

# **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.