



# EPI MONTHLY REPORT

## MIAMI-DADE COUNTY HEALTH DEPARTMENT

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

### Current Situation of Dengue Fever in Miami-Dade County, July 2012

Pedro Noya-Chaveco and Rene Borroto

#### Background:

On March 28, 2012, the Pan American Health Organization (PAHO) released an Epidemiological alert stating that Member States (specifically those located in the regions of Central America and the Caribbean) could have a greater risk of dengue outbreaks during the second half of 2012.<sup>1</sup>

Dengue infections are more prevalent than Malaria among U.S. residents returning from travel to endemic areas; including the Caribbean, South America, South-Central Asia and Southeast Asia.<sup>2</sup> Figure 1 shows that the number of Dengue cases diagnosed has been increasing since 2009 with a peak in 2010 in Miami-Dade County and Florida. This is mainly due to importation by travelers to endemic countries. Because US travelers spend a median of 10 nights abroad, many returning travelers who are infected with Dengue could be viremic and able to infect endemic *Aedes* spp vector mosquitoes (principally *Ae. aegypti* and *Ae. albopictus*) in our communities.<sup>2</sup> This may create the potential for localized dengue transmission. The increased volume of international travel has been implicated in the spread of dengue globally, and the popularity of south Florida as a tourist destination enhances the likelihood of virus introduction and subsequent local transmission.<sup>3</sup>

#### Dengue Fever in Miami-Dade County:

In 2011 a total of 24 Dengue cases were reported, of which 3 (12.5%) were infected locally in Miami-Dade County without any epidemiological link between each one (Figure 1). The other 21 cases were travel-associated Dengue infections, with most of them acquired in Caribbean countries (13/24, 54.1%). Table 1 illustrates the distribution of reported Dengue cases by geographical location and the countries where individuals were infected. As of July 2012, all of the diagnosed dengue cases were imported. There has been an

increased frequency of cases with history of travel to Caribbean countries (6/8, 75%). It is noteworthy that Dengue cases acquired in Cuba were more frequent in 2011, 4 cases (16.7%) and in 2012, 2 cases (25.0%). This was also true for individuals who were infected in Puerto Rico with 2 cases in 2011 (8.3%) and 1 case in 2012 (12.5%).

The recent increase in rain may have led to increased mosquito breeding sites in the county.<sup>4</sup> Rainfall in Miami-Dade in May 2012 was 14.67 inches, nearly 3 times as high as the mean value for the same month over the last 30 years (5.02 inches) (Figure 2). Mosquito Control Division performed an aerial spray in the county as a result of the increase in rain. The impact of aerial spray was evident by the reduction in the number of trapped adults of *Aedes aegypti* and *Aedes albopictus* (Figure 3, 4).

#### How to Prevent Dengue Fever:

We encourage residents to “**DRAIN and COVER**” to guard against Dengue fever. Protect yourself from mosquito bites and the diseases they carry by doing the following:

- **Drain** standing water. Drain water from garbage cans, gutters, pool covers, coolers, toys any other containers where sprinkler or rain water has collected.
- **Discard** old tires, drums, bottles, cans, pots and pans, broken appliances and other items that aren't being used.
- **Empty** and clean birdbaths and pets' water bowls at least once or twice a week.
- **Protect** boats and vehicles from rain with tarps that don't accumulate water.
- **Maintain** the water balance of swimming pools. Empty plastic swimming pools when not in use.
- **Cover your skin** with clothing if you must be outside when mosquitoes are active. Wear shoes, socks, long pants and long sleeves.
- **Apply mosquito repellent** to bare skin and



clothing. Always use repellents according to the label. Repellents with DEET, picaridin, oil of lemon eucalyptus and IR3535 are effective. Use mosquito netting to protect children younger than 2 months.

- **Cover doors and windows** with screens to keep mosquitoes out of your house. Repair broken screens on windows, doors, porches and patios.

Figure 1: Dengue Fever Cases by Year, 2005-2011

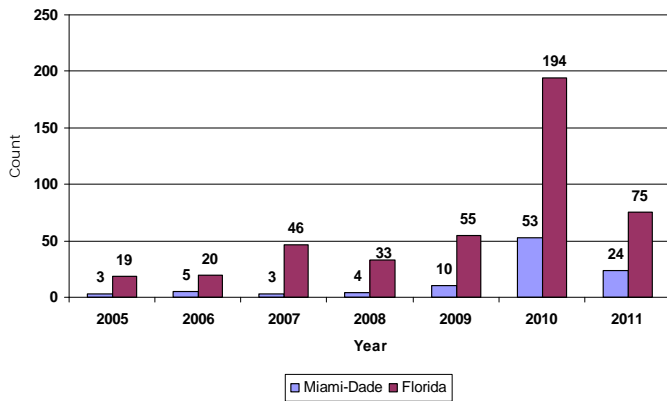


Table 1: Reported Dengue Cases by Geographical Location Miami-Dade County, 2011 - July 17, 2012

Geographical Area	2011	January to July 17, 2012
<b>Caribbean</b>	<b>n= 13</b>	<b>n= 6</b>
Bahamas	2	0
Cuba	4	2
Dominican Republic	1	1
Haiti	1	1
Jamaica	0	1
Puerto Rico	2	1
Trinidad & Tobago	2	0
Turks & Caicos	1	0
<b>Central America</b>	<b>n= 4</b>	<b>n= 0</b>
Nicaragua	2	0
Panama	2	0
<b>South America</b>	<b>n= 4</b>	<b>n= 2</b>
Brazil	2	0
Colombia	1	0
Ecuador	0	2
Venezuela	1	0
<b>Locally-acquired in Miami</b>	<b>n= 3</b>	<b>n= 0</b>
<b>Total Cases</b>	<b>24</b>	<b>8</b>

Figure 2: Average of Inches of Rainfall per Month in Miami-Dade, 2011 - 2012.

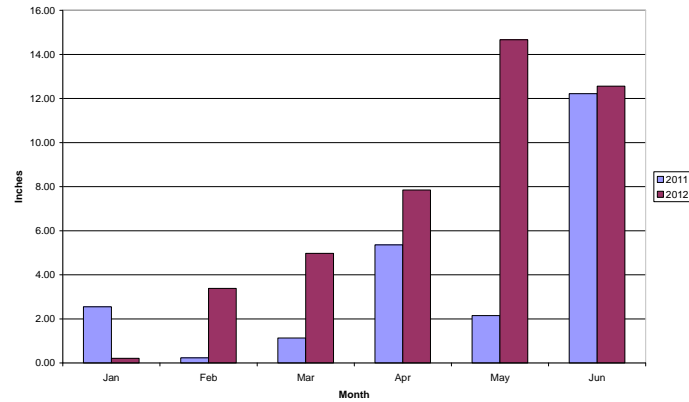


Figure 3: Trapped adults of Ae. aegypti per Week, Miami-Dade, 2011-2012

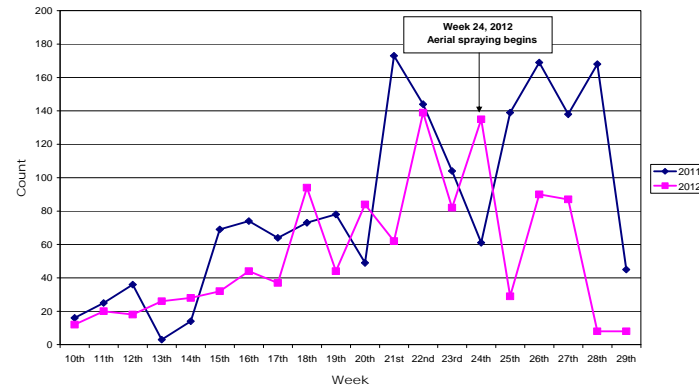
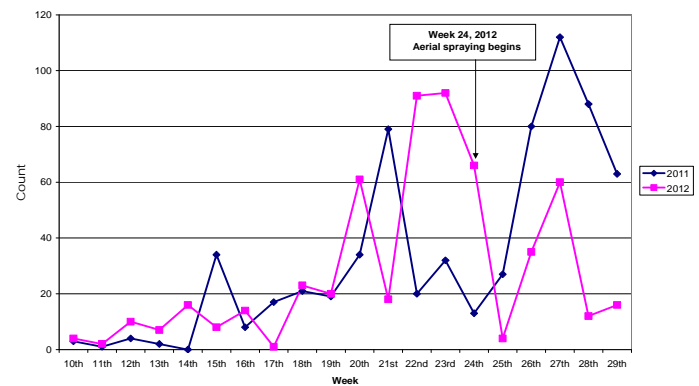


Figure 4: Trapped adults of Ae. albopictus per Week, Miami-Dade, 2011-2012



**References**

1. *Epidemiological Alert: Dengue*, 28 March 2012: [http://new.paho.org/hq/index.php?option=com\\_content&task=blogcategory&id=2598&Itemid=2291&lang=en](http://new.paho.org/hq/index.php?option=com_content&task=blogcategory&id=2598&Itemid=2291&lang=en)
2. CDC. *Travel-Associated Dengue Surveillance - United States, 2006-2008*. *MMWR* June 18, 2010 / 59(23);715-719.
3. CDC. *Locally acquired Dengue-Key West, Florida, 2009--2010*. *MMWR* 2010; 59:577-81.
4. National Weather Service Office, Miami-South Florida. <http://www.nws.noaa.gov/climate/index.php?wfo=mfl>



## Topic of the Month

### Managing Stress [cdc.gov]

Stress can hit you when you least expect it—before a test, after an accident, or during conflict in a relationship. While everyone experiences stress at times, a prolonged bout of it can affect your health and ability to cope with life. That’s why social support and self-care are important.



Sometimes stress can be good. For instance, it can help you develop skills needed to manage potentially threatening situations in life. However, stress can be harmful when it is severe enough to make you feel over-whelmed and out of control. Strong emotions like fear, sadness, or other symptoms of depression are normal, as long as they are temporary and don’t interfere with daily activities. If these emotions last too long or cause other problems, it’s a different story.

#### Symptoms of Stress:

Common reactions to a stressful event include:

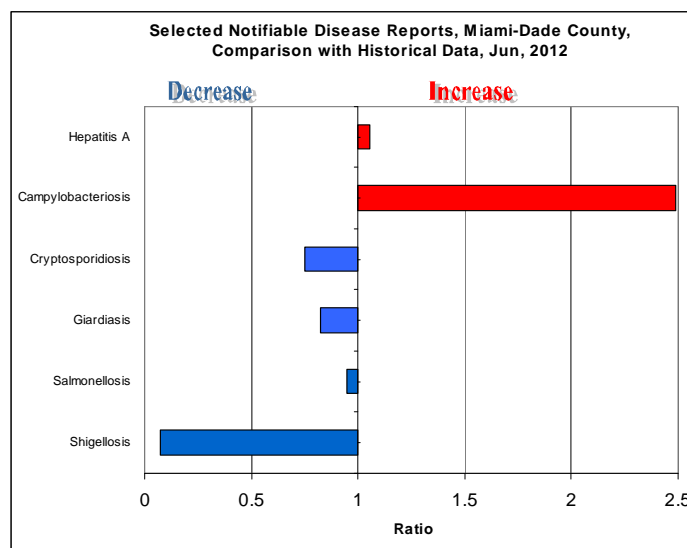
- Tension and irritability
- Fear and anxiety about the future
- Difficulty making decisions
- Loss of interest in normal activities
- Loss of appetite
- Nightmares and recurring thoughts about the event
- Anger
- Sadness and other symptoms of depression
- Feeling powerless
- Crying
- Sleep problems

#### Tips for self-care:

- Find support. Seek help from a partner, family member, friend, or counselor. Having a sympathetic, listening ear and sharing about your problems and stress really can lighten the burden.
- Connect socially. After a stressful event, it is easy isolate yourself. Make sure that you are spending time with loved ones. Consider planning fun activities with your partner, children, or friends.
- Eat a healthy, well-balanced diet and exercise regularly

- Get plenty of sleep
- Give yourself a break if you feel stressed out—for example, treat yourself to a therapeutic massage
- Stay active. You can take your mind off your problems by giving—helping a neighbor, volunteering in the community, even taking the dog on a long walk. These can be positive ways to channel your feelings.

For more information please visit: [www.cdc.gov](http://www.cdc.gov)



**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

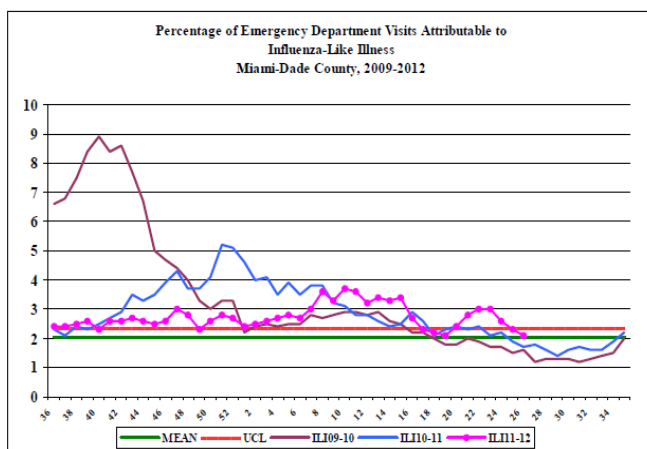
**Miami-Dade County Health Department**  
**EDC-IS Influenza/Respiratory**  
**Illness**  
**Surveillance Report**



**Week 26: 6/24/2012– 6/30/2012**

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 21,226 ED visits; among them 442 (2.1%) were ILI. At the same week of last year, 1.7% 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.



# Miami-Dade County Monthly Report

## Select Reportable Disease/Conditions

### June 2012

Diseases/Conditions	2012 Current Month	2012 Year to Date	2011 Year to Date	2010 Year to Date
<b>HIV/AIDS</b>				
AIDS*	45	276	359	357
HIV	121	598	736	617
<b>STD</b>				
Infectious Syphilis*	26	162	158	163
Chlamydia*	715	4630	4300	4206
Gonorrhea*	179	1202	1132	1172
<b>TB</b>				
Tuberculosis**	9	41	58	78
<b>Epidemiology, Disease Control &amp; Immunization Services</b>				
<b>Epidemiology</b>				
Campylobacteriosis	41	150	250	83
Ciguatera Poisoning	0	3	7	3
Cryptosporidiosis	1	12	9	6
Cyclosporiasis	1	1	2	0
Dengue Fever	2	5	5	7
E. coli, O157:H7	0	2	9	3
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	20	98	145	330
Influenza Novel Strain	0	0	0	20
Influenza, Pediatric Death	0	2	0	0
Legionellosis	4	7	9	4
Leptospirosis	0	0	0	0
Listeriosis	0	1	0	13
Lyme disease	2	6	0	2
Malaria	0	5	9	11
Meningitis (except aseptic)	0	8	18	12
Meningococcal Disease	0	9	9	11
Salmonellosis	48	194	182	154
Shigellosis	1	21	57	90
Streptococcus pneumoniae, Drug Resistant	5	41	54	98
Toxoplasmosis	0	2	0	1
Typhoid Fever	1	1	1	2
Vibriosis	2	3	1	0
West Nile Fever	0	0	0	0
<b>Immunization Preventable Diseases</b>				
Measles	0	0	0	0
Mumps	0	1	0	3
Pertussis	9	32	13	17
Rubella	0	0	0	0
Tetanus	0	0	0	0
Varicella	3	29	24	52
<b>Hepatitis</b>				
Hepatitis A	4	14	12	22
Hepatitis B (Acute)	2	13	3	14
<b>Lead</b>				
Lead Poisoning	11	40	70	122

\*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.