

# EPI NOTES

Hillsborough County Health Department  
Disease Surveillance Newsletter  
December 2010

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## Vibrio Infections

Neekan Aeni

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'Tis the season to indulge! One of the many foods enjoyed this season, besides turkey and warm comfort foods, are our cold critters from the sea! While this is the time to explore and try different foods, it is important to remember the risks associated with certain foods. Although delicious, raw shellfish can harbor potentially dangerous bacteria that are not so pleasant. The *Vibrio* species are a group of naturally-occurring bacteria that come from the same family that cause cholera. *Vibrio* live inside shellfish, particularly oysters and clams. They are mainly found in warm coastal waters, such as The Gulf of Mexico, where levels of the bacteria are elevated during summer months. Furthermore, they can also be found in areas where fresh and saltwater meet, also known as brackish water, such as the lower end of the Hillsborough River and Tampa Bay. There are many different species of *Vibrio* and most can cause gastrointestinal illness through ingestion of raw, contaminated shellfish. Some species can also cause skin and soft tissue infections through wound exposures to contaminated saltwater or by handling contaminated shellfish.

The danger exists due to the fact that the *Vibrio* bacteria do not change the appearance, taste or odor of shellfish and do not alter the appearance of contaminated saltwater. The two species that are most commonly consumed and found in wound infections are called *Vibrio vulnificus* and *Vibrio parahaemolyticus*. Although similar in presentation, these two species pose different risks to certain populations. Individuals considered at risk are those living with chronic liver disease, diabetes, cancer and any other illness or medical treatment that weakens the body's immune system. These populations should be particularly careful not to come in contact with *V. vulnificus* because they are at higher risk for bloodstream infections.

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### ***Vibrio Vulnificus***

Healthy people who ingest *V. vulnificus* through raw, contaminated shellfish, rarely get severely ill; minor symptoms include vomiting, diarrhea, and abdominal pain. However, for individuals at risk (as discussed above), *V. vulnificus* can quickly infect the bloodstream, causing severe and life-threatening illness characterized by fever, chills, decreased blood pressure and blistering skin lesions. According to the Centers for Disease Control and Prevention (CDC), studies have shown that people with pre-existing medical conditions, such as chronic liver disease, were 80 times more likely to develop *V. vulnificus* bloodstream infections than were healthy people: bloodstream infections are fatal about 50% of the time. When the skin and soft tissue are infected through open wound exposures, the infection may lead to skin breakdown, ulceration and amputation of infected limbs. The CDC reports that on average, 16 deaths are reported each year from Gulf Coast states including: Alabama, Florida, Louisiana, Mississippi, and Texas. Doctors should have a high suspicion for this organism when patients present with gastrointestinal illness, fever or shock following ingestion of raw seafood (especially oysters) or with a wound infection after exposure to saltwater. *V. vulnificus* infection is diagnosed by stool, wound or blood cultures. If suspected, aggressive antibiotic treatment should be started immediately to improve the chances of survival.

### ***Vibrio Parahaemolyticus***

In comparison, ingesting *Vibrio parahaemolyticus* through raw, contaminated shellfish can also cause gastrointestinal illness in healthy individuals. Symptoms consist of watery diarrhea often with abdominal cramping, nausea, vomiting, fever and chills. These symptoms primarily occur within 24 hours of ingestion. Severe disease is rare and again occurs more commonly in persons with weakened immune systems; however, infection is usually not life-threatening to immunocompromised individuals. *V. parahaemolyticus* can also cause skin and soft tissue infections when an open wound is exposed to the bacterium through contaminated saltwater or by handling contaminated shellfish; however, this is less common. Most people become infected by eating raw or undercooked shellfish, particularly oysters. The CDC reports that on average 1-2 deaths are reported each year nationwide. *V. parahaemolyticus* infections are diagnosed similarly to *V. vulnificus*; yet, treatment is not always necessary. Patients are advised to drink plenty of liquids to replace fluids lost through diarrhea. In severe or prolonged illnesses, antibiotic therapy should be considered.

### **Other *Vibrios***

Several other marine *Vibrios* have been implicated in human disease and may cause ear infections, wound infections and gastroenteritis. Methods for recovery of these organisms from foods are similar to those used for recovery of *V. parahaemolyticus*.

### **Prevention**

Here are some tips for preventing *Vibrio* infections, particularly among immunocompromised patients, including those with underlying liver disease:

- Cook shellfish (oysters, clams, mussels) thoroughly and avoid eating raw.
- For shellfish in the shell, either a) boil until the shells open and continue boiling for 5 more minutes, or b) steam until the shells open and then continue cooking for 9 more minutes. Do not eat those shellfish that do not open during cooking. Boil shucked oysters at least 3 minutes, or fry them in oil for at least 10 minutes at 375°F.
- Avoid cross-contamination of cooked seafood and other foods with raw seafood and juices from raw seafood.

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- Eat shellfish promptly after cooking and refrigerate leftovers.
- Wear protective clothing (e.g., gloves) when handling or cleaning raw shellfish and seafood.
- Avoid exposure of open wounds or broken skin to warm salt or brackish water.
- Be careful when wading or walking on the beach to avoid cuts from shells and rocks.

### **Reporting**

All positive lab results for *Vibrio* must be reported to the local health department immediately. Rapid notification of positive results assists in prevention, investigation and control of *Vibrio* infections. When notified of cases, officials can sample harvest waters to discover possible sources of infection and may close oyster beds. Ongoing research may help to predict environmental or other factors that increase the chance that oysters carry *Vibrios*.

More information about the potential dangers of raw oyster consumption is available through the FDA's Seafood Hotline (telephone 1-800-332-4010). FDA public affairs specialists are available at this number between 12 and 4 pm Monday through Friday.

Sources for this article:

<http://www.cdc.gov>

<http://seafood.ucdavis.edu>

<http://www.issc.org/consumerinfo/risks.aspx>



*Vibrio vulnificus* wound infection



*Vibrio vulnificus* blistering skin lesion



# Reportable Disease Surveillance Data

Disease	2007	2008	2009	3 Year Average	Jan-Nov 2009	Jan-Nov 2010
AIDS	249	326	NA	N/A	241	181
AMEBIC ENCEPHALITIS	NR	NR	1	N/A	1	0
ANIMAL BITE, PEP RECEIVED	20	15	72	35.7	66	55
ANTHRAX	0	0	0	0.0	0	0
ARSENIC	NR	1	1	N/A	1	0
BOTULISM, FOODBORNE	0	0	0	0.0	0	0
BOTULISM, INFANT	0	0	1	0.3	1	0
BRUCELLOSIS	0	0	2	0.7	2	0
CALIFORNIA SEROGROUP, NEUROINVASIVE	1	1	0	0.7	0	0
CAMPYLOBACTERIOSIS	57	82	69	69.3	67	66
CARBON MONOXIDE POISONING	NR	NR	0	N/A	0	6
CHLAMYDIA	5167	6127	5058	5450.7	NA	NA
CIGUATERA	0	0	0	0.0	0	0
CREUTZFELDT-JAKOB DISEASE	0	0	1	0.3	1	0
CRYPTOSPORIDIOSIS	46	33	38	39.0	33	11
CYCLOSPORIASIS	2	7	2	3.7	2	3
DENGUE	2	4	3	3.0	2	7
DIPHThERIA	0	0	0	0.0	0	0
EHRlichIOSIS, HUMAN GRANULOCYtic	0	0	0	0.0	0	1
EHRlichIOSIS, HUMAN MONOCYtic	0	0	0	0.0	1	1
EHRlichIOSIS/ANAPLASMOSIS, UNDETER.	0	0	1	0.3	0	1
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	0	0	0.0	0	2
ENCEPHALITIS, SLE	0	0	0	0.0	0	0
ENCEPHALITIS, WN	0	0	0	0.0	0	0
ENTEROHEMORRHAGIC E. COLI (O157:H7)	4	1	0	1.7	0	0
E. COLI SHIGA TOXIN + NOT SEROGROUP	2	1	0	1.0	0	0
E. COLI SHIGA TOXIN + NON O157:H7	1	0	0	0.3	0	0
E. COLI SHIGA TOXIN PRODUCING - 0800	0	1	11	4.0	9	14
FOOD AND WATERBORNE CASES	64	46	74	61.3	NA	NA
FOOD AND WATERBORNE OUTBREAKS	17	21	18	18.7	NA	NA
GIARDIASIS	86	90	101	92.3	91	91
GONORRHEA	2067	2059	1574	1900.0	NA	NA
H. INFLUENZAE PNEUMONIA	5	1	0	2.0	0	0
H-FLU, PRIMARY BACTEREMIA, INVASIVE	2	13	13	9.3	12	11
H-FLU, SEPTIC ARTHRITIS	1	1	0	0.7	0	0
HANSEN'S DISEASE (LEPROSY)	0	1	1	0.7	1	1
HANTAVIRUS	0	0	0	0.0	0	0
HEMOLYTIC UREMIC SYNDROME	1	0	0	0.3	0	1
HEPATITIS A, ACUTE	16	15	13	14.7	12	6
HEPATITIS B, ACUTE	38	38	29	35.0	26	45
HEPATITIS B, MATERNAL (HBsAg+ PREGNANT)	62	57	65	61.3	56	37
HEPATITIS B, PERINATAL ACUTE	0	0	0	0.0	0	0
HEPATITIS B, CHRONIC	121	218	317	218.7	283	258
HEPATITIS C, ACUTE	2	4	14	6.7	12	11
HEPATITIS C, CHRONIC	1349	1423	1391	1387.7	1191	1574
HEPATITIS D	NR	NR	1	0.3	1	0

NR = Not reportable by law for that year

N/A = Not applicable

NA = Not available (no data received)

Disease	2007	2008	2009	3 Year Average	Jan-Nov 2009	Jan-Nov 2010
HEPATITIS E, NON-A, NON-B, ACUTE	0	0	0	0.0	0	0
HEPATITIS G	1	0	0	0.3	0	0
HEPATITIS UNSPECIFIED, ACUTE	0	0	0	0.0	0	0
HIV INFECTION	423	441	NA	N/A	332	311
INFLUENZA-ASSOCIATED PEDIATRIC MORTALITY	1	1	0	0.7	0	0
INFLUENZA-A, NOVEL OR PANDEMIC STRAINS	NR	NR	321	N/A	314	7
LEAD POISONING	17	56	77	50.0	72	240
LEGIONELLOSIS	9	11	8	9.3	6	5
LEPTOSPIROSIS	0	0	0	0.0	0	0
LISTERIOSIS	2	1	2	1.7	2	2
LYME DISEASE	1	2	11	4.7	11	4
MALARIA	1	4	2	2.3	2	5
MEASLES	0	0	0	0.0	0	0
MENINGITIS, GROUP B STREP	2	2	0	1.3	0	0
MENINGITIS, H-FLU	1	0	0	0.3	0	0
MENINGITIS, LISTERIA MONOCYTOGENES	0	1	0	0.3	0	0
MENINGITIS BACTERIAL CRYPTOCOCCAL	9	21	28	19.3	25	27
MENINGITIS, STREP, PNEUMONIAE	1	1	0	0.7	0	0
MENINGOCOCCAL DISEASE	6	2	1	3.0	1	1
MERCURY POISONING	0	0	0	0.0	0	1
MUMPS	3	5	2	3.3	2	1
NEUROTOXIC SHELLFISH POISONING	0	0	0	0.0	0	0
PERTUSSIS	18	28	25	23.7	25	28
PESTICIDE RELATED ILLNESS	0	0	0	0.0	0	4
POLIO, PARALYTIC	0	0	0	0.0	0	0
PSITTACOSIS	0	0	0	0.0	0	0
Q FEVER	2	0	0	0.7	0	0
RABIES ANIMAL	7	4	5	5.3	5	4
ROCKY MOUNTAIN SPOTTED FEVER	2	1	0	1.0	0	3
RUBELLA	0	1	0	0.3	0	0
SALMONELLOSIS	285	242	337	288.0	282	275
SHIGELLOSIS	44	30	21	31.7	19	69
SMALLPOX	0	0	0	0.0	0	0
STAPH AUREUS, COM. ASSOC. MORTALITY	NR	1	2	N/A	2	0
STAPH AUREUS, VISA/VRSA	0	0	0	0.0	0	0
STREP DISEASE, INVASIVE GROUP A	8	10	14	10.7	12	17
STREP PNEUMO, INVASIVE DRUG RESIST.	48	55	54	52.3	51	51
STREP PNEUMO, INVASIVE SUSCEPTIBLE	35	28	35	32.7	28	35
SYPHILIS, CONGENITAL	4	2	0	2.0	NA	NA
SYPHILIS, EARLY	NR	NR	NR	N/A	NA	NA
SYPHILIS, INFECTIOUS	115	121	82	106.0	NA	NA
SYPHILIS, LATENT	NR	NR	106	N/A	NA	NA
TETANUS	1	1	0	0.7	0	1
TOXOPLASMOSIS	2	2	0	1.3	0	4
TUBERCULOSIS	82	69	79	76.7	73	79
THYPHOID FEVER	0	0	0	0.0	0	1
TYPHUS FEVER, ENDEMIC (MURIN)	1	1	1	1.0	1	0
VARICELLA	42	62	28	44.0	28	46
VIBRIO ALGINOYTIUS	1	1	1	1.0	1	2
VIBRIO CHOLERA NON-01	0	0	0	0.0	0	0
VIBRIO FLUVIALIS	0	0	2	0.7	2	0
VIBRIO HOLLISAE	0	0	1	0.3	1	0
VIBRIO PARAHAEMOLYTICUS	0	0	2	0.7	2	4
VIBRIO VULNIFICUS	0	1	0	0.3	0	4
VIBRIO, OTHER	0	0	1	0.3	1	2
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) 276-2091

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).

<b>AIDS, HIV – (813) 307-8011</b> <b>DO NOT FAX</b>	<ul style="list-style-type: none"> <li>• Congenital anomalies</li> </ul>	<ul style="list-style-type: none"> <li>• Psittacosis (Ornithosis)</li> </ul>
<ul style="list-style-type: none"> <li>+ Acquired Immune Deficiency Syndrome (AIDS)</li> </ul>	<ul style="list-style-type: none"> <li>• Creutzfeldt-Jakob disease (CJD)</li> </ul>	<ul style="list-style-type: none"> <li>• Q Fever</li> </ul>
<ul style="list-style-type: none"> <li>+ Human Immunodeficiency Virus (HIV) infection (all, and including neonates born to an infected woman, exposed newborn)</li> </ul>	<ul style="list-style-type: none"> <li>• Cryptosporidiosis</li> </ul>	<ul style="list-style-type: none"> <li>☎ <b>Rabies (human, animal)</b></li> </ul>
<b>STD – (813) 307- 8022</b> <b>Fax (813) 307-8027</b>	<ul style="list-style-type: none"> <li>• Cyclosporiasis</li> </ul>	<ul style="list-style-type: none"> <li>! <b>Rabies (possible exposure)</b></li> </ul>
<ul style="list-style-type: none"> <li>• Chancroid</li> </ul>	<ul style="list-style-type: none"> <li>• Dengue</li> </ul>	<ul style="list-style-type: none"> <li>! <b>Ricin toxicity</b></li> </ul>
<ul style="list-style-type: none"> <li>• Chlamydia</li> </ul>	<ul style="list-style-type: none"> <li>! <b>Diphtheria</b></li> </ul>	<ul style="list-style-type: none"> <li>• Rocky Mountain spotted fever</li> </ul>
<ul style="list-style-type: none"> <li>• Conjunctivitis (in neonates ≤ 14 days old)</li> </ul>	<ul style="list-style-type: none"> <li>• Eastern equine encephalitis virus disease (neuroinvasive and non-neuroinvasive)</li> </ul>	<ul style="list-style-type: none"> <li>! <b>Rubella (including congenital)</b></li> </ul>
<ul style="list-style-type: none"> <li>• Gonorrhea</li> </ul>	<ul style="list-style-type: none"> <li>• Ehrlichiosis</li> </ul>	<ul style="list-style-type: none"> <li>• St. Louis encephalitis (SLE) virus disease (neuroinvasive and non-neuroinvasive)</li> </ul>
<ul style="list-style-type: none"> <li>• Granuloma inguinale</li> </ul>	<ul style="list-style-type: none"> <li>• Encephalitis, other (non-arboviral)</li> </ul>	<ul style="list-style-type: none"> <li>• Salmonellosis</li> </ul>
<ul style="list-style-type: none"> <li>• 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)</li> </ul>	<p><b>Enteric disease due to:</b>  <i>Escherichia coli</i>, O157:H7  <i>Escherichia coli</i>, other pathogenic  <i>E. coli</i> including entero- toxigenic, invasive, pathogenic, hemorrhagic, aggregative strains and shiga toxin positive strains</p>	<ul style="list-style-type: none"> <li>• Saxitoxin poisoning (including paralytic shellfish poisoning)(PSP)</li> </ul>
<ul style="list-style-type: none"> <li>• Human papilloma virus (HPV) (associated laryngeal papillomas or recurrent respiratory papillomatosis in children ≤ 6 years old; anogenital in children ≤ 12 years)</li> </ul>	<ul style="list-style-type: none"> <li>• Giardiasis (acute)</li> </ul>	<ul style="list-style-type: none"> <li>! <b>Severe Acute Respiratory Syndrome-associated Coronavirus (SARS-CoV) disease</b></li> </ul>
<ul style="list-style-type: none"> <li>• Lymphogranuloma venereum (LGV)</li> </ul>	<ul style="list-style-type: none"> <li>! <b>Glanders</b></li> </ul>	<ul style="list-style-type: none"> <li>• Shigellosis</li> </ul>
<ul style="list-style-type: none"> <li>• Syphilis</li> </ul>	<ul style="list-style-type: none"> <li>! <b>Haemophilus influenzae (meningitis and invasive disease)</b></li> </ul>	<ul style="list-style-type: none"> <li>! <b>Smallpox</b></li> </ul>
<ul style="list-style-type: none"> <li>☎ <b>Syphilis (in pregnant women and neonates)</b></li> </ul>	<ul style="list-style-type: none"> <li>• Hansen's disease (Leprosy)</li> </ul>	<ul style="list-style-type: none"> <li>☎ <b>Staphylococcus aureus (infection with intermediate or full resistance to vancomycin, VISA, VRSA)</b></li> </ul>
<b>TB CONTROL – (813) 307-8015 x 4758</b> <b>Fax- (813) 975-2014</b>	<ul style="list-style-type: none"> <li>☎ <b>Hantavirus infection</b></li> </ul>	<ul style="list-style-type: none"> <li>☎ <b>Staphylococcus enterotoxin B (disease due to)</b></li> </ul>
<ul style="list-style-type: none"> <li>• Tuberculosis (TB)</li> </ul>	<ul style="list-style-type: none"> <li>☎ <b>Hemolytic uremic syndrome</b></li> </ul>	<ul style="list-style-type: none"> <li>• Streptococcal disease (invasive, Group A)</li> </ul>
<b>CANCER – Tumor Registry Database</b>	<ul style="list-style-type: none"> <li>☎ <b>Hepatitis A</b></li> </ul>	<ul style="list-style-type: none"> <li>• Streptococcus pneumoniae (invasive disease)</li> </ul>
<ul style="list-style-type: none"> <li>+ Cancer (except non-melanoma skin cancer, and including benign and borderline intracranial and CNS tumors)</li> </ul>	<ul style="list-style-type: none"> <li>• Hepatitis B, C, D, E, and G</li> </ul>	<ul style="list-style-type: none"> <li>• Tetanus</li> </ul>
<b>EPIDEMIOLOGY – (813) 307-8010</b> <b>Fax (813) 276-2981</b>	<ul style="list-style-type: none"> <li>• Hepatitis B surface antigen (HBsAg) (positive in a pregnant woman or a child up to 24 months old)</li> </ul>	<ul style="list-style-type: none"> <li>• Toxoplasmosis (acute)</li> </ul>
<ul style="list-style-type: none"> <li>! <b>Any disease outbreak</b></li> </ul>	<ul style="list-style-type: none"> <li>! <b>Influenza due to novel or pandemic strains</b></li> </ul>	<ul style="list-style-type: none"> <li>• Trichinellosis (Trichinosis)</li> </ul>
<ul style="list-style-type: none"> <li>! <b>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.</b></li> </ul>	<ul style="list-style-type: none"> <li>☎ <b>Influenza-associated pediatric mortality (in persons &lt; 18 years)</b></li> </ul>	<ul style="list-style-type: none"> <li>! <b>Tularemia</b></li> </ul>
<ul style="list-style-type: none"> <li>• Amebic encephalitis</li> </ul>	<ul style="list-style-type: none"> <li>• 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</li> </ul>	<ul style="list-style-type: none"> <li>☎ <b>Typhoid fever</b></li> </ul>
<ul style="list-style-type: none"> <li>• Anaplasmosis</li> </ul>	<ul style="list-style-type: none"> <li>• Legionellosis</li> </ul>	<ul style="list-style-type: none"> <li>! <b>Typhus fever (disease due to Rickettsia prowazekii infection)</b></li> </ul>
<ul style="list-style-type: none"> <li>! <b>Anthrax</b></li> </ul>	<ul style="list-style-type: none"> <li>• Leptospirosis</li> </ul>	<ul style="list-style-type: none"> <li>• Typhus fever (disease due to Rickettsia typhi, R. felis infection)</li> </ul>
<ul style="list-style-type: none"> <li>• Arsenic poisoning</li> </ul>	<ul style="list-style-type: none"> <li>☎ <b>Listeriosis</b></li> </ul>	<ul style="list-style-type: none"> <li>! <b>Vaccinia disease</b></li> </ul>
<ul style="list-style-type: none"> <li>! <b>Botulism (foodborne, wound, unspecified, other)</b></li> </ul>	<ul style="list-style-type: none"> <li>• Lyme disease</li> </ul>	<ul style="list-style-type: none"> <li>• Varicella (Chickenpox)</li> </ul>
<ul style="list-style-type: none"> <li>• Botulism (infant)</li> </ul>	<ul style="list-style-type: none"> <li>• Malaria</li> </ul>	<ul style="list-style-type: none"> <li>• Varicella mortality</li> </ul>
<ul style="list-style-type: none"> <li>! <b>Brucellosis</b></li> </ul>	<ul style="list-style-type: none"> <li>! <b>Measles (Rubeola)</b></li> </ul>	<ul style="list-style-type: none"> <li>! <b>Venezuelan equine encephalitis virus disease (neuroinvasive and non-neuroinvasive)</b></li> </ul>
<ul style="list-style-type: none"> <li>• California serogroup virus (neuroinvasive and non-neuroinvasive disease)</li> </ul>	<ul style="list-style-type: none"> <li>! <b>Melioidosis</b></li> </ul>	<ul style="list-style-type: none"> <li>• Vibriosis (Vibrio infections)</li> </ul>
<ul style="list-style-type: none"> <li>• Campylobacteriosis</li> </ul>	<ul style="list-style-type: none"> <li>• Meningitis (bacterial, cryptococcal, mycotic)</li> </ul>	<ul style="list-style-type: none"> <li>! <b>Viral hemorrhagic fevers (Ebola, Marburg, Lassa, Machupo)</b></li> </ul>
<ul style="list-style-type: none"> <li>• Carbon monoxide poisoning</li> </ul>	<ul style="list-style-type: none"> <li>! <b>Meningococcal disease (includes meningitis and meningococemia)</b></li> </ul>	<ul style="list-style-type: none"> <li>• West Nile virus disease (neuroinvasive and non-neuroinvasive)</li> </ul>
<ul style="list-style-type: none"> <li>! <b>Cholera</b></li> </ul>	<ul style="list-style-type: none"> <li>• Mercury poisoning</li> </ul>	<ul style="list-style-type: none"> <li>• Western equine encephalitis virus disease (neuroinvasive and non-neuroinvasive)</li> </ul>
<ul style="list-style-type: none"> <li>• Ciguatera fish poisoning (Ciguatera)</li> </ul>	<ul style="list-style-type: none"> <li>• Mumps</li> </ul>	<ul style="list-style-type: none"> <li>! <b>Yellow fever</b></li> </ul>
	<ul style="list-style-type: none"> <li>☎ <b>Neurotoxic shellfish poisoning</b></li> </ul>	
	<ul style="list-style-type: none"> <li>☎ <b>Pertussis</b></li> </ul>	
	<ul style="list-style-type: none"> <li>• Pesticide-related illness and injury</li> </ul>	
	<ul style="list-style-type: none"> <li>! <b>Plague</b></li> </ul>	
	<ul style="list-style-type: none"> <li>! <b>Poliomyelitis, paralytic and non-paralytic</b></li> </ul>	

- ! = 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

