

EPIGRAM

PRODUCED BY DISEASE CONTROL SERVICES
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ZIKA UPDATE

Surveillance

Florida Department of Health (DOH) issues a Zika update each weekday at 2pm with current information on Zika case counts and DOH response. **As of July 22nd, there have been 306 cases of Zika in Florida in non-pregnant individuals. There have been 47 cases of Zika in Florida involving pregnant women.** Governor Scott directed the State Surgeon General to issue a Declaration of Public Health Emergency for the counties of residents with travel-associated cases of Zika. There have been 29 counties included in the declaration. No cases have been reported in Nassau County.

Testing Information

Zika RT-PCR testing is now available through three commercial laboratories (LabCorp, Quest, and Viracor) for urine and serum. DOH laboratories continue to provide Zika IgM testing on serum and RT-PCR testing on amniotic fluid, placenta, semen, and cerebrospinal fluid. Clinicians are encouraged to submit samples commercial labs for patients meeting the following criteria:

- ✦ Pregnant women who, while pregnant, traveled to an area reporting Zika virus activity regardless of the length of time since the travel/illness occurred, but ideally within 2-12 weeks of travel. Recommended testing is Zika IgM serum antibody testing.
- ✦ All persons, including pregnant women, with two or more of the following signs/symptoms: fever, maculopapular rash, arthralgia or conjunctivitis **and** a history of travel to an area reporting Zika virus activity in the two weeks prior to illness onset **or** suspect locally acquired cases. Recommended testing is urine and serum Zika RT-PCR and Zika IgM serum antibody testing.
- ✦ The mother of an infant or fetus with microcephaly or intracranial calcifications or poor fetal outcome diagnosed after the first trimester **and** with history of travel to an area with Zika virus activity during pregnancy. Both mother and infant may be tested. Recommended samples and testing: (1) serum from mother for Zika IgM antibody testing; (2) cord blood and/or serum from infant for Zika RT-PCR and IgM antibody testing; (3) infant urine for Zika RT-PCR; and (4) fresh and formalin-fixed placenta for Zika RT-PCR and immunohistochemistry (IHC). Amniotic fluid can be tested using Zika RT-PCR if needed.

Please contact DOH-Nassau to request Zika virus testing for patients without insurance. **Clinicians are still required to report suspected Zika fever cases to DOH at the time testing is ordered, regardless of which lab performs the testing, to ensure appropriate mosquito control actions are taken.**

DISEASE REPORTING

Phone: (904) 530-6800
Confidential Fax Line:
(904) 277-7286
Afterhours Line:
(904) 813-6801

Bureau of Epidemiology
24 Hour Reporting Line:
(850) 245-4401

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(904) 530-6750

Yulee Clinic
86014 Pages Dairy Road
Yulee, FL 32097
(904) 530-6840

Callahan Clinic
45377 Mickler Street
Callahan, FL 32011
(904) 530-6870

Hilliard Clinic
37203 Pecan Street
Hilliard, FL 32046
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Recent Developments

Zika is an emerging infectious disease and research is ongoing. Recommendations are constantly changing as we learn more about the virus, highlighting the need to remain informed about new developments.

- ✦ According to a CDC country-specific assessment of Zika virus importation and transmission risk after travel to the 2016 Olympic and Paralympic Games, only four countries have risk that is uniquely attributable to travel related to the Olympics. The four countries (Chad, Djibouti, Eritrea, and Yemen) are uniquely at risk because they do not have substantial non-Olympics related travel to countries that are experiencing local Zika virus transmission. For other countries, travel for the Olympic and Paralympic Games does not pose a unique or substantive risk that is greater than the risk posed by other ongoing travel to Zika affected countries.
- ✦ The New York City Department of Health and Mental Hygiene reported the first suspected case of female-to-male sexual transmission of Zika on July 15th, 2016. For more information, please visit: http://www.cdc.gov/mmwr/volumes/65/wr/mm6528e2.htm?s_cid=mm6528e2_w
- ✦ CDC is assisting the Utah Department of Health in investigating a case of Zika that is apparently not linked to travel. The case patient is a family contact to an elderly Utah resident who died in June. The deceased patient had history of travel to a Zika-affected area and had unusually high levels of virus in his blood. For more information, please visit: <http://www.cdc.gov/media/releases/2016/s0718-zika-utah-investigation.html>
- ✦ The Florida Department of Health is investigating two possible non-travel related cases of Zika virus, one in Miami-Dade County and one in Broward County. Approximately 200 people have been interviewed and tested to date as part of the investigations. Dr. Marc Fischer, a medical epidemiologist from the CDC, has arrived in Florida to assist the investigation with mapping and testing methodology. For more information, please see the attached clinician information sheet and letter from State Surgeon General Dr. Celeste Philip. Up to date DOH press releases can be found at: <http://www.floridahealth.gov/newsroom/index.html>

SUMMER WATER EXPOSURES

In the summer months when Florida residents and visitors are enjoying outdoor water activities, DOH encourages health care providers to maintain awareness of water-related exposures and illnesses.

Primary Amebic Meningoencephalitis (PAM)

PAM is caused by *Naegleria fowleri*, an amoeba that is commonly found in warm freshwater (such as lakes, rivers, and hot springs) and soil. Most *Naegleria fowleri* infections in the United States are tied to freshwater exposures in southern states, and infections are most common in the summer months when it is hot for long periods of time. Infection occurs when water containing the amoeba enters the body through the nose, most often from swimming or diving. In rare cases, infections have occurred from contaminated tap water used to irrigate the sinuses or inadequately chlorinated swimming pools. Infections do not occur from drinking contaminated water, and *Naegleria fowleri* is not found in salt water. PAM is a rare disease, with only 138 reported cases in the U.S. from 1962 through 2015, 34 of which had documented exposures in Florida. The fatality rate is over 97%. Initial symptoms of PAM include headache, fever, nausea, vomiting, and stiff neck, and may be similar to symptoms of bacterial meningitis. Later symptoms may include confusion, lack of attention to people and surroundings, loss of balance and bodily control, seizures, and hallucinations. While it is unclear what treatments are effective, an investigational drug called miltefosine has recently shown some promise when combined with other drugs. The risk of *Naegleria fowleri* infection is very low, especially compared to other water-related risks such as drowning. Risk can be reduced by taking steps to prevent contaminated water from going up the nose, including avoiding water-related activities in warm freshwater during periods of high water temperature and holding the nose shut or using nose clips when engaging in water activities in warm freshwater. When water is used to irrigate the sinuses, tap water should be boiled for one minute and allowed to cool or distilled or sterile water should be used.

Sources: <http://www.floridahealth.gov/diseases-and-conditions/primary-amebic-meningoencephalitis/index.html> and <http://www.cdc.gov/parasites/naegleria/general.html>.

Seabather's Eruption

Seabather's eruption, a condition also known as "sea poisoning," "sea critters," "ocean itch," or "sea lice" is caused by the larval form of the thimble jellyfish. Nematocysts (stinging cells) surrounding the larva are triggered by pressure, such as friction from clothing or body creases. Thimble jellyfish larvae are present in Florida waters between March and August. Seabather's eruption causes an itchy dermatitis (Figure 1) that usually appears between 4 and 24 hours after exposure and resolves on its own within 7-10 days. Children may also exhibit febrile reactions. Any rash should also be evaluated to rule out any possible communicable diseases. Treatment includes administration of an

antihistamine. Good personal hygiene can help prevent secondary bacterial infections. It is recommended that swimmers change out of their bathing suits as soon as possible after swimming in the ocean. Showering to rinse off loose larvae can also help limit the number of stings. This is especially important when swimmers are transitioning between the ocean and pool, as rinsing off before getting in the pool may help prevent swimmers from introducing the larvae into the pool. Bathing suits should be washed with detergent and heat dried after use, as air-dried nematocysts still have the potential to fire.

Source: <http://www.floridahealth.gov/diseases-and-conditions/food-and-waterborne-disease/waterborne-links.html>



Figure 1. Lesions associated with seabather's eruption.

PERTUSSIS CLUSTERS

DOH-Nassau investigated a cluster of pertussis in July, unrelated to three previous pertussis clusters earlier in 2016. DOH-Nassau's investigation focused on identifying and treating close contacts to pertussis cases and educating cases and contacts about pertussis symptoms and how to prevent pertussis transmission. Immunized adults may not consider pertussis a threat, but may in fact not be immune due to waning vaccine immunity. The acellular pertussis vaccine series recommended in the United States has an efficacy of approximately 80%, but immunity wanes after three to five years. This cluster underscored the importance of "cocooning" infants and encouraging pregnant women to have a pertussis booster during their pregnancy. **Infants can be protected by "cocooning," or vaccinating the adults, teens, and children who spend time with the infant.** Adults, teens, and children who have not been vaccinated are often the ones who spread pertussis to infants who are too young to have received all doses of the pertussis vaccine. The Advisory Committee on Immunization Practices (ACIP) recommends that pregnant women receive a dose of Tdap vaccine during every pregnancy, regardless of their previous immunization status. **Physicians can play a vital role in preventing pertussis by strongly encouraging pregnant women to receive a dose of Tdap, and following up to ensure that they have had the immunization.** Underimmunization in children too young to have completed the vaccination series and waning immunity in older children and adults contribute to creating gaps in herd immunity, leaving vulnerable populations such as infants and immunocompromised individuals at risk. The four unrelated pertussis clusters in Nassau County this year serve as a reminder that pertussis continues to circulate in the community. Health care providers should continue to consider pertussis when treating a patient with cough illness. Promoting complete pertussis vaccination for children and boosters for pregnant women can help address the gaps in herd immunity and prevent further spread.

CLINICAL ADVISORY

Gonorrhea the second most commonly reported communicable disease in the United States, with an estimated 820,000 new cases each year. U.S. gonococcal strains show resistance to cefixime and tetracyclines, but are likely susceptible to azithromycin. CDC recommends dual treatment of uncomplicated urogenital gonorrhea with Ceftriaxone 250mg IM plus Azithromycin 1g orally in a single dose. However, in a patient with a cephalosporin allergy the recommendation is Gentamycin 240 mg IM plus Azithromycin 2g orally in a single dose. For more information on antimicrobial resistance and treatment recommendations, please visit: <http://www.cdc.gov/std/tg2015/gonorrhea.htm>

GLOBAL HEALTH NEWS

- ✦ A yellow fever outbreak that was detected in December 2016 in Angola continues, with a suspected total of 3,625 cases in Angola and 1,798 suspected cases in the Democratic Republic of the Congo (DRC). The outbreak is concentrated in main cities in both countries, but there is a high risk of spread to other areas. Two countries (Kenya and China) have reported confirmed yellow fever cases imported from Angola.
- ✦ Researchers in China suspect that two patients died after receiving kidney transplants from a donor who was infected with rabies. No samples from the donor were kept after organs and tissues were removed for transplantation so rabies could not be confirmed by laboratory methods. Two patients who received corneal transplants from the same donor received rabies post-exposure prophylaxis and are in good health.
- ✦ Hong Kong health officials reported seven cases of suspected botulism in female patients who received injections in May 2016. The cases reported receiving botulinum toxin injections for beauty purposes, possibly by unregistered doctors. Health officials are urging the public to only receive injections from registered doctors.

JUNE 2016: REPORTED CASES IN NASSAU COUNTY

Confirmed, Probable, Suspect, Unkown Cases of Multiple Diseases with Report Date 06/01/2016 to 06/30/2016 with Three-Year Period Comparison for Nassau County

Disease Name	Selection Date 06/01/16 - 06/30/16		Comparison Date 1 06/01/15 - 06/30/15		Comparison Date 2 06/01/14 - 06/30/14		Comparison Date 3 06/01/13 - 06/30/13	
	Cases	Percent	Cases	Percent	Cases	Percent	Cases	Percent
County: NASSAU								
Campylobacteriosis	5	18.52%	0	0.00%	1	5.26%	1	12.50%
Ehrlichiosis, HME (Ehrlichia chaffeensis)	0	0.00%	1	5.26%	0	0.00%	0	0.00%
Escherichia coli, Shiga Toxin-Producing (STEC) Infection	1	3.70%	0	0.00%	0	0.00%	0	0.00%
Haemophilus influenzae Invasive Disease	0	0.00%	0	0.00%	1	5.26%	0	0.00%
Hepatitis B, Chronic	3	11.11%	0	0.00%	0	0.00%	0	0.00%
Hepatitis C, Chronic	12	44.44%	11	57.89%	7	36.84%	2	25.00%
Lead Poisoning	0	0.00%	0	0.00%	2	10.53%	1	12.50%
Rabies, Animal	0	0.00%	1	5.26%	0	0.00%	0	0.00%
Rabies, Possible Exposure	0	0.00%	4	21.05%	0	0.00%	0	0.00%
Salmonellosis	5	18.52%	2	10.53%	4	21.05%	3	37.50%
Shigellosis	0	0.00%	0	0.00%	3	15.79%	1	12.50%
Typhoid Fever (Salmonella Serotype Typhi)	0	0.00%	0	0.00%	1	5.26%	0	0.00%
Varicella (Chickenpox)	1	3.70%	0	0.00%	0	0.00%	0	0.00%
TOTAL:	27	100.00%	19	100.00%	19	100.00%	8	100.00%
STATEWIDE TOTAL								
Campylobacteriosis	342	5.64%	417	9.03%	274	6.49%	262	7.02%
Ehrlichiosis, HME (Ehrlichia chaffeensis)	11	0.18%	6	0.13%	5	0.12%	2	0.05%
Escherichia coli, Shiga Toxin-Producing (STEC) Infection	63	1.04%	39	0.84%	52	1.23%	40	1.07%
Haemophilus influenzae Invasive Disease	17	0.28%	14	0.30%	24	0.57%	30	0.80%
Hepatitis B, Chronic	460	7.58%	384	8.32%	407	9.64%	357	9.57%
Hepatitis C, Chronic	3441	56.74%	2050	44.41%	1823	43.17%	1610	43.16%
Lead Poisoning	80	1.32%	57	1.23%	43	1.02%	50	1.34%
Rabies, Animal	13	0.21%	5	0.11%	1	0.02%	1	0.03%
Rabies, Possible Exposure	318	5.24%	351	7.60%	247	5.85%	257	6.89%
Salmonellosis	590	9.73%	580	12.56%	487	11.53%	520	13.94%
Shigellosis	94	1.55%	269	5.83%	316	7.48%	93	2.49%
Typhoid Fever (Salmonella Serotype Typhi)	1	0.02%	0	0.00%	1	0.02%	1	0.03%
Varicella (Chickenpox)	50	0.82%	46	1.00%	38	0.90%	42	1.13%
Other remaining conditions in FL (not shared w/ Nassau County)	585	9.65%	398	8.62%	505	11.96%	465	12.47%
TOTAL:	6065	100.00%	4616	100.00%	4223	100.00%	3730	100.00%

HEALTH BULLETINS, ADVISORIES, AND ALERTS

For additional information regarding bulletins, advisories and alerts visit the DOH-Nassau website or Department of Health Online Newsroom at: <http://nassau.floridahealth.gov/> and <http://www.floridahealth.gov/newsroom/>

- ✦ *“Prevention is the key to stopping the Zika virus,”* article published in the Fernandina Beach News Leader July 5th 2016.
- ✦ 7/11/16 Blast fax to Nassau primary care physicians and urgent care centers: *Physician awareness letter requesting active surveillance for pertussis cases.*
- ✦ 7/19/16 Press release by the Florida Department of Health Office of Communications: *Department of Health Investigating Possible Non-Travel Related Case of Zika.*
- ✦ 7/21/16 Press release by the Florida Department of Health Office of Communications: *Department of Health Investigating Possible Non-Travel Related Case of Zika in Broward County*
- ✦ 7/22/16 Blast fax to Nassau physicians: *Zika testing recommendation reminders and investigation of possible non-travel related cases in Florida*

Mission:

To protect, promote & improve the health of all people in Florida through integrated state, county & community efforts.



Rick Scott
Governor

Celeste Philip, MD, MPH
Surgeon General and Secretary

Vision: To be the **Healthiest State** in the Nation

July 20, 2016

Dear Colleague:

The Department of Health is currently investigating a possible non-travel related case of Zika virus in Miami-Dade County. We must remain vigilant and increase our level of questioning when considering Zika virus disease. At this time, it is important to review what we know about this disease and act accordingly to prevent transmission and mitigate negative health outcomes. **Remember to identify, test and inform.** Please contact your county health department immediately if you suspect a patient has Zika fever (per rule 64D-3.029, Florida Administrative Code), to ensure prompt mosquito control efforts.

Zika fever, a dengue-like illness caused by a mosquito-borne flavivirus, has been identified in numerous countries. Zika virus infection during pregnancy can cause serious birth defects, including microcephaly. Links between Zika virus infection and Guillain-Barre syndrome (GBS) are also suspected. Transmission occurs through the bite of an infected mosquito. Perinatal, in utero, sexual, transfusion and contact with body fluids transmissions have also been reported. Suspect Zika fever patients should be advised to avoid mosquito bites while ill, to prevent potential infection of local mosquitoes.

Clinical Presentation: The incubation period is approximately two to 14 days. Only about one in five people infected with Zika virus are symptomatic. Signs/symptoms of Zika fever may include acute fever (often low grade), maculopapular rash, arthralgia, conjunctivitis, myalgia, headache, retro-orbital pain and vomiting. Zika fever is generally a mild illness with symptoms similar to mild dengue fever. Severe disease requiring hospitalization is uncommon. Treatment is symptomatic and illness typically resolves within a week. Co-infections with dengue or chikungunya are possible and should be considered. Aspirin and other non-steroidal anti-inflammatory drugs are not advised in case of co-infection with dengue. Pregnant women with fever should be treated with acetaminophen.

This is an evolving situation and there will be additional guidance issued when it is available. Additional resources you may find helpful:

- Current Zika virus information from CDC: <http://www.cdc.gov/zika>
- Florida mosquito-borne disease information including weekly surveillance reports: <http://www.floridahealth.gov/diseases-and-conditions/mosquito-borne-diseases/index.html>
- Contact information for county and state DOH: <http://www.floridahealth.gov/diseases-and-conditions/disease-reporting-and-management/index.html>

Please share this information with other relevant partners. The department's Bureau of Epidemiology and our county health departments are available to assist you with questions about Zika virus testing protocols and sample submission requests.

Sincerely,

Celeste Philip, MD, MPH
Surgeon General and Secretary



Zika Fever: Information for Clinicians

Version 3.0 (July 21, 2016)

DOH: www.flhealth.gov/zika

CDC: www.cdc.gov/zika/

Please contact your county health department immediately if you suspect a patient has Zika fever to ensure prompt mosquito control efforts.

Zika fever, a dengue-like illness caused by a mosquito-borne flavivirus, has been identified in numerous countries in Central and South America, Mexico and the Caribbean including Puerto Rico. **Zika virus infection during pregnancy can cause certain birth defects including microcephaly.** Fetuses and infants of women infected with Zika virus during pregnancy should be evaluated for possible congenital infection and neurologic abnormalities. Possible links to Zika virus infection and Guillain-Barre syndrome (GBS) are also suspected.

Transmission occurs through the bite of an infected mosquito. Perinatal, in utero, sexual and transfusion transmissions have also been reported. **Suspect Zika fever cases should be advised to avoid mosquito bites while ill to prevent infection of local mosquitoes.** Potentially infected men or women should either abstain from sex or use condoms consistently and correctly during intercourse for the duration of the pregnancy.

Incubation period is approximately 2 to 14 days.

Clinical Presentation: Only about 1 in 5 people infected with Zika virus are symptomatic. Zika fever is a mild illness with symptoms similar to those of mild dengue fever. Severe disease requiring hospitalization is uncommon. Treatment is symptomatic and illness typically resolves within a week. Co-infections with dengue or chikungunya are possible and should be considered. Aspirin and other non-steroidal anti-inflammatory drugs are not advised in case of co-infection with dengue. Pregnant women with fever should be treated with acetaminophen. Signs/symptoms of Zika fever may include:

- Acute fever (often low grade)
- Conjunctivitis
- Retro-orbital pain
- Maculopapular rash
- Myalgia
- Vomiting
- Arthralgia
- Headache

Laboratory testing: Polymerase chain reaction (PCR) can be used to detect viral RNA in serum and urine during the first week of illness and in urine alone for samples collected one to three weeks after illness onset. Serum antibody tests are recommended for samples collected ≥ 4 days after illness onset. However, cross-reaction with related flaviviruses (e.g. dengue) is common and results may be difficult to interpret. Dengue IgM antibody testing should be run on samples from patients with positive Zika IgM antibody tests due to cross-reactivity. Zika virus PCR testing of serum and urine is currently commercially available. Zika virus PCR testing for samples other than serum and urine, as well as Zika IgM antibody testing, is available at Florida Department of Health for patients who meet the following testing criteria.

Please contact your county health department to discuss Zika virus testing for patients meeting the following criteria:

- All persons, including pregnant women, with two or more of the following signs/symptoms: fever, maculopapular rash, arthralgia or conjunctivitis (GBS could follow) **and** a history of travel to an area reporting Zika virus activity in the two weeks prior to illness onset **or** is a suspect local case should be immediately reported and tested.

OR

- Mother of an infant or fetus with microcephaly or intracranial calcifications or poor fetal outcome diagnosed after the first trimester **and** with history of travel to an area with Zika virus activity during pregnancy should be immediately reported. Testing of both mother and infant is recommended.

OR

- Pregnant women who, while pregnant, **traveled to an area reporting Zika virus activity** regardless of the length of time since the travel/illness occurred, but ideally within 2-12 weeks of travel may also be tested.