

MIAMI-DADE COUNTY HEALTH DEPARTMENT

EPI MONTHLY REPORT

Inside this issue:

1 Knowledge, Attitudes and Practices (KAP)

Among Food Handlers in Miami-Dade County: A Pilot Study

3 Selected Notifiable Disease Reports, Historical data. Miami-Dade County

4 EDC-IS Influenza/Respiratory Illness Surveillance Report

5 Monthly Report, Selected Reportable Diseases/ Conditions in August 2011

Epidemiology, Disease Control & Immunization Services
8600 NW 17th Street
Suite 200
Miami, Florida 33126
Tel: (305) 470-5660
Fax: (305) 470-5533

Knowledge, Attitudes and Practices (KAP) Among Food Handlers in Miami-Dade County: A Pilot Study

Martha Casero, MPH

Introduction

The recurrence of foodborne illnesses remains a public health concern despite the implementation of food safety strategies and regulations across the country. The Centers for Disease Control and Prevention (CDC) estimates that annually in the United States, approximately 50 million people become ill, 128,000 are hospitalized, and 3,000 die as a result of foodborne diseases (CDC, 2011). Based on findings from a 10-year study conducted by the FDA, there are three main risk factors for foodborne illness that still require attention and improvement. These include: (1) poor personal hygiene, (2) improper holding of food, and (3) contaminated food surfaces and equipment (FDA, 2010). The mishandling of food and improper hygiene by food handlers are not only considered contributing factors in the transmission of foodborne diseases, but the driving forces behind the majority of foodborne-related outbreaks. While a number of studies assessing the knowledge, attitudes and practices (KAP) of food handlers in relation to food safety have been done around the world, very few have actually been conducted in the United States.

The KAP study is to examine and evaluate what people know about certain things, how they feel, and how they behave. Taking into consideration these important determinants for foodborne illnesses and the number of restaurants that currently serve Miami-Dade County residents, the aim of this pilot study was to assess the general food safety

knowledge, attitudes and practices among Miami-Dade County's food handlers.

Methods

A survey assessing the knowledge, attitudes and practices (KAP) of food handlers working in three outbreak-related restaurants in Miami-Dade County was carried out between June and July 2011. Restaurant selection for this pilot study was based on previous restaurant outbreaks. A four-part questionnaire was developed and its design was modified and modeled after established guidelines and previously conducted KAP studies. The first part of the questionnaire was designed to collect demographic information such as age, race/ethnicity, number of years of experience in the food industry and whether or not the food handlers had received formal training on food safety. The second part consisted of 10 open-ended questions about general food safety knowledge and hygiene. Participants were asked, for example, to define "foodborne illness" and to identify the proper methods necessary to prevent cross contamination. For part three of the questionnaire, food handlers were asked to use a five-point rating scale (1=strongly disagree, 2=disagree, 3=neutral, 4=agree, 5=strongly agree) to indicate their level of agreement to 10 statements about their personal role in the control and prevention of foodborne illnesses. Part four included 10 open-ended questions related to individual food safety practices while at work; for example, we wanted to know

how, when and where each of the participants stored raw meats and how often they washed their hands. Food safety knowledge and practices were measured using a score range between 0 and 18, which were converted to 100 points. A score below 50% for either part was defined as poor food safety knowledge and poor practices, respectively. Food handlers' attitudes were measured using a score range between 10 and 50. A score below 30 points was defined as negative attitude toward the control and prevention of foodborne illnesses. The questionnaire was translated into Spanish. Trained interviewers conducted face-to-face interviews at food handlers' place of work. All interviews were completed either before or after restaurant peak times and away from any customers. Each interview lasted approximately 20 minutes.

Results

Demographics

A total of 38 food handlers were interviewed for this pilot study. Table 1 shows that out of the 38 food handlers, 16 (42%) were servers, 9 (24%) were cooks, and 5 (13%) assisted in the food preparation. The remaining 8 (20%) staff members did not have direct contact with food preparation. Approximately 78% were male. Seventy-three percent were Hispanic and the majority (71%) spoke only Spanish. When asked about having received food safety training prior to starting their current position, 100% responded affirmatively. Data showed that training had been conducted by either their manager (44.7%) or an external company (34.2%). Approximately 21% had been trained by a co-worker.

Knowledge and Practices

Each of the restaurants demonstrated variation in the overall measurement of food safety knowledge and practices (Figures 1 and 2). In Restaurant A, there was no considerable difference in good or poor food safety knowledge or practices among the staff, but they demonstrated an overall better food safety knowledge (21.1%) when compared with Restaurant B (7.9%) and Restaurant C (7.9%). When compared with Restaurants A and C, Restaurant B exhibited a higher percentage of poor knowledge (29%) and practices (26%) in regards to food safety. Among the staff at Restaurant C, the overall level of food safety knowledge was found to be lower (13.2%) in comparison with their food safety practices (2.6%). All restaurants demonstrated 100% (not graphed) positive attitudes among their staff.

Figure 1. Measurement of Food Safety Knowledge among Food Handlers (n=38), Miami-Dade County, 2011

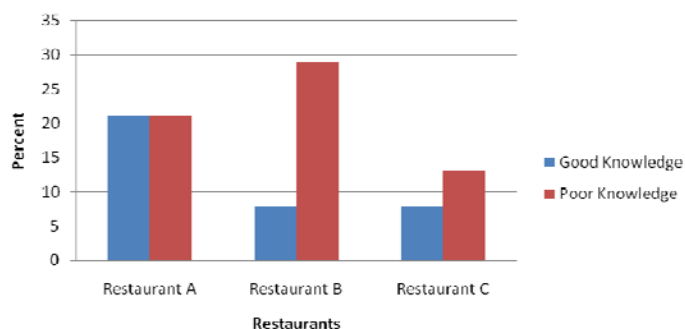
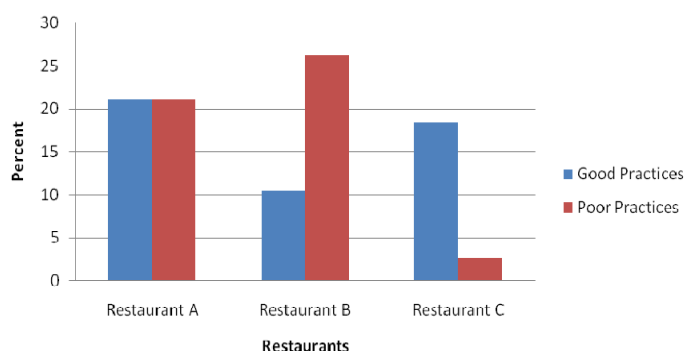


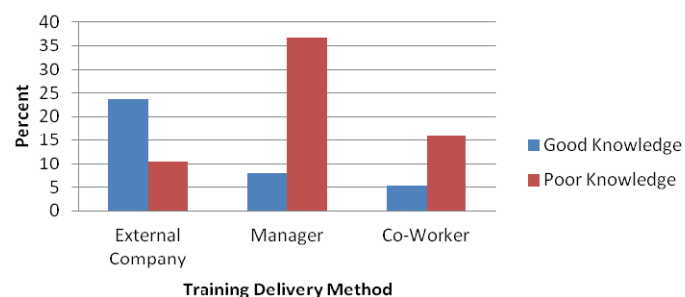
Figure 2. Measurement of Food Safety Practices among Food Handlers (n=38), Miami-Dade County, 2011



Food Safety Training

According to Figure 3, the respondents that received food safety training from an external training company had a higher percentage of good food safety knowledge (23.7%), compared with those who received training directly from their manager (7.9%) or their co-workers (5.3%). In comparison with those who obtained food safety training from their manager, 26.3% performed better food safety practices than those who received training from an external company (15.8%) or their co-workers (7.9%) (Figure 4).

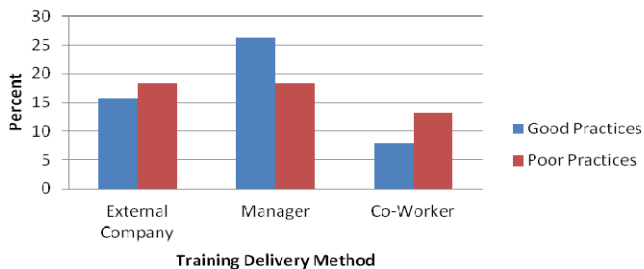
Figure 3. Measurement of Food Safety Knowledge by Type of Food Safety Training Delivery Method (n=38), Miami-Dade County, 2011



Acknowledgements

A special thanks to Pedro Noya-Chaveco, Juan Suarez, Erin O’Connell, Wenddy Ayerdis, Steffan Cooper, Lise Malebranche, and Lan Zhang for their help and guidance throughout this project.

Figure 4. Measurement of Food Safety Practices by Type of Food Safety Training Delivery Method (n=38), Miami-Dade County, 2011

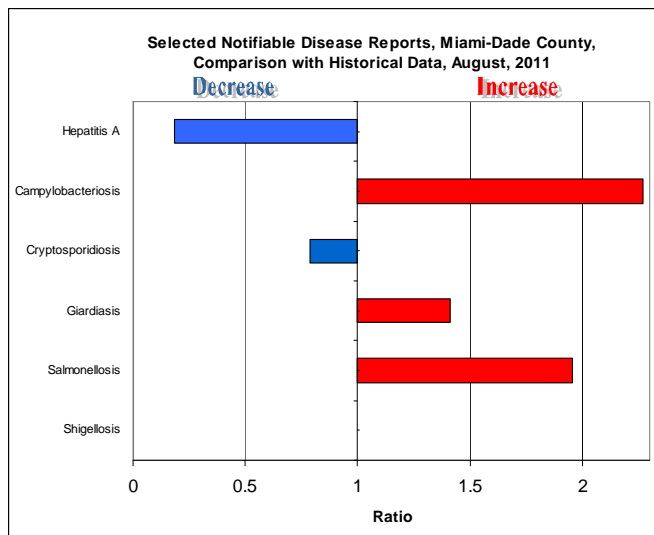


Conclusion

In this pilot study, there was variation in food safety knowledge and practices among the food handlers for each of the three participating restaurants. The difference in levels of knowledge and practices may be, in part, associated with the make-up of the establishment (e.g., family-owned/operated, high-end, franchise sit-down). Further study with a larger sample and variety of establishments would be necessary to determine if there is any plausibility in this observation. Another finding that stood out was the difference in the level of knowledge among those who received training from a training company versus their manager. Although very little research has assessed the degree of impact that various types of training may have on the level of knowledge among food handlers, several researchers have suggested that formal food safety training has a positive impact on knowledge (Lynch, Elledge, Griffith, & Boatright, 2003; Pilling, Brannon, Shanklin, Roberts, Barrett, & Howells, 2008).

Strengths and Limitations

In order to better assess the general knowledge, attitude and practices among food handlers in Miami-Dade County a cross-sectional study was developed. This type of study was conducted to gain an understanding of the demographic and general knowledge of food handlers in the county. Although this study identifies differences in knowledge and practices among the respondents, this sample is non-representative and results should not be generalized. In addition, language barriers may have biased the results during data collection. Despite these limitations, this pilot study is one of the first KAP studies to have been conducted in Miami-Dade County. The potential exists for a larger-scale KAP study that can help identify specific gaps and barriers in knowledge and behavior among our food handlers and, in turn, use that information to develop and implement better strategies to improve food safety practices.



TO REPORT ANY DISEASE AND FOR INFORMATION CALL: Epidemiology, Disease Control & Immunization Services

Childhood Lead Poisoning Prevention Program	305-470-6877
Hepatitis	305-470-5536
Immunizations or outbreaks	305-470-5660
HIV/AIDS Program	305-470-6999
STD Program	305-575-5430
Tuberculosis Program	305-575-5415
Immunization Service	305-470-5660
To make an appointment.....	786-845-0550

Miami-Dade County Health Department
EDC-IS Influenza/Respiratory Illness
Surveillance Report

EDC-IS

Epidemiology, Disease Control
& Immunization Services

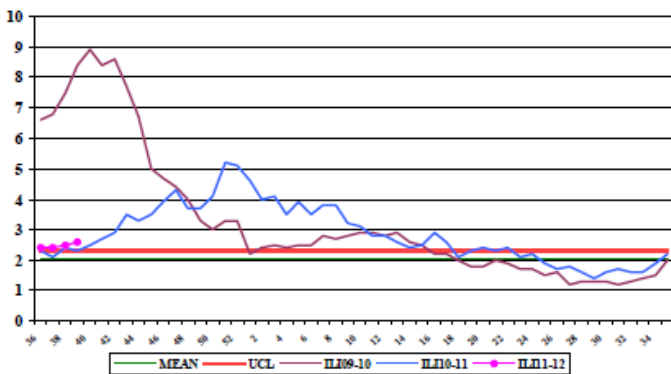
Week 39: 09/25/2011– 10/01/2011

Miami Dade County Health Department EDC-IS collects and analyzes weekly information on influenza activity in Miami-Dade County. On a daily basis, selected Miami-Dade County hospitals electronically transmit hospital emergency department data to the Miami-Dade County Health Department.



This data is then categorized into 11 distinct syndromes. The influenza-like illness (ILI) syndrome consists of fever with either cough or sore throat. It can also include a chief complaint of “flu”. Each week, staff will determine the percentage of all emergency department visits that fall into the ILI category.

Percentage of Emergency Department Visits Attributable to Influenza-Like Illness
Miami-Dade County, 2009-2011



During this period, there were 20,967 ED visits; among them 537 (2.6%) were ILI. At the same week of last year, 2.3% of ED visits were ILI.

PARTICIPATE IN INFLUENZA
SENTINEL
PROVIDER SURVEILLANCE

The Miami-Dade County Health Department NEEDS Influenza Sentinel Providers!!

Sentinel providers are key to the success of the Florida Department of Health’s Influenza Surveillance System. Data reported by sentinel providers gives a picture of the influenza virus and ILI activity in the U.S. and Florida which can be used to guide prevention and control activities, vaccine strain selection, and patient care.

- Providers of any specialty, in any type of practice, are eligible to be sentinel providers.
- Most providers report that it takes **less than 30 minutes a week** to compile and report data on the total number of patients seen and the number of patients seen with influenza-like illness.
- Sentinel providers can submit specimens from a subset of patients to the state laboratory for virus isolation **free of charge**.

For more information, please contact **Lakisha Thomas** at 305-470-5660.

About the Epi Monthly Report

The Epi Monthly Report is a publication of the Miami-Dade County Health Department, Epidemiology, Disease Control & Immunization Services, The publication serves a primary audience of physicians, nurses, and public health professionals. Articles published in the Epi Monthly Report may focus on quantitative research and analysis, program updates, field investigations, or provider education. For more information or to submit an article, contact Lizbeth Londoño at 305-470-6918.

Miami-Dade County Monthly Report

Select reportable Disease/Conditions

August 2011



EDC-13
Epidemiology, Disease Control
& Immunization Services
MDCHD

Diseases/Conditions	2011 Current Month	2011 Year to Date	2010 Year to Date	2009 Year to Date
HIV/AIDS				
AIDS*	73	514	692	846
HIV	136	1079	1308	1352
STD				
Infectious Syphilis*	27	209	231	N/A
Chlamydia*	704	5711	5707	N/A
Gonorrhea*	213	1530	1592	N/A
TB				
Tuberculosis**	16	87	97	N/A

Epidemiology, Disease Control & Immunization Services

Epidemiology

Campylobacteriosis	33	326	142	103
Ciguatera Poisoning	0	12	13	29
Cryptosporidiosis	2	13	9	14
Cyclosporiasis	3	5	1	1
Dengue Fever	1	6	27	2
E. coli, O157:H7	1	7	8	9
E. coli, Non-O157	0	0	0	0
Encephalitis (except WNV)	0	0	0	0
Encephalitis, West Nile Virus	0	0	0	0
Giardiasis, Acute	34	209	489	417
Influenza Novel Strain	0	0	20	1220
Influenza, Pediatric Death	0	0	0	0
Legionellosis	2	11	6	11
Leptospirosis	0	0	0	0
Listeriosis	0	0	13	0
Lyme disease	0	0	3	2
Malaria	3	13	17	14
Meningitis (except aseptic)	0	0	0	0
Meningococcal Disease	0	10	13	13
Salmonellosis	116	371	260	306
Shigellosis	13	81	135	110
Streptococcus pneumoniae, Drug Resistant	5	61	109	74
Toxoplasmosis	0	0	1	1
Typhoid Fever	1	3	2	3
Vibriosis	0	1	0	0
West Nile Fever	0	0	0	0

Immunization Preventable Diseases

Measles	0	0	0	0
Mumps	0	0	3	0
Pertussis	5	20	22	28
Rubella	0	0	0	0
Tetanus	0	0	0	0
Varicella	4	33	62	46

Hepatitis

Hepatitis A	1	13	30	32
Hepatitis B (Acute)	1	3	20	9

Lead

Lead Poisoning	15	109	167	69
----------------	----	-----	-----	----

*Data is provisional at the county level and is subject to edit checks by state and federal agencies.

** Data on tuberculosis are provisional at the county level.

