



# EPI MONTHLY REPORT

## Increase in Reported Listeriosis Cases in Miami-Dade, January-June 2010

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### Inside this

#### Introduction

Listeriosis is a serious bacterial infection associated with food and is a leading cause of serious food-borne illnesses.

(1) Listeria species are ubiquitous in the environment and able to withstand refrigeration temperatures and high salt concentrations. (2) Listeria monocytogenes is an opportunistic human pathogen, with serotypes 1 a/b/c, 2a/b/c and 4b being the most common infectious agents. (1,2)

This report includes a description of Listeria cases reported to Miami-Dade County Health Department (MDCHD) Epidemiology, Disease Control and Immunization Services (EDC-IS) and the investigation into possible trends and clustering of cases in the community. Since January of 2010, EDC-IS began receiving an increasing number of Listeria case reports.

#### Methods

An adapted form of the CDC's Listeria Questionnaire developed at Broward County Health Department was used to interview each new case of Listeria reported after January 1st, 2010. Cases were sorted by onset date and analyzed by zip code, age, gender, travel history, occupation, hospital attended, grocery stores/restaurants visited and other food exposures. Additionally, EDC-IS case investigators placed calls to each of

the reporting hospital labs and commercial labs to determine if the increase in reported cases was an artifact due to new lab technologies or increased testing practices in the community

#### Results

From 2005 through 2009, Miami-Dade County has had 22 confirmed cases of listeriosis, an average of 4-5 cases per year (about 2 cases per million people). Figure 1 compares quarterly Listeria incidence in Miami-Dade County with the rest of the state of Florida beginning in 2006. As of June 23, 2010, 13 cases of listeriosis have been reported to EDC-IS from nine different hospitals.

According to Figure 2, the number of cases reported to Miami-Dade County EDC-IS in 2010 quickly outpaced previous years. Five cases arose in January, already meeting the high mark for annual Listeria activity. No cases were reported in February; March and April each had one case. Another major increase in the number of cases was seen in May when 4 cases were reported. To date, two additional cases were reported during the month of June. No change in testing practices was reported by the labs where isolation of Listeria was done.

Forty-six percent of patients are over 60 years of age and 15% are less than 3

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weeks of age, both known as age groups at high risk for complications associated with *Listeria* infection (Table 1). The remaining patients also represent populations at high risk of complication – namely pregnant women and patients with underlying medical conditions. There was no significant difference among genders (54% male). Two cases have a history of travel within the possible incubation period (70 days) but only one of them during the median incubation period of 3 weeks before symptom onset. Food specific questions have identified unspecified brands of cream cheese (38%), blue/gorgonzola cheeses (31%) and cantaloupe (31%) as the most common foods reported by patients. However, EDC-IS has not been able to establish a causal relationship between any of these foods and *Listeria* infection among the patients reported in 2010. The majority of cases (77%) have home addresses scattered in the northern half of the county, but it must be mentioned that this is also the more populous and economically distressed area of the county therefore this information is of limited value in terms of establishing an association between *Listeria* infection and specific geographical areas of the county (Figure 3).

Nine (69%) of the thirteen cases have recovered, and two patients are ill at the time of this summary report. Two deaths have been associated with this investigation. Death 1 was recorded in a patient with multiple underlying medical conditions who expired after being transferred to hospice care. The death certificate however, made no mention of listeriosis or other infection as a contributing factor. Death 2 was in a patient who also had multiple underlying conditions, was treated for *Listeria* meningitis and developed hydrocephalus secondary to this infection. The patient’s condition continued to deteriorate after multiple efforts to enhance drainage and the patient expired after being discharged to hospice.

### Discussion

Collecting information from patients as close to the onset of illness as possible is especially important in cases of *Listeria* as the incubation period is longer than most food-borne agents, making information difficult for patients to recall. Therefore, prompt notification to MDCHD will enhance the investigators’ opportunities to gather more reliable information from patients or their families. MDCHD requests health care providers to immediately report new cases to EDC-IS. Both hospi-

tal and commercial laboratories must also forward all suspected or confirmed *Listeria* isolates to the Bureau of Laboratories – Miami Branch.

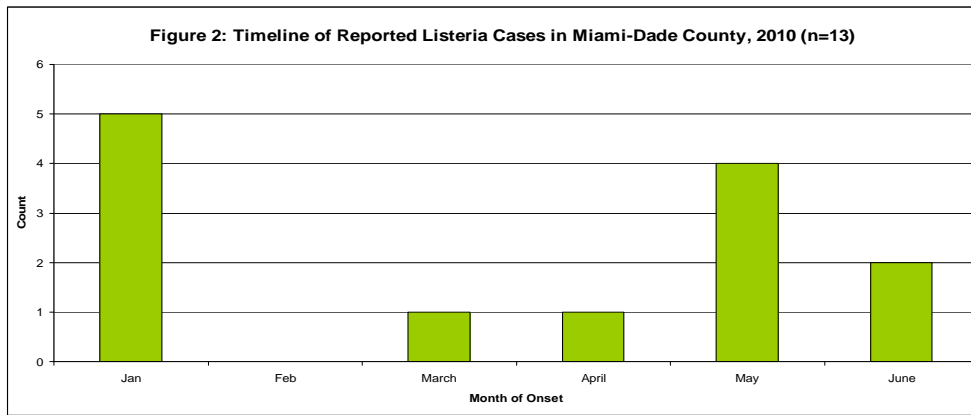
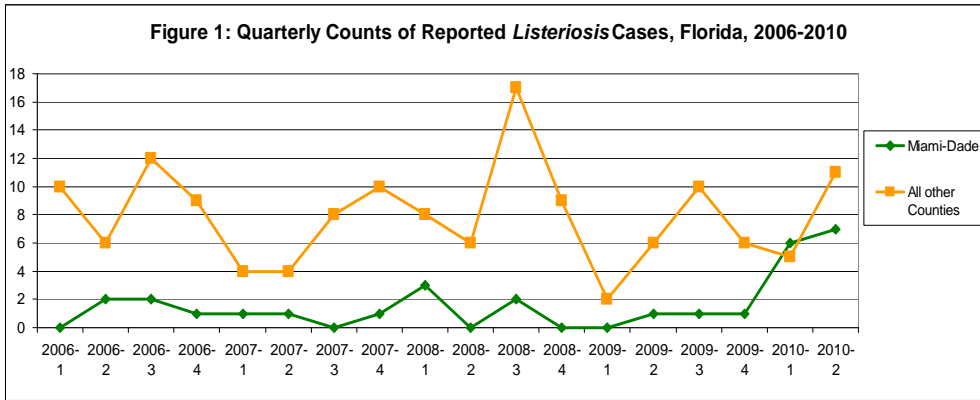
All positive isolates confirmed by the Miami DOH lab are sent to the Jacksonville Lab for PFGE analysis. By combining molecular biology identifiers with patient surveys, links between patients infected by identical strains can be established.

Our investigation into possible sources of infection is on-going as no clear causal relationships between the cases have been identified. Furthermore, to help identify possible sources of infection or case clustering, MDCHD is participating with providers in the CDC’s *Listeria* Initiative – a national database of patient interviews and molecular patterns. (information about the *Listeria* Initiative can be found at: ([http://www.cdc.gov/nationalsurveillance/listeria\\_surveillance.html](http://www.cdc.gov/nationalsurveillance/listeria_surveillance.html)))

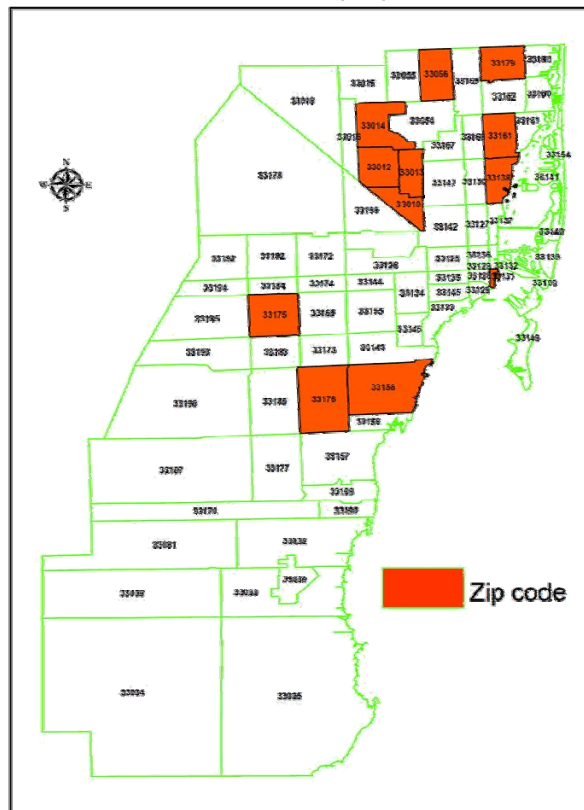
### References:

Heymann, D. *Control of Communicable Disease Manual 19th ed.*  
 Montville, T.J. *Food Microbiology: An Introduction, 2nd ed.*

Gender	Count	Percentage
Male	7	54%
Female	6	46%
<b>Age</b>		
0-4	3	23%
5-17	1	8%
18-34	1	8%
35-64	2	15%
65+	6	46%
<b>Outcomes</b>		
Recovery	9	69%
Unresolved Illness	2	15%
Death	2	15%
<b>Past Medical History**</b>		
Cardiovascular Disease(s)	6	46%
Endocrine Disease(s)	3	23%
Renal Disease(s)	3	23%
Respiratory Disease(s)	2	15%
No underlying conditions	2	15%
Eye Disease(s)	1	8%
Pregnancy	1	8%
Immunocompromised	1	8%
Skin Disease(s)	1	8%
Cancer	1	8%
*No medical history/congenital anomalies for 2 newborn patients		
**Some patients had more than one underlying condition		



**Figure 3: Miami-Dade County Zip Codes with Reported *Listeria* Cases, Jan-Jun 2010 (n=12)**



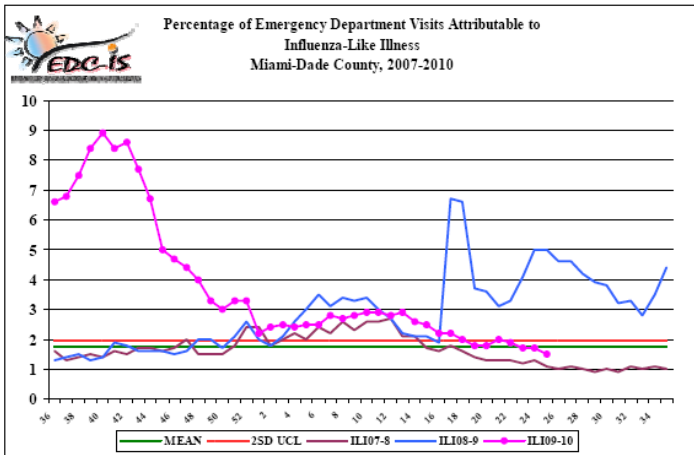
**Miami-Dade County Health Department**  
**EDC-IS Influenza/Respiratory Illness**  
**Surveillance Report**

**Week 25: 06/20/2010– 06/26/2010**



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 10 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.

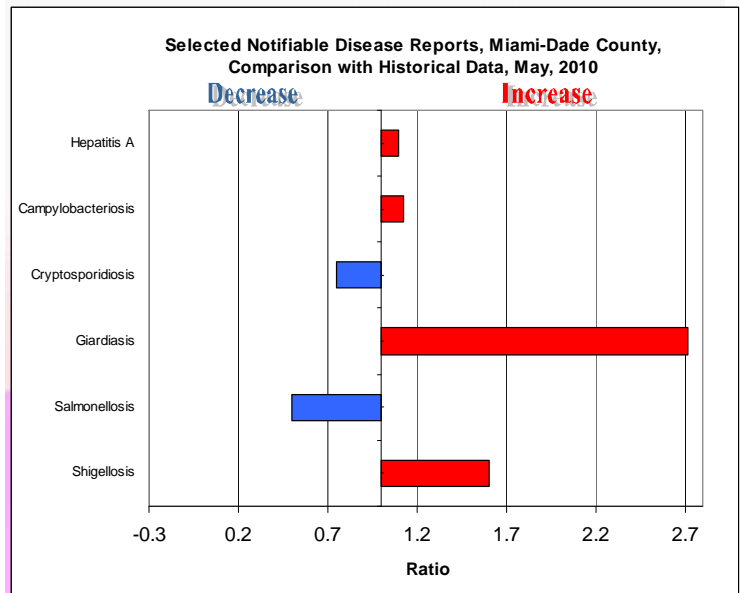


During this period, there were 18,419 ED visits; among them 283(1.5%) were ILI. At the same week of last year, 5.0% of ED visits were ILI.

For more information, please contact  
**Erin O’Connell** at 305-470-5660.

**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 .....305-325-3242
- Tuberculosis Program .....305-324-2470
- Immunization Service .....305-470-5660
- To make an appointment.....786-845-0550





# Miami-Dade County Monthly Report

## Select reportable Disease/Conditions

### May 2010

Diseases/Conditions	2010 Current Month	2010 Year to Date	2009 Year to Date	2008 Year to Date
<b>HIV/AIDS</b>				
AIDS*	42	311	348	502
HIV	89	474	419	672
<b>STD</b>				
Infectious Syphilis	15	139	N/A	N/A
Chlamydia	677	3518	N/A	N/A
Gonorrhea	196	950	N/A	N/A
<b>TB</b>				
Tuberculosis**	15	68	N/A	N/A

#### Epidemiology, Disease Control & Immunization Services

#### Epidemiology

Campylobacteriosis	16	63	36	54
Ciguatera Poisoning	0	0	3	10
Cryptosporidiosis	1	3	7	7
Cyclosporiasis	0	0	0	4
Dengue Fever	2	4	3	1
E. coli, O157:H7	0	0	0	2
E. coli, Non-O157	0	0	0	1
Encephalitis (except WNV)	0	0	0	1
Encephalitis, West Nile Virus	0	0	0	2
Giardiasis, Acute	61	262	247	91
Influenza Novel Strain	3	20	57	0
Influenza, Pediatric Death	0	0	0	0
Legionellosis	1	3	5	5
Leptospirosis	0	0	0	0
Listeriosis	0	3	0	3
Lyme disease	1	1	0	1
Malaria	2	11	7	1
Meningitis (except aseptic)	0	0	0	3
Meningococcal Disease	1	10	11	4
Salmonellosis	22	110	147	144
Shigellosis	21	69	68	18
Streptococcus pneumoniae, Drug Resistant	4	86	62	56
Toxoplasmosis	0	1	0	0
Typhoid Fever	1	2	1	0
Vibriosis	0	0	0	1
West Nile Fever	0	0	0	0

#### Immunization Preventable Diseases

Measles	0	0	0	0
Mumps	0	1	0	2
Pertussis	3	16	14	9
Rubella	0	0	0	1
Tetanus	0	0	0	0
Varicella	17	49	35	28
<b>Hepatitis</b>				
Hepatitis A	3	21	25	15
Hepatitis B (Acute)	2	14	4	7
<b>Lead</b>				
Lead Poisoning	33	117	54	56

\*Data on AIDS are 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.