's six hospitals. Hospital cafeterias in Wake County are

¹ FDA Data Collection Manual, "Developing a Baseline on the Occurrence of Foodborne Illness Risk Factors," page 12.

classified by the North Carolina Department of Environment and Natural Resources (NC DHHS) types #01 or #16. Because of the low sample size, all hospital cafeterias were included in the study.

- **Nursing Home** food establishments (n=33) were selected based on the NC DHHS type #16. Each of these food establishments serves clients from nursing facilities.
- **Elementary School** food establishments (n=57) were selected from the list of private and public school lunchrooms with a risk category of 4. These facilities served school children from grades K-5.
- **Fast Food Restaurants** (n=87) were selected from NC DHHS types #01 and #02 that had a risk category of 2 or 3. The sample did not consider the type of service provided by the fast food establishment, i.e., counter, wait or drive-through service.
- **Full Service Restaurants** (n=87) were selected from NC DHHS types #01 and #02 that had a risk category of 4.
- **Delis** (n=57) were selected from the raw data by considering the word “deli” in the name of the establishment. These were most often associated with a retail grocery store. In addition, other facilities were selected based on the definition used in Annex 1.² Delis typically slice meats and cheeses; however, they may serve cooked foods and deli salads.
- **Meat Markets** (n=59) were selected from the NC DHHS type #30. Other facilities that sold raw meat or poultry directly to the consumer were also considered.³
- **Produce Departments** (n=38) were selected from facilities that cut, prepare, store or display produce. These facilities were often associated with retail grocery stores. Facilities were flagged for consideration if they had “produce” or “salad bar” in their facility name.
- **Seafood Markets** (n=23) were selected from facilities that sell seafood directly to the consumer, including raw and/or ready-to-eat product. Seafood restaurants were not considered for this category, but were considered for fast food or full service restaurants.

Risk categories: Studies have shown that the types of food served, the food preparation processes used, the volume of food, and the populations served all have a bearing on the occurrence of foodborne illness risk factors in retail and foodservice establishments. The 2015 Wake County baseline survey used the State’s category flow chart in Appendix M.

² FDA Data Collection Manual, “Developing a Baseline on the Occurrence of Foodborne Illness Risk Factors,” page 43.

³ Ibid.

B. Random Selection of Establishments

The project manager generated a list of types of facilities, and then randomized the list in a Microsoft Excel spreadsheet. A sample number was assigned to each facility, including the first 10 substitutes, which were numbered sequentially. Data collectors were assigned facilities to evaluate. If a facility was no longer in business, the surveyor would be assigned the next substitute on the list.

Staff completed the surveys for each facility type before proceeding to the facility type. This allowed staff to focus on similar process associated with a facility type.

C. Selection of Data Collectors

The same survey team from 2010 was used to conduct the surveys in this study. Staff was trained by the FDA regional retail food specialist who initially accompanied staff to several facilities to perform surveys.

Staff met weekly to discuss the process, clarify questions, and review colleagues' data collection forms. Throughout the process, staff consulted with the FDA regional retail food specialist.

D. Geographical Locations

To minimize travel costs, staff was assigned facilities in a particular geographic area. Staff surveyed the sample in the following order: Institutional (Hospitals, Nursing Home Kitchens, Elementary School Cafeterias), Restaurants (Fast Food and Full Service) and Retail Food Stores (Deli, Meat, Produce and Seafood). Retail food stores were grouped by address, and all types located at that address were surveyed at a single visit.

E. Baseline Data Collection Procedure

The 5 major risk factors contributing to foodborne illness identified by the CDC provided the foundation for the data collection inspection form. See Appendix O, "2015 Data Collection Form". For each risk factor, Food Code requirements were identified and grouped into individual data items on the inspection form. See Appendix N, "2015 Reference Sheet." An additional risk factor, "Other," was used to capture the potential food safety risks related to possible contamination by toxic or unapproved chemicals in the establishment. Data related to Certified Food Protection Manager (CFPM) was also captured.

Unannounced visits to selected establishments were designed to be observational rather than regulatory. The surveyor was not the regularly assigned staff person for that facility. If observations merited regulatory action, the survey representative would ask for correction of the condition and follow up with the environmental health specialist (EHS) assigned to that facility to ensure long term correction.

F. Baseline Data Collection Form

The 2015 Data Collection inspection form (Appendix O) contained 46 individual data items. For each of the 46 observations, the EHS determined whether the item was:

- IN=Item found “in compliance” with 2013 FDA Food Code provisions.
- OUT=Item found “out of compliance” with 2013 FDA Food Code provisions. An explanation was provided in the comment section on the data collection form for each “out of compliance” observation.
- NO=Item was “not observed.” The “NO” notation was used when an item was a usual practice in the food service operation, but the practice was not observed during the time of the inspection.
- NA=Item was “not applicable.” The “NA” notation was used when an item was not part of the food service operation.

The same data collection form was used at each establishment. The completed data collection inspection forms were sent to a project manager. Before data entry, the project manager thoroughly reviewed each form to ensure reporting consistency.

G. Quality Control

To ensure quality control, staff met weekly to discuss issues and to ask questions. Staff consulted with the FDA regional retail food specialist frequently for interpretation. E-mails have been archived for future reference.

After the data sheets were collected and reviewed, the project managers cross-referenced the entries on the raw data sheets with the electronically entered data to ensure accuracy in transfer to the electronic database. Final tabulations were audited by an outside staff person to confirm the results of the study.

H. Average Time per Data Collection

During data collection, Wake County tracked the actual time spent in each of the inspected establishments. Table 6, that appears on the following page, presents the average data collection time, in minutes, for each of the facility types and compares the 2015 study and the 2010 baseline study. Travel time and off-site report preparation were not included in the time assessment.

Table 6

**Average Inspection Time per Establishment for each of the 9 Facility Types
(Total MINUTES per Establishment)**

	Average Inspection Time (In Minutes)		
Facility Type	2015 Wake County	2010 Wake County	2008 FDA
Hospitals	64	79	138
Nursing Homes	58	56	81
Elementary Schools	33	40	91
Fast Food Restaurants	35	39	73
Full Service Restaurants	51	55	106
Deli	46	50	80
Meat & Poultry	30	28	36
Produce	29	26	33
Seafood	32	29	41

IV - A. Institutional Food Service-Hospitals

Introduction

In 2015 all hospital cafeterias were assessed for food safety risk factors. For the 46 possible individual data items on the survey instrument, 163 observations were made at six hospital kitchens. See Appendix A for complete data related to hospitals.

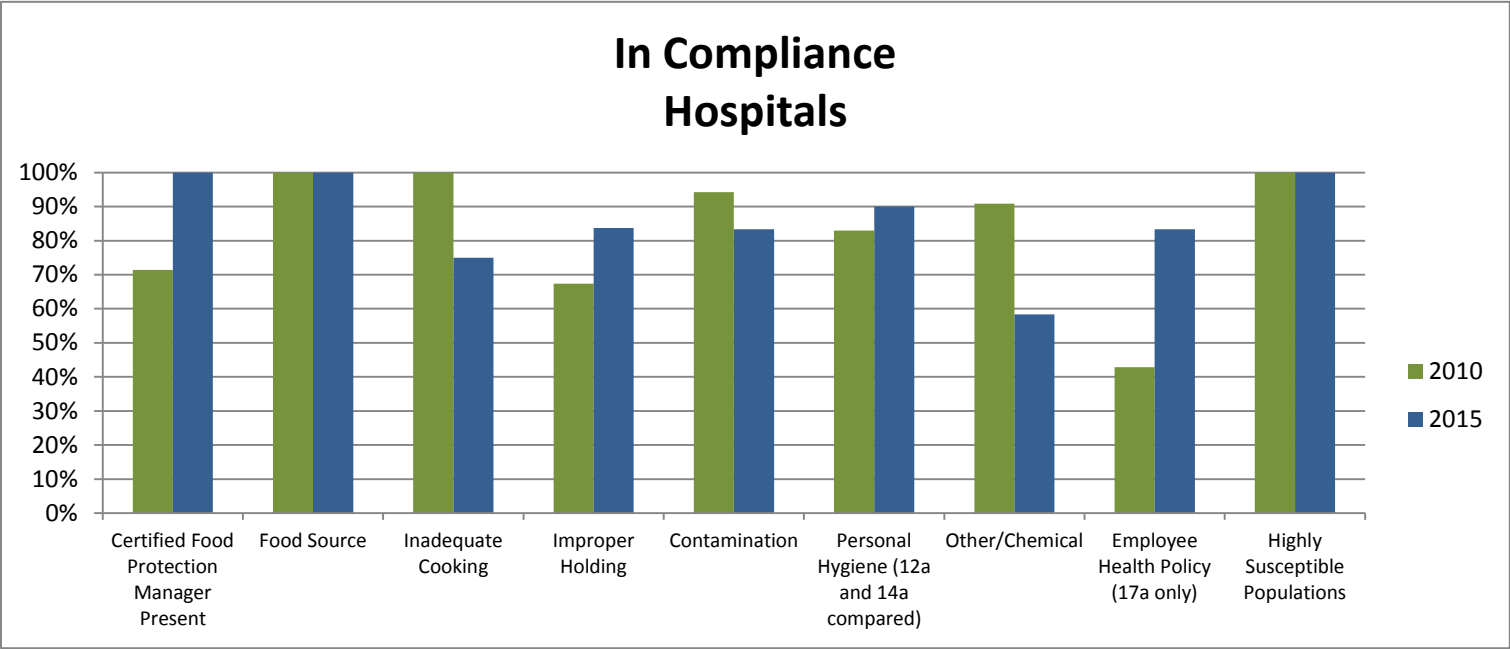
Certified food protection managers (CFPM) (100%): For this survey, a CFPM had to be present. A CFPM is defined as an employee who has supervisory responsibility and the authority to direct and control food preparation. The CFPM must have passed an American National Standards Institute (ANSI) accredited program, and present a certificate during the assessment. A CFPM was present at all six facilities (100% IN compliance).

Employee Health Policy (83%): There was a significant improvement (40%) in compliance with the 2009 Employee Health Policy.

Results and Discussion

The following diagram represents IN compliance risk factors by category as a percentage of total observations.

Table H-1



The same data is shown in the table below with the actual number of IN compliance observations relative to the total number of observations (IN and OUT).

Table H-2

Foodborne Illness Risk Factor Risk Factor IN compliance:	Hospital Cafeterias					
	2010			2015		
	% IN	# IN observations	Total observations	% IN	# IN observations	Total observations
Approved Source	100%	14	14	100%	12	12
Inadequate Cooking	100%	10	10	75%	9	12
Improper Holding	67%	31	46	84%	36	43
Contamination	94%	33	35	83%	25	30
Personal Hygiene	83%	34	41	90%	27	30
Other/Chemical	91%	10	11	58%	7	12
Employee Health Policy	43%	3	7	83%	5	6
Highly Susceptible Populations	100%	21	21	100%	18	18
Totals	84.3%	156	185	85.3%	139	163

Overall, the compliance with risk factors at hospital cafeterias improved from 84.3% in 2010 to 85.3% in 2015. Observations for three foodborne illness risk factors reduced in compliance: Inadequate Cooking, Contamination and Other/Chemical. Considering the small size of the sample, the reader may not be able to assume normality.

Tables H-3, H-4 and H-5 show the breakdown of these risk factors into the specific individual data items on the survey instrument.

Table H-3: Inadequate Cooking

Data Item	# IN	Total Observations	% IN
Proper Cooking Temperature Per Potentially Hazardous Food (TCS) (4a-4h)	6	7	86 %
Rapid Reheating for Hot Holding (5a-5d)	3	5	60 %
Total	9	12	75%

Proper Cooking Temperature Per Potentially Hazardous Food (TCS) (Items 4a-4h): Required cooking temperatures are based on thermal destruction data and anticipated microbial load. These parameters may vary with different types of raw animal foods. The minimum internal product temperature and the time that this temperature must be maintained are dictated by the type of food product being cooked. Proper

monitoring and control of cooking operations is central to an effective food safety management system in any establishment.

Rapid Reheating for Hot Holding (5a–5d): It is important to properly reheat TCS food that was initially cooked and cooled on premises and that is to be held hot prior to serving. Reheating these products to 165°F (74°C) for 15 seconds ensures that pathogens that may have contaminated the food after cooking are destroyed and are not given the opportunity to multiply during hot holding.

Table H-4: Contamination

Data Item	# IN	Total Observations	% IN
Separation/Segregation/Protection (10a-10d)	22	24	92%
Food Contact Surfaces (11a)	3	6	50%
Total	25	30	83%

Separation/Segregation/Protection (Items 10a-10d): Raw animal foods are a potential source of contamination in any food operation. Storing raw animal foods above or in close proximity to ready-to-eat foods increases the potential for food to become contaminated. Having organized, designated areas for the safe storage of raw animal products will help prevent cross-contamination of cooked and ready-to-eat foods.

Food Contact Surfaces (Item 11a): Proper cleaning and sanitization of food contact surfaces is an effective means of preventing cross-contamination. Keeping surfaces and utensils clean and sanitized helps prevent cross-contamination.

Table H-5: Other/Chemical

Data Item	# IN	Total Observations	% IN
Other/Chemical (16a-16c)	7	12	58%

Foreign Substances/Chemicals (16a – 16c): The proper identification, storage, and use of cleaners, sanitizers, and other chemicals are necessary for food safety. Toxic materials must be stored in an area that is not above food or equipment.

IV - B. Institutional Food Service-Nursing Homes

Introduction

In 2015 nursing home kitchens were assessed for food safety risk factors. For the 46 possible individual data items on the survey instrument, 767 observations were made. See Appendix B for complete data related to nursing homes.

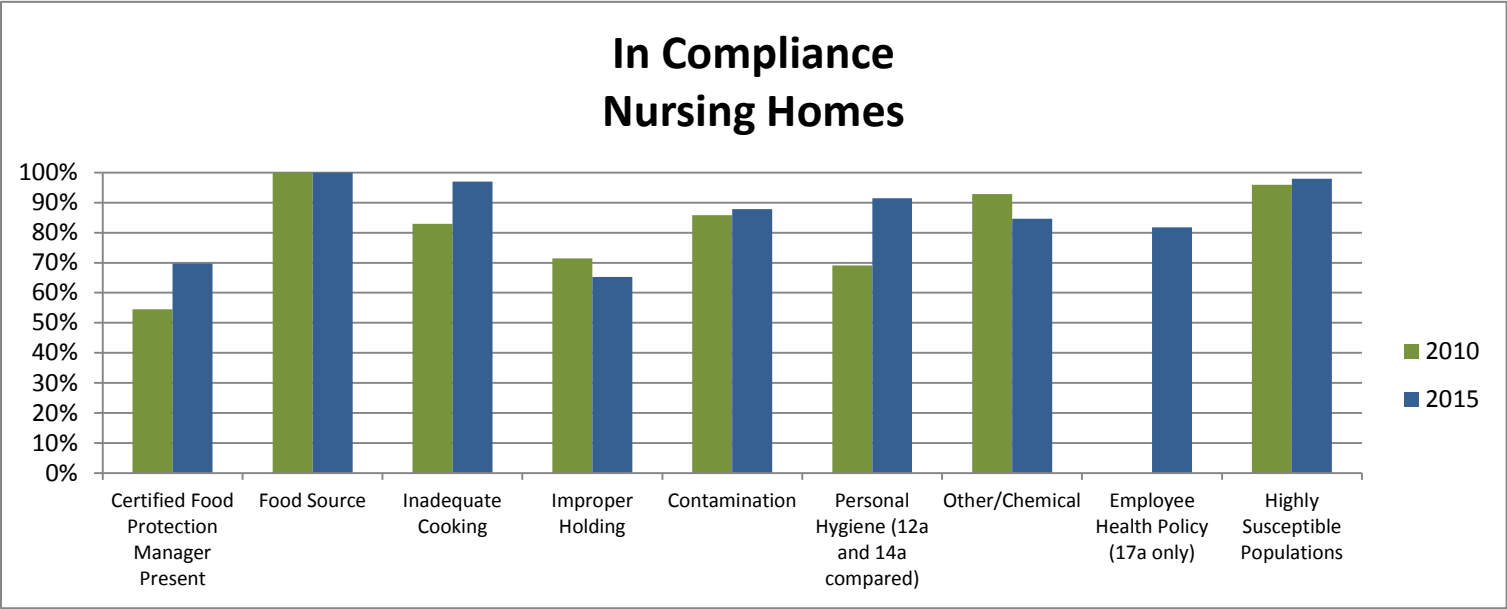
Certified food protection managers (CFPM) (70%): For this survey, a CFPM had to be present. A CFPM is defined as an employee who has supervisory responsibility and the authority to direct and control food preparation. The CFPM must have passed an American National Standards Institute (ANSI) accredited program, and present a certificate during the assessment. A CFPM was present at twenty-three facilities (70% IN compliance).

Employee Health Policy (82%): There was a significant improvement (82%) in compliance of the 2009 Employee Health Policy.

Results and Discussion

The following diagram represents IN compliance risk factors by category as a percentage of total observations.

Table H-1



The same data is shown in the table below with the actual number of IN compliance observations relative to the total number of observations (IN and OUT).

Table H-2

Foodborne Illness Risk Factor Risk Factor IN compliance:	Nursing Homes					
	2010			2015		
	% IN	# IN observations	Total observations	% IN	# IN observations	Total observations
Approved Source	100%	66	66	100%	66	66
Inadequate Cooking	83%	34	41	97%	32	33
Improper Holding	71%	135	189	65%	111	170
Contamination	86%	139	162	88%	144	164
Personal Hygiene	69%	134	194	91%	149	163
Other/Chemical	93%	52	56	85%	33	39
Employee Health Policy	0%	0	33	82%	27	33
Highly Susceptible Populations	96%	95	99	98%	97	99
Totals	78.0%	655	840	85.9%	659	767

Overall, the compliance with risk factors at nursing homes improved from 78.0% in 2010 to 85.9% in 2015. Observations for two foodborne illness risk factors reduced in compliance: Improper Holding and Other/Chemical.

Observations for Personal Hygiene significantly increased from 69% to 91%.

Tables H-3 and H-4 show the breakdown of these risk factors into the specific individual data items on the survey instrument.

Table H-3: Improper Holding

Data Item	# IN	Total Observations	% IN
Rapid Reheating for Hot Holding (5a -5d)	16	17	94%
Proper Cooling Procedure (6a-6c)	16	25	64%
Cold Hold (41°F (5°C)) (7a)	23	33	70%
Hot Hold (135°F (60°C)) (8a-8b)	19	21	90%
Time as Public Health Control (TPHC)/Date Marking (9a-9d)	53	91	58%
Total	127	187	68%

The three individual data items with 70% or less compliance for Improper Holding for nursing homes are Proper Cooling Procedure, Cold Hold and Time as Public Health Control.

Proper Cooling Procedure (Individual Data Items 6a, 6b and 6c): Safe cooling requires rapid removal of heat from foods quickly enough to prevent the growth of spore-forming pathogens. Foodservice directors and managers need to ensure their practices and procedures are capable of rapidly cooling foods that are time and temperature controlled for safety (TCS).

Cold Holding at 41°F (Individual Data Item 7a): Maintaining TCS foods under the cold temperature control of 41°F limits the growth of pathogens that may be present in or on the food and may help prevent foodborne illness. Temperature has significant impact on both the generation time of an organism and its lag period. Control of the growth of *Listeria monocytogenes* (Lm) is the basis for the cold holding temperature of 41°F. North Carolina’s cold holding temperature requirement is 45°F.

Date marking (Individual Data Items 9a, 9b, 9c and 9d): Date marking of refrigerated ready-to-eat, TCS foods is an important food safety system component designed to promote proper food rotation and limit the growth of *Listeria monocytogenes* (Lm) during cold storage. The importance of date marking of ready-to-eat TCS is accentuated in the nursing home environment because the meals are primarily served to a highly susceptible population.

Table H-4: Other/Chemical

Data Item	# IN	Total Observations	% IN
Other/Chemical (16a-16c)	33	39	85%

Foreign Substances/Chemicals (16a – 16c): The proper identification, storage, and use of cleaners, sanitizers, and other chemicals are necessary for food safety. Toxic materials must be stored in an area that is not above food or equipment.

IV - C. Institutional Food Service-Elementary Schools

Introduction

In 2015 elementary school kitchens were assessed for food safety risk factors. For the 46 possible individual data items on the survey instrument, 1136 observations were made. See Appendix C for complete data related to elementary schools.

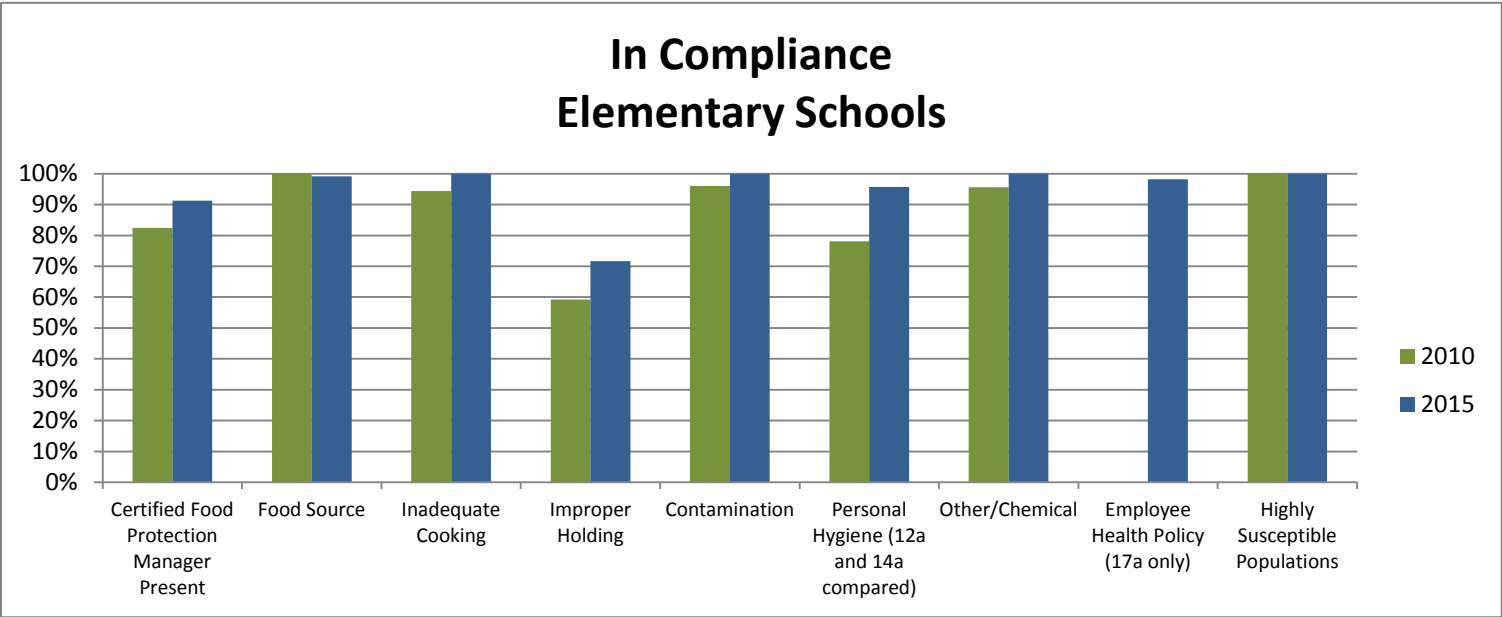
Certified food protection managers (CFPM) (91%): For this survey, a CFPM had to be present. A CFPM is defined as an employee who has supervisory responsibility and the authority to direct and control food preparation. The CFPM must have passed an American National Standards Institute (ANSI) accredited program, and present a certificate during the assessment. A CFPM was present at fifty-two facilities (91% IN compliance).

Employee Health Policy (98%): There was a significant improvement (98%) in compliance of the 2009 Employee Health Policy.

Results and Discussion

The following diagram represents IN compliance risk factors by category as a percentage of total observations.

Table H-1



The same data is shown in the table below with the actual number of IN compliance observations relative to the total number of observations (IN and OUT).

Table H-2

Foodborne Illness Risk Factor Risk Factor IN compliance:	Elementary Schools					
	2010			2015		
	% IN	# IN observations	Total observations	% IN	# IN observations	Total observations
Approved Source	100%	115	115	99%	110	111
Inadequate Cooking	94%	50	53	100%	37	37
Improper Holding	59%	183	309	72%	185	258
Contamination	96%	168	175	100%	164	164
Personal Hygiene	78%	267	342	96%	271	283
Other/Chemical	96%	88	92	100%	58	58
Employee Health Policy	0%	0	57	98%	56	57
Highly Susceptible Populations	100%	171	171	100%	168	168
Totals	79.3%	1042	1314	92.3%	1049	1136

Overall, the compliance with risk factors at elementary school cafeterias improved from 79.3% in 2010 to 92.3% in 2015.

Observations for Personal Hygiene significantly increased from 78% to 96%.

IV - D. Restaurants-Fast Food

Introduction

In 2015 fast food restaurants were assessed for food safety risk factors. For the 42 possible individual data items on the survey instrument, 1578 observations were made. See Appendix D for complete data related to elementary schools.

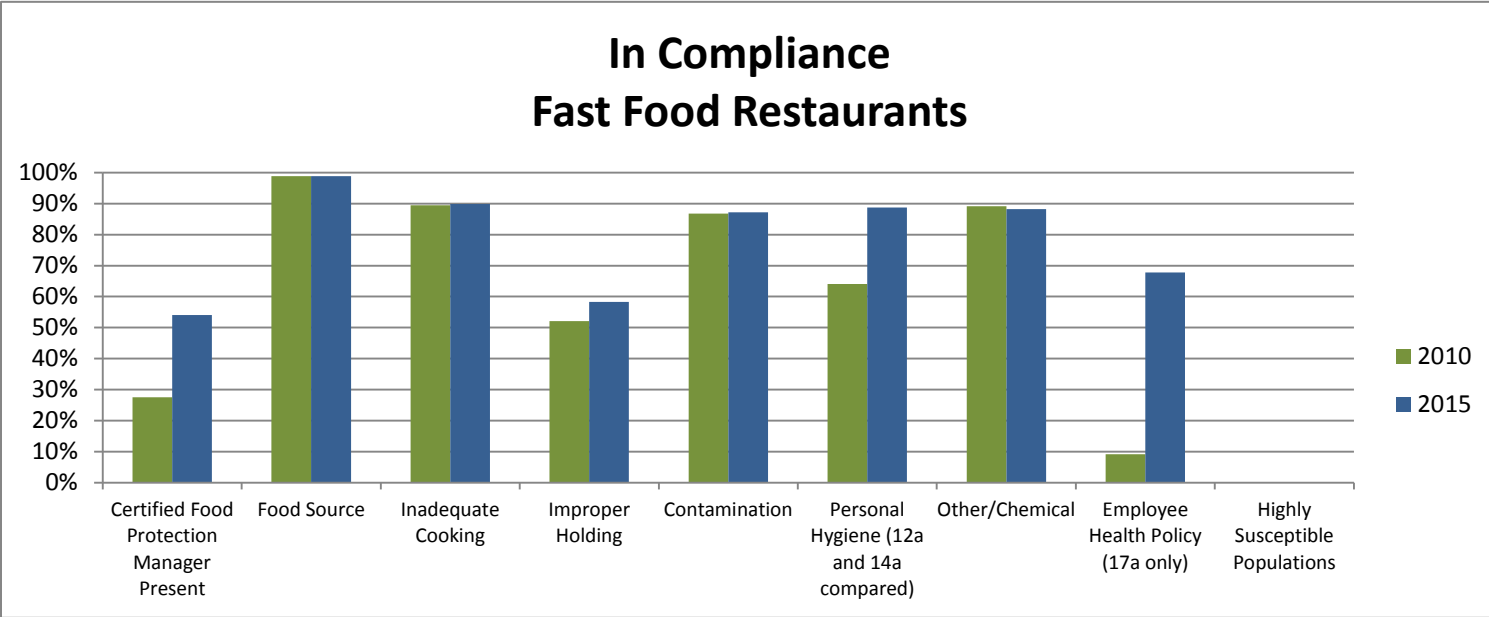
Certified food protection managers (CFPM) (54%): For this survey, a CFPM had to be present. A CFPM is defined as an employee who has supervisory responsibility and the authority to direct and control food preparation. The CFPM must have passed an American National Standards Institute (ANSI) accredited program, and present a certificate during the assessment. A CFPM was present at forty-seven facilities (54% IN compliance).

Employee Health Policy (68%): There was a significant improvement (59%) in compliance of the 2009 Employee Health Policy.

Results and Discussion

The following diagram represents IN compliance risk factors by category as a percentage of total observations.

Table H-1



The same data is shown in the table below with the actual number of IN compliance observations relative to the total number of observations (IN and OUT).

Table H-2

Foodborne Illness Risk Factor Risk Factor IN compliance:	Fast Food Restaurants					
	2010			2015		
	% IN	# IN observations	Total observations	% IN	# IN observations	Total observations
Approved Source	99%	177	179	99%	175	177
Inadequate Cooking	89%	76	85	90%	53	59
Improper Holding	52%	224	430	58%	219	376
Contamination	87%	303	349	87%	306	351
Personal Hygiene	64%	316	493	89%	386	435
Other/Chemical	89%	82	92	88%	82	93
Employee Health Policy	9%	8	87	68%	59	87
Highly Susceptible Populations	0%	0	0	0%	0	0
Totals	69.2%	1186	1715	81.1%	1280	1578

Overall, the compliance with risk factors at fast food restaurants improved from 69.2% in 2010 to 81.1% in 2015.

Observations for Personal Hygiene significantly increased from 64% to 89%.

IV - E. Restaurants-Full Service

Introduction

In 2015 full service restaurants were assessed for food safety risk factors. For the 42 possible individual data items on the survey instrument, 1839 observations were made. See Appendix E for complete data related to elementary schools.

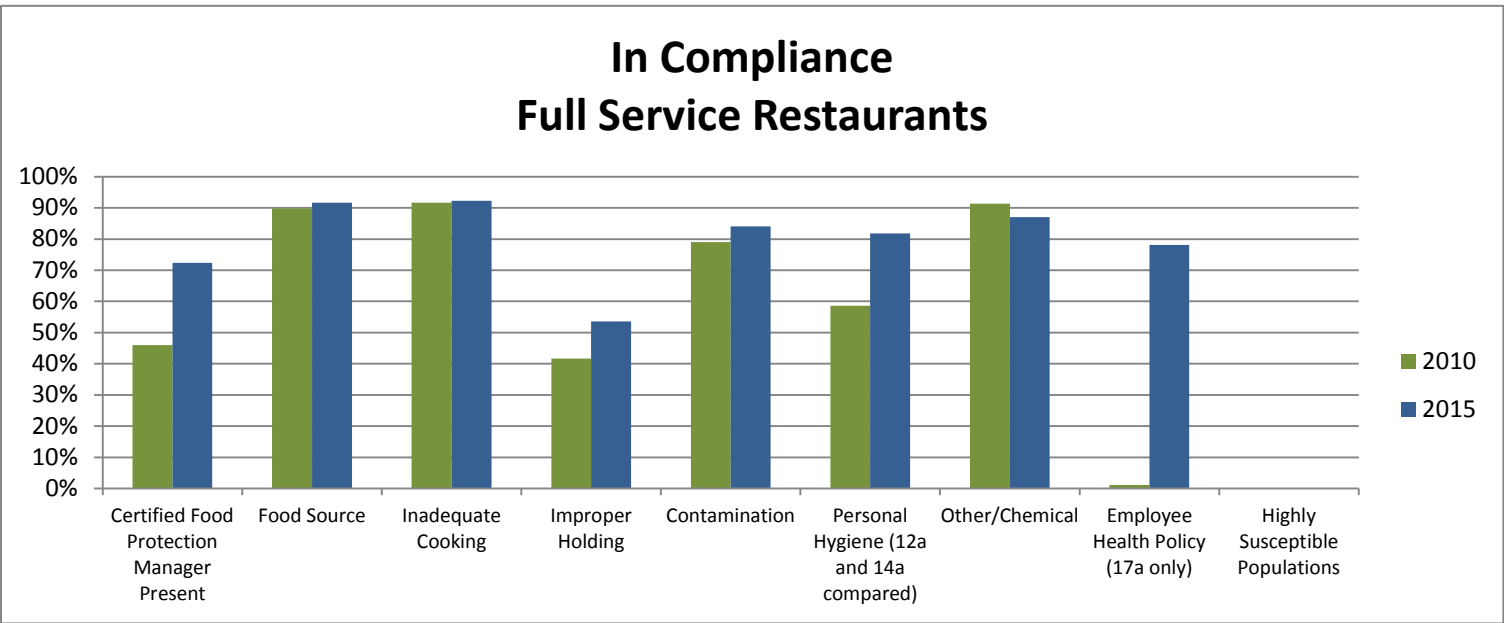
Certified food protection managers (CFPM) (72%): For this survey, a CFPM had to be present. A CFPM is defined as an employee who has supervisory responsibility and the authority to direct and control food preparation. The CFPM must have passed an American National Standards Institute (ANSI) accredited program, and present a certificate during the assessment. A CFPM was present at sixty-three facilities (72% IN compliance).

Employee Health Policy (78%): There was a significant improvement (77%) in compliance of the 2009 Employee Health Policy.

Results and Discussion

The following diagram represents IN compliance risk factors by category as a percentage of total observations.

Table H-1



The same data is shown in the table below with the actual number of IN compliance observations relative to the total number of observations (IN and OUT).

Table H-2

Foodborne Illness Risk Factor Risk Factor IN compliance:	Full Service Restaurants					
	2010			2015		
	% IN	# IN observations	Total observations	% IN	# IN observations	Total observations
Approved Source	89%	194	216	92%	186	203
Inadequate Cooking	91%	121	132	92%	72	78
Improper Holding	41%	209	501	54%	268	500
Contamination	79%	339	429	84%	360	428
Personal Hygiene	58%	298	508	82%	356	435
Other/Chemical	91%	105	115	87%	94	108
Employee Health Policy	1%	1	87	78%	68	87
Highly Susceptible Populations	0%	0	0	0%	0	0
Totals	63.7%	1267	1988	76.3%	1404	1839

Overall, the compliance with risk factors at full service restaurants improved from 63.7% in 2010 to 76.3% in 2015.

Observations for Personal Hygiene significantly increased from 58% to 82%.

IV - F. Retail Food-Delis

Introduction

In 2015 Delis were assessed for food safety risk factors. For the 42 possible individual data items on the survey instrument, 1158 observations were made. See Appendix F for complete data related to delis.

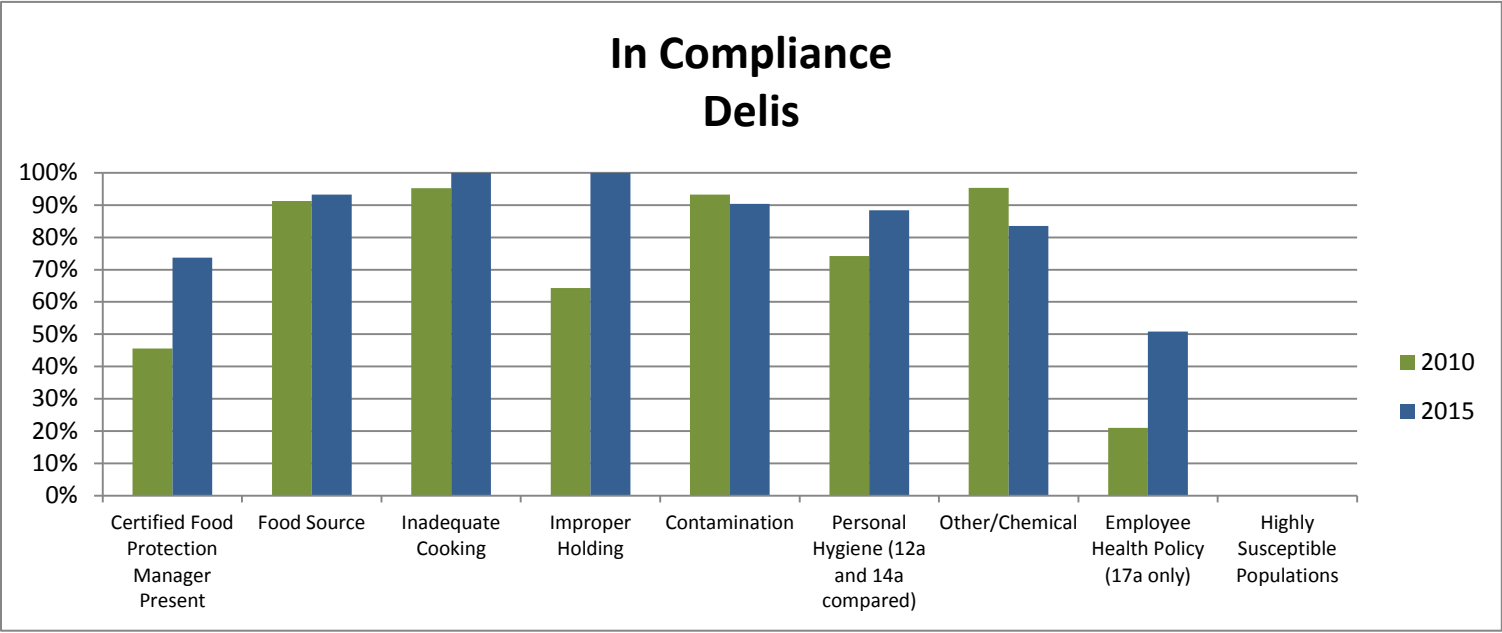
Certified food protection managers (CFPM) (74%): For this survey, a CFPM had to be present. A CFPM is defined as an employee who has supervisory responsibility and the authority to direct and control food preparation. The CFPM must have passed an American National Standards Institute (ANSI) accredited program, and present a certificate during the assessment. A CFPM was present at forty-two facilities (74% IN compliance).

Employee Health Policy (51%): There was a significant improvement (30%) in compliance of the 2009 Employee Health Policy.

Results and Discussion

The following diagram represents IN compliance risk factors by category as a percentage of total observations.

Table H-1



The same data is shown in the table below with the actual number of IN compliance observations relative to the total number of observations (IN and OUT).

Table H-2

Foodborne Illness Risk Factor Risk Factor IN compliance:	Retail Food - Delis					
	2010			2015		
	% IN	# IN observations	Total observations	% IN	# IN observations	Total observations
Approved Source	91%	125	137	93%	139	149
Inadequate Cooking	95%	40	42	100%	35	35
Improper Holding	64%	191	297	100%	310	310
Contamination	93%	236	253	90%	225	249
Personal Hygiene	74%	245	330	88%	252	285
Other/Chemical	95%	81	85	84%	61	73
Employee Health Policy	21%	12	57	51%	29	57
Highly Susceptible Populations	0%	0	0	0%	0	0
Totals	77.4%	930	1201	90.8%	1051	1158

Overall, the compliance with risk factors at delis improved from 77.4% in 2010 to 90.8% in

Observations for Personal Hygiene significantly increased from 74% to 88% and Improper Holding increased from 64% to 100%. Observations for two foodborne illness risk factors reduced in compliance: Contamination and Other/Chemical.

Tables H-3 and H-4 show the breakdown of these risk factors into the specific individual data items on the survey instrument.

Table H-3: Contamination

Data Item	# IN	Total Observations	% IN
Food Contact Surfaces (11a)	38	57	67%

Food Contact Surfaces (Item 11a): Proper cleaning and sanitization of food-contact surfaces is an effective means of preventing cross-contamination. Keeping surfaces and utensils clean and sanitized helps prevent cross-contamination.

Table H-4: Other/Chemical

Data Item	# IN	Total Observations	% IN
Other/Chemical (16a-16c)	61	73	84%

Foreign Substances/Chemicals (16a – 16c): The proper identification, storage, and use of cleaners, sanitizers, and other chemicals are necessary for food safety. Toxic materials must be stored in an area that is not above food or equipment.

IV - G. Retail Food-Meat Markets

Introduction

In 2015 meat markets were assessed for food safety risk factors. For the 42 possible individual data items on the survey instrument, 900 observations were made. See Appendix G for complete data related to elementary schools.

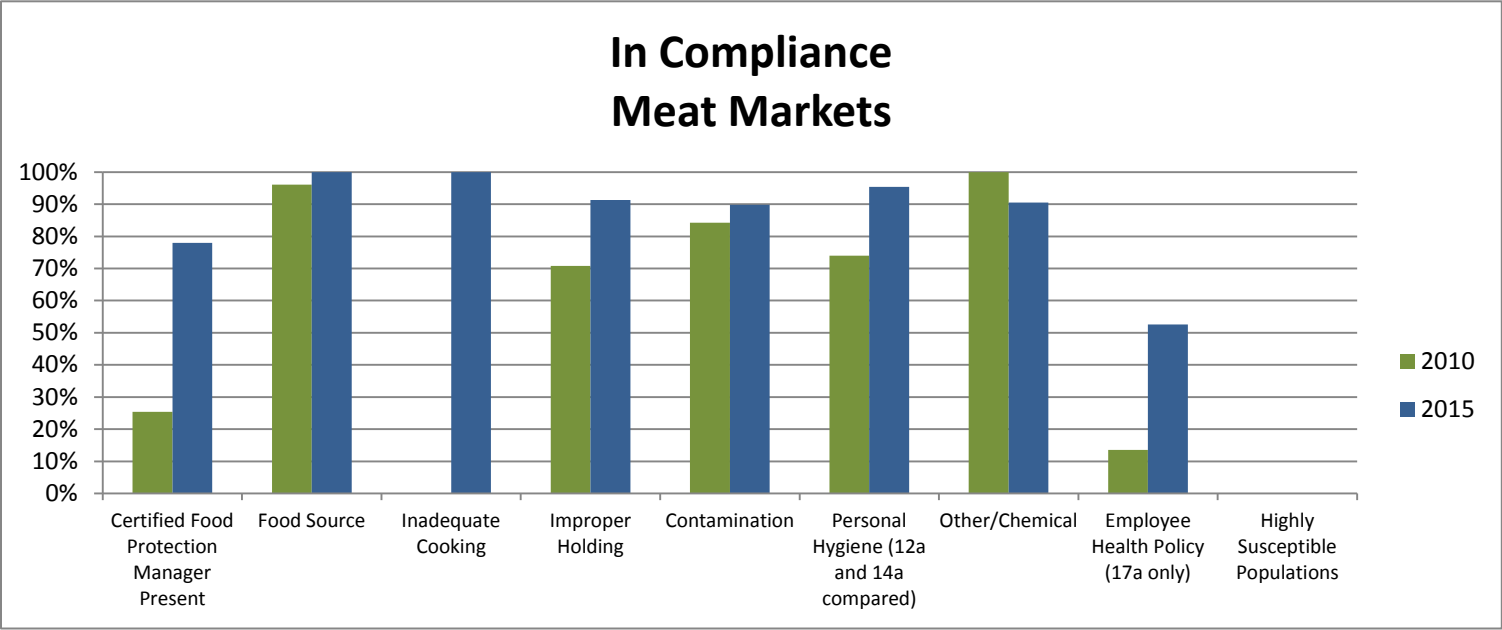
Certified food protection managers (CFPM) (78%): For this survey, a CFPM had to be present. A CFPM is defined as an employee who has supervisory responsibility and the authority to direct and control food preparation. The CFPM must have passed an American National Standards Institute (ANSI) accredited program, and present a certificate during the assessment. A CFPM was present at forty-six facilities (78% IN compliance).

Employee Health Policy (53%): There was a significant improvement (39%) in compliance of the 2009 Employee Health Policy.

Results and Discussion

The following diagram represents IN compliance risk factors by category as a percentage of total observations.

Table H-1



The same data is shown in the table below with the actual number of IN compliance observations relative to the total number of observations (IN and OUT).

Table H-2

Foodborne Illness Risk Factor Risk Factor IN compliance:	Meat Markets					
	2010			2015		
	% IN	# IN observations	Total observations	% IN	# IN observations	Total observations
Approved Source	96%	124	129	100%	151	151
Inadequate Cooking	0%	0	0	100%	2	2
Improper Holding	70%	63	89	91%	74	81
Contamination	84%	224	266	90%	256	285
Personal Hygiene	74%	208	281	95%	247	259
Other/Chemical	100%	65	65	90%	57	63
Employee Health Policy	13%	8	59	53%	31	59
Highly Susceptible Populations	0%	0	0	0%	0	0
Totals	77.8%	692	889	90.9%	818	900

Overall, the compliance with risk factors at meat markets improved from 77.8% in 2010 to 90.9% in 2015.

Observations for Personal Hygiene significantly increased from 74% to 95% and Improper Holding increased from 70% to 91%.

Observations for one foodborne illness risk factor reduced in compliance: Other/Chemical.

Tables H-3 shows the breakdown of these risk factors into the specific individual data items on the survey instrument.

Table H-3: Other/Chemical

Data Item	# IN	Total Observations	% IN
Other/Chemical (16a-16c)	57	63	90%

Foreign Substances/Chemicals (16a – 16c): The proper identification, storage, and use of cleaners, sanitizers, and other chemicals are necessary for food safety. Toxic materials must be stored in an area that is not above food or equipment.

IV - H. Retail Food – Produce

Introduction

In 2015 produce were assessed for food safety risk factors. For the 43 possible individual data items on the survey instrument, 627 observations were made. See Appendix H for complete data related to elementary schools.

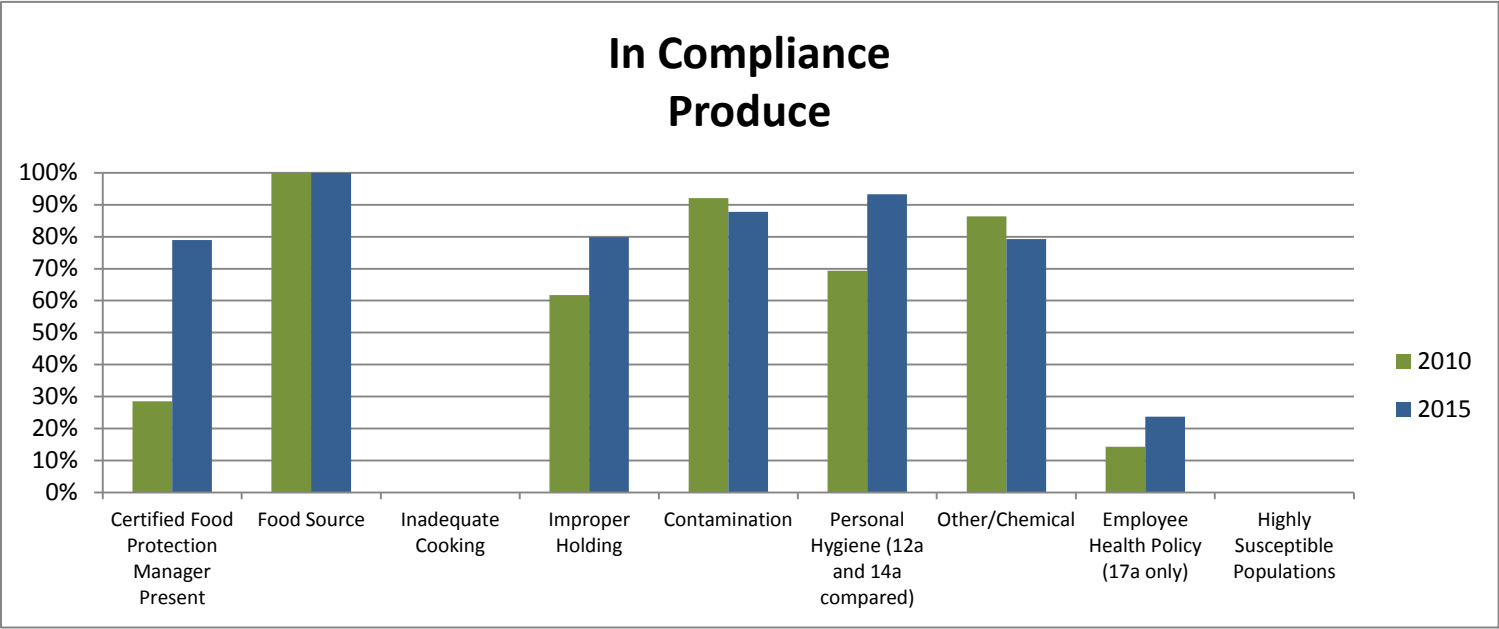
Certified food protection managers (CFPM) (79%): For this survey, a CFPM had to be present. A CFPM is defined as an employee who has supervisory responsibility and the authority to direct and control food preparation. The CFPM must have passed an American National Standards Institute (ANSI) accredited program, and present a certificate during the assessment. A CFPM was present at thirty facilities (79% IN compliance).

Employee Health Policy (24%): There was an improvement (10%) in compliance of the 2009 Employee Health Policy.

Results and Discussion

The following diagram represents IN compliance risk factors by category as a percentage of total observations.

Table H-1



The same data is shown in the table below with the actual number of IN compliance observations relative to the total number of observations (IN and OUT).

Table H-2

Foodborne Illness Risk Factor Risk Factor IN compliance:	Produce					
	2010			2015		
	% IN	# IN observations	Total observations	% IN	# IN observations	Total observations
Approved Source	100%	87	87	100%	76	76
Inadequate Cooking	0%	0	0	0%	0	0
Improper Holding	61%	76	123	80%	111	139
Contamination	92%	116	126	88%	100	114
Personal Hygiene	69%	136	196	93%	166	178
Other/Chemical	86%	76	88	79%	65	82
Employee Health Policy	14%	6	42	24%	9	38
Highly Susceptible Populations	0%	0	0	0%	0	0
Totals	75.1%	497	662	84.1%	527	627

Overall, the compliance with risk factors at produce improved from 75.1% in 2010 to 84.1% in 2015. Observations for two foodborne illness risk factors reduced in compliance: Contamination and Other/Chemical. Observations for Personal Hygiene significantly increased from 69% to 93%.

Table H-4: Contamination

Data Item	# IN	Total Observations	% IN
Separation/Segregation/Protection (10a-10d)	74	76	97%
Food Contact Surfaces (11a)	26	38	68%
Total	25	30	83%

Food Contact Surfaces (Item 11a): Proper cleaning and sanitization of food contact surfaces is an effective means of preventing cross-contamination. Keeping surfaces and utensils clean and sanitized helps prevent cross-contamination.

Table H-4: Other/Chemical

Data Item	# IN	Total Observations	% IN
Other/Chemical (16a-16c)	33	39	85%

Foreign Substances/Chemicals (16a – 16c): The proper identification, storage, and use of cleaners, sanitizers, and other chemicals are necessary for food safety. Toxic materials must be stored in an area that is not above food or equipment.

IV - I. Retail Food-Seafood

Introduction

In 2015 produce were assessed for food safety risk factors. For the 42 possible individual data items on the survey instrument, 415 observations were made. See Appendix I for complete data related to elementary schools.

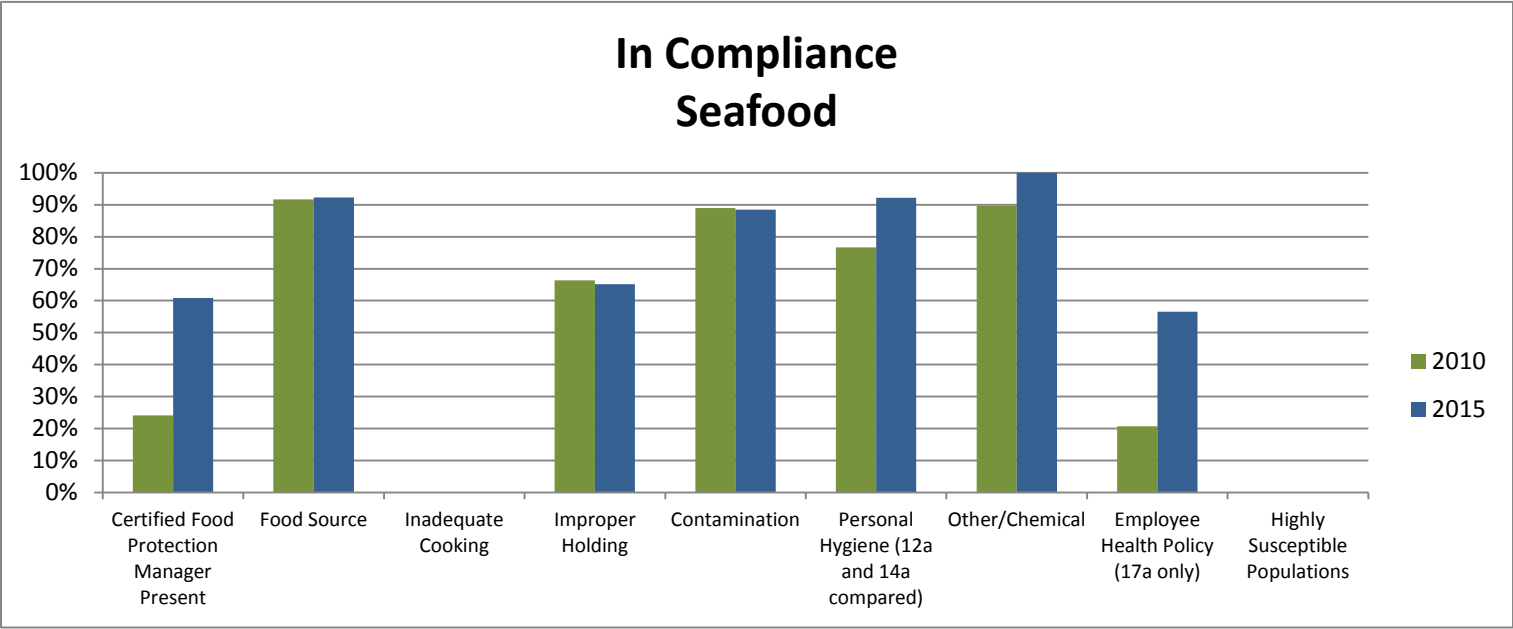
Certified food protection managers (CFPM) (61%): For this survey, a CFPM had to be present. A CFPM is defined as an employee who has supervisory responsibility and the authority to direct and control food preparation. The CFPM must have passed an American National Standards Institute (ANSI) accredited program, and present a certificate during the assessment. A CFPM was present at fourteen facilities (61% IN compliance).

Employee Health Policy (57%): There was an improvement (36%) in compliance of the 2009 Employee Health Policy.

Results and Discussion

The following diagram represents IN compliance risk factors by category as a percentage of total observations.

Table H-1



The same data is shown in the table below with the actual number of IN compliance observations relative to the total number of observations (IN and OUT).

Table H-2

Foodborne Illness Risk Factor Risk Factor IN compliance:	Seafood					
	2010			2015		
	% IN	# IN observations	Total observations	% IN	# IN observations	Total observations
Approved Source	92%	88	96	92%	84	91
Inadequate Cooking	0%	0	0	0%	0	0
Improper Holding	66%	65	98	65%	43	66
Contamination	89%	121	136	88%	84	95
Personal Hygiene	77%	105	137	92%	106	115
Other/Chemical	90%	26	29	100%	25	25
Employee Health Policy	21%	6	29	57%	13	23
Highly Susceptible Populations	0%	0	0	0%	0	0
Totals	78.3%	411	525	85.5%	355	415

Overall, the compliance with risk factors at produce improved from 78.3% in 2010 to 85.5% in 2015.

Observations for Personal Hygiene significantly increased from 76% to 92%.

IV. Results and Discussion - Summary

The results of this study highlight foodborne illness risk factors associated with food preparation procedures and employee behaviors. A common goal for industry and regulators is to reduce the occurrence of foodborne illness risk factors. Industry achieves this goal through education and active managerial control. Recommended intervention strategies for both regulatory and industry food safety professionals are presented in Section V, “Recommendations.”

The 2015 Wake County study instrument consisted of 46 individual data items that are grouped into the five CDC risk factor categories and sections for chemicals, employee health policy and food preparation for highly susceptible populations. The individual data items on the study form are grouped as follows:

Risk Factor	Individual Data Items	Number of items
Food source	1a-3c	7
Inadequate cooking	4a-5d	12
Improper holding	6a-9d	10
Contamination	10a-11a	5
Personal hygiene	12a-15b	5
Other/chemical	16a-18c	7

The study instrument is available at Appendix O “2015 Data Collection Form”.

Certified Manager Presence

Designation of a person in charge during all hours of operation ensures the continuous presence of someone who is responsible for monitoring and managing all food establishment operations and who is authorized to take actions to ensure that public health objectives are fulfilled. During the day-to-day operation of a food establishment, a person who is immediately available and knowledgeable in both operational and regulatory requirements is needed to respond to questions and concerns and to resolve problems. During the 2015 Wake County risk factor study, staff surveyed whether a Certified Food Protection Manager (CFPM) was present and could present a State-approved course certificate. If the conditions were met, the observation was marked IN compliance. The following table lists the facility type and the corresponding percent compliance with this question.

Facility Type	2015 # facilities with CFPM present	2015 % presence of CFPM's	2010 % presence of CFPM's	% increase in CFPM's present
Hospitals (n=6)	6	100%	71%	29%
Nursing Homes (n=33)	23	70%	55%	15%
Elementary Schools (n=57)	52	91%	82%	9%
Fast Food Restaurants (n=87)	47	54%	28%	26%
Full Service Restaurants (n=87)	63	72%	46%	26%
Deli (n=57)	42	74%	46%	28%
Meat (n=59)	46	78%	25%	53%
Produce (n=38)	30	79%	29%	50%
Seafood (n=23)	14	61%	24%	37%

The highest percentage of facilities with a certified manager present was the hospital facility type. Fast Food Restaurants had the lowest percentage of certified managers present. Since 2010, there has been an overall increase in the presence of CFPM's in kitchens. This may be attributed to a rule change that allows a two point deduction when a CFPM is not present in the facility.

Presentation of the data results

A summary of the overall percentage of IN compliance individual data items (Appendix K) per facility type is presented in Table 1 of this section. The data reflect the overall percentage of observable and applicable data items found to be IN compliance.

Table 1

Overall percent (%) of Observable and Applicable data items found IN compliance by facility type					
		2015 Wake County Study % IN Compliance	2010 Wake County Baseline % IN Compliance	FDA National 2008 study	FDA National 2003 study
Institutions	Hospital	85%	86%	81%	80%
	Nursing Home	86%	81%	83%	80%
	Elementary School	92%	83%	84%	83%
Restaurants	Fast Food	81%	72%	78%	74%
	Full Service	76%	67%	64%	62%
Retail Store Departments	Deli	91%	80%	74%	70%
	Meat and Poultry	91%	82%	88%	80%
	Produce	84%	79%	86%	79%
	Seafood	86%	82%	84%	80%

2015 Wake County Risk Factor Study calculation: Percentage IN compliance=all applicable, observable, IN COMPLIANCE data items within all risk factor categories(IN) / total number of observations (IN and OUT) *Note: The data in Table 1 represents the percentages of observations found IN compliance with the 2013 Food Code.*

Percentage of IN compliance observations for each risk factor category for each of the nine facility types is presented in Appendix K. The table provides the percent of IN compliance observations for each of the nine facility types as they pertain to controlling the five risk factors contributing to foodborne illness. The “other” risk factor is included to collect data on the storage and use of chemicals.

Percentage of OUT of compliance observations for each risk factor category for each of the nine facility types is presented in Appendix L. The table provides the percentage of OUT of compliance observations for each of the nine facility types as they pertain to controlling the five risk factors contributing to foodborne illness. The “other” risk factor is included to collect data on the storage and use of chemicals. This table provides the basis of directing priority attention to specific risk factors for each facility type.

Immediately following this section, the results are presented separately for each of the nine facility types, as independent reports. Each report is intended to compare comparable facilities and may be used by regulators and industry to focus attention on those areas found OUT of compliance during the survey.

These sections are:

- A. Institutional Food Service - Hospitals
- B. Institutional Food Service - Nursing Homes
- C. Institutional Food Service - Elementary Schools
- D. Restaurants - Fast Food
- E. Restaurants - Full Service
- F. Retail Food Stores - Delis
- G. Retail Food Stores - Meat Markets
- H. Retail Food Stores - Produce
- I. Retail Food Stores - Seafood

V. Recommendations

The following recommendations are based on the findings in this report and are intended to enhance the effectiveness of regulatory and industry retail food protection programs. Each of the foodborne illness risk factors is comprised of a number of food safety practices and employee behaviors. These practices and behaviors are captured by the individual data items in this report and are based on the food safety provisions of the 2009 FDA Food Code.

The results of the 2015 risk factor study indicate that overall all Risk Factors improved from the 2010 baseline study. This can be attributed partially to the adoption of the 2009 FDA Food Code by the State of North Carolina. Although overall percentages of IN compliance have increased (table R-1), the percentage remains under 80% for Certified Food Protection Manager (CFPM) and Improper Holding for foods (see tables R-2 and R-3).

Table R-1

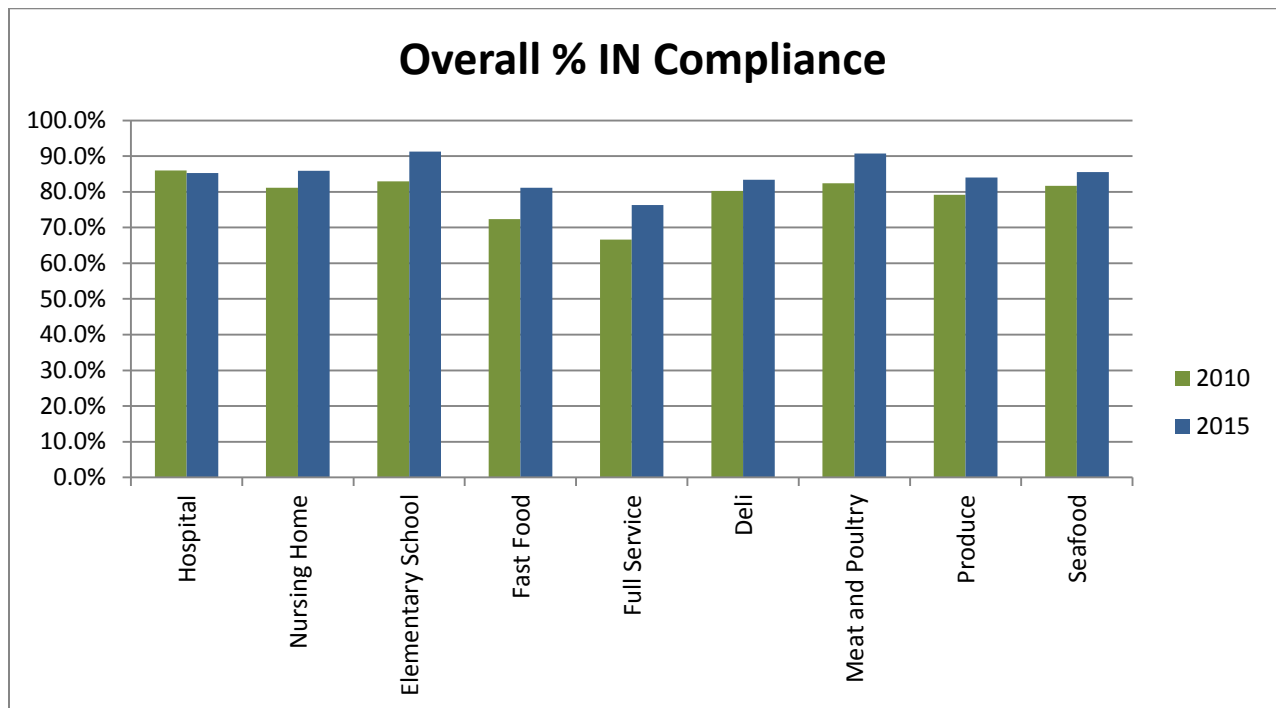
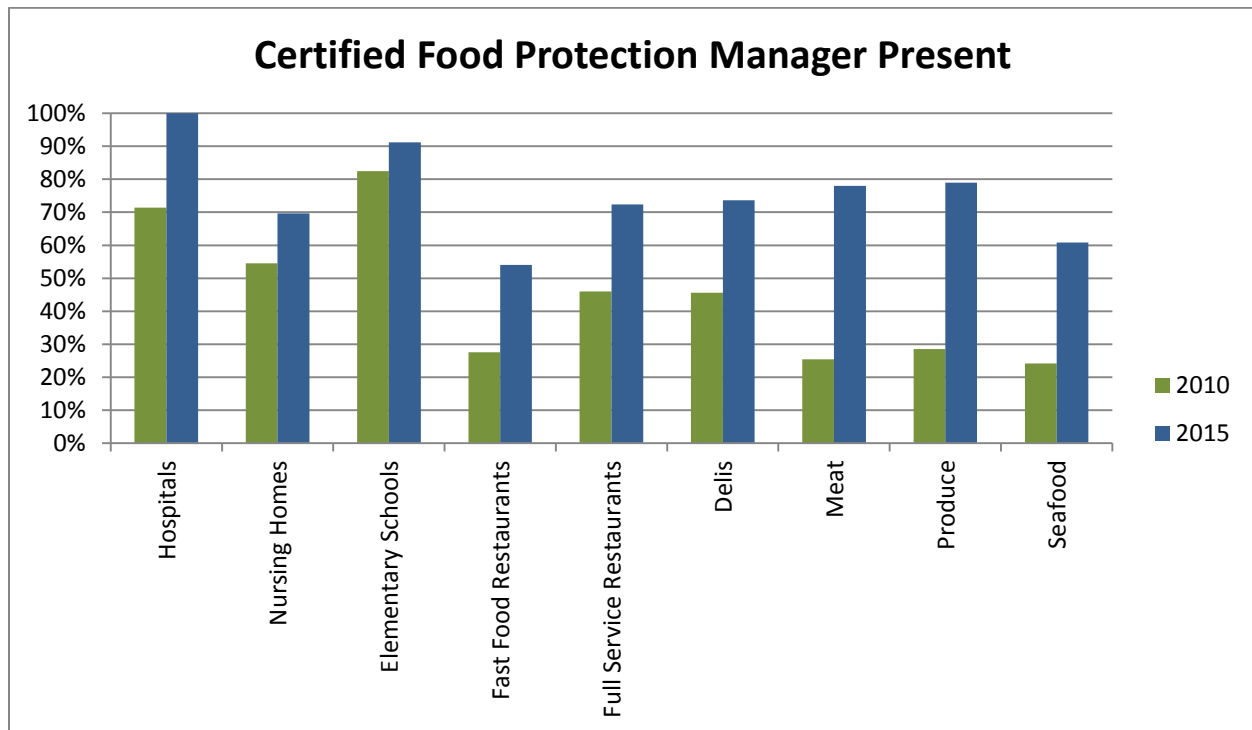


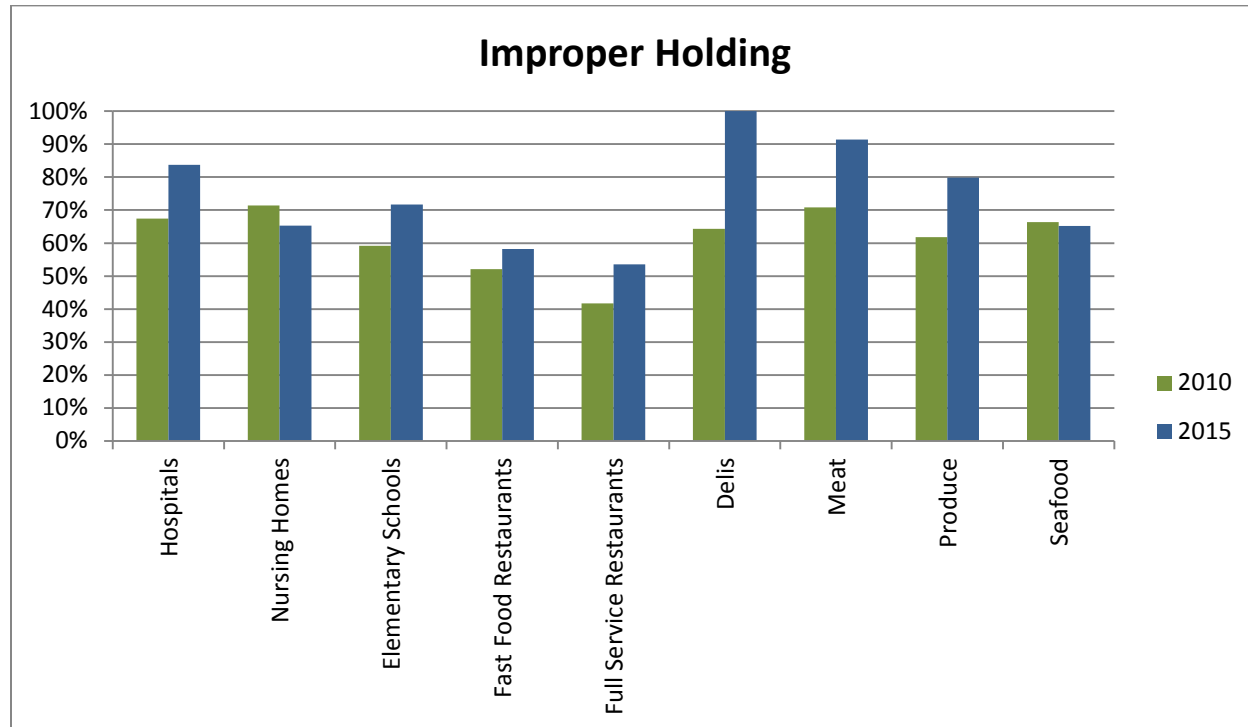
Table R-2



Although the percent IN compliance increased overall from the 2010 baseline data, seven out of nine facility types remain below 80% IN compliance.

A Certified Food Protection Manager (CFPM) is knowledgeable about the relationship between the prevention of foodborne illness and the various operations, practices, and behaviors that take place in the food establishment, and will be in a far better position to exert active managerial control over foodborne illness risk factors.

Table R-3



The two risk factors that are the highest OUT of compliance are shown below

Data Item	Individual Risk Factor	% OUT of compliance
9B	Discard RTE TCS and/or opened commercial container exceeding 7 days at < 41°F. (5°C.)	34%
9C	Opened Commercial container of prepared ready-to-eat TCS is date marked as required	27%

Date marking (Individual Data Items 9a, 9b, 9c and 9d): Date marking of refrigerated ready-to-eat, TCS foods is an important food safety system component designed to promote proper food rotation and limit the growth of *Listeria monocytogenes* (*Lm*) during cold storage. Discarding ready-to-eat, PHF/TCS Food that has remained in cold storage beyond the parameters described in the FDA Food Code prevents foods with a harmful level of *Listeria monocytogenes* from being sold or served. It is especially important to date mark ready-to-eat, PHY/TCS food in hospitals and nursing homes because the meals are primarily served to a highly susceptible population. When cooling, cold holding and date marking are viewed in the context of a total food safety management system, the potential for bacterial growth increases with each uncontrolled process step. It is essential that each process step by routinely monitoring in a manner that enables management to take prompt corrective action before and unsafe product reaches the consumer.

V. Recommendations

A. Recommendations for Foodservice and Retail Food Industries

Managing risk factors must be a fully integrated part of every business operation if the industry is to significantly reduce the risk of foodborne illness. Ultimate responsibility for the development and maintenance of effective food safety management systems lies with the management of institutional foodservice, restaurant, and retail food store operations. Individual operators that are responsible for the day-to-day management of these facilities play a key role in preventing foodborne illness. Reducing the occurrence of foodborne illness risk factors should be a goal for all those involved in food safety.

Food safety management systems can take many forms. Every establishment has some set pattern of procedures, even if it is simply described as “the way we do things.” Some establishments have implemented effective food safety management systems by establishing controls for food preparation methods and monitoring processes common to their operation. Many others, however, continue to rely on vague, unmonitored procedures. At a minimum, an operator’s food safety management system should be based on achieving the same level of safety established by the critical limits in the Food Code. Recommendations for industry managers include the following:

- **Develop and implement written Standard Operating Procedures (SOPs)** that address the risk factors. These SOPs should detail the monitoring and corrective action procedures necessary for time/temperature control of potentially hazardous food and cooking of raw animal foods, good personal hygiene, and prevention of cross-contamination. The SOPs should include the critical limits, or the minimum or maximum parameters that must be met to ensure that food safety hazards are controlled at critical process steps. Responsibility for measuring the critical limits should be assigned to specific employees or employee positions. These SOPs should be specific to the operation and tested by management to ensure that the procedures are effective for controlling the risk factor. Training on the implementation of SOPs should be included in employee orientation and in periodic refresher training.
- **Provide the necessary resources, equipment, and supplies to implement the SOPs.** Items such as temperature measurement devices, temperature logs, the availability of hand soap and towels at each handwashing station, and the use of chemical sanitizers at the required strength along with chemical test papers are crucial to the successful control of specific risk factors.
- **Verify that monitoring procedures are being followed by employees.** Monitoring procedures will only be effective if employees are given the knowledge, skills, and responsibility for specific food safety tasks. Management should verify, through active daily oversight, that critical processes are being monitored by employees
- **Identify methods to routinely assess the effectiveness of the SOPs.** Managers should review SOPs at least annually to determine whether the SOPs as written are still

V. Recommendations

effective or whether changes in the operation, ingredients, equipment, or personnel have triggered the need for revisions

B. Recommendations for Regulatory Retail Food Protection Programs

The common goal for industry and regulatory agencies is to protect public health by reducing or eliminating risk factors that contribute to foodborne illness. In addition to Food Code adoption, Wake County recommends that regulatory agencies ensure that their inspections, education and enforcement activities are geared toward the control of the risk factors that contribute to foodborne illness outbreaks. Participation in FDA's Program Standards provides guidance for continuing to focus on these improvements.

Recommendations for Regulatory retail food protection programs include the following:

- **Adoption of the current FDA Food Code Manual.** A new FDA Food Code Manual is released every four years. The study suggests that the State of North Carolina keep current with the latest Code.
- **Continuous Program Improvement by participating in the FDA's Program Standards.** The Program Standards are a foundation to build upon through a continuous improvement process. Currently Wake County is in compliance with five of the nine Program Standards and is in the process of reviewing existing practices and procedures against the criteria in the Program Standards to ensure that current program activities target reducing the occurrence of risk factors.
- **Provide on-site education and achieve voluntary compliance.** Recognize and make use of existing industry quality assurance (QA) or training programs. Inspectors should become familiar with an establishment's existing QA and employee training programs and reinforce components of these programs that lead to active managerial control of risk factors. Time spent learning an establishment's system can allow an inspector to focus on potential weaknesses and offer suggestions for strengthening an existing food safety management system.

Summary of Findings by Facility Type

Facility Type=Hospitals

			n=6							
			IN	% IN	OUT	% OUT	NA	% NA	NO	%NO
		Certified Food Protection Manager Present	6	100%	0	0%	0	0%	0	0%
1	A	Approved Source	6	100%	0	0%	0	0%	0	0%
1	B	Approved Source	0	0%	0	0%	6	100%	0	0%
1	C	Approved Source	0	0%	0	0%	6	100%	0	0%
2	A	Receiving/Sound Condition	6	100%	0	0%	0	0%	0	0%
3	A	Records	0	0%	0	0%	6	100%	0	0%
3	B	Records	0	0%	0	0%	6	100%	0	0%
3	C	Records	0	0%	0	0%	6	100%	0	0%
4	A	Proper Cooking Temp	0	0%	0	0%	3	50%	3	50%
4	B	Proper Cooking Temp	1	100%	0	0%	0	0%	5	83%
4	C	Proper Cooking Temp	1	100%	0	0%	2	33%	3	50%
4	D	Proper Cooking Temp	2	67%	1	33%	1	17%	2	33%
4	E	Proper Cooking Temp	0	0%	0	0%	6	100%	0	0%
4	F	Proper Cooking Temp	0	0%	0	0%	6	100%	0	0%
4	G	Proper Cooking Temp	0	0%	0	0%	6	100%	0	0%
4	H	Proper Cooking Temp	2	100%	0	0%	0	0%	4	67%
5	A	Rapid Reheating/Hot Hold	0	0%	2	100%	1	17%	3	50%
5	B	Rapid Reheating/Hot Hold	0	0%	0	0%	5	83%	1	17%
5	C	Rapid Reheating/Hot Hold	3	100%	0	0%	0	0%	3	50%
5	D	Rapid Reheating/Hot Hold	0	0%	0	0%	5	83%	1	17%
6	A	Proper Cooling	3	100%	0	0%	0	0%	3	50%
6	B	Proper Cooling	4	100%	0	0%	0	0%	2	33%
6	C	Proper Cooling	5	100%	0	0%	0	0%	1	17%
7	A	Cold Hold	4	67%	2	33%	0	0%	0	0%
8	A	Hot Hold	4	67%	2	33%	0	0%	0	0%
8	B	Hot Hold	1	100%	0	0%	2	33%	3	50%
9	A	Time	6	100%	0	0%	0	0%	0	0%
9	B	Time	5	83%	1	17%	0	0%	0	0%
9	C	Time	4	67%	2	33%	0	0%	0	0%
9	D	Time	0	0%	0	0%	6	100%	0	0%
10	A	Separation	6	100%	0	0%	0	0%	0	0%
10	B	Separation	5	83%	1	17%	0	0%	0	0%
10	C	Separation	5	83%	1	17%	0	0%	0	0%
10	D	Separation	6	100%	0	0%	0	0%	0	0%
11	A	Food Contact Surfaces	3	50%	3	50%	0	0%	0	0%
12	A	Proper Handwashing (2009 FDA Code)	5	83%	1	17%	0	0%	0	0%
12	B	Proper Handwashing (2013 Food Code)	5	83%	1	17%	0	0%	0	0%
13	A	Good Hygienic Practices	6	100%	0	0%	0	0%	0	0%
14	A	Prevention Hand Contamination (2009 Food Code)	5	83%	1	17%	0	0%	0	0%
14	B	Prevention Hand Contamination (2013 Food Code)	5	83%	1	17%	0	0%	0	0%
15	A	Handwash Facilities	6	100%	0	0%	0	0%	0	0%
15	B	Handwash Facilities	5	83%	1	17%	0	0%	0	0%
16	A	Chemicals	1	17%	0	0%	5	83%	0	0%
16	B	Chemicals	6	100%	0	0%	0	0%	0	0%
16	C	Chemicals	0	0%	0	0%	6	100%	0	0%
17	A	Employee Health Policy (2009 Food Code)	5	83%	1	17%	0	0%	0	0%
17	B	Employee Health Policy (2013 Food Code)	1	17%	5	83%	0	0%	0	0%
18	A	Highly Susceptible Populations	6	100%	0	0%	0	0%	0	0%
18	B	Highly Susceptible Populations	6	100%	0	0%	0	0%	0	0%
18	C	Highly Susceptible Populations	6	100%	0	0%	0	0%	0	0%
		TOTAL (does not include CFPM, 12b, 14b, 17b)	139	85%	19	12%	84		34	

Summary of Findings by Facility Type

Facility Type=Nursing Homes

n=33

			IN	% IN	OUT	% OUT	NA	% NA	NO	%NO
		Certified Food Protection Manager Present	23	70%	10	30%	0	0%	0	0%
1	A	Approved Source	33	100%	0	0%	0	0%	0	0%
1	B	Approved Source	0	0%	0	0%	33	100%	0	0%
1	C	Approved Source	0	0%	0	0%	33	100%	0	0%
2	A	Receiving/Sound Condition	33	100%	0	0%	0	0%	0	0%
3	A	Records	0	0%	0	0%	33	100%	0	0%
3	B	Records	0	0%	0	0%	33	100%	0	0%
3	C	Records	0	0%	0	0%	33	100%	0	0%
4	A	Proper Cooking Temp	0	0%	0	0%	27	82%	6	18%
4	B	Proper Cooking Temp	2	100%	0	0%	1	3%	30	91%
4	C	Proper Cooking Temp	0	0%	0	0%	10	30%	23	70%
4	D	Proper Cooking Temp	5	100%	0	0%	0	0%	28	85%
4	E	Proper Cooking Temp	0	0%	0	0%	33	100%	0	0%
4	F	Proper Cooking Temp	0	0%	0	0%	33	100%	0	0%
4	G	Proper Cooking Temp	1	100%	0	0%	25	76%	7	21%
4	H	Proper Cooking Temp	8	100%	0	0%	0	0%	25	76%
5	A	Rapid Reheating/Hot Hold	6	86%	1	14%	2	6%	24	73%
5	B	Rapid Reheating/Hot Hold	0	0%	0	0%	23	70%	10	30%
5	C	Rapid Reheating/Hot Hold	10	100%	0	0%	2	6%	21	64%
5	D	Rapid Reheating/Hot Hold	0	0%	0	0%	12	36%	21	64%
6	A	Proper Cooling	7	64%	4	36%	0	0%	22	67%
6	B	Proper Cooling	2	67%	1	33%	0	0%	30	91%
6	C	Proper Cooling	7	64%	4	36%	0	0%	22	67%
7	A	Cold Hold	23	70%	10	30%	0	0%	0	0%
8	A	Hot Hold	19	90%	2	10%	2	6%	10	30%
8	B	Hot Hold	0	1%	0	0%	11	33%	22	67%
9	A	Time	20	71%	8	29%	0	0%	5	15%
9	B	Time	14	44%	18	56%	0	0%	1	3%
9	C	Time	19	61%	12	39%	0	0%	2	6%
9	D	Time	0	0%	0	0%	33	100%	0	0%
10	A	Separation	28	85%	5	15%	0	0%	0	0%
10	B	Separation	28	88%	4	13%	0	0%	1	3%
10	C	Separation	31	94%	2	6%	0	0%	0	0%
10	D	Separation	33	100%	0	0%	0	0%	0	0%
11	A	Food Contact Surfaces	24	73%	9	27%	0	0%	0	0%
12	A	Proper Handwashing (2009 FDA Code)	24	73%	9	27%	0	0%	0	0%
12	B	Proper Handwashing (2013 Food Code)	25	76%	8	24%	0	0%	0	0%
13	A	Good Hygienic Practices	30	91%	3	9%	0	0%	0	0%
14	A	Prevention Hand Contamination (2009 Food Code)	31	100%	0	0%	0	0%	2	6%
14	B	Prevention Hand Contamination (2013 Food Code)	31	100%	0	0%	0	0%	2	6%
15	A	Handwash Facilities	31	94%	2	6%	0	0%	0	0%
15	B	Handwash Facilities	33	100%	0	0%	0	0%	0	0%
16	A	Chemicals	6	100%	0	0%	27	82%	0	0%
16	B	Chemicals	27	82%	6	18%	0	0%	0	0%
16	C	Chemicals	0	0%	0	0%	33	100%	0	0%
17	A	Employee Health Policy (2009 Food Code)	27	82%	6	18%	0	0%	0	0%
17	B	Employee Health Policy (2013 Food Code)	1	3%	32	97%	0	0%	0	0%
18	A	Highly Susceptible Populations	33	100%	0	0%	0	0%	0	0%
18	B	Highly Susceptible Populations	32	97%	1	3%	0	0%	0	0%
18	C	Highly Susceptible Populations	32	97%	1	3%	0	0%	0	0%
		TOTAL (does not include CFPM, 12b, 14b, 17b)	659	86%	108	14%	439		312	

Summary of Findings by Facility Type

Facility Type=Elementary Lunchrooms

n=57

			IN	% IN	OUT	% OUT	NA	% NA	NO	%NO
		Certified Food Protection Manager Present	52	91%	5	9%	0	0%	0	0%
1	A	Approved Source	57	100%	0	0%	0	0%	0	0%
1	B	Approved Source	0	0%	0	0%	57	100%	0	0%
1	C	Approved Source	0	0%	0	0%	57	100%	0	0%
2	A	Receiving/Sound Condition	53	98%	1	2%	3	5%	0	0%
3	A	Records	0	0%	0	0%	57	100%	0	0%
3	B	Records	0	0%	0	0%	57	100%	0	0%
3	C	Records	0	0%	0	0%	57	100%	0	0%
4	A	Proper Cooking Temp	0	0%	0	0%	56	98%	1	2%
4	B	Proper Cooking Temp	0	0%	0	0%	56	98%	1	2%
4	C	Proper Cooking Temp	0	0%	0	0%	56	98%	1	2%
4	D	Proper Cooking Temp	0	0%	0	0%	55	96%	2	4%
4	E	Proper Cooking Temp	0	0%	0	0%	57	100%	0	0%
4	F	Proper Cooking Temp	0	0%	0	0%	57	100%	0	0%
4	G	Proper Cooking Temp	0	0%	0	0%	57	100%	0	0%
4	H	Proper Cooking Temp	0	0%	0	0%	56	98%	1	2%
5	A	Rapid Reheating/Hot Hold	6	100%	0	0%	4	7%	47	82%
5	B	Rapid Reheating/Hot Hold	0	0%	0	0%	56	98%	1	2%
5	C	Rapid Reheating/Hot Hold	30	100%	0	0%	3	5%	24	42%
5	D	Rapid Reheating/Hot Hold	1	100%	0	0%	55	96%	1	2%
6	A	Proper Cooling	5	100%	0	0%	4	7%	48	84%
6	B	Proper Cooling	5	100%	0	0%	8	14%	44	77%
6	C	Proper Cooling	11	100%	0	0%	0	0%	46	81%
7	A	Cold Hold	43	77%	13	23%	0	0%	1	2%
8	A	Hot Hold	32	65%	17	35%	1	2%	7	12%
8	B	Hot Hold	0	0%	1	100%	53	93%	3	5%
9	A	Time	21	72%	8	28%	4	7%	24	42%
9	B	Time	30	57%	23	43%	1	2%	3	5%
9	C	Time	37	77%	11	23%	3	5%	6	11%
9	D	Time	1	100%	0	0%	55	96%	1	2%
10	A	Separation	3	75%	1	25%	53	93%	0	0%
10	B	Separation	2	67%	1	33%	54	95%	0	0%
10	C	Separation	54	96%	2	4%	1	2%	0	0%
10	D	Separation	57	100%	0	0%	0	0%	0	0%
11	A	Food Contact Surfaces	48	84%	9	16%	0	0%	0	0%
12	A	Proper Handwashing (2009 FDA Code)	49	86%	8	14%	0	0%	0	0%
12	B	Proper Handwashing (2013 Food Code)	51	89%	6	11%	0	0%	0	0%
13	A	Good Hygienic Practices	53	93%	4	7%	0	0%	0	0%
14	A	Prevention Hand Contamination (2009 Food Code)	57	100%	0	0%	0	0%	0	0%
14	B	Prevention Hand Contamination (2013 Food Code)	57	100%	0	0%	0	0%	0	0%
15	A	Handwash Facilities	57	100%	0	0%	0	0%	0	0%
15	B	Handwash Facilities	55	100%	0	0%	2	4%	0	0%
16	A	Chemicals	0	0%	0	0%	57	100%	0	0%
16	B	Chemicals	57	100%	0	0%	0	0%	0	0%
16	C	Chemicals	1	100%	0	0%	56	98%	0	0%
17	A	Employee Health Policy (2009 Food Code)	56	98%	1	2%	0	0%	0	0%
17	B	Employee Health Policy (2013 Food Code)	51	89%	6	11%	0	0%	0	0%
18	A	Highly Susceptible Populations	56	100%	0	0%	1	2%	0	0%
18	B	Highly Susceptible Populations	56	100%	0	0%	1	2%	0	0%
18	C	Highly Susceptible Populations	56	100%	0	0%	1	2%	0	0%
		TOTAL (does not include CFPM, 12b, 14b, 17b)	1049	91%	100	9%	1211		262	

Summary of Findings by Facility Type

Facility Type=Fast Foods

n=87

			IN	% IN	OUT	% OUT	NA	% NA	NO	%NO
		Certified Food Protection Manager Present	47	54%	40	46%	0	0%	0	0%
1	A	Approved Source	87	100%	0	0%	0	0%	0	0%
1	B	Approved Source	2	100%	0	0%	85	98%	0	0%
1	C	Approved Source	1	100%	0	0%	86	99%	0	0%
2	A	Receiving/Sound Condition	84	100%	0	0%	3	3%	0	0%
3	A	Records	1	50%	1	50%	83	95%	2	2%
3	B	Records	0	0%	1	100%	86	99%	0	0%
3	C	Records	0	0%	0	0%	87	100%	0	0%
4	A	Proper Cooking Temp	1	50%	1	50%	68	78%	17	20%
4	B	Proper Cooking Temp	10	91%	1	9%	51	59%	25	29%
4	C	Proper Cooking Temp	1	100%	0	0%	76	87%	10	11%
4	D	Proper Cooking Temp	14	100%	0	0%	45	52%	28	32%
4	E	Proper Cooking Temp	0	0%	0	0%	87	100%	0	0%
4	F	Proper Cooking Temp	0	0%	0	0%	86	99%	1	1%
4	G	Proper Cooking Temp	0	0%	0	0%	83	95%	4	5%
4	H	Proper Cooking Temp	10	100%	0	0%	47	54%	30	34%
5	A	Rapid Reheating/Hot Hold	6	75%	2	25%	55	63%	24	28%
5	B	Rapid Reheating/Hot Hold	0	0%	0	0%	64	74%	23	26%
5	C	Rapid Reheating/Hot Hold	11	85%	2	15%	26	30%	48	55%
5	D	Rapid Reheating/Hot Hold	0	0%	0	0%	82	94%	5	6%
6	A	Proper Cooling	2	50%	2	50%	52	60%	31	36%
6	B	Proper Cooling	10	67%	5	33%	37	43%	35	40%
6	C	Proper Cooling	2	100%	0	0%	22	25%	63	72%
7	A	Cold Hold	44	51%	43	49%	0	0%	0	0%
8	A	Hot Hold	47	81%	11	19%	17	20%	12	14%
8	B	Hot Hold	1	100%	0	0%	80	92%	6	7%
9	A	Time	24	52%	22	48%	36	41%	5	6%
9	B	Time	39	51%	37	49%	8	9%	3	3%
9	C	Time	40	55%	33	45%	9	10%	5	6%
9	D	Time	10	71%	4	29%	72	83%	1	1%
10	A	Separation	39	83%	8	17%	40	46%	0	0%
10	B	Separation	40	93%	3	7%	44	51%	0	0%
10	C	Separation	81	93%	6	7%	0	0%	0	0%
10	D	Separation	87	100%	0	0%	0	0%	0	0%
11	A	Food Contact Surfaces	59	68%	28	32%	0	0%	0	0%
12	A	Proper Handwashing (2009 FDA Code)	70	80%	17	20%	0	0%	0	0%
12	B	Proper Handwashing (2013 Food Code)	75	86%	12	14%	0	0%	0	0%
13	A	Good Hygienic Practices	74	85%	13	15%	0	0%	0	0%
14	A	Prevention Hand Contamination (2009 Food Code)	82	94%	5	6%	0	0%	0	0%
14	B	Prevention Hand Contamination (2013 Food Code)	83	95%	4	5%	0	0%	0	0%
15	A	Handwash Facilities	82	94%	5	6%	0	0%	0	0%
15	B	Handwash Facilities	78	90%	9	10%	0	0%	0	0%
16	A	Chemicals	5	100%	0	0%	82	94%	0	0%
16	B	Chemicals	77	89%	10	11%	0	0%	0	0%
16	C	Chemicals	0	0%	1	100%	86	99%	0	0%
17	A	Employee Health Policy (2009 Food Code)	59	68%	28	32%	0	0%	0	0%
17	B	Employee Health Policy (2013 Food Code)	0	0%	87	100%	0	0%	0	0%
18	A	Highly Susceptible Populations	0	0%	0	0%	87	100%	0	0%
18	B	Highly Susceptible Populations	0	0%	0	0%	87	100%	0	0%
18	C	Highly Susceptible Populations	0	0%	0	0%	87	100%	0	0%
		TOTAL (does not include CFPM, 12b, 14b, 17b)	1280	81%	298	19%	2046		378	

Summary of Findings by Facility Type

Facility Type=Full Service Restaurants

n=87

			IN	% IN	OUT	% OUT	NA	% NA	NO	%NO
		Certified Food Protection Manager Present	63	72%	24	28%	0	0%	0	0%
1	A	Approved Source	86	99%	1	1%	0	0%	0	0%
1	B	Approved Source	8	100%	0	0%	79	91%	0	0%
1	C	Approved Source	0	0%	0	0%	87	100%	0	0%
2	A	Receiving/Sound Condition	85	100%	0	0%	2	2%	0	0%
3	A	Records	4	57%	3	43%	77	89%	3	3%
3	B	Records	3	23%	10	77%	73	84%	1	1%
3	C	Records	0	0%	3	100%	84	97%	0	0%
4	A	Proper Cooking Temp	2	100%	0	0%	32	37%	53	61%
4	B	Proper Cooking Temp	10	100%	0	0%	20	23%	57	66%
4	C	Proper Cooking Temp	2	100%	0	0%	52	60%	33	38%
4	D	Proper Cooking Temp	22	100%	0	0%	8	9%	57	66%
4	E	Proper Cooking Temp	0	0%	0	0%	86	99%	1	1%
4	F	Proper Cooking Temp	0	0%	0	0%	86	99%	1	1%
4	G	Proper Cooking Temp	3	100%	0	0%	69	79%	15	17%
4	H	Proper Cooking Temp	18	95%	1	5%	4	5%	64	74%
5	A	Rapid Reheating/Hot Hold	6	60%	4	40%	8	9%	69	79%
5	B	Rapid Reheating/Hot Hold	1	100%	0	0%	80	92%	6	7%
5	C	Rapid Reheating/Hot Hold	8	89%	1	11%	26	30%	52	60%
5	D	Rapid Reheating/Hot Hold	0	0%	0	0%	66	76%	21	24%
6	A	Proper Cooling	28	76%	9	24%	4	5%	46	53%
6	B	Proper Cooling	25	86%	4	14%	10	11%	48	55%
6	C	Proper Cooling	6	100%	0	0%	3	3%	78	90%
7	A	Cold Hold	22	25%	65	75%	0	0%	0	0%
8	A	Hot Hold	61	78%	17	22%	0	0%	9	10%
8	B	Hot Hold	3	100%	0	0%	58	67%	26	30%
9	A	Time	46	55%	38	45%	3	3%	0	0%
9	B	Time	33	39%	52	61%	2	2%	0	0%
9	C	Time	37	46%	44	54%	2	2%	4	5%
9	D	Time	7	70%	3	30%	75	86%	2	2%
10	A	Separation	77	91%	8	9%	1	1%	1	1%
10	B	Separation	71	87%	11	13%	4	5%	1	1%
10	C	Separation	72	83%	15	17%	0	0%	0	0%
10	D	Separation	87	100%	0	0%	0	0%	0	0%
11	A	Food Contact Surfaces	53	61%	34	39%	0	0%	0	0%
12	A	Proper Handwashing (2009 FDA Code)	64	74%	23	26%	0	0%	0	0%
12	B	Proper Handwashing (2013 Food Code)	66	76%	21	24%	0	0%	0	0%
13	A	Good Hygienic Practices	63	72%	24	28%	0	0%	0	0%
14	A	Prevention Hand Contamination (2009 Food Code)	82	94%	5	6%	0	0%	0	0%
14	B	Prevention Hand Contamination (2013 Food Code)	82	94%	5	6%	0	0%	0	0%
15	A	Handwash Facilities	69	79%	18	21%	0	0%	0	0%
15	B	Handwash Facilities	78	90%	9	10%	0	0%	0	0%
16	A	Chemicals	18	86%	3	14%	66	76%	0	0%
16	B	Chemicals	76	87%	11	13%	0	0%	0	0%
16	C	Chemicals	0	0%	0	0%	87	100%	0	0%
17	A	Employee Health Policy (2009 Food Code)	68	78%	19	22%	0	0%	0	0%
17	B	Employee Health Policy (2013 Food Code)	1	1%	86	99%	0	0%	0	0%
18	A	Highly Susceptible Populations	0	0%	0	0%	87	100%	0	0%
18	B	Highly Susceptible Populations	0	0%	0	0%	87	100%	0	0%
18	C	Highly Susceptible Populations	0	0%	0	0%	87	100%	0	0%
		TOTAL (does not include CFPM, 12b, 14b, 17b)	1404	76%	435	24%	1515		648	

Summary of Findings by Facility Type

Facility Type=Deli's

n=57

			IN	% IN	OUT	% OUT	NA	% NA	NO	%NO
		Certified Food Protection Manager Present	42	74%	15	26%	0	0%	0	0%
1	A	Approved Source	57	100%	0	0%	0	0%	0	0%
1	B	Approved Source	1	100%	0	0%	56	98%	0	0%
1	C	Approved Source	0	0%	0	0%	57	100%	0	0%
2	A	Receiving/Sound Condition	57	100%	0	0%	0	0%	0	0%
3	A	Records	0	0%	0	0%	57	100%	0	0%
3	B	Records	14	82%	3	18%	40	70%	0	0%
3	C	Records	10	59%	7	41%	40	70%	0	0%
4	A	Proper Cooking Temp	0	0%	0	0%	56	98%	1	2%
4	B	Proper Cooking Temp	1	100%	0	0%	54	95%	2	4%
4	C	Proper Cooking Temp	1	100%	0	0%	49	86%	7	12%
4	D	Proper Cooking Temp	25	100%	0	0%	1	2%	31	54%
4	E	Proper Cooking Temp	0	0%	0	0%	57	100%	0	0%
4	F	Proper Cooking Temp	0	0%	0	0%	57	100%	0	0%
4	G	Proper Cooking Temp	0	0%	0	0%	57	100%	0	0%
4	H	Proper Cooking Temp	1	100%	0	0%	40	70%	16	28%
5	A	Rapid Reheating/Hot Hold	2	100%	0	0%	49	86%	6	11%
5	B	Rapid Reheating/Hot Hold	0	0%	0	0%	55	96%	2	4%
5	C	Rapid Reheating/Hot Hold	5	100%	0	0%	25	44%	27	47%
5	D	Rapid Reheating/Hot Hold	0	0%	0	0%	55	96%	2	4%
6	A	Proper Cooling	21	84%	4	16%	1	2%	31	54%
6	B	Proper Cooling	8	73%	3	27%	12	21%	34	60%
6	C	Proper Cooling	0	0%	0	0%	45	79%	12	21%
7	A	Cold Hold	25	44%	32	56%	0	0%	0	0%
8	A	Hot Hold	34	71%	14	29%	1	2%	8	14%
8	B	Hot Hold	0	0%	0	0%	49	86%	8	14%
9	A	Time	48	86%	8	14%	1	2%	0	0%
9	B	Time	45	79%	12	21%	0	0%	0	0%
9	C	Time	42	82%	9	18%	6	11%	0	0%
9	D	Time	2	40%	3	60%	52	91%	0	0%
10	A	Separation	53	96%	2	4%	2	4%	0	0%
10	B	Separation	22	96%	1	4%	33	58%	1	2%
10	C	Separation	55	96%	2	4%	0	0%	0	0%
10	D	Separation	57	100%	0	0%	0	0%	0	0%
11	A	Food Contact Surfaces	38	67%	19	33%	0	0%	0	0%
12	A	Proper Handwashing (2009 FDA Code)	49	86%	8	14%	0	0%	0	0%
12	B	Proper Handwashing (2013 Food Code)	49	86%	8	14%	0	0%	0	0%
13	A	Good Hygienic Practices	56	98%	1	2%	0	0%	0	0%
14	A	Prevention Hand Contamination (2009 Food Code)	55	96%	2	4%	0	0%	0	0%
14	B	Prevention Hand Contamination (2013 Food Code)	55	96%	2	4%	0	0%	0	0%
15	A	Handwash Facilities	49	86%	8	14%	0	0%	0	0%
15	B	Handwash Facilities	43	75%	14	25%	0	0%	0	0%
16	A	Chemicals	16	100%	0	0%	41	72%	0	0%
16	B	Chemicals	45	79%	12	21%	0	0%	0	0%
16	C	Chemicals	0	0%	0	0%	57	100%	0	0%
17	A	Employee Health Policy (2009 Food Code)	29	51%	28	49%	0	0%	0	0%
17	B	Employee Health Policy (2013 Food Code)	9	16%	48	84%	0	0%	0	0%
18	A	Highly Susceptible Populations	0	0%	0	0%	57	100%	0	0%
18	B	Highly Susceptible Populations	0	0%	0	0%	57	100%	0	0%
18	C	Highly Susceptible Populations	0	0%	0	0%	57	100%	0	0%
		TOTAL (does not include CFPM, 12b, 14b, 17b)	966	83%	192	17%	1276		188	

Summary of Findings by Facility Type

Facility Type=Meat

n=59

			IN	% IN	OUT	% OUT	NA	% NA	NO	%NO
		Certified Food Protection Manager Present	46	78%	13	22%	0	0%	0	0%
1	A	Approved Source	59	100%	0	0%	0	0%	0	0%
1	B	Approved Source	17	100%	0	0%	42	71%	0	0%
1	C	Approved Source	0	0%	0	0%	59	100%	0	0%
2	A	Receiving/Sound Condition	59	100%	0	0%	0	0%	0	0%
3	A	Records	16	100%	0	0%	41	69%	2	3%
3	B	Records	0	0%	0	0%	59	100%	0	0%
3	C	Records	0	0%	0	0%	59	100%	0	0%
4	A	Proper Cooking Temp	1	100%	0	0%	58	98%	0	0%
4	B	Proper Cooking Temp	1	100%	0	0%	57	97%	1	2%
4	C	Proper Cooking Temp	0	0%	0	0%	59	100%	0	0%
4	D	Proper Cooking Temp	0	0%	0	0%	57	97%	2	3%
4	E	Proper Cooking Temp	0	0%	0	0%	59	100%	0	0%
4	F	Proper Cooking Temp	0	0%	0	0%	56	95%	3	5%
4	G	Proper Cooking Temp	0	0%	0	0%	59	100%	0	0%
4	H	Proper Cooking Temp	0	0%	0	0%	49	83%	10	17%
5	A	Rapid Reheating/Hot Hold	0	0%	0	0%	59	100%	0	0%
5	B	Rapid Reheating/Hot Hold	0	0%	0	0%	59	100%	0	0%
5	C	Rapid Reheating/Hot Hold	0	0%	0	0%	59	100%	0	0%
5	D	Rapid Reheating/Hot Hold	0	0%	0	0%	59	100%	0	0%
6	A	Proper Cooling	0	0%	0	0%	59	100%	0	0%
6	B	Proper Cooling	1	100%	0	0%	53	90%	5	8%
6	C	Proper Cooling	0	0%	0	0%	46	78%	13	22%
7	A	Cold Hold	55	93%	4	7%	0	0%	0	0%
8	A	Hot Hold	0	0%	1	100%	57	97%	1	2%
8	B	Hot Hold	0	0%	0	0%	59	100%	0	0%
9	A	Time	3	100%	0	0%	56	95%	0	0%
9	B	Time	8	89%	1	11%	50	85%	0	0%
9	C	Time	7	88%	1	13%	50	85%	1	2%
9	D	Time	0	0%	0	0%	59	100%	0	0%
10	A	Separation	44	90%	5	10%	10	17%	0	0%
10	B	Separation	53	90%	6	10%	0	0%	0	0%
10	C	Separation	57	97%	2	3%	0	0%	0	0%
10	D	Separation	59	100%	0	0%	0	0%	0	0%
11	A	Food Contact Surfaces	43	73%	16	27%	0	0%	0	0%
12	A	Proper Handwashing (2009 FDA Code)	52	88%	7	12%	0	0%	0	0%
12	B	Proper Handwashing (2013 Food Code)	52	88%	7	12%	0	0%	0	0%
13	A	Good Hygienic Practices	59	100%	0	0%	0	0%	0	0%
14	A	Prevention Hand Contamination (2009 Food Code)	23	100%	0	0%	36	61%	0	0%
14	B	Prevention Hand Contamination (2013 Food Code)	23	100%	0	0%	35	59%	1	2%
15	A	Handwash Facilities	55	93%	4	7%	0	0%	0	0%
15	B	Handwash Facilities	58	98%	1	2%	0	0%	0	0%
16	A	Chemicals	4	100%	0	0%	55	93%	0	0%
16	B	Chemicals	53	90%	6	10%	0	0%	0	0%
16	C	Chemicals	0	0%	0	0%	59	100%	0	0%
17	A	Employee Health Policy (2009 Food Code)	31	53%	28	47%	0	0%	0	0%
17	B	Employee Health Policy (2013 Food Code)	10	17%	49	83%	0	0%	0	0%
18	A	Highly Susceptible Populations	0	0%	0	0%	59	100%	0	0%
18	B	Highly Susceptible Populations	0	0%	0	0%	59	100%	0	0%
18	C	Highly Susceptible Populations	0	0%	0	0%	59	100%	0	0%
		TOTAL (does not include CFPM, 12b, 14b, 17b)	818	91%	82	9%	1776		38	

Summary of Findings by Facility Type

Facility Type=Produce

n=38

			IN	% IN	OUT	% OUT	NA	% NA	NO	%NO
		Certified Food Protection Manager Present	30	79%	8	21%	0	0%	0	0%
1	A	Approved Source	38	100%	0	0%	0	0%	0	0%
1	B	Approved Source	0	0%	0	0%	38	100%	0	0%
1	C	Approved Source	0	0%	0	0%	38	100%	0	0%
2	A	Receiving/Sound Condition	38	100%	0	0%	0	0%	0	0%
3	A	Records	0	0%	0	0%	38	100%	0	0%
3	B	Records	0	0%	0	0%	38	100%	0	0%
3	C	Records	0	0%	0	0%	38	100%	0	0%
4	A	Proper Cooking Temp	0	0%	0	0%	38	100%	0	0%
4	B	Proper Cooking Temp	0	0%	0	0%	38	100%	0	0%
4	C	Proper Cooking Temp	0	0%	0	0%	38	100%	0	0%
4	D	Proper Cooking Temp	0	0%	0	0%	38	100%	0	0%
4	E	Proper Cooking Temp	0	0%	0	0%	38	100%	0	0%
4	F	Proper Cooking Temp	0	0%	0	0%	38	100%	0	0%
4	G	Proper Cooking Temp	0	0%	0	0%	38	100%	0	0%
4	H	Proper Cooking Temp	0	0%	0	0%	38	100%	0	0%
5	A	Rapid Reheating/Hot Hold	0	0%	0	0%	38	100%	0	0%
5	B	Rapid Reheating/Hot Hold	0	0%	0	0%	38	100%	0	0%
5	C	Rapid Reheating/Hot Hold	0	0%	0	0%	38	100%	0	0%
5	D	Rapid Reheating/Hot Hold	0	0%	0	0%	38	100%	0	0%
6	A	Proper Cooling	0	0%	0	0%	38	100%	0	0%
6	B	Proper Cooling	8	67%	4	33%	6	16%	20	53%
6	C	Proper Cooling	0	0%	0	0%	37	97%	1	3%
7	A	Cold Hold	14	37%	24	63%	0	0%	0	0%
8	A	Hot Hold	0	0%	0	0%	38	100%	0	0%
8	B	Hot Hold	0	0%	0	0%	38	100%	0	0%
9	A	Time	36	100%	0	0%	2	5%	0	0%
9	B	Time	35	100%	0	0%	3	8%	0	0%
9	C	Time	18	100%	0	0%	20	53%	0	0%
9	D	Time	0	0%	0	0%	38	100%	0	0%
10	A	Separation	0	0%	0	0%	38	100%	0	0%
10	B	Separation	0	0%	0	0%	38	100%	0	0%
10	C	Separation	36	95%	2	5%	0	0%	0	0%
10	D	Separation	38	100%	0	0%	0	0%	0	0%
11	A	Food Contact Surfaces	26	68%	12	32%	0	0%	0	0%
12	A	Proper Handwashing (2009 FDA Code)	32	94%	2	6%	0	0%	4	11%
12	B	Proper Handwashing (2013 Food Code)	32	94%	2	6%	0	0%	4	11%
13	A	Good Hygienic Practices	33	94%	2	6%	0	0%	3	8%
14	A	Prevention Hand Contamination (2009 Food Code)	33	100%	0	0%	1	3%	4	11%
14	B	Prevention Hand Contamination (2013 Food Code)	33	100%	0	0%	1	3%	4	11%
15	A	Handwash Facilities	32	84%	6	16%	0	0%	0	0%
15	B	Handwash Facilities	36	95%	2	5%	0	0%	0	0%
16	A	Chemicals	7	100%	0	0%	31	82%	0	0%
16	B	Chemicals	33	87%	5	13%	0	0%	0	0%
16	C	Chemicals	25	68%	12	32%	1	3%	0	0%
17	A	Employee Health Policy (2009 Food Code)	9	24%	29	76%	0	0%	0	0%
17	B	Employee Health Policy (2013 Food Code)	1	3%	37	97%	0	0%	0	0%
18	A	Highly Susceptible Populations	0	0%	0	0%	38	100%	0	0%
18	B	Highly Susceptible Populations	0	0%	0	0%	38	100%	0	0%
18	C	Highly Susceptible Populations	0	0%	0	0%	38	100%	0	0%
		TOTAL (does not include CFPM, 12b, 14b, 17b)	527	84%	100	16%	1089		32	

Summary of Findings by Facility Type

Facility Type=Seafood

n=23

			IN	% IN	OUT	% OUT	NA	% NA	NO	%NO
		Certified Food Protection Manager Present	14	61%	9	39%	0	0%	0	0%
1	A	Approved Source	21	91%	2	9%	0	0%	0	0%
1	B	Approved Source	21	95%	1	5%	1	4%	0	0%
1	C	Approved Source	1	100%	0	0%	22	96%	0	0%
2	A	Receiving/Sound Condition	23	100%	0	0%	0	0%	0	0%
3	A	Records	16	80%	4	20%	3	13%	0	0%
3	B	Records	2	100%	0	0%	21	91%	0	0%
3	C	Records	0	0%	0	0%	23	100%	0	0%
4	A	Proper Cooking Temp	0	0%	0	0%	23	100%	0	0%
4	B	Proper Cooking Temp	0	0%	0	0%	23	100%	0	0%
4	C	Proper Cooking Temp	0	0%	0	0%	23	100%	0	0%
4	D	Proper Cooking Temp	0	0%	0	0%	23	100%	0	0%
4	E	Proper Cooking Temp	0	0%	0	0%	23	100%	0	0%
4	F	Proper Cooking Temp	0	0%	0	0%	23	100%	0	0%
4	G	Proper Cooking Temp	0	0%	0	0%	23	100%	0	0%
4	H	Proper Cooking Temp	0	0%	0	0%	6	26%	17	74%
5	A	Rapid Reheating/Hot Hold	0	0%	0	0%	23	100%	0	0%
5	B	Rapid Reheating/Hot Hold	0	0%	0	0%	23	100%	0	0%
5	C	Rapid Reheating/Hot Hold	0	0%	0	0%	23	100%	0	0%
5	D	Rapid Reheating/Hot Hold	0	0%	0	0%	23	100%	0	0%
6	A	Proper Cooling	2	100%	0	0%	18	78%	3	13%
6	B	Proper Cooling	0	0%	0	0%	22	96%	1	4%
6	C	Proper Cooling	0	0%	0	0%	9	39%	14	61%
7	A	Cold Hold	19	83%	4	17%	0	0%	0	0%
8	A	Hot Hold	0	0%	0	0%	23	100%	0	0%
8	B	Hot Hold	0	0%	0	0%	23	100%	0	0%
9	A	Time	5	63%	3	38%	15	65%	0	0%
9	B	Time	9	53%	8	47%	6	26%	0	0%
9	C	Time	8	50%	8	50%	7	30%	0	0%
9	D	Time	0	0%	0	0%	23	100%	0	0%
10	A	Separation	21	100%	0	0%	2	9%	0	0%
10	B	Separation	5	100%	0	0%	17	74%	1	4%
10	C	Separation	22	96%	1	4%	0	0%	0	0%
10	D	Separation	23	100%	0	0%	0	0%	0	0%
11	A	Food Contact Surfaces	13	57%	10	43%	0	0%	0	0%
12	A	Proper Handwashing (2009 FDA Code)	17	74%	6	26%	0	0%	0	0%
12	B	Proper Handwashing (2013 Food Code)	17	74%	6	26%	0	0%	0	0%
13	A	Good Hygienic Practices	22	96%	1	4%	0	0%	0	0%
14	A	Prevention Hand Contamination (2009 Food Code)	23	100%	0	0%	0	0%	0	0%
14	B	Prevention Hand Contamination (2013 Food Code)	23	100%	0	0%	0	0%	0	0%
15	A	Handwash Facilities	22	96%	1	4%	0	0%	0	0%
15	B	Handwash Facilities	22	96%	1	4%	0	0%	0	0%
16	A	Chemicals	2	100%	0	0%	21	91%	0	0%
16	B	Chemicals	23	100%	0	0%	0	0%	0	0%
16	C	Chemicals	0	0%	0	0%	23	100%	0	0%
17	A	Employee Health Policy (2009 Food Code)	13	57%	10	43%	0	0%	0	0%
17	B	Employee Health Policy (2013 Food Code)	0	0%	23	100%	0	0%	0	0%
18	A	Highly Susceptible Populations	0	0%	0	0%	23	100%	0	0%
18	B	Highly Susceptible Populations	0	0%	0	0%	23	100%	0	0%
18	C	Highly Susceptible Populations	0	0%	0	0%	23	100%	0	0%
		TOTAL (does not include CFPM, 12b, 14b, 17b)	355	86%	60	14%	607		36	

Summary of Findings by Facility Type

Facility Type=All Facilities

n=447

			IN	% IN	OUT	% OUT	NA	% NA	NO	%NO
		Certified Food Protection Manager Present	323	72%	124	28%	0	0%	0	0%
1	A	Approved Source	444	99%	3	1%	0	0%	0	0%
1	B	Approved Source	49	98%	1	2%	397	89%	0	0%
1	C	Approved Source	2	100%	0	0%	445	100%	0	0%
2	A	Receiving/Sound Condition	438	100%	1	0%	8	2%	0	0%
3	A	Records	37	82%	8	18%	395	88%	7	2%
3	B	Records	19	58%	14	42%	413	92%	1	0%
3	C	Records	10	50%	10	50%	427	96%	0	0%
4	A	Proper Cooking Temp	4	80%	1	20%	361	81%	81	18%
4	B	Proper Cooking Temp	25	96%	1	4%	300	67%	121	27%
4	C	Proper Cooking Temp	5	100%	0	0%	365	82%	77	17%
4	D	Proper Cooking Temp	68	99%	1	1%	228	51%	150	34%
4	E	Proper Cooking Temp	0	0%	0	0%	446	100%	1	0%
4	F	Proper Cooking Temp	0	0%	0	0%	442	99%	5	1%
4	G	Proper Cooking Temp	4	100%	0	0%	417	93%	26	6%
4	H	Proper Cooking Temp	39	98%	1	3%	240	54%	167	37%
5	A	Rapid Reheating/Hot Hold	26	74%	9	26%	239	53%	173	39%
5	B	Rapid Reheating/Hot Hold	1	100%	0	0%	403	90%	43	10%
5	C	Rapid Reheating/Hot Hold	67	96%	3	4%	202	45%	175	39%
5	D	Rapid Reheating/Hot Hold	1	100%	0	0%	395	88%	51	11%
6	A	Proper Cooling	68	78%	19	22%	176	39%	184	41%
6	B	Proper Cooling	63	79%	17	21%	148	33%	219	49%
6	C	Proper Cooling	31	89%	4	11%	162	36%	250	56%
7	A	Cold Hold	249	56%	197	44%	0	0%	1	0%
8	A	Hot Hold	197	75%	64	25%	139	31%	47	11%
8	B	Hot Hold	5	83%	1	17%	373	83%	68	15%
9	A	Time	209	71%	87	29%	117	26%	34	8%
9	B	Time	218	59%	152	41%	70	16%	7	2%
9	C	Time	212	64%	120	36%	97	22%	18	4%
9	D	Time	20	67%	10	33%	413	92%	4	1%
10	A	Separation	271	90%	29	10%	146	33%	1	0%
10	B	Separation	226	89%	27	11%	190	43%	4	1%
10	C	Separation	413	93%	33	7%	1	0%	0	0%
10	D	Separation	447	100%	0	0%	0	0%	0	0%
11	A	Food Contact Surfaces	307	69%	140	31%	0	0%	0	0%
12	A	Proper Handwashing (2009 FDA Code)	362	82%	81	18%	0	0%	4	1%
12	B	Proper Handwashing (2013 Food Code)	372	84%	71	16%	0	0%	4	1%
13	A	Good Hygienic Practices	396	89%	48	11%	0	0%	3	1%
14	A	Prevention Hand Contamination (2009 Food Code)	391	97%	13	3%	37	8%	6	1%
14	B	Prevention Hand Contamination (2013 Food Code)	392	97%	12	3%	36	8%	7	2%
15	A	Handwash Facilities	403	90%	44	10%	0	0%	0	0%
15	B	Handwash Facilities	408	92%	37	8%	2	0%	0	0%
16	A	Chemicals	59	88%	3	4%	385	86%	0	0%
16	B	Chemicals	397	89%	50	11%	0	0%	0	0%
16	C	Chemicals	26	67%	13	33%	408	91%	0	0%
17	A	Employee Health Policy (2009 Food Code)	297	66%	150	34%	0	0%	0	0%
17	B	Employee Health Policy (2013 Food Code)	74	17%	373	83%	0	0%	0	0%
18	A	Highly Susceptible Populations	95	100%	0	0%	352	79%	0	0%
18	B	Highly Susceptible Populations	94	99%	1	1%	352	79%	0	0%
18	C	Highly Susceptible Populations	94	99%	1	1%	352	79%	0	0%
		TOTAL (does not include CFPM, 12b, 14b, 17b)	7197	84%	1394	16%	10043		1928	

2015 Wake County Risk Factor Study

Percentage (%) of IN compliance observations for each risk factor

Risk Factor (IN compliance)	Hospitals			Nursing Homes			Elementary Schools			Fast Food Restaurants			Full Service Restaurants		
	%	in	Total Obs	%	in	Total Obs	%	in	Total Obs	%	in	Total Obs	%	in	Total Obs
Certified Food Protection Manager Present	100%	6	6	70%	23	33	91%	52	57	54%	47	87	72%	63	87
Food Source	100%	12	12	100%	66	66	99%	110	111	99%	175	177	92%	186	203
Inadequate Cooking	75%	9	12	97%	32	33	100%	37	37	90%	53	59	92%	72	78
Improper Holding	84%	36	43	65%	111	170	72%	185	258	58%	219	376	54%	268	500
Contamination	83%	25	30	88%	144	164	100%	164	164	87%	306	351	84%	360	428
Personal Hygiene (12a and 14a compared)	90%	27	30	91%	149	163	96%	271	283	89%	386	435	82%	356	435
Other/Chemical	58%	7	12	85%	33	39	100%	58	58	88%	82	93	87%	94	108
Employee Health Policy (17a only)	83%	5	6	82%	27	33	98%	56	57	68%	59	87	78%	68	87
Highly Susceptible Populations	100%	18	18	98%	97	99	100%	168	168	0%	0	0	0%	0	0
Totals (does not include CFPM)	85.3%	139	163	85.9%	659	767	92.3%	1049	1136	81.1%	1280	1578	76.3%	1404	1839

Risk Factor (IN compliance)	Delis			Meat			Produce			Seafood		
	%	in	Total Obs	%	in	Total Obs	%	in	Total Obs	%	in	Total Obs
Certified Food Protection Manager Present	74%	42	57	78%	46	59	79%	30	38	61%	14	23
Food Source	93%	139	149	100%	151	151	100%	76	76	92%	84	91
Inadequate Cooking	100%	35	35	100%	2	2	0%	0	0	0%	0	0
Improper Holding	100%	310	310	91%	74	81	80%	111	139	65%	43	66
Contamination	90%	225	249	90%	256	285	88%	100	114	88%	84	95
Personal Hygiene (12a and 14a compared)	88%	252	285	95%	247	259	93%	166	178	92%	106	115
Other/Chemical	84%	61	73	90%	57	63	79%	65	82	100%	25	25
Employee Health Policy (17a only)	51%	29	57	53%	31	59	24%	9	38	57%	13	23
Highly Susceptible Populations	0%	0	0	0%	0	0	0%	0	0	0%	0	0
Totals (does not include CFPM)	90.8%	1051	1158	90.9%	818	900	84.1%	527	627	85.5%	355	415

2015 Wake County Risk Factor Study

Percentage (%) of OUT of compliance observations for each risk factor

Risk Factor OUT of compliance	Hospitals			Nursing Homes			Elementary Schools			Fast Food Restaurants			Full Service Restaurants		
	%	out	Total Obs	%	out	Total Obs	%	out	Total Obs	%	out	Total Obs	%	out	Total Obs
Certified Food Protection Manager Present	0%	0	6	30%	10	33	9%	5	57	46%	40	87	28%	24	87
Food Source	0%	0	12	0%	0	66	1%	1	111	1%	2	177	8%	17	203
Inadequate Cooking	25%	3	12	3%	1	33	0%	0	37	10%	6	59	8%	6	78
Improper Holding	16%	7	43	35%	59	170	28%	73	258	42%	157	376	46%	232	500
Contamination	17%	5	30	12%	20	164	7%	13	177	13%	45	351	16%	68	428
Personal Hygiene (12a and 14a compared)	10%	3	30	9%	14	163	4%	12	283	11%	49	435	18%	79	435
Other/Chemical	0%	0	12	15%	6	39	0%	0	58	12%	11	93	13%	14	108
Employee Health Policy (17a only)	17%	1	6	18%	6	33	2%	1	57	32%	28	87	22%	19	87
Highly Susceptible Populations	0%	0	18	2%	2	99	0%	0	168	0%	0	0	0%	0	0
Totals (does not include CFPM)	11.7%	19	163	14.1%	108	767	8.7%	100	1149	18.9%	298	1578	23.7%	435	1839

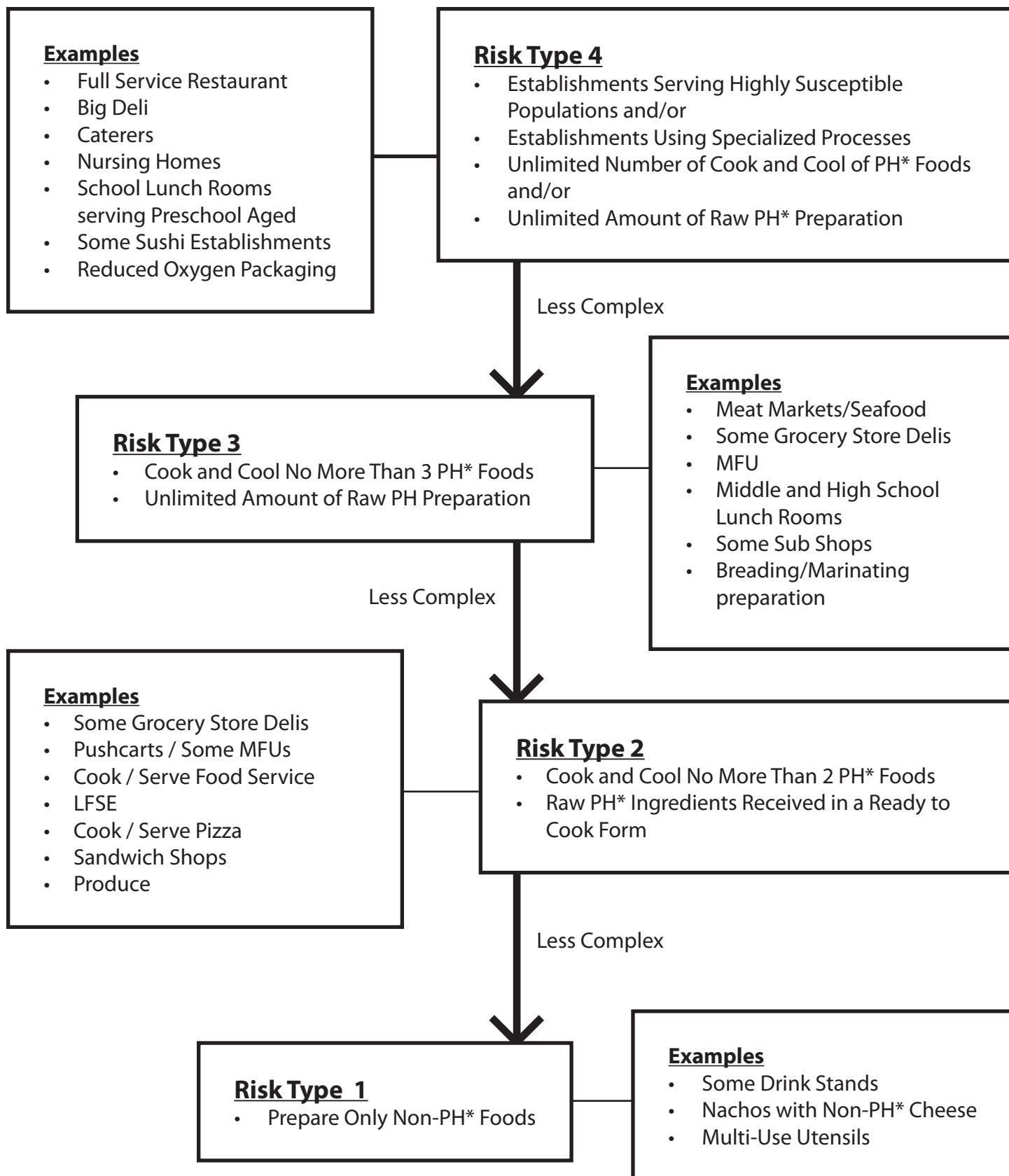
Risk Factor OUT of compliance	Deli's			Meat			Produce			Seafood		
	%	out	Total Obs	%	out	Total Obs	%	out	Total Obs	%	out	Total Obs
Certified Food Protection Manager Present	26%	15	57	22%	13	59	21%	8	38	39%	9	23
Food Source	7%	10	149	0%	0	151	0%	0	76	8%	7	91
Inadequate Cooking	0%	0	35	0%	0	2	0%	0	0	0%	0	0
Improper Holding	27%	85	310	10%	8	81	20%	28	139	35%	23	66
Contamination	10%	24	249	10%	29	285	12%	14	114	12%	11	95
Personal Hygiene (12a and 14a compared)	12%	33	285	5%	12	259	7%	12	178	8%	9	115
Other/Chemical	16%	12	73	10%	6	63	21%	17	82	0%	0	25
Employee Health Policy (17a only)	49%	28	57	47%	28	59	76%	29	38	43%	10	23
Highly Susceptible Populations	0%	0	0	0%	0	0	0%	0	0	0%	0	0
Totals (does not include CFPM)	16.6%	192	1158	9.2%	83	900	15.9%	100	627	14.5%	60	415

Improper Hold is the most significant risk factor across the board

Most significant risk factor

2nd most significant risk factor

Risk Categorization of Food Establishments



* Potentially Hazardous

2015 REFERENCE SHEET

APPENDIX N

CDC Risk Factor FOODS FROM UNSAFE SOURCES Food Source	CDC Risk Factor INADEQUATE COOK Pathogen Destruction
<p>1. Approved Source</p> <p><u>Data Item - 1A</u> 3-201.11* Compliance with Food Law 3-201.12* Food in A Hermetically Sealed Container. 3-201.13* Fluid Milk and Milk Products 3-201.14* Fish</p> <p><u>Data Item - 1B</u> 3-201.15* Molluscan Shellfish 3-202.18* Shellstock Identification</p> <p><u>Data Item - 1C</u> 3-201.16* Wild Mushrooms 3-201.17* Game Animals</p>	<p>4. Proper Cooking Temperature per TCS</p> <p><u>Data Item - 4A</u> 3-401.11(A)(1)(a)* Raw Animal Foods 3-401.11(A)(2)* Raw Animal Foods</p> <p><u>Data Item - 4B</u> 3-401.11(A)(2)* Raw Animal Foods</p> <p><u>Data Item - 4C</u> 3-401.11(B)(1)(2)* Raw Animal Foods</p> <p><u>Data Item - 4D</u> 3-401.11(A)(3)* Raw Animal Foods</p> <p><u>Data Item - 4E</u> 3-401.11(A)(3)* Raw Animal Foods</p> <p><u>Data Item - 4F</u> 3-401.12* Microwave Cooking</p> <p><u>Data Item - 4G</u> 3-401.11(A)(2)* Raw Animal Foods</p> <p><u>Data Item - 4H</u> 3-401.11(A)(1)(b)* Raw Animal Foods</p>
<p>2. Receiving/Sound Condition</p> <p><u>Data Item - 2A</u> 3-202.11* Temperature 3-202.15* Package Integrity 3-101.11* Safe, Unadulterated, and Honestly Presented</p>	
<p>3. Records</p> <p><u>Data Item - 3A</u> 3-202.18* Shellfish Identification 3-203.12* Shellfish Maintaining Identification</p> <p><u>Data Item - 3B</u> 3.402.11* Parasite Destruction 3.402.12* Records, Creation and Retention</p> <p><u>Data Item - 3C</u> 3-502.12* Reduced Oxygen Packaging, Criteria 8-103.12* Conformance with Approved Procedures</p>	<p>5. Rapid Reheating for Hot Holding</p> <p><u>Data Item 5A</u> 3-403.11(A)* Reheating for Hot Holding</p> <p><u>Data Item 5B</u> 3-403.11(B)* Reheating for Hot Holding - Microwave</p> <p><u>Data Item 5C</u> 3-403.11(C)* Reheating for Hot Holding – Commercially Processed RTE Food</p> <p><u>Data Item 5D</u> 3-403.11(E)* Reheating for Hot Holding – Remaining unsliced portion of Meat Roasts</p>

2015 REFERENCE SHEET

APPENDIX N

<p>CDC Risk Factor IMPROPER HOLDING Limitation of Growth of Organisms of Public Health Concern</p>	<p>CDC Risk Factor CONTAMINATED EQUIPMENT Protection from Contamination</p>
<p>6. Proper Cooling Procedure</p> <p><u>Data Item 6A</u> 3-501.14(A)* Cooling – Cooked TCS</p> <p><u>Data Item 6B</u> 3-501.14(B)* Cooling – TCS prepared from ingredients at ambient temperature</p> <p><u>Data Item 6C</u> 3-501.14(C)* Cooling – TCS receipt of foods allowed at >41° F. (5° C.) during shipment</p>	<p>10. Separation / Segregation /Protection</p> <p><u>Data Item 10A</u> 3-302.11(A)(1)* Packaged and Unpackaged Food – Separation, Packaging, and Segregation <i>(Separate raw animal foods from raw RTE and cooked RTE foods)</i></p> <p><u>Data Item 10B</u> 3-302.11(A)(2)* Packaged and Unpackaged Food – Separation, Packaging, and Segregation <i>(Separate raw animal foods by using separate equipment, special arrangement of food in equipment to avoid cross contamination of one type with another, or by preparing different types of food at different time or in separate areas)</i></p> <p><u>Data Item 10C</u> 3-302.11(A)(4-6)* Packaged and Unpackaged Food – Separation, Packaging, and Segregation 3-304.11(B)* Food Contact with Equipment and Utensils</p> <p><u>Data Item 10D</u> 3-306.14(A)(B)* Returned Food, Reservice or Sale</p>
<p>7. Cold Hold (41° F. (5° C.))</p> <p><u>Data Item 7A</u> 3-501.16(A)* TCS, Hot and Cold Holding <i>(For the purposes of this Baseline, 41° F. (5° C.) or below will be used as the criteria for assessing <u>all</u> TCS that are maintained/held cold.)</i></p>	
<p>8. Hot Hold (135° F. (57° C.))</p> <p><u>Data Item 8A</u> 3-501.16(A)* TCS, Hot and Cold Holding</p> <p><u>Data Item 8B</u> 3-501.16(A)* TCS, Hot and Cold Holding</p>	
<p>9. Time as Public Health Control (TPHC)/Date Marking</p> <p><u>Data Item 9A</u> 3-501.17(A)(C)* Ready-to-Eat, TCS, Date Marking – On-premises Preparation <i>7 calendar days at 41° F. (5° C.) or less</i></p> <p><u>Data Item 9B</u> 3-501.18* Ready-to-Eat, TCS, Disposition <i>(Food shall be discarded if not consumed within ≤ 7 calendar days at 41° F. (5° C.) or less</i></p> <p><u>Data Item 9C</u> 3-501.17(B)(F)* Ready-to-Eat, TCS, Date Marking</p> <p><u>Data Item 9D</u> 3-501.19* Time as a Public Health Control</p>	<p>11. Food Contact Surfaces</p> <p><u>Data Item 11A</u> 4-601.11(A)&(B)* Equipment, Food Contact Surfaces and Utensils 4-602.11* Equipment Food – Contact Surfaces and Utensils – Frequency 4-701.10* Sanitation of Equipment and Utensils – Food Contact Surfaces and Utensils 4-702.11* Sanitization of Equipment and Utensils – Before Use After Cleaning</p>

2015 REFERENCE SHEET

APPENDIX N

<p>CDC Risk Factor POOR PERSONAL HYGIENE Personnel</p>	<p>16. Chemical</p>
<p>12. Proper, Adequate Handwashing</p> <p><u>Data Item 12A (2009 Food Code)</u></p> <p>2-301.11* Clean Condition 2-301.12* Cleaning Procedure 2-301.14* When to Wash 2-301.15* Where to Wash</p> <p><u>Data Item 12B (2013 Food Code)</u></p> <p>2-301.11* Clean Condition 2-301.12* Cleaning Procedure 2-301.14* When to Wash 2-301.15* Where to Wash</p>	<p><u>Data Item 16A</u></p> <p>3-202.12* Additives 3-302.14* Protection from Unapproved Additives <i>(NOTE: Regarding SULFITES – Refers to any sulfites added in the food establishment, not to foods processed by a commercial processor or that come into the food establishment already on foods)</i></p> <p><u>Data Item 16B</u></p> <p>7-101.11* Identifying Information, Prominence-Original Containers</p> <p>7-102.11* Common Name-Working Containers</p>
<p>13. Good Hygiene Practices</p> <p><u>Data Item 13A</u></p> <p>2-401.11* Eating, Drinking, or Using Tobacco 2-401.12* Discharges from the Eyes, Nose and Mouth 2-403.11* Handling Prohibition – Animals 3-301.12* Preventing Contamination when Tasting</p>	<p><i>Operational Suppliers and Applications</i></p> <p>7-201.11* Separation-Storage 7-202.11* Restriction-Presence and Use 7-202.12* Conditions of Use 7-203.11* Poisonous or Toxic Material Containers – Prohibitions 7-204.11* Sanitizers, Criteria-Chemicals 7-204.12* Chemicals for Washing Fruits And Vegetables</p>
<p>14. Prevention of Contamination from Hands</p> <p><u>Data Item 14A (2009 Food Code)</u></p> <p>3-301.11* Preventing Contamination from Hands</p> <p><u>Data Item 14B (2013 Food Code)</u></p> <p>3-301.11* Preventing Contamination from Hands</p>	<p>7-204.13* Boiler Water Additives, Criteria 7-204.14* Drying Agents, Criteria 7-205.11* Incidental Food Contact, Criteria-Lubricants 7-206.11* Restricted Use Pesticides, Criteria 7-206.12* Rodent Bait Stations 7-206.13* Tracking Powders, Pest Control And Monitoring 7-207.11* Restriction and Storage-Medicines</p>
<p>15. Handwash Facilities</p> <p><u>Data Item 15A</u></p> <p>5-203.11* Handwashing Lavatory-Numbers and Capacity 5-204.11* Handwashing Lavatory-Location and Placement 5-205.11* Using a Handwashing Lavatory-Operation and Maintenance</p> <p><u>Data Item 15B</u></p> <p>6-301.11* Handwashing Cleanser, Availability 6-301.12* Hand Drying Provision</p>	<p>7-207.12* Refrigerated Medicines, Storage 7-208.11* Storage-First Aid Supplies 7-209.11* Storage-Other Personal Care Items</p> <p><u>Data Item 16C</u></p> <p><i>Stock and Retail Sale of Poisonous or Toxic Material INCLUDE ON PRODUCE ONLY</i></p> <p>7-301.11* Separation-Storage and Display <i>(Separation is to be by spacing or partitioning)</i></p>

17. Employee Health Policy**Data Item 17A (2009 Food Code)**

- 2-201.11* Responsibility of Person in Charge
- 2-201.12* Exclusions and Restrictions
- 2-201.13* Removal of Exclusions and Restrictions

Data Item 17B (2013 Food Code)

- 2-201.11* Responsibility of Person in Charge
- 2-201.12* Exclusions and Restrictions
- 2-201.13* Removal of Exclusions and Restrictions

18. Food & Food Preparation for Highly Susceptible Populations – HSP's ONLY**Data Item 18A**

- 3-801.11(A)(2)* Prohibited Foods

Data Item 18B

- 3-801.11(B)* Prohibited Foods
- 3-801.11(E)* Prohibited Foods

Data Item 18C

- 3-801.11(C)* Prohibited Foods

2105 Data Collection – Wake County

Facility ID# _____

Sample # _____

QA _____

FDA
Foodborne Illness Risk Factor Study
Data Collection Form

Date: _____ Time In: _____ Time Out: _____ Inspector: _____

Establishment: _____ Manager: _____

Physical Address: _____

City: _____ State: NC Zip: _____ County: Wake Facility Type: _____**STATUS OF OBSERVATIONS:****IN=** Item found in compliance (**IN** Compliance marking must be based on actual observations)**OUT=** Item found out of compliance (**OUT** of Compliance marking must be based on actual observations)**NO=** Not observable (**NO** marking is made when the data item is part of the establishment's operation or procedures, OR is seasonal and is not occurring at the time of the inspection).**NA=** Not applicable (**NA** marking is made when the data item is NOT part of the establishment's operation or procedures)**IN OUT*******Certified Food Protection Manager Present*******CDC RISK FACTORS*******CDC RISK FACTOR – FOODS FROM UNSAFE SOURCE******FOOD SOURCE****STATUS 1. Approved Source****IN OUT** A. All food from Regulated Food Processing Plants/ No home prepared/canned foods**IN OUT NA** B. All Shellfish from NSSP listed sources. No recreationally caught shellfish received or sold**IN OUT NA NO** C. Game, wild mushrooms harvested with approval of Regulatory Authority**STATUS 2. Receiving / Sound Condition****IN OUT** A. Food received at proper temperatures/ protected from contamination during transportation and receiving/food is safe, unadulterated**STATUS 3. Records****IN OUT NA NO** A. Shellstock tags/labels retained for 90 days from the date the container is emptied**IN OUT NA NO** B. As required, written documentation of parasite destruction maintained for 90 days for Fish products**IN OUT NA** C. CCP monitoring records maintained in accordance with HACCP plan when required

Notes: _____

Make a note if ROP for less than 48 hours, in which case HACCP plan is not required; mark NA

CDC RISK FACTORS*****CDC RISK FACTOR – INADEQUATE COOK******PATHOGEN DESTRUCTION****STATUS 4. Proper Cooking Temperature Per Potentially Hazardous Food (TCS)**

(NOTE: Cooking temperatures must be taken to make a determination of compliance or non-compliance. Do not rely upon discussions with managers or cooks to make a determination of compliance or non-compliance. If one food item is found out of temperature, that TCS category must be marked as **OUT** of compliance.)

IN OUT NA NO	A. Raw shell eggs broken for immediate service cooked to 145°F. (63°C.) for 15 seconds. Raw shell eggs broken but not prepared for immediate service cooked to 155°F. (68°C.) for 15 seconds
IN OUT NA NO	B. Comminuted Fish, Meats, Game animals cooked to 155°F. (68°C.) for 15 seconds
IN OUT NA NO	C. Roasts, including formed meat roasts, are cooked to 130°F. (54°C.) for 112 minutes or as Chart specified and according to oven parameters per Chart (NOTE: This data item includes beef roasts, corned beef roasts, pork roasts, and cured pork roasts such as ham.)
IN OUT NA NO	D. Poultry; stuffed fish, stuffed meat, stuffed pasta, stuffed poultry, stuffed ratites, or stuffing containing fish, meat, poultry or ratites cooked to 165°F. (74°C.) for 15 seconds
IN OUT NA NO	E. Wild game animals cooked to 165°F. (74°C.) for 15 seconds
IN OUT NA NO	F. Raw animal foods cooked in microwave are rotated, stirred, covered, and heated to 165°F. (74°C.). Food is allowed to stand covered for 2 minutes after cooking.
IN OUT NA NO	G. Ratites, injected meats are cooked to 155°F. (68°C) for 15 seconds. Specify product and temperature in the space Below
IN OUT NA NO	H. All other TCS cooked to 145°F. (63°C.) for 15 seconds (including pork and fish)
Notes: _____	

STATUS **5. Rapid Reheating For Hot Holding**

IN OUT NA NO	A. TCS that is cooked and cooled on premises is rapidly reheated to 165°F. (74°C.) for 15 seconds for hot holding
IN OUT NA NO	B. Food reheated in a microwave is heated to 165°F. (74°C.) or higher for hot holding
IN OUT NA NO	C. Commercially processed ready to eat food, reheated to 135°F. (60°C.) or above for hot holding
IN OUT NA NO	D. Remaining unsliced portions of meat roasts are reheated for hot holding using minimum oven parameters

Notes: _____

****CDC RISK FACTOR – IMPROPER HOLD****

LIMITATION OF GROWTH OF ORGANISMS OF PUBLIC HEALTH CONCERN

STATUS **6. Proper Cooling Procedure**

(NOTE: Record any temperature above 41°F. (5°C) on blank lines. Production documents as well as statements from managers, person-in-charge (PIC), and employees, regarding the time the cooling process was initiated, may be used to supplement actual observations.)

IN OUT NA NO	A. Cooked TCS is cooled from 135°F. (60°C.) to 70°F. (21°C.) within 2 hours and from 135°F. (60°C.) to 41°F. (5°C.) or below within 6 hours
IN OUT NA NO	B. TCS (prepared from ingredients at ambient temperature) is cooled to 41°F. (5°C.) or below within 4 hours
IN OUT NA NO	C. Foods received at a temperature according to Law are cooled to 41°F. (5°C.) within 4 hours (milk, shellfish, eggs)

Notes: _____

STATUS **7. Cold Hold (41°F. (5°C.))**

(NOTE: For the purposes of this Baseline, 41° F. (5°C) or below will be used as the criteria for assessing **all** TCS that are maintained/held cold.) If one product is found out of temperature the item is marked **OUT** of compliance.

IN OUT	A. TCS is maintained at 41°F. (5°C.) or below, except during preparation, cooking, cooling or when time is used as a public health control. (Record products and temperatures in the space below).
--------	---

Notes: _____

STATUS **8. Hot Hold (135° F. (60°C.))**

IN OUT NA NO A. TCS is maintained at 135°F. (60°C.) or above, except during preparation, cooking, or cooling or when time is used as a public health control.

IN OUT NA NO B. Roasts are held at a temperature of 130°F. (54°C.) or above

Notes: _____

STATUS **9. Time as Public Health Control (TPHC)/Date Marking**

IN OUT NA NO A. Ready-to-eat TCS held for more than 24 hours is date marked as required (**prepared on-site**)

IN OUT NA NO B. Discard RTE TCS and/or opened commercial container exceeding 7 days at ≤ 41°F. (5°C.)

IN OUT NA NO C. Opened **Commercial** container of prepared ready-to-eat TCS is date marked as required

IN OUT NA NO D. When time only is used as a public health control, food is cooked and served within 4 hours as required

Notes: _____

****CDC RISK FACTOR – CONTAMINATED EQUIPMENT****
PROTECTION FROM CONTAMINATION

STATUS **10. Separation / Segregation / Protection**

IN OUT NA NO A. Food is protected from cross contamination by separating raw animal foods from raw ready-to-eat food and by separating raw animal foods from cooked ready-to-eat food (**Raw from RTE**)

IN OUT NA NO B. Raw animal foods are separated from each other during storage, preparation, holding, and display (**Raw from Raw**)

IN OUT C. Food is protected from environmental contamination – critical items

IN OUT D. After being served or sold to a consumer, food is not re-served

Notes: _____

STATUS **11. Food-Contact Surfaces**

*(NOTE: This item will require some judgment to be used when marking this item **IN** or **OUT** of compliance. This item should be marked **OUT** of compliance if observations are made that supports a pattern of non-compliance with this item. One dirty utensil, food contact surface or one sanitizer container without sanitizer would not necessarily support an **OUT** of compliance mark. You must provide notes concerning an **OUT** of compliance mark on this item).*

IN OUT A. Food-contact surfaces and utensils are clean to sight and touch and sanitized before use (Including frequency of cleaning/sanitizing).

Notes: _____

****CDC RISK FACTOR – POOR PERSONAL HYGIENE****
PERSONNEL

STATUS **12. Proper, Adequate Handwashing**

IN OUT NO A. Hands are clean and properly washed when and as required (2009 FDA Code)

IN OUT NO B. Hands are clean and properly washed when and as required (2013 FDA Code)

Notes: _____

STATUS **13. Good Hygienic Practices**

IN OUT NO A. Food Employees eat, drink, and use tobacco only in designated areas / do not use a utensil more than once to taste food that is sold or served / do not handle or care for animals present. Food employees experiencing

persistent sneezing, coughing, or runny nose do not work with exposed food, clean equipment, utensils, linens, unwrapped single-service or single-use articles

Notes: _____

STATUS **14. Prevention of Contamination From Hands**

IN OUT NA NO A. Employees do not contact exposed, ready-to-eat food with their bare hands. (2009 FDA Code: RTE foods contacted with bare hands must reach 165°F)

IN OUT NA NO B. Employees do not contact exposed, ready-to-eat food with their bare hands. (2013 FDA Code: RTE foods contacted with bare hands must reach 145°F)

Notes: _____

STATUS **15. Handwash Facilities**

IN OUT A. Handwash facilities conveniently located and accessible for employees

IN OUT B. Handwash facilities supplied with hand cleanser / sanitary towels / hand drying devices

Notes: _____

****CDC RISK FACTOR – OTHER****

FOREIGN SUBSTANCES

STATUS **16. Chemicals**

IN OUT NA A. If used, only approved food or color additives. Sulfites are not applied to fresh fruits & vegetables intended for raw consumption

IN OUT B. Poisonous or toxic materials, chemicals, lubricants, pesticides, medicines, first aid supplies, and other personal care items are properly identified, stored and used

IN OUT NA* C. Poisonous or toxic materials held for retail sale are properly stored (***PRODUCE ONLY**)

Notes: _____

SUPPLEMENTAL ITEMS

STATUS 17 **Employee Health Policy**

IN OUT A. Facility has a **policy** that is consistent with 2-201 of the Food Code for excluding and restricting employees on the basis of their health and activities as they relate to diseases that are transmissible through food. **Policy** includes employee's responsibility to notify management of symptoms and illnesses identified in the **2009** Food Code.

IN OUT B. Facility has a **policy** that is consistent with 2-201 of the Food Code for excluding and restricting employees on the basis of their health and activities as they relate to diseases that are transmissible through food. **Policy** includes employee's responsibility to notify management of symptoms and illnesses identified in the **2013** Food Code.

Notes: _____

STATUS 18 **Food & food preparation for highly susceptible populations**

(NOTE: These items pertain specifically to those facilities that serve Highly Susceptible Populations as defined in the Food Code. Establishments would include such facility types as Hospitals, Nursing Homes and Elementary Schools.)

IN OUT NA A. Prepackaged juice/beverage containing juice with a warning label (21 CFR, Section 101.17(g)) not served.

IN OUT NA B. Pasteurized eggs or egg products substitutes for raw shell eggs in preparation of foods that are cooked to minimum required temperatures, (specified in Section 4.0 of this Baseline Form), unless cooked to order & immediately served; broken immediately before baking and thoroughly cooked: or included as an ingredient for a recipe supported by a HACCP plan that controls Salmonella Enteritidis.

IN OUT NA C. Raw or partially cooked animal food and raw seed sprouts not served.

Notes: _____

APPENDIX P – RESOURCES

WEB SITE LOCATIONS FOR REFERENCED DOCUMENTS

2010 Wake County Baseline Study

http://www.wakegov.com/food/healthinspections/Pages/fda_report.aspx

FDA Report on the Occurrence of Foodborne Illness Risk Factors in Selected Institutional Foodservice, Restaurant, and Retail Food Store Facility Types (2009)

<http://www.fda.gov/downloads/Food/FoodSafety/RetailFoodProtection/FoodborneIllnessandRiskFactorReduction/RetailFoodRiskFactorStudies/UCM224682.pdf>

2009 FDA Food Code

<http://www.fda.gov/downloads/Food/GuidanceRegulation/UCM189448.pdf>

2013 FDA Food Code

<http://www.fda.gov/downloads/Food/GuidanceRegulation/RetailFoodProtection/FoodCode/UCM374510.pdf>



**Environmental
Services**

TEL 919 856 7400
FAX 919 743 4772

Administration
336 Fayetteville Street • Raleigh, NC 27602
www.wakegov.com

March 24, 2016

Mr. Larry Michael, Section Chief
NC DHHS/Division of Public Health
Environmental Health Section
1632 Mail Service Center
Raleigh, NC 27699-1632

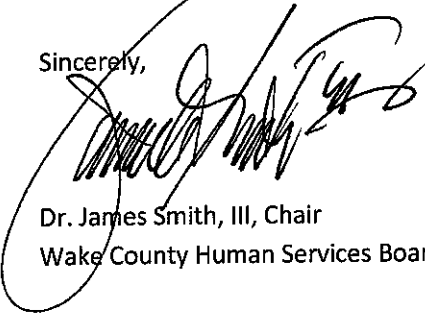
Dear Mr. Michael:

In 2010, the Wake County Board of Human Services supported the adoption of food safety rules based on the 2009 FDA Food Code. Wake County conducted risk factor studies before and after the state adopted the Code in 2012. The study data show significant reduction in observations of each of the CDC risk factors that contribute to foodborne illness:

Observations of Risk Factors IN compliance	Average	
	2010	2015
Approved Food Source	95%	96%
Final Cook Temperatures	91%	94%
Improper Holding / Time and Temperature	57%	66%
Contamination	87%	88%
Personal Hygiene	82%	90%

The FDA Food Code is based on the latest food science and is updated every four years through a rigorous process that involves diverse stakeholders. The Wake County Board of Human Services supports keeping the food safety rules current with the latest FDA Food Code, by allowing the state to adopt the Code by reference with subsequent editions and amendments. This will ensure that Wake County has the regulatory foundation to protect the public health of its citizens.

Sincerely,



Dr. James Smith, III, Chair
Wake County Human Services Board