

EPI NOTES

Hillsborough County Health Department
Disease Surveillance Newsletter
May 2012

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Mosquito-borne Diseases

By Amy Pullman and Kiley Workman

Mosquito-borne illnesses pose a health risk to Hillsborough residents, especially in the summer months and during hurricane season. Typically, the peak is in June through September, but cases can occur at any time of the year. In the summer of 2010, two residents died from Eastern equine encephalitis (EEE), one of whom was only 17 months old. Because mosquito-borne disease can be life threatening, it is very important that our providers know what to look for and individuals know how to reduce their risk.

The Hillsborough County Health Department (HCHD) monitors the following mosquito-borne diseases: Saint Louis encephalitis (SLE), West Nile virus (WNV), EEE, dengue, malaria, yellow fever, and Highlands J virus (HJV). Since it is still early in mosquito season, the HCHD would like to take this opportunity to update providers and the community of what to expect this summer and how to prevent and identify mosquito-borne disease.

Current Activity

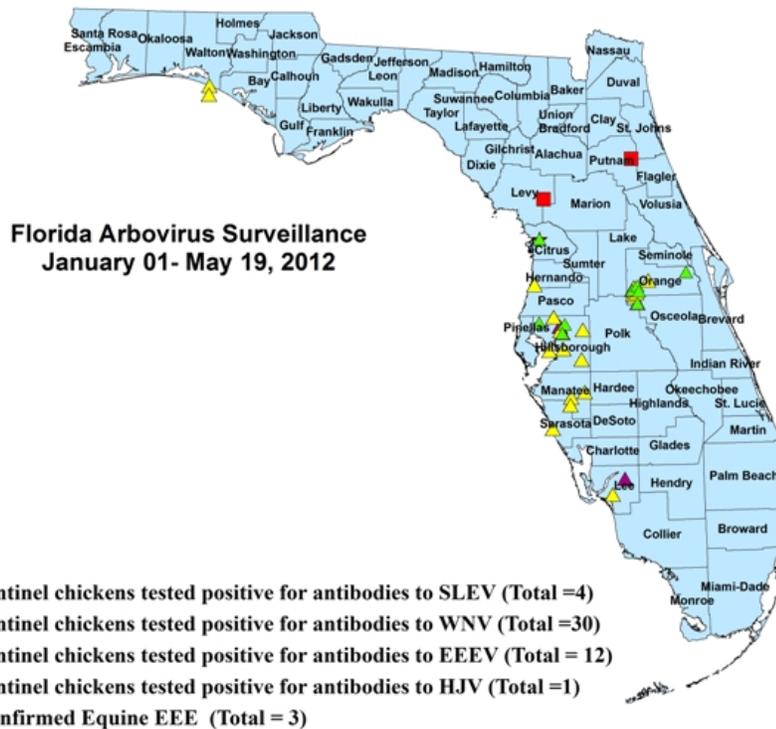
The Florida Department of Health uses a number of surveillance systems to monitor mosquito activity in the state. Sentinel chicken surveillance, which acts as an early warning system for mosquito-borne illness, is one of them. The flocks of chickens and geese are kept in various areas around the county and are tested weekly for mosquito-borne illness. This doesn't hurt the birds, and it provides us with up to date information for some of the mosquito-borne viruses in our community. So far this year, we have had birds test positive for antibodies for WNV, EEE, and SLE. As you can see on the map below, a lot of flocks in our county have tested positive,

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relative to the rest of the state.

At this point, the numbers are still moderate. However, since these viruses are circulating in our birds, it is certainly possible that people could become infected as well. Dengue fever and malaria cases also occur in Hillsborough residents who have recently traveled (in the last month or so) to countries where these diseases are common.



Symptoms

There are many different mosquito-borne illnesses, and the severity and symptoms can vary. For instance, only 20% of those infected with West Nile virus are symptomatic.¹ Eastern equine encephalitis, however, kills about a third of those infected.² Generally, onset of a mosquito-borne disease is acute and includes one or more of the following: fever, headache, stiff neck, rash, dizziness, muscle pain, and malaise. In some cases, the illness can progress to encephalitis (inflammation of the brain), which could result in altered mental status or confusion, seizures, flaccid paralysis, acute meningitis, or death.

Laboratory Criteria

The HCHD's public health response relies heavily on laboratory criteria.

For that reason, it is very important that providers order appropriate lab tests. Providers should keep in mind the relevant clinical and epidemiological information while ordering labs. All positive results should be forwarded to the Florida Bureau of Laboratories in Tampa for confirmation. For more detailed information on laboratory criteria, please refer to [Surveillance and Control of Selected Mosquito-borne Diseases in Florida](#).

Prevention

The HCHD works with Hillsborough County Mosquito Control (HCMC) to identify areas of the county at increased risk for mosquito-borne illness. HCMC follows up with increased spraying against larval and adult mosquitoes in the high-risk areas. In addition, there are many steps individuals can take to reduce their risk.

Personal prevention measures include:

- Reducing time outdoors, even during the day (some mosquitoes bite in the daytime)
- Wearing light colored clothing that covers your arms and legs
- Applying mosquito repellent (30% DEET repellent is best) to exposed skin areas

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- Discarding and draining standing water in pots, old tires, and any other yard debris that collects water
- Cleaning birdbaths and small pools weekly
- Covering doors and windows with screens

Sources

¹ http://www.cdc.gov/ncidod/dybid/westnile/wnv_factsheet.htm

² <http://www.cdc.gov/EasternEquineEncephalitis/>

Resources

Hillsborough County Mosquito Control

<http://www.hillsboroughcounty.org/publicworks/transmaintenance/mosquitocontrol/>

Florida Bureau of Environmental Public Health Medicine

<http://www.doh.state.fl.us/environment/medicine/arboviral/index.html>

Centers for Disease Control and Prevention

http://www.cdc.gov/ncidod/diseases/list_mosquitoborne.htm

May is Hepatitis Awareness Month

By Patrick Rodriguez, MSPH, CPH

Millions of Americans are infected with hepatitis and many of them do not know it. The focus of Hepatitis Awareness Month is to encourage testing and to raise awareness of this silent epidemic. Hepatitis is an inflammation of the liver that is caused by a number of different viruses. Two hepatitis viruses (hepatitis B and hepatitis C) can cause chronic infections that sometimes last throughout a person's life. With chronic hepatitis infection, a number of serious life threatening conditions may develop, including liver failure and even cancer.

In Florida, hepatitis B and hepatitis C are major causes of morbidity in the population. Between 2002 and 2005, more than 14,000 cases of hepatitis B and 98,000 cases of hepatitis C were reported to the state health office. The Florida Department of Health estimates that these cases represent only a fraction of the population who are actually infected with hepatitis, as most people infected do not suffer any symptoms of illness and do not seek medical care.

A person can spread the virus through contact with blood or body fluids, even if he or she is not feeling sick. For this reason, testing is vital. People who are at the highest risk for hepatitis include: people who have multiple sexual partners, injection drug users, and health care providers who come in contact with blood.

Please contact the Hillsborough County Health Department at (813) 307-8010 with any questions related to hepatitis testing.



Reportable Disease Surveillance Data

Disease	2009	2010	2011	3 Year Average	Jan-Apr 2011	Jan-Apr 2012
AIDS	253	193	NA	N/A	NA	NA
AMEBIC ENCEPHALITIS	1	0	0	0.3	0	0
ANIMAL BITE, PEP RECEIVED	72	55	95	74.0	35	34
ANTHRAX	0	0	0	0.0	0	0
ARSENIC	1	0	0	0.3	0	0
BOTULISM, FOODBORNE	0	0	0	0.0	0	0
BOTULISM, INFANT	1	0	0	0.3	0	0
BRUCELLOSIS	2	0	1	1.0	0	0
CALIFORNIA SEROGROUP, NEUROINVASIVE	0	0	0	0.0	0	0
CAMPYLOBACTERIOSIS	69	76	120	88.3	38	36
CARBON MONOXIDE POISONING	0	7	13	6.7	1	1
CHLAMYDIA	5058	NA	NA	N/A	NA	NA
CIGUATERA	0	0	0	0.0	0	0
CREUTZFELDT-JAKOB DISEASE	1	0	0	0.3	0	0
CRYPTOSPORIDIOSIS	38	14	38	30.0	11	30
CYCLOSPORIASIS	2	3	1	2.0	0	0
DENGUE	3	7	4	4.7	0	0
DIPHThERIA	0	0	0	0.0	0	0
EHRlichIOSIS, HUMAN GRANULOCYtic	0	1	0	0.3	0	0
EHRlichIOSIS, HUMAN MONOCYtic	0	1	0	0.3	0	0
EHRlichIOSIS/ANAPLASMOSIS, UNDETER.	1	1	0	0.7	0	0
ENCEPHALITIS, CALIFORNIA/LACROSSE	0	0	0	0.0	0	0
ENCEPHALITIS, HERPES	0	0	0	0.0	0	0
ENCEPHALITIS, NON-ARBOVIRAL	0	0	0	0.0	0	0
ENCEPHALITIS, OTHER	0	0	0	0.0	0	0
ENCEPHALITIS, EEE	0	2	0	0.7	0	0
ENCEPHALITIS, SLE	0	0	0	0.0	0	0
ENCEPHALITIS, WN	0	0	0	0.0	0	0
ENTEROHEMORRHAGIC E. COLI (O157:H7)	0	0	0	0.0	0	0
E. COLI SHIGA TOXIN + NOT SEROGROUP	0	0	0	0.0	0	0
E. COLI SHIGA TOXIN + NON O157:H7	0	0	0	0.0	0	0
E. COLI SHIGA TOXIN PRODUCING - 0800	11	13	24	16.0	8	9
FOOD AND WATERBORNE CASES	74	NA	NA	N/A	NA	NA
FOOD AND WATERBORNE OUTBREAKS	18	NA	NA	N/A	NA	NA
GIARDIASIS	101	100	81	94.0	18	16
GONORRHEA	1574	NA	NA	N/A	NA	NA
H. INFLUENZAE PNEUMONIA	0	0	0	0.0	0	0
H-FLU, PRIMARY BACTEREMIA, INVASIVE	13	11	16	13.3	5	0
H-FLU, SEPTIC ARTHRITIS	0	0	0	0.0	0	0
HANSEN'S DISEASE (LEPROSY)	1	1	0	0.7	0	0
HANTAVIRUS	0	0	0	0.0	0	0
HEMOLYTIC UREMIC SYNDROME	0	1	0	0.3	0	1
HEPATITIS A, ACUTE	13	6	6	8.3	2	0
HEPATITIS B, ACUTE	29	49	27	35.0	9	9
HEPATITIS B, MATERNAL (HBsAg+ PREGNANT)	65	40	49	51.3	17	12
HEPATITIS B, PERINATAL ACUTE	0	1	0	0.3	0	0
HEPATITIS B, CHRONIC	317	279	316	304.0	70	105
HEPATITIS C, ACUTE	14	12	7	11.0	1	9
HEPATITIS C, CHRONIC	1391	1699	1628	1572.7	512	504
HEPATITIS D	1	0	0	N/A	0	0

NR = Not reportable by law for that year

N/A = Not applicable

NA = Not available (no data received)

Disease	2009	2010	2011	3 Year Average	Jan-Apr 2011	Jan-Apr 2012
HEPATITIS E, NON-A, NON-B, ACUTE	0	0	0	0.0	0	0
HEPATITIS G	0	0	0	0.0	0	0
HEPATITIS UNSPECIFIED, ACUTE	0	0	0	0.0	0	0
HIV INFECTION	355	346	NA	N/A	NA	NA
INFLUENZA-ASSOCIATED PEDIATRIC MORTALITY	0	0	0	0.0	0	0
INFLUENZA-A, NOVEL OR PANDEMIC STRAINS	321	7	7	111.7	0	0
LEAD POISONING	77	249	199	175.0	67	138
LEGIONELLOSIS	8	7	12	9.0	0	3
LEPTOSPITOSIS	0	0	0	0.0	0	0
LISTERIOSIS	2	2	3	2.3	1	1
LYME DISEASE	11	4	8	7.7	1	4
MALARIA	2	5	7	4.7	1	1
MEASLES	0	0	0	0.0	0	0
MENINGITIS, GROUP B STREP	0	0	0	0.0	0	0
MENINGITIS, H-FLU	0	0	0	0.0	0	0
MENINGITIS, LISTERIA MONOCYTOGENES	0	0	0	0.0	0	0
MENINGITIS BACTERIAL CRYPTOCOCCAL	28	28	21	25.7	9	1
MENINGITIS, STREP, PNEUMONIAE	0	0	0	0.0	0	0
MENINGOCOCCAL DISEASE	1	1	1	1.0	1	0
MERCURY POISONING	0	1	0	0.3	0	0
MUMPS	2	1	1	1.3	0	0
NEUROTOXIC SHELLFISH POISONING	0	0	0	0.0	0	0
PERTUSSIS	25	30	31	28.6	14	37
PESTICIDE RELATED ILLNESS	0	4	16	6.7	3	2
POLIO, PARALYTIC	0	0	0	0.0	0	0
PSITTACOSIS	0	0	0	0.0	0	0
Q FEVER	0	0	0	0.0	0	1
RABIES ANIMAL	5	4	2	3.7	1	2
ROCKY MOUNTAIN SPOTTED FEVER	0	4	1	1.7	0	0
RUBELLA	0	0	0	0.0	0	0
SALMONELLOSIS	337	302	353	330.7	52	75
SHIGELLOSIS	21	134	377	177.3	206	13
SMALLPOX	0	0	0	0.0	0	0
STAPH AUREUS, COM. ASSOC. MORTALITY	2	0	0	0.7	0	2
STAPH AUREUS, VISA/VRSA	0	0	1	0.3	0	1
STREP DISEASE, INVASIVE GROUP A	14	17	17	16.0	9	5
STREP PNEUMO, INVASIVE DRUG RESIST.	54	60	54	56.0	33	13
STREP PNEUMO, INVASIVE SUSCEPTIBLE	35	45	46	42.0	21	13
SYPHILIS, CONGENITAL	0	NA	NA	N/A	NA	NA
SYPHILIS, EARLY	NR	NA	NA	N/A	NA	NA
SYPHILIS, INFECTIOUS	82	NA	NA	N/A	NA	NA
SYPHILIS, LATENT	106	NA	NA	N/A	NA	NA
TETANUS	0	1	0	0.3	0	0
TOXOPLASMOSIS	0	4	1	1.7	0	0
TUBERCULOSIS	79	85	NA	N/A	NA	NA
THPHOID FEVER	0	1	0	0.3	0	0
TYPHUS FEVER, ENDEMIC (MURIN)	2	0	2	0.7	0	0
VARICELLA	28	48	47	41.0	14	24
VIBRIO ALGINOYTICUS	1	2	5	2.7	0	0
VIBRIO CHOLERA NON-01	0	0	0	0.0	0	0
VIBRIO FLUVIALIS	2	0	0	0.7	0	0
VIBRIO HOLLISAE	1	0	0	0.3	0	0
VIBRIO PARAHAEMOLYTICUS	2	4	1	2.3	0	1
VIBRIO VULNIFICUS	0	4	2	2.0	0	0
VIBRIO, OTHER	1	2	0	1.0	0	0
WEST NILE	0	0	0	0.0	0	0
YELLOW FEVER	0	0	0	0.0	0	0

NR = Not reportable by law for that year

N/A = Not applicable

NA = Not available (no data received)



Hillsborough County Health Department

Disease Reporting Telephone Numbers
 AIDS, HIV – (813) 307-8011 (DO NOT FAX)

STD – (813) 307-8022, Fax – (813) 307-8027

TB Control – (813) 307-8015 X 4758, Fax – (813) 975-2014

All Others – (813) 307-8010, Fax – (813) 276-2981

After Hours Reporting All Diseases – (813) 307-8000



Section 381.0031 (1,2), Florida Statutes, provides that “Any practitioner, licensed in Florida to practice medicine, osteopathic medicine, chiropractic, naturopathy, or veterinary medicine, who diagnoses or suspects the existence of a disease of public health significance shall immediately report the fact to the Department of Health.” The DOH county health departments serve as the Department’s representative in this reporting requirement. Furthermore, this Section provides that “Periodically the Department shall issue a list of diseases determined by it to be of public health significance...and shall furnish a copy of said list to the practitioners...”

Reportable Diseases/Conditions in Florida Practitioner* Guide 11/24/08

*Reporting requirements for laboratories differ. For specific information on disease reporting, consult Rule 64D-3, Florida Administrative Code (FAC).

AIDS, HIV – (813) 307-8011 DO NOT FAX	<ul style="list-style-type: none"> • Congenital anomalies 	<ul style="list-style-type: none"> • Psittacosis (Ornithosis)
<ul style="list-style-type: none"> + Acquired Immune Deficiency Syndrome (AIDS) 	<ul style="list-style-type: none"> • Creutzfeldt-Jakob disease (CJD) 	<ul style="list-style-type: none"> • Q Fever
<ul style="list-style-type: none"> + Human Immunodeficiency Virus (HIV) infection (all, and including neonates born to an infected woman, exposed newborn) 	<ul style="list-style-type: none"> • Cryptosporidiosis 	<ul style="list-style-type: none"> Rabies (human, animal)
STD – (813) 307-8027 FAX (813) 307-8027	<ul style="list-style-type: none"> • Cyclosporiasis 	<ul style="list-style-type: none"> ! Rabies (possible exposure)
<ul style="list-style-type: none"> • Chancroid 	<ul style="list-style-type: none"> • Dengue 	<ul style="list-style-type: none"> ! Ricin toxicity
<ul style="list-style-type: none"> • Chlamydia 	<ul style="list-style-type: none"> ! Diphtheria 	<ul style="list-style-type: none"> • Rocky Mountain spotted fever
<ul style="list-style-type: none"> • Conjunctivitis (in neonates ≤ 14 days old) 	<ul style="list-style-type: none"> • Eastern equine encephalitis virus disease (neuroinvasive and non-neuroinvasive) 	<ul style="list-style-type: none"> ! Rubella (including congenital)
<ul style="list-style-type: none"> • Gonorrhea 	<ul style="list-style-type: none"> • Ehrlichiosis 	<ul style="list-style-type: none"> • St. Louis encephalitis (SLE) virus disease (neuroinvasive and non-neuroinvasive)
<ul style="list-style-type: none"> • Granuloma inguinale 	<ul style="list-style-type: none"> • Encephalitis, other (non-arboviral) 	<ul style="list-style-type: none"> • Salmonellosis
<ul style="list-style-type: none"> • Herpes Simplex Virus (HSV) (in infants up to 60 days old with disseminated infection with involvement of liver, encephalitis and infections limited to skin, eyes and mouth; anogenital in children ≤ 12 years old) 	<p style="color: blue;">Enteric disease due to:</p> <p style="color: blue;"><i>Escherichia coli</i>, O157:H7 <i>Escherichia coli</i>, other pathogenic <i>E. coli</i> including entero-toxicogenic, invasive, pathogenic, hemorrhagic, aggregative strains and shiga toxin positive strains</p>	<ul style="list-style-type: none"> • Saxitoxin poisoning (including paralytic shellfish poisoning)(PSP)
<ul style="list-style-type: none"> • Human papilloma virus (HPV) (associated laryngeal papillomas or recurrent respiratory papillomatosis in children ≤ 6 years old; anogenital in children ≤ 12 years) 	<ul style="list-style-type: none"> • Giardiasis (acute) 	<ul style="list-style-type: none"> ! Severe Acute Respiratory Syndrome-associated Coronavirus (SARS-CoV) disease
<ul style="list-style-type: none"> • Lymphogranuloma venereum (LGV) 	<ul style="list-style-type: none"> ! Glanders 	<ul style="list-style-type: none"> • Shigelliosis
<ul style="list-style-type: none"> • Syphilis 	<ul style="list-style-type: none"> ! Haemophilus influenzae (meningitis and invasive disease) 	<ul style="list-style-type: none"> ! Smallpox
<ul style="list-style-type: none"> Syphilis (in pregnant women and neonates) 	<ul style="list-style-type: none"> • Hansen’s disease (Leprosy) 	<ul style="list-style-type: none"> • Staphylococcus aureus, Community Associated Mortality
TB CONTROL - (813) 307-8015 x 4758 FAX (813) 975-2014	<ul style="list-style-type: none"> Hantavirus infection 	<ul style="list-style-type: none"> Staphylococcus aureus (infection with intermediate or full resistance to vancomycin, VISA, VRSA)
<ul style="list-style-type: none"> • Tuberculosis (TB) 	<ul style="list-style-type: none"> Hemolytic uremic syndrome 	<ul style="list-style-type: none"> Staphylococcus enterotoxin B (disease due to)
CANCER – Tumor Registry Database	<ul style="list-style-type: none"> Hepatitis A 	<ul style="list-style-type: none"> • Streptococcal disease (invasive, Group A)
<ul style="list-style-type: none"> + Cancer (except non-melanoma skin cancer, and including benign and borderline intracranial and CNS tumors) 	<ul style="list-style-type: none"> • Hepatitis B, C, D, E, and G 	<ul style="list-style-type: none"> • Streptococcus pneumoniae (invasive disease)
Epidemiology (813) 307-8010 FAX (813) 276- 2981	<ul style="list-style-type: none"> • Hepatitis B surface antigen (HBsAg) (positive in a pregnant woman or a child up to 24 months old) 	<ul style="list-style-type: none"> • Tetanus
<ul style="list-style-type: none"> ! Any disease outbreak 	<ul style="list-style-type: none"> ! Influenza due to novel or pandemic strains 	<ul style="list-style-type: none"> • Toxoplasmosis (acute)
<ul style="list-style-type: none"> ! Any case, cluster of cases, or outbreak of a disease or condition found in the general community or any defined setting such as a hospital, school or other institution, not listed below that is of urgent public health significance. This includes those indicative of person to person spread, zoonotic spread, the presence of an environmental, food or waterborne source of exposure and those that result from a deliberate act of terrorism. 	<ul style="list-style-type: none"> Influenza-associated pediatric mortality (in persons < 18 years) 	<ul style="list-style-type: none"> • Trichinellosis (Trichinosis)
<ul style="list-style-type: none"> • Amebic encephalitis 	<ul style="list-style-type: none"> • Lead Poisoning (blood lead level ≥ 10µg/dL); additional reporting requirements exist for hand held and/or on-site blood lead testing technology, see 64D-3 FAC 	<ul style="list-style-type: none"> ! Tularemia
<ul style="list-style-type: none"> • Anaplasmosis 	<ul style="list-style-type: none"> • Legionellosis 	<ul style="list-style-type: none"> Typhoid fever
<ul style="list-style-type: none"> ! Anthrax 	<ul style="list-style-type: none"> • Leptospirosis 	<ul style="list-style-type: none"> ! Typhus fever (disease due to Rickettsia prowazekii infection)
<ul style="list-style-type: none"> • Arsenic poisoning 	<ul style="list-style-type: none"> Listeriosis 	<ul style="list-style-type: none"> • Typhus fever (disease due to Rickettsia typhi, R. felis infection)
<ul style="list-style-type: none"> ! Botulism (foodborne, wound, unspecified, other) 	<ul style="list-style-type: none"> • Lyme disease 	<ul style="list-style-type: none"> ! Vaccinia disease
<ul style="list-style-type: none"> • Botulism (infant) 	<ul style="list-style-type: none"> • Malaria 	<ul style="list-style-type: none"> • Varicella (Chickenpox)
<ul style="list-style-type: none"> ! Brucellosis 	<ul style="list-style-type: none"> ! Measles (Rubeola) 	<ul style="list-style-type: none"> • Varicella mortality
<ul style="list-style-type: none"> • California serogroup virus (neuroinvasive and non-neuroinvasive disease) 	<ul style="list-style-type: none"> ! Melioidosis 	<ul style="list-style-type: none"> ! Venezuelan equine encephalitis virus disease (neuroinvasive and non-neuroinvasive)
<ul style="list-style-type: none"> • Campylobacteriosis 	<ul style="list-style-type: none"> • Meningitis (bacterial, cryptococcal, mycotic) 	<ul style="list-style-type: none"> • Vibriosis (Vibrio infections)
<ul style="list-style-type: none"> • Carbon monoxide poisoning 	<ul style="list-style-type: none"> ! Meningococcal disease (includes meningitis and meningococemia) 	<ul style="list-style-type: none"> ! Viral hemorrhagic fevers (Ebola, Marburg, Lassa, Machupo)
<ul style="list-style-type: none"> ! Cholera 	<ul style="list-style-type: none"> • Mercury poisoning 	<ul style="list-style-type: none"> • West Nile virus disease (neuroinvasive and non-neuroinvasive)
<ul style="list-style-type: none"> • Ciguatera fish poisoning (Ciguatera) 	<ul style="list-style-type: none"> • Mumps 	<ul style="list-style-type: none"> • Western equine encephalitis virus disease (neuroinvasive and non-neuroinvasive)
	<ul style="list-style-type: none"> Neurotoxic shellfish poisoning 	<ul style="list-style-type: none"> ! Yellow fever
	<ul style="list-style-type: none"> Pertussis 	
	<ul style="list-style-type: none"> • Pesticide-related illness and injury 	
	<ul style="list-style-type: none"> ! Plague 	
	<ul style="list-style-type: none"> ! Poliomyelitis, paralytic and non-paralytic 	

! = 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

