

EpiNotes

Florida Department of Health - Hillsborough County Disease Surveillance Newsletter October 2015

Director
Douglas Holt, MD
813.307.8008
Medical Director (HIV/STD/EPI)
Charurut Somboonwit, MD
813.307.8008
Medical Director (TB/Refugee)
Beata Casanas, MD
813.307.8008
Medical Director (Vaccine Outreach)
Jamie P. Morano, MD, MPH
813.307.8008
Community Health Director
Leslene Gordon, PhD, RD, LD/N
813.307.8015 x7107
Disease Control Director
Faye Coe, RN
813.307.8015 x6321
Environmental Administrator
Brian Miller, RS
813.307.8015 x5901
Epidemiology
Warren R. McDougle Jr., MPH
813.307.8010 Fax 813.276.2981

TO REPORT A DISEASE:

Epidemiology
813.307.8010
After Hours Emergency
813.307.8000
Food and Waterborne Illness
James Ashworth
813.307.8015 x5944 Fax 813.272.7242
HIV/AIDS Surveillance
Erica Botting
813.307.8011
Lead Poisoning
Cynthia O. Keeton
813.307.8015 x7108 Fax 813.272.6915
Sexually Transmitted Disease
Carlos Mercado
813.307.8045 Fax 813.307.8027
Tuberculosis
Chris Lutz
813.307.8015 x4758 Fax 813.975.2014

Articles and Attachments: The following are included this month:

- Page 1 – Synthetic Marijuana in Florida**
- Page 3 – Reportable Disease Surveillance Data**
- Page 6 – Reportable Diseases/Conditions in Florida Practitioner List**
- Page 7 – Florida Department of Health, Practitioner Disease Report Form**
- Page 8 – Health Officials Issue Mosquito-Borne Illnesses Alert**
- Page 10 - Non-tuberculous Mycobacterium (NTM) Infections and Heater-Cooler Devices used During Surgeries and Other Medical Procedures**

Synthetic Marijuana in Florida Michael Wiese, MPH, CPH

Synthetic marijuana has been marketed as a legal alternative to weed (the actual marijuana plant) for years. It is often sold under cool-sounding names like Spice, K2, Yucatan Fire, Zombie Dust, Scooby Snax, and Mr. Nice Guy, just to name a few.

Synthetic marijuana is an artificial, chemically created product intended to simulate the high of the marijuana plant. But this fake version can have extremely dangerous side effects including hallucinations, disorientation, stroke, seizures, heart attack, coma and even death. Real reports from patients at Hillsborough County hospitals include “used synthetic marijuana and then had seizure”, “smoked spice, feel like I’m dying”, “smoking spice...acting psychotic”, “seizing and vomiting after smoking K2”, and the reports go on and on.

The Florida House of Representatives made synthetic weed illegal in 2013. But because the chemicals can be changed it is very difficult for police to enforce the law. So, despite these efforts from law enforcement and government officials, synthetic marijuana products continue to be available at gas stations, smoke shops, and through the internet. And severe reactions to this drug are on the rise. Visits to emergency departments in Florida because of synthetic marijuana are again increasing.

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

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

Rick Scott
Governor
John H. Armstrong, MD, FACS
State Surgeon General & Secretary



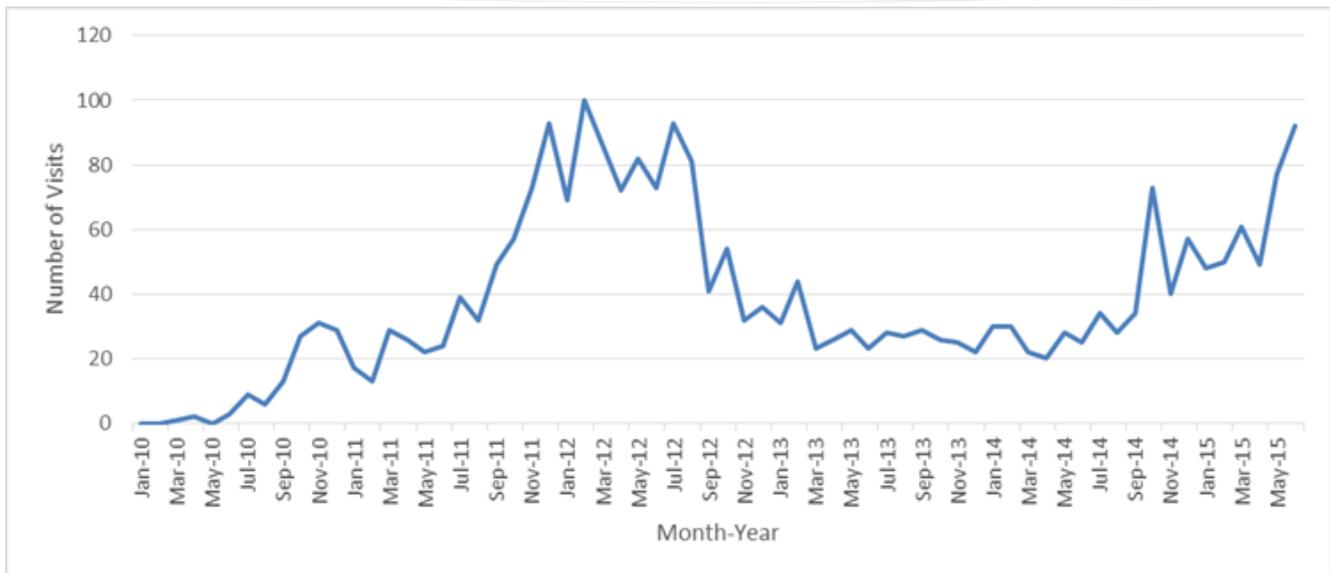


Figure 1: Emergency Department Visits Related to Synthetic Marijuana, Florida, January 1, 2010 - June 30, 2015, by Month

In Florida, users of synthetic marijuana who go to emergency rooms are usually males and with an average age of 27. Since 2010, almost 50% of emergency room visits for synthetic marijuana were in men aged 12-28. Almost every county in Florida had patients go to an emergency department because of synthetic marijuana use. Hillsborough County was the unfortunate leader with 17.5% of all identified visits.

As synthetic marijuana use continues, here are some important facts:

- Synthetic marijuana is NOT the same thing as regular marijuana.
- It is more dangerous than marijuana and has caused **death**.

Many types of synthetic marijuana are still legal (because the producers change the chemical compound in order to avoid the DEA's list of illegal drugs).

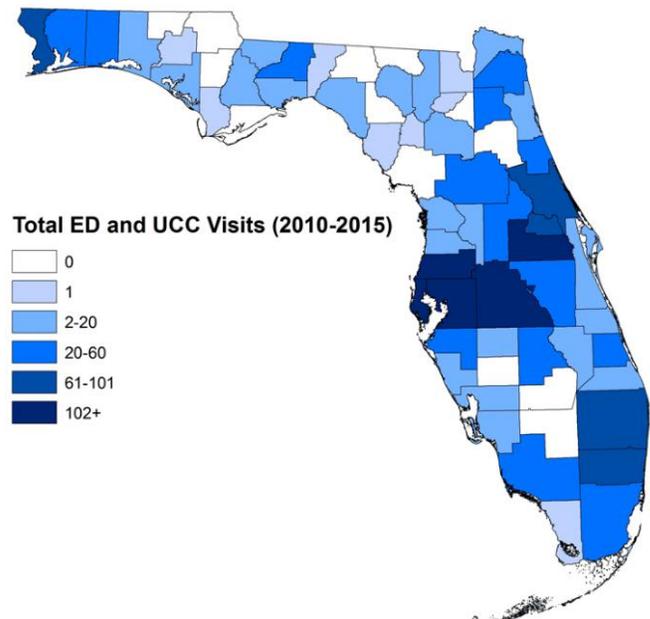


Figure 2: Number of Emergency Department Visits for Synthetic Marijuana Use, by County, January 2010 - June 2015

Reportable Disease Surveillance Data

Disease Category	Annual Totals			3 Year Average	Year-to-date	
	2012	2013	2014		Jan-Sep 14	Jan-Sep 15
Vaccine Preventable Diseases						
Diphtheria	0	0	0	0.00	0	0
Measles	0	0	0	0.00	0	0
Mumps	0	0	2	0.67	1	1
Pertussis	119	95	65	93.00	58	27
Poliomyelitis	0	0	0	0.00	0	0
Rubella	0	0	0	0.00	0	0
Smallpox	0	0	0	0.00	0	0
Tetanus	0	0	0	0.00	0	0
Varicella	45	65	59	56.33	45	54
CNS Diseases & Bacteremias						
Creutzfeldt-Jakob Disease	3	1	1	1.67	1	3
<i>H. influenzae</i> (Invasive Disease in children <5)	2	2	3	2.33	2	1
Listeriosis	1	5	2	2.67	2	1
Meningitis (Bacterial, Cryptococcal, Mycotic)	5	11	12	9.33	11	13
Meningococcal Disease	3	6	3	4.00	3	2
Staphylococcus aureus (VISA, VRSA)	1	1	0	0.67	0	0
<i>S. pneumoniae</i> (Invasive Disease in children <6)	5	7	5	5.67	4	1
Enteric Infections						
Campylobacteriosis	105	134	189	142.67	127	209
Cholera	1	0	0	0.33	0	0
Cryptosporidiosis	77	59	354	163.33	258	86
Cyclospora	2	9	4	5.00	4	0
Escherichia coli, Shiga toxin-producing (STEC)	22	30	20	24.00	17	21
Giardiasis	54	56	64	58.00	49	43
Hemolytic Uremic Syndrome	1	2	1	1.33	0	2
Salmonellosis	331	303	362	332.00	248	235
Shigellosis	36	63	68	55.67	35	225
Typhoid Fever	0	0	0	0.00	0	0
Viral Hepatitis						
Hepatitis A	5	10	5	6.67	4	4
Hepatitis B (Acute)	39	56	61	52.00	43	53
Hepatitis C (Acute)	26	38	28	30.67	23	36
Hepatitis +HBsAg in Pregnant Women	38	30	35	34.33	26	23
Hepatitis D, E, G	1	0	0	0.33	0	0

Reportable Disease Surveillance Data

Disease Category	Annual Totals			3 Year Average	Year-to-date	
	2012	2013	2014		Jan-Sep 14	Jan-Sep 15
Vectorborne, Zoonoses						
Chikungunya	N/A	N/A	36	N/A	18	10
Dengue	5	4	6	5.00	4	3
Eastern Equine Encephalitis	0	1	0	0.33	0	0
Ehrlichiosis/Anaplasmosis	0	2	2	1.33	1	0
Leptospirosis	0	0	0	0.00	0	1
Lyme Disease	9	12	9	10.00	6	13
Malaria	7	8	11	8.67	9	2
Plague	0	0	0	0.00	0	0
Psittacosis	0	0	0	0.00	0	0
Q Fever (Acute and Chronic)	0	0	0	0.00	0	0
Rabies (Animal)	5	6	5	5.33	4	2
Rabies (Human)	0	0	0	0.00	0	0
Rocky Mountain Spotted Fever	1	1	0	0.67	0	0
St. Louis Encephalitis	0	0	0	0.00	0	0
Trichinellosis	0	0	0	0.00	0	0
Tularemia	0	0	0	0.00	0	0
Typhus Fever (Epidemic)	0	0	0	0.00	0	0
Venezuelan Equine Encephalitis	0	0	0	0.00	0	0
West Nile Virus	1	0	0	0.33	0	1
Western Equine Encephalitis	0	0	0	0.00	0	0
Yellow Fever	0	0	0	0.00	0	0
Others						
Anthrax	0	0	0	0.00	0	0
Botulism, Foodborne	0	0	0	0.00	0	0
Botulism, Infant	0	0	0	0.00	0	0
Brucellosis	0	0	0	0.00	0	0
Glanders	0	0	0	0.00	0	0
Hansen's Disease (Leprosy)	2	2	0	1.33	0	0
Hantavirus Infection	0	0	0	0.00	0	0
Legionellosis	8	18	8	11.33	7	16
Melioidosis	0	0	0	0.00	0	0
Vibriosis	13	13	7	11.00	4	9

Reportable Disease Surveillance Data

Disease Category	Annual Totals			3 Year Average	Year-to-date	
	2012	2013	2014		Jan-Sep 14	Jan-Sep 15
Chemicals/Poisoning						
Arsenic	0	0	0	0.00	0	0
Carbon Monoxide	4	5	22	10.33	7	19
Lead	329	173	246	249.33	169	232
Mercury	0	0	0	0.00	0	0
Pesticide	4	13	42	19.67	3	36
Influenza						
Influenza, Pediatric Associated Mortality	0	1	1	0.67	1	0
Influenza, Novel or Pandemic Strain	0	0	0	0.00	0	0
HIV/AIDS						
AIDS	172	231	178	193.67	142	147
HIV Infection	327	403	443	391.00	343	361
STDs						
Chlamydia	7124	7220	7461	7268.33	5693	5725
Gonorrhea	2160	2023	1848	2010.33	1446	1484
Syphilis, Congenital	6	3	4	4.33	4	3
Syphilis, Latent	129	189	166	161.33	130	137
Syphilis, Early	117	124	141	127.33	119	117
Syphilis, Infectious	155	156	208	173.00	161	175
Tuberculosis						
TB	51	54	51	52.00	31	29
Food and Waterborne Illness Outbreaks						
Food and Waterborne Cases	74	73	55	67.33	51	27
Food and Waterborne Outbreaks	4	4	3	3.67	2	2

Reportable Diseases/Conditions in Florida

Practitioner List (Laboratory Requirements Differ)

Effective June 4, 2014



Did you know that you are required* to report certain diseases to your local county health department?

! Report immediately 24/7 by phone upon initial suspicion or laboratory test order

☎ Report immediately 24/7 by phone

• Report next business day

+ Other reporting timeframe

Birth Defects

- + Congenital anomalies
- + Neonatal abstinence syndrome (NAS)

Cancer

- + Cancer, excluding non-melanoma skin cancer and including benign and borderline intracranial and CNS tumors

HIV/AIDS

- + Acquired immune deficiency syndrome (AIDS)
- + Human immunodeficiency virus (HIV) infection
- HIV, exposed infants <18 months old born to an HIV-infected woman

STDs

- Chancroid
- Chlamydia
- Conjunctivitis in neonates <14 days old
- Gonorrhea
- Granuloma inguinale
- Herpes simplex virus (HSV) in infants <60 days old with disseminated infection and liver involvement; encephalitis; and infections limited to skin, eyes, and mouth; anogenital HSV in children <12 years old
- Human papillomavirus (HPV), associated laryngeal papillomas or recurrent respiratory papillomatosis in children <6 years old; anogenital papillomas in children <12 years old
- Lymphogranuloma venereum (LGV)
- Syphilis
- ☎ Syphilis in pregnant women and neonates

Tuberculosis

- Tuberculosis (TB)

All Others

! Outbreaks of any disease, any case, cluster of cases, or exposure to an infectious or non-infectious disease, condition, or agent found in the general community or any defined setting (e.g., hospital, school, other institution) not listed that is of urgent public health significance

☎ Amebic encephalitis

! Anthrax

- Arsenic poisoning
- Arboviral diseases not otherwise listed

! Botulism, foodborne, wound, and unspecified

- Botulism, infant

! Brucellosis

- California serogroup virus disease
- Campylobacteriosis
- Carbon monoxide poisoning
- Chikungunya fever

☎ Chikungunya fever, locally acquired

! Cholera (*Vibrio cholerae* type O1)

- Ciguatera fish poisoning
- Creutzfeldt-Jakob disease (CJD)
- Cryptosporidiosis
- Cyclosporiasis
- Dengue fever

☎ Dengue fever, locally acquired

! Diphtheria

- Eastern equine encephalitis
- Ehrlichiosis/anaplasmosis
- *Escherichia coli* infection, Shiga toxin-producing
- Giardiasis, acute

! Glanders

! *Haemophilus influenzae* invasive disease in children <5 years old

- Hansen's disease (leprosy)

☎ Hantavirus infection

☎ Hemolytic uremic syndrome (HUS)

☎ Hepatitis A

- Hepatitis B, C, D, E, and G
- Hepatitis B surface antigen in pregnant women or children <2 years old

☎ Herpes B virus, possible exposure

! Influenza A, novel or pandemic strains

☎ Influenza-associated pediatric mortality in children <18 years old

- Lead poisoning

- Legionellosis

- Leptospirosis

☎ Listeriosis

- Lyme disease

- Malaria

! Measles (rubeola)

! Melioidosis

- Meningitis, bacterial or mycotic

! Meningococcal disease

- Mercury poisoning

- Mumps

☎ Neurotoxic shellfish poisoning

☎ Pertussis

- Pesticide-related illness and injury, acute

! Plague

! Poliomyelitis

- Psittacosis (ornithosis)

- Q Fever

☎ Rabies, animal or human

! Rabies, possible exposure

! Ricin toxin poisoning

- Rocky Mountain spotted fever and other spotted fever rickettsioses

! Rubella

- St. Louis encephalitis

- Salmonellosis

- Saxitoxin poisoning (paralytic shellfish poisoning)

! Severe acute respiratory disease syndrome associated with coronavirus infection

- Shigellosis

! Smallpox

☎ Staphylococcal enterotoxin B poisoning

☎ *Staphylococcus aureus* infection, intermediate or full resistance to vancomycin (VISA, VRSA)

- *Streptococcus pneumoniae* invasive disease in children <6 years old

- Tetanus

- Trichinellosis (trichinosis)

! Tularemia

☎ Typhoid fever (*Salmonella* serotype Typhi)

! Typhus fever, epidemic

! Vaccinia disease

- Varicella (chickenpox)

! Venezuelan equine encephalitis

- Vibriosis (infections of *Vibrio* species and closely related organisms, excluding *Vibrio cholerae* type O1)

! Viral hemorrhagic fevers

- West Nile virus disease

! Yellow fever

*Section 381.0031 (2), *Florida Statutes* (F.S.), provides that "Any practitioner licensed in this state to practice medicine, osteopathic medicine, chiropractic medicine, naturopathy, or veterinary medicine; any hospital licensed under part I of chapter 395; or any laboratory licensed under chapter 483 that diagnoses or suspects the existence of a disease of public health significance shall immediately report the fact to the Department of Health." Florida's county health departments serve as the Department's representative in this reporting requirement. Furthermore, Section 381.0031 (4), F.S. provides that "The department shall periodically issue a list of infectious or noninfectious diseases determined by it to be a threat to public health and therefore of significance to public health and shall furnish a copy of the list to the practitioners..."

Florida Department of Health, Practitioner Disease Report Form



Complete the following information to notify the Florida Department of Health of a reportable disease or condition, as required by Chapter 64D-3, *Florida Administrative Code (FAC)*. This can be filled in electronically.

Print Form

Patient Information

SSN: _____

Last name: _____

First name: _____

Middle: _____

Parent name: _____

Gender: Male Female Unk
Pregnant: Yes No Unk

Birth date: _____ Death date: _____

Race: American Indian/Alaska Native White
 Asian/Pacific Islander Other
 Black Unk

Ethnicity: Hispanic Non-Hispanic Unk

Address: _____

ZIP: _____ County: _____

City: _____ State: _____

Home phone: _____

Other phone: _____

Emer. phone: _____

Email: _____

Medical Information

MRN: _____

Date onset: _____ Date diagnosis: _____

Died: Yes No Unk

Hospitalized: Yes No Unk

Hospital name: _____

Date admitted: _____ Date discharged: _____

Insurance: _____

Treated: Yes No Unk

Specify treatment:

Laboratory testing: Yes No Unk Attach laboratory result(s) if available.

Provider Information

Physician: _____

Address: _____

City: _____ State: _____ ZIP: _____

Phone: _____ Fax: _____

Email: _____

Reportable Diseases and Conditions in Florida

Notify upon suspicion 24/7 by phone **Notify upon diagnosis 24/7 by phone**

HIV/AIDS and HIV-exposed newborn notification should be made using the Adult HIV/AIDS Confidential Case Report Form, CDC 50.42A (revised March 2013) for cases in people ≥13 years old or the Pediatric HIV/AIDS Confidential Case Report, CDC 50.42B (revised March 2003) for cases in people <13 years old. Please contact your local county health department for these forms (visit <http://floridahealth.gov/chdecontact> to obtain CHD contact information). Congenital anomalies and neonatal abstinence syndrome notification occurs when these conditions are reported to the Agency for Health Care Administration in its inpatient discharge data report pursuant to Chapter 59E-7 FAC. Cancer notification should be directly to the Florida Cancer Data System (see <http://fcds.med.miami.edu>). All other notifications should be to the CHD where the patient resides.

To obtain CHD contact information, see <http://floridahealth.gov/chdecontact>. See <http://floridahealth.gov/diseasereporting> for other reporting questions.

- | | | | |
|--|---|--|---|
| <input type="checkbox"/> Amebic encephalitis | <input type="checkbox"/> Glanders | <input type="checkbox"/> Melioidosis | <input type="checkbox"/> Staphylococcal enterotoxin B poisoning |
| <input type="checkbox"/> Anthrax | <input type="checkbox"/> Gonorrhea | <input type="checkbox"/> Meningitis, bacterial or mycotic | <input type="checkbox"/> Streptococcus pneumoniae invasive disease in child <6 years old |
| <input type="checkbox"/> Arsenic poisoning | <input type="checkbox"/> Granuloma inguinale | <input type="checkbox"/> Meningococcal disease | <input type="checkbox"/> Syphilis |
| <input type="checkbox"/> Arboviral disease not listed here | <input type="checkbox"/> Haemophilus influenzae invasive disease in child <5 years old | <input type="checkbox"/> Mercury poisoning | <input type="checkbox"/> Syphilis in pregnant woman or neonate |
| <input type="checkbox"/> Botulism, infant | <input type="checkbox"/> Hansen's disease (leprosy) | <input type="checkbox"/> Mumps | <input type="checkbox"/> Tetanus |
| <input type="checkbox"/> Botulism, foodborne | <input type="checkbox"/> Hantavirus infection | <input type="checkbox"/> Neurotoxic shellfish poisoning | <input type="checkbox"/> Trichinellosis (trichinosis) |
| <input type="checkbox"/> Botulism, wound or unspecified | <input type="checkbox"/> Hemolytic uremic syndrome (HUS) | <input type="checkbox"/> Pertussis | <input type="checkbox"/> Tuberculosis (TB) |
| <input type="checkbox"/> Brucellosis | <input type="checkbox"/> Hepatitis A | <input type="checkbox"/> Pesticide-related illness and injury, acute | <input type="checkbox"/> Tularemia |
| <input type="checkbox"/> California serogroup virus disease | <input type="checkbox"/> Hepatitis B, C, D, E, and G | <input type="checkbox"/> Plague | <input type="checkbox"/> Typhoid fever (Salmonella serotype Typhi) |
| <input type="checkbox"/> Campylobacteriosis | <input type="checkbox"/> Hepatitis B surface antigen in pregnant woman or child <2 years old | <input type="checkbox"/> Poliomyelitis | <input type="checkbox"/> Typhus fever, epidemic |
| <input type="checkbox"/> Carbon monoxide poisoning | <input type="checkbox"/> Herpes B virus, possible exposure | <input type="checkbox"/> Psittacosis (ornithosis) | <input type="checkbox"/> Vaccinia disease |
| <input type="checkbox"/> Chancroid | <input type="checkbox"/> Herpes simplex virus (HSV) in infant <60 days old | <input type="checkbox"/> Q Fever | <input type="checkbox"/> Varicella (chickenpox) |
| <input type="checkbox"/> Chikungunya fever | <input type="checkbox"/> HSV, anogenital in child <12 years old | <input type="checkbox"/> Rabies, animal | <input type="checkbox"/> Venezuelan equine encephalitis |
| <input type="checkbox"/> Chikungunya fever, locally acquired | <input type="checkbox"/> Human papillomavirus (HPV), laryngeal papillomas or recurrent respiratory papillomatosis in child <6 years old | <input type="checkbox"/> Rabies, human | <input type="checkbox"/> Vibriosis (infections of Vibrio species and closely related organisms, excluding Vibrio cholerae type O1) |
| <input type="checkbox"/> Chlamydia | <input type="checkbox"/> HPV, anogenital papillomas in child <12 years old | <input type="checkbox"/> Rabies, possible exposure | <input type="checkbox"/> Viral hemorrhagic fevers |
| <input type="checkbox"/> Cholera (Vibrio cholerae type O1) | <input type="checkbox"/> Influenza A, novel or pandemic strains | <input type="checkbox"/> Ricin toxin poisoning | <input type="checkbox"/> West Nile virus disease |
| <input type="checkbox"/> Ciguatera fish poisoning | <input type="checkbox"/> Influenza-associated pediatric mortality in child <18 years old | <input type="checkbox"/> Rocky Mountain spotted fever or other spotted fever rickettsiosis | <input type="checkbox"/> Yellow fever |
| <input type="checkbox"/> Conjunctivitis in neonate <14 days old | <input type="checkbox"/> Lead poisoning | <input type="checkbox"/> Rubella | <input type="checkbox"/> Outbreaks of any disease, any case, cluster of cases, or exposure to an infectious or non-infectious disease, condition, or agent found in the general community or any defined setting (e.g., hospital, school, other institution) not listed above that is of urgent public health significance. Please specify: |
| <input type="checkbox"/> Creutzfeldt-Jakob disease (CJD) | <input type="checkbox"/> Legionellosis | <input type="checkbox"/> St. Louis encephalitis | |
| <input type="checkbox"/> Cryptosporidiosis | <input type="checkbox"/> Leptospirosis | <input type="checkbox"/> Salmonellosis | |
| <input type="checkbox"/> Cyclosporiasis | <input type="checkbox"/> Listeriosis | <input type="checkbox"/> Saxitoxin poisoning (paralytic shellfish poisoning) | |
| <input type="checkbox"/> Dengue fever | <input type="checkbox"/> Lyme disease | <input type="checkbox"/> Severe acute respiratory disease syndrome associated with coronavirus infection | |
| <input type="checkbox"/> Dengue fever, locally acquired | <input type="checkbox"/> Lymphogranuloma venereum (LGV) | <input type="checkbox"/> Shigellosis | |
| <input type="checkbox"/> Diphtheria | <input type="checkbox"/> Malaria | <input type="checkbox"/> Smallpox | |
| <input type="checkbox"/> Eastern equine encephalitis | <input type="checkbox"/> Measles (rubeola) | <input type="checkbox"/> Staphylococcus aureus infection, intermediate or full resistance to vancomycin (VISA, VRSA) | |
| <input type="checkbox"/> Ehrlichiosis/anaplasmosis | | | |
| <input type="checkbox"/> Escherichia coli infection, Shiga toxin-producing | | | |
| <input type="checkbox"/> Giardiasis, acute | | | |

Comments

Oct. 8, 2015

HEALTH OFFICIALS ISSUE MOSQUITO-BORNE ILLNESSES ALERT



Contact:

Steve Huard

Gerald.huard@flhealth.gov

(813) 307-8044, Desk

(813) 298-2024, Cell

Tampa, Fla.—The Florida Department of Health in Hillsborough County has upgraded the mosquito-borne illness advisory to an alert for Hillsborough County due to the confirmation of an asymptomatic case of West Nile virus being identified in the county.

There has been one confirmed human case of West Nile Virus in the county, and eight confirmed human cases in Florida in 2015.

“The addition of an asymptomatic case being discovered in the community is an indication that we could potentially see more human cases in the future,” said Dr. Douglas Holt, MD, director of the Florida Department of Health in Hillsborough County. “Residents and visitors should take precautions to avoid being bitten by mosquitoes and to limit exposure to mosquito-borne illnesses.”

Hillsborough County Mosquito and Aquatic Weed Control and the Florida Department of Health in Hillsborough County continue surveillance and prevention efforts. There is heightened concern that other Hillsborough County residents and visitors may become ill from being bitten by an infected mosquito.

Infection with West Nile Virus is either asymptomatic (no symptoms) in around 80 percent of infected people, or can lead to more severe case of West Nile Virus. Symptoms include fever, headache, tiredness, and body aches, nausea, vomiting, occasionally with a skin rash (on the trunk of the body) and swollen lymph glands.

To protect yourself from mosquitoes, you should remember to “**Drain and Cover**”:

DRAIN standing water to stop mosquitoes from multiplying.

- Drain water from garbage cans, house gutters, buckets, pool covers, coolers, toys, flower pots or any other containers where sprinkler or rain water has collected.
- Discard old tires, bottles, pots, broken appliances and other items not being used.
- Empty and clean birdbaths and pets’ water bowls at least twice a week.
- Protect boats and vehicles from rain with tarps that don’t accumulate water.
- Maintain swimming pools in good condition and appropriately chlorinated. Empty plastic swimming pools when not in use.

COVER skin with clothing or repellent and cover doors and windows.

- Wear comfortable shoes, socks, and long pants and long sleeves when mosquitoes are most prevalent.
- Apply mosquito repellent to exposed skin and clothing.
- Always use repellents according to the label. Environmental Protection Agency (EPA) registered repellents with 10-30 percent DEET, picaridin, IR3535 and some oil of lemon eucalyptus and para-mentane-diol products provide longer-lasting protection.
- Use mosquito netting to protect children younger than 2 months old.

- Avoid applying repellents to the hands of children. Adults should apply repellent first to their own hands and then transfer it to the child's skin and clothing.
- Place screens on windows, doors, porches and patios. Always repair broken screens.

For more information contact the Florida Department of Health in Hillsborough County at 813-307-8000, or visit www.hillsborough.floridahealth.gov/. The department works to protect, promote and improve the health of all people in Florida through integrated state, county and community efforts.

Follow us on Twitter at [@HealthyFla](https://twitter.com/HealthyFla) and on [Facebook](#). For more information about the Florida Department of Health please visit www.FloridaHealth.gov.

Non-tuberculous Mycobacterium (NTM) Infections and Heater-Cooler Devices used During Surgeries and Other Medical Procedures

Purpose:

CDC has identified a need for increased awareness about health care-associated NTM infections by health departments, healthcare facilities, and individual healthcare providers. [FDA recently issued a Safety Communication on Nontuberculous Mycobacterium Infections Associated with Heater-Cooler Devices](#) that addresses issues regarding the proper use and maintenance of these devices. CDC has been working with the FDA and local and state health departments to investigate heater-cooler units associated with NTM infections and/or found to be contaminated with NTM. The purpose of this communication is to (a) raise awareness among county health departments, healthcare facilities, and healthcare providers of the possible association between NTM infections and use of heater-cooler devices and (b) to provide guidance on identifying patients with infection.

Summary:

Heater-cooler devices are commonly used during cardiac surgical procedures to warm and cool a patient's blood during cardiopulmonary bypass. NTM are slow-growing bacteria that are found in surface water, tap water, and soil. Recent reports have suggested an association between heater-cooler devices and NTM infections among patients undergoing cardiac surgery potentially through the aerosolization of bacteria from contaminated water used in these devices.¹⁻⁴

The most important action to protect patients will be to remove contaminated heater-coolers from operating rooms, and ensure that those in service are correctly maintained.

Patients who might have been exposed to NTM during a surgical procedure should continue to look for signs of potential infection and keep in touch with their clinicians for further evaluation. Due to the potentially long delay between exposure to NTM and manifestation of clinical infection (up to several years), identifying infections related to the use of heater-cooler devices can be challenging.

Recommendations for County health departments:

- County health departments should communicate with healthcare facilities that perform cardiac surgical procedures, or facilities that may provide care to patients who have undergone such procedures, to recommend that the devices are assessed, their maintenance reviewed and any potentially contaminated devices are removed from service. Clinical staff should be alerted to maintain increased awareness in identifying NTM infections potentially associated with surgery that uses heater-cooler devices.
- County health departments should encourage healthcare facilities to conduct surveillance for infections potentially associated with heater-cooler units, encourage facilities to report these events to FDA, request facilities report clusters of NTM infections, and be prepared to assist healthcare facilities with further investigation as needed.

Recommendations for healthcare facilities:

Healthcare facilities should immediately assess their use of heater-cooler units and ensure that they are safe and properly maintained. In addition, clinical staff should maintain heightened vigilance for possible NTM infections among patients who have undergone cardiac surgical procedures that involved the use of heater-cooler devices. Some actions that healthcare facilities should consider include:

- Ensure that your facility is following the most current manufacturer's instructions and following [FDA's recommendations for maintenance, cleaning, disinfection and monitoring of heater-cooler devices](#)

- If a heater-cooler device in your facility tests positive for NTM or if there is concern for patient infections related to the heater-cooler device, review your facility's microbiological database and records of surgical procedures to identify any patients that have had NTM-positive cultures within four years following a cardiac surgery procedure.
- If a heater-cooler device is suspected to have led to patient infections or if a heater-cooler device has tested positive for NTM, promptly notify your county health department, submit a report to FDA via MedWatch, and assess the need for notifying exposed patients in coordination with public health authorities.

Recommendations for healthcare providers:

Healthcare providers should have increased suspicion for NTM infections among patients who have signs of infection and a history of cardiac surgery. When seeing patients, actions that providers should consider include:

- Assessment for NTM infection for patients who report signs or symptoms of infection and who have had undergone cardiac surgery within the previous four years.
- Patients suspected to have an NTM infection should also be assessed for a history of cardiac surgery or exposure to a heater-cooler device. Note that other healthcare exposures such as injections, plastic surgery, and dialysis may also be associated with NTM infections and warrant consultation with public health authorities or reporting to FDA.
- Order mycobacterial culture in patients who have undergone a cardiac procedure within the previous four years who present with signs of infection.
 - Patients with NTM infections following cardiac surgery have presented with a variety of clinical manifestations. Common examples include endocarditis, surgical site infection, and bacteremia. However, other clinical manifestations have included hepatitis, splenomegaly, and osteomyelitis.
 - Diagnosis can be difficult due to the non-specific presentation of illness, but it is important that providers maintain an index of suspicion in patients with a history of cardiac surgery. Consider arranging consultation with an infectious disease specialist. It is also important to obtain acid fast bacteria (AFB) cultures to increase the likelihood of identification of the organism as well as to obtain an AFB smear in order to have preliminary information while awaiting culture results.

Recommendations for patients:

Patients who have recently had cardiac or thoracic surgery should contact their health care provider if they have (a) symptoms of NTM infection, which may include a combination of the following: fever; pain, redness, heat, or pus around a surgical incision; night sweats; joint pain; muscle pain; and fatigue; or (b) questions about possible or exposure to a heater-cooler device.

It is important to note that these infections typically develop slowly and treatment may not be needed right away. Those who were exposed to NTM should continue to look for signs of unexplained infection and keep in touch with their health care professionals for further evaluation and tracking.

References:

1. U.S. Food and Drug Administration, Nontuberculous Mycobacterium Infections Associated with Heater-Cooler Devices: FDA Safety Communication: October 15, 2015.
2. Kohler P, Kuster SP, Bloemberg G, et al. Healthcare-associated prosthetic heart valve, aortic vascular graft, and disseminated Mycobacterium chimaera infections subsequent to open heart surgery. *European heart journal*. Jul 17 2015.
3. Sax H, Bloemberg G, Hasse B, et al. Prolonged Outbreak of Mycobacterium chimaera Infection After Open-Chest Heart Surgery. *Clinical infectious diseases: an official publication of the Infectious Diseases Society of America*. Jul 1 2015;61(1):67-75.
4. Mycobacterial infections associated with heater cooler units used in cardiac surgery: advice for providers of cardiac surgery. London: Public Health England; 2015.