FLORIDA DEPARTMENT OF HEALTH IN PINELLAS COUNTY

EPI WATCH

Monthly Epidemiology and Preparedness Newsletter

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Disease Reporting

To report diseases and clusters of illness
(*other than TB/STD/HIV/AIDS*)
Phone: (727) 507-4346
Fax: (727) 507-4347

For TB, STD or HIV/AIDS Reporting
Phone: (727) 824-6932

Animal Bite Reporting
Phone: (727) 524-4410 x7665

Non-Cholera Vibrio Infections in Florida and the United States

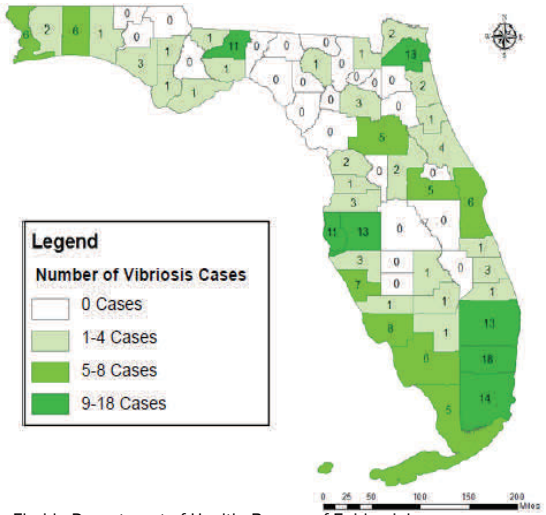
BY ANDREA LEAPLEY, MPH

Vibrio are a family of gram-negative rod bacteria that occur naturally in surface water around the world. While they are most commonly found in salty or brackish water, they can occur in freshwater as well. Vibrio infections occur most often between April and October, when the seawater is warm and the bacteria are present in higher concentrations. There are approximately a dozen species of *Vibrio* that are pathogenic in humans. The most well-known species is *Vibrio cholerae,* which causes cholera. In the United States, *Vibrio vulnificus, Vibrio parahaemolyticus,* and *Vibrio alginolyticus* are responsible for the majority of infections.

Depending on the site, *Vibrio* infections, also known as vibriosis, can cause different types of illness. Gastroenteritis occurs after ingestion of the *Vibrio* bacteria and symptoms can include diarrhea, vomiting, or abdominal pain. Wound infections occur when lacerations or other breaks in the skin come into contact with seawater containing *Vibrio* bacteria. Septicemia may occur after bacteria enter the bloodstream through the digestive tract or open wound and cause fever, chills, a drop in blood pressure, shock or possibly death. While not limited to these sites, they are among the most common types of *Vibrio* infections.

A majority of *Vibrio* infections tend to occur in the Gulf of Mexico region. Between 2010-2012, Florida reported more cases of vibriosis than any other state. In 2013, 192 cases of vibriosis were reported in Florida. *V. parahaemolyticus* was responsible for 55 cases, *V. alginolyticus* for 49 cases, and *V. vulnificus* for 41 cases. While Florida's cases peaked in the summer months, every month saw more reported cases than was seen on average during the previous five years (except January and April). Broward County reported the highest number of cases, a total of 18, in the State and in Pinellas County, 11 cases were reported.

Number of Vibriosis Cases Reported in Florida by County of Residence, 2013



Source: Florida Department of Health, Bureau of Epidemiology

Nationally, most cases of vibriosis are due to foodborne exposures. Common food items associated with ingestion of vibrio include cooked and raw oysters, crab, and raw clams. In Florida, during 2013, most cases were associated with wound infections due to seawater or marine wildlife exposures.

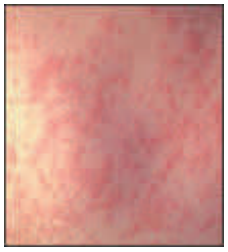
Treatment for vibriosis depends on the site of infection as well the strain of *Vibrio* that caused the infection. For example, patients with *V. vulnicus* infections require immediate treatment because antibiotics improve the chance of survival. However, most patients with gastroenteritis due to *V. parahaemolyticus* may not require antibiotic treatment, but do need fluids to replenish those lost through diarrhea and vomiting. Treatment should be determined on a case by case basis.

To avoid *Vibrio* infections, seafood should be cooked thoroughly before consumption. Raw seafood, especially oysters, should be avoided. Exposure to seawater should be avoided while open wounds are present on the body.

Vibrio infections should be reported to your local health department by the next business day.
For more information on vibriosis, please visit the Centers for Disease Control and Prevention's website:
http://www.cdc.gov/vibrio/index.html

Disease Facts & Trends - Measles

Measles is a serious respiratory disease caused by a virus. Measles causes fever, runny nose, cough and a rash all over the body. No specific antiviral treatment exists for the measles virus; however, severe complications can be avoided through supportive care. *Measles is very contagious!* Transmission can occur when an infected person breathes, coughs, or sneezes. An individual infected with measles is contagious even before they develop a measles rash.



Source: CDC. Skin of a patient after 3 days of measles infection.

Measles is very rare in the United States and in regions of the world that have high vaccination rates. In 2000, the United States declared that measles was eliminated from this country. Although measles is no longer endemic, there are still sporadic cases and outbreaks reported. Most measles cases appear in the United States because visitors from other countries or US citizens traveling abroad can become infected before or during travel and spread the infection to unvaccinated or unprotected persons.

According to the Centers for Disease Control and Prevention (CDC), in 2011 and 2013, there were more cases of Measles reported than previous years since it was considered eliminated. Over the past ten years, 32 confirmed cases have been reported in Florida. No confirmed cases have been reported in Pinellas County since 1998.

Measles can be prevented! The measles, mumps, rubella (MMR) vaccine protects against measles. Children should get two doses of the MMR vaccine, at 12 through 15 months, and the second dose at 4 through 6 years old, for best protection.

Healthcare providers are asked to report immediately on suspicion or laboratory test order to the local health department. More information on Measles and the recommended vaccination schedule can be found here, http://www.cdc.gov/measles/

Pertussis: Health Alert!

The Florida Department of Health would like to notify health care providers of increased local transmission of pertussis (whooping cough) among children and adults. In Florida during 2013, over 700 cases of pertussis were reported, the most in 20 years. Infants and immune compromised persons remain at highest risk for hospitalization and mortality from the disease.

We request that all health care providers remain vigilant for pertussis and coordinate appropriate testing, treatment, exclusion, prevention, and reporting of pertussis cases.

THINK PERTUSSIS

Consider pertussis in your differential diagnosis for persistent cough illnesses. Pertussis vaccines are effective, but *a history of pertussis immunization or infection does not preclude the possibility of pertussis.*

Pertussis typically starts with mild upper respiratory symptoms. Although the disease course varies, progression to a persistent cough that lasts weeks is typical. Coughing paroxysms may be present and can be followed by post-tussive vomiting or an inspiratory whoop. Fever is absent or minimal and cough is nonproductive. Pertussis patients with a previous vaccination history may present with milder symptoms.

The diagnosis of pertussis in infants less than 6 months is often delayed because of a brief initial period of mild symptoms. Gagging, emesis, gasping, cyanosis, apnea, or seizures may be apparent rather than a cough or whoop. While evaluating patients ask about pertussis immunization status and history of cough illness in parents, siblings, and other close contacts.

When evaluating a patient with a history of contact with a pertussis case or exposures in a setting where pertussis transmission has been identified, a low threshold is recommended for testing, treating, and prophylaxing close contacts. This is especially important if high-risk persons (infants, pregnant women, or immune compromised) are in the household. Don't hesitate to reach out to your local health department for help with the identification of close contacts.

TEST FOR PERTUSSIS

Clinics should stock the supplies needed to test for pertussis, which may be acquired from commercial labs. For suspected pertussis cases obtain a nasopharyngeal aspirate or swab prior to treatment and send it for Bordetella pertussis polymerase chain reaction (PCR) and culture (if available) at a commercial laboratory. Serologic testing is not recommended. **http://www.cdc.gov/pertussis/clinical/diagnostic-testing/index.html**

TREAT PERTUSSIS

Appropriate antibiotic treatment (i.e. erythromycin, clarithromycin, azithromycin, or Bactrim®) should be initiated as soon as pertussis is suspected in a patient. Early treatment of pertussis is very important. The earlier a person, especially an infant, starts treatment the better. If treatment for pertussis is started early in the course of illness, during the first 1 to 2 weeks before coughing paroxysms occur, symptoms may be lessened.

For diagnosed or suspected cases, antibiotic prophylaxis for household and high-risk contacts is recommended to prevent disease. Please reach out to your local health department for further guidance if needed.

EXCLUSION OF PERTUSSIS CASES

Pertussis cases should isolate themselves at home while infectious. Cases are non-infectious, and can return to normal activities (e.g. school, daycare, work) after five days of effective antibiotic therapy or after 21 days of cough.

PREVENT PERTUSSIS

Recommend routine pertussis vaccination of children, adolescents, close contacts of infants, and healthcare providers as detailed by the Advisory Committee on Immunization Practices. In particular, to protect both mothers and infants, Tdap is recommended for pregnant women during each pregnancy, preferably in their final trimester. **http://www.cdc.gov/vaccines/vpd-vac/pertussis/default.htm**

REPORT PERTUSSIS

Report all pertussis cases, even without laboratory confirmation, immediately to the local DOH Epidemiology Program.
For more information please contact your local DOH Epidemiology Program or visit http://www.cdc.gov/pertussis/

Selected Reportable Diseases in Pinellas County

	Pinellas	Year-to-Date		Pinellas County Annual Totals		
Disease	**2014 March**	**Pinellas 2014**	**Florida 2014**	**2013**	**2012**	**2011**
A. Vaccine Preventable						
Measles						
Mumps						
Pertussis	**1**	**4**	**233**	17	10	10
Varicella	**3**	**6**	**180**	19	16	21
B. CNS Diseases & Bacteremias						
Creutzfeldt-Jakob Disease (CJD)			**6**		2	3
H. influenzae (Invasive Disease)		**3**	**113**	12	7	10
Meningitis (Bacterial, Cryptococcal, Mycotic)		**1**	**42**	5	6	7
Meningococcal Disease			**15**	1		
Streptococcal Disease, Group A, Invasive	**3**	**9**	**134**	12	6	3
S. Pneumoniae, Invasive Disease, Drug Resistant	**4**	**8**	**222**	24	16	22
S. Pneumoniae, Invasive Disease, Susceptible	**4**	**8**	**237**	11	25	11
C. Enteric Infections						
Campylobacteriosis	**10**	**34**	**599**	63	59	83
Cryptosporidiosis	**2**	**6**	**129**	19	29	19
Cyclosporiasis			**2**	5	1	2
E. coli Shiga Toxin (+)			**49**	7	8	2
Giardiasis	**3**	**4**	**279**	34	32	27
Hemolytic Uremic Syndrome (HUS)			**4**	1		
Listeriosis			**9**		5	3
Salmonellosis	**8**	**34**	**1011**	203	203	225
Shigellosis	**2**	**12**	**611**	5	18	93
D. Viral Hepatitis						
Hepatitis A			**34**	6	4	5
Hepatitis B: Pregnant Woman +HBsAg	**2**	**2**	**156**	17	16	29
Hepatitis B, Acute	**1**	**4**	**104**	39	16	10
Hepatitis C, Acute	**2**	**4**	**48**	17	5	13
E. Vector Borne, Zoonoses						
Animal Rabies			**25**			2
Rabies, possible exposure	**12**	**37**	**726**	193	201	217
Dengue		**1**	**26**	2	3	1
Eastern Equine Encephalitis			**1**			
Lyme Disease		**1**	**17**	8	6	9
Malaria			**8**	1	2	1
St. Louis Encephalitis						
West Nile Virus			**1**			
F. Others						
AIDS**	**11**	**30**	**n/a**	123	130	123
HIV**	**20**	**63**	**n/a**	203	177	189
Chlamydia			**n/a**	4155	3812	3863
Gonorrhea			**n/a**	1429	1029	1034
Hansen's Disease						
Lead Poisoning: Children < 6 years:		**1**	**44**	4	2	4
Legionellosis	**1**	**2**	**60**	10	13	13
Mercury Poisoning		**2**	**3**			2
Syphilis, Total	**14**	**47**	**n/a**	114	141	132
Syphilis, Infectious (Primary and Secondary)	**5**	**18**	**n/a**	52	61	66
Syphilis, Early Latent	**4**	**12**	**n/a**	37	47	35
Syphilis, Congenital			**n/a**			1
Syphilis, Late Syphilis (Late Latent; Neurosyphilis)	**5**	**17**	**n/a**	25	33	30
Tuberculosis	**2**	**3**	**n/a**	28	17	9
Vibrio Infections		**1**	**19**	11	10	11

n/a = not available at this time. Blank cells indicate no cases reported.

All case counts are provisional. Data is collected from the Merlin Reportable Disease database, surveillance systems maintained at the Florida Department of Health in Pinellas County, and Florida CHARTS http://www.floridacharts.com/charts/default.aspx.

** Current HIV Infection data reflects any case meeting the CDC definition of "HIV infection" which includes all newly reported HIV cases and newly reported AIDS cases with no previous report of HIV. Newly reported HIV Infection cases do not imply they are all newly diagnosed cases. For a more detailed explanation on changes in reporting and changes in trends, please contact the HIV/AIDS Program, 727-824-6932. or the Florida Department of Health, Bureau of HIV/AIDS, Data Analysis Section 850-245-4334.