



EPI MONTHLY REPORT

MIAMI-DADE COUNTY HEALTH DEPARTMENT

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Campylobacteriosis in Miami-Dade County

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Background

Campylobacteriosis is an illness caused by Campylobacter species and is characterized by an acute onset of diarrhea, abdominal cramps, fever, malaise, nausea, and sometimes vomiting and bloody stool. Symptoms usually occur within two to five days after exposure to the bacteria, but can range from one to ten days. Some individuals infected with the bacteria may be asymptomatic. Diagnosis of Campylobacter infection occurs when the organism is present in a culture of a stool specimen.

Campylobacter species are found in animals such as poultry, cattle, pigs and shellfish. Transmission of Campylobacter often occurs through consumption of undercooked or improperly handled meat, poultry or dairy products. Almost all persons infected with Campylobacter recover without any specific treatment. Physicians may instruct patients to drink extra fluids and in some cases, antibiotics may be prescribed.

According to the Centers for Disease Control and Prevention (CDC), Campylobacter is one of the most common causes of diarrheal illness. Campylobacteriosis is estimated to affect over 2.4 million persons every year (0.8% of the population) with the majority of cases often occurring in infants and young children. Miami-Dade County experiences approximately 177 confirmed cases of Campylobacteriosis each year. The number of reported cases of Campylobacteriosis increased from 189 in 2010 to 278 in 2012.

The objective of this study is to describe Campylobacteriosis in Miami-Dade County, to examine demographic and seasonal patterns of Campylobacteriosis and to compare data among different demographic characteristics.

Methods

Data was extracted from Merlin, the State of Florida's disease reporting system, between 01/01/2005 and 02/28/2012 and was based on case onset date. All Campylobacteriosis cases included in this report were confirmed by laboratory culture. Age was divided into four groups: younger children aged 0-4 years old, school aged children 5-17 years old, adults 18-64 years old and elderly adults aged 65 years and older. Race/ethnicity was grouped as Non-Hispanic White, Non-Hispanic Black, Hispanic and Other. SAS (version 9.3, SAS Institute Inc.) and the geographic information system (GIS) were utilized for data analysis.

Results

The number of reported cases of Campylobacteriosis in Miami-Dade County increased to 278 in 2011 from 189 in 2010 and 150 in 2005, which represents a 47.1% and 85.3% increase respectively (Figure-1). As of February 2012, there were 40 cases reported in January, which is the highest level compared to previous years during the same month (Figure-2). Between 2005 and 2011, the incidence rate in Miami-Dade County was higher than the state of Florida and there was a gradual increase in the trend among both the county and the state (Figure-3).

Race/Ethnicity and Age: The rate of cases between 2005 and 2011 increased among all race/ethnicity and age groups except among Non-Hispanic Black school aged children and the elderly (Figures 4-10). However, Hispanics, which make up 65% of the county's population, accounted for 75 to 87% of all confirmed cases. Non-Hispanic Blacks (19% of the population) and Non-Hispanic Whites (15% of the population) accounted for 2 to 7.6% and 7.9 to 18.7% of all cases respectively.



Despite the increase in incidence rates among most age groups, the highest rates remained among younger aged children. The proportion of cases among the elderly gradually increased from 4.1% in 2008 to 17.3% of all cases in 2011. Moreover, during the same time period, the proportion of cases occurring among younger children decreased from 36.1% to 31.3% of all cases. This pattern indicates the number of cases or incidence rate increased more among the elderly than other age groups. No confirmed cases of Campylobacteriosis were reported among Non-Hispanic Blacks over the age of 65 years from 2005 to 2011.

Sex: There was no significant change in pattern regarding gender between 2005 and 2011. Males accounted for approximately 60% of all reported confirmed cases.

Seasonality and outbreak association: Between 2005 and 2011, the peak months of reported confirmed cases of Campylobacteriosis were from May to August in most years (Figure 2). This is consistent with research findings that have shown Campylobacteriosis typically occurs most often during the summer months. Most of Campylobacteriosis cases (96%) were not associated with a known outbreak.

Location: Most of the reported cases of Campylobacteriosis occurred in highly dense areas of central and northern regions of Miami-Dade County (Figure 11).

Discussion

Campylobacteriosis has been an increasing public health issue in Miami-Dade County. Overall, incidence rates have increased from 2005 to 2011. Cases occurred at a higher frequency in the northern and central areas of Miami-Dade County. The rate of Campylobacteriosis cases was higher among Hispanics and lower among Non-Hispanic Blacks. Reports from states such as California, Kansas and Virginia show that Non-Hispanic Blacks typically have lower rates of Campylobacteriosis. The increase in rates in Miami-Dade County varied by age. Although younger children had the highest incidence rates, the number of cases or rates increased much more among the elderly than other age groups during recent years. No confirmed cases of Campylobacteriosis were reported among Non-Hispanic Blacks over the age of 65 years from 2005 to 2011 in Miami-Dade County. Although food is likely the main source of transmission of Campylobacter to humans, most human infections cannot be explained by recognized risk factors. Preventive measures for Campylobacter infection consist of proper food handling practices such as cooking poultry thoroughly, avoiding cross contamination in the kitchen and washing hands before preparing food and after handling raw meat. Outreach activities should be conducted to educate the community on these prevention measures to help reduce infection from Campylobacter.

Figure-1. Reported Cases of Campylobacteriosis Miami-Dade County, 01/01/2005-02/28/2012

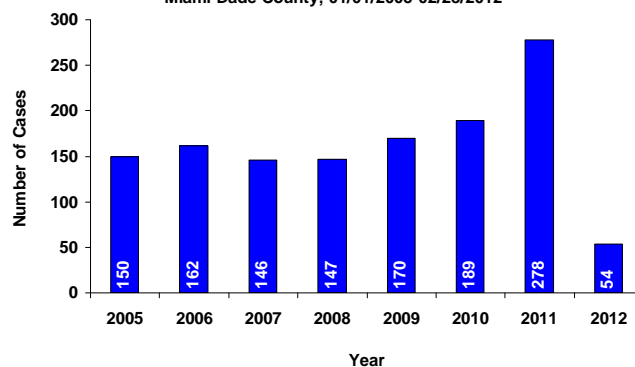


Figure-2. Reported Cases of Campylobacteriosis by Month in Miami-Dade County, 01/01/2005-02/28/2012

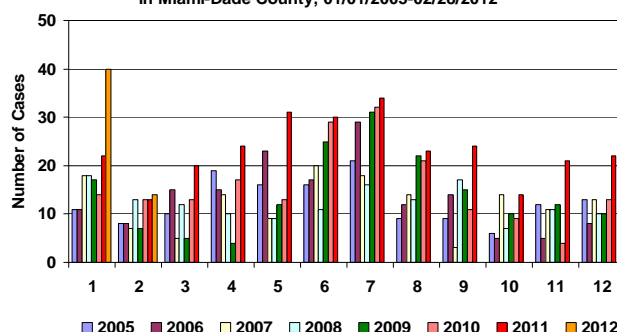


Figure-3. Incidence Rate of Campylobacteriosis in Miami-Dade County and Florida, 2005-2011

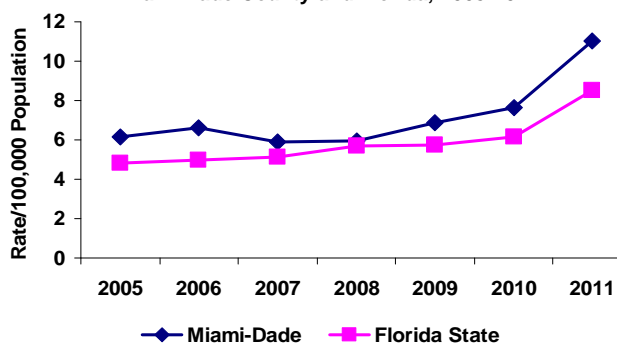


Figure-4. Reported Cases of Campylobacteriosis and Race/Ethnicity Distribution in Miami-Dade County, 01/01/2005-02/28/2012

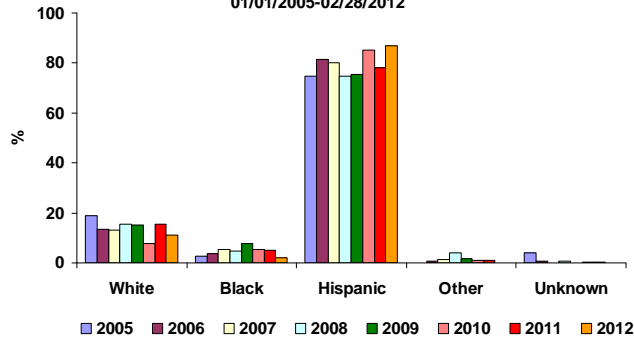




Figure-5. Incidence Rate of Campylobacteriosis by Race/Ethnicity in Miami-Dade County, 2005-2011

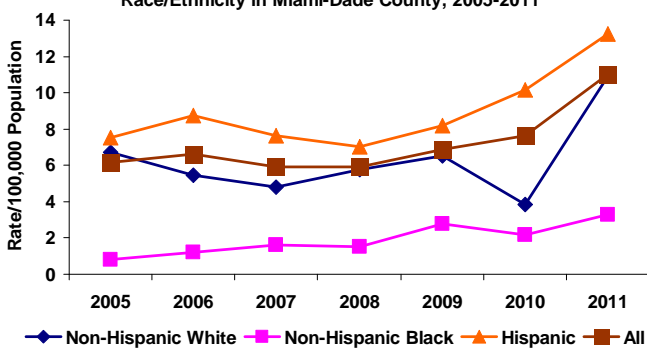


Figure-9. Incidence Rate of Campylobacteriosis by Race/Ethnicity among Ederly Adults Aged 65+ Years in Miami-Dade County, 2005-2011

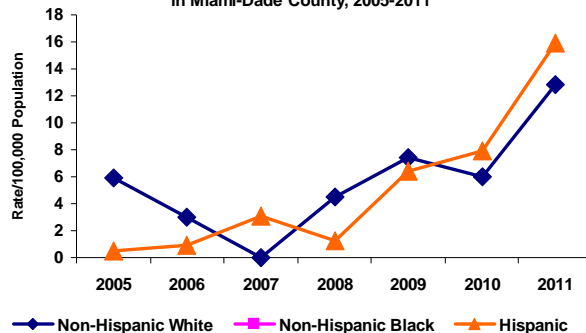


Figure-6. Incidence Rate of Campylobacteriosis by Race/Ethnicity among Younger Children Aged 0-4 Years in Miami-Dade County, 2005-2011

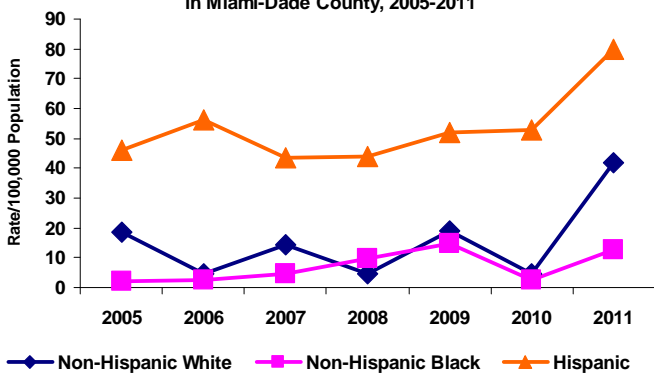


Figure-10. Reported Cases of Campylobacteriosis and Age Distribution in Miami-Dade County, 01/01/2005-02/28/2012

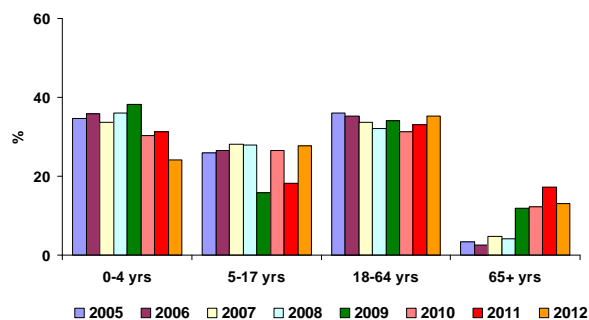


Figure-7. Incidence Rate of Campylobacteriosis by Race/Ethnicity among School Children Aged 5-17 Years in Miami-Dade County, 2005-2011

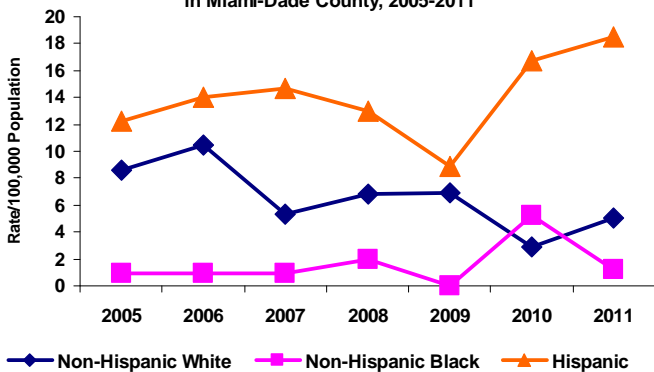


Figure-8. Incidence Rate of Campylobacteriosis by Race/Ethnicity among Adults Aged 18-64 Years in Miami-Dade County, 2005-2011

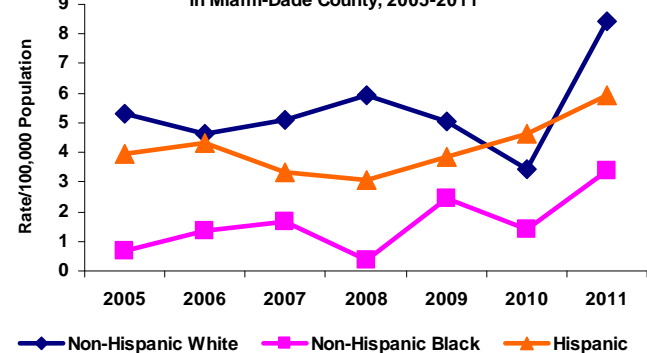
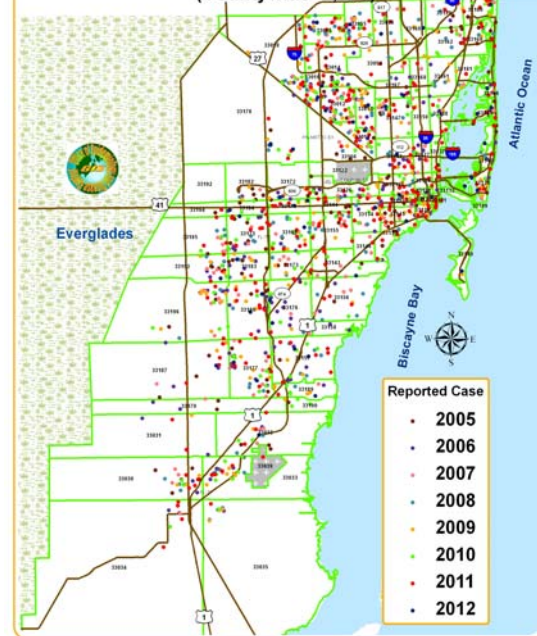


Figure-11. Reported Cases of Campylobacteriosis Miami-Dade County, 01/01/2005-02/28/2012 (Countywide=1,296)



References

1. Acute Communicable Disease Control Program, 2008 Annual Morbidity report, Disease Summaries.
2. Centers for Disease Control and Prevention (CDC), National Center for Emerging and Zoonotic Infectious Diseases, Division of Foodborne, Waterborne and Environmental Diseases. <http://www.cdc.gov/nczved/divisions/dfbmd/diseases/campylobacter/>
3. Gillespie, IA, O'Brien SJ, Bolton FJ. Age Patterns of Persons with Campylobacteriosis, England and Wales, 1990-2007. *Emerg Infect Dis*, Vol. 15, No. 12: 2046-2048.
4. Kansas Department of Health, Campylobacter 2010 Fact Sheet.
5. World Health Organization (WHO), Media Centre, Campylobacter Fact Sheet. <http://www.who.int/mediacentre/factsheets/fs255/en/index.html>



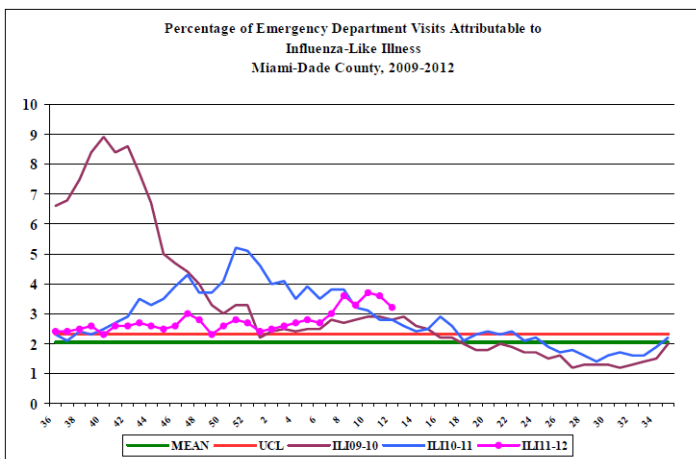
Miami-Dade County Health Department
EDC-IS Influenza/Respiratory Illness
Surveillance Report



Week 12: 03/18/2012– 03/24/2012

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.



During this period, there were 21,736 ED visits; among them 702 (3.2%) were ILI. At the same week of last year, 2.8% of ED visits were ILI.

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

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 February 2012

Diseases/Conditions	2012 Current Month	2012 Year to Date	2011 Year to Date	2010 Year to Date
HIV/AIDS				
AIDS*	51	119	93	103
HIV	96	219	219	143
STD				
Infectious Syphilis*	21	57	59	54
Chlamydia*	739	1517	1382	1251
Gonorrhea*	191	411	332	364
TB				
Tuberculosis**	6	9	15	15
Epidemiology, Disease Control & Immunization Services				
Epidemiology				
Campylobacteriosis	19	55	48	22
Ciguatera Poisoning	0	0	4	0
Cryptosporidiosis	0	2	4	0
Cyclosporiasis	0	0	0	0
Dengue Fever	1	1	1	1
E. coli, O157:H7	1	2	3	0
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	13	21	53	91
Influenza Novel Strain	0	0	0	6
Influenza, Pediatric Death	0	0	0	0
Legionellosis	0	1	5	1
Leptospirosis	0	0	0	0
Listeriosis	0	0	0	3
Lyme disease	0	0	0	0
Malaria	0	1	3	5
Meningitis (except aseptic)	4	4	6	5
Meningococcal Disease	4	5	1	2
Salmonellosis	33	56	43	36
Shigellosis	1	4	14	14
Streptococcus pneumoniae, Drug Resistant	14	21	18	26
Toxoplasmosis	0	0	0	0
Typhoid Fever	0	0	0	0
Vibriosis	0	0	1	0
West Nile Fever	0	0	0	0
Immunization Preventable Diseases				
Measles	0	0	0	0
Mumps	0	0	0	0
Pertussis	5	6	0	0
Rubella	0	0	0	0
Tetanus	0	0	0	0
Varicella	5	9	8	13
Hepatitis				
Hepatitis A	2	2	3	7
Hepatitis B (Acute)	2	2	0	2
Lead				
Lead Poisoning	7	11	18	6

*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.

