

# EPI EXPRESS

Escambia County Health Department

May 2011



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## ESSENCE and the Oil Spill A Glance at 2010

Casey Richards, B.S.

As the oil began to move toward the beaches of our county, the Escambia County Health Department's (ECHD) Epidemiology (Epi) team began utilizing surveillance tools to identify and track potential oil-related health effects among the citizens in the community. This was the first time the team had been involved in surveillance related to a large oil release in the Gulf of Mexico.

On May 20, 2010, the ECHD issued the first oil-related press release in response to information received from the Escambia County Emergency Operations Center regarding several reports of petroleum-like odors in the air. The first health advisory was issued on June 8th and included recommendations aimed at decreasing or avoiding negative health impacts from petroleum odors and exposure to oil in the water and on the shoreline. Additional health related press releases went out to the public during the course of the disaster such as, "When an oily feeling or residue is present on your skin, don't swim in the water."

The Epi program used ESSENCE (Electronic Surveillance System for the Early Notification of Community-based Epidemics) as a useful surveillance tool during the oil spill. ESSENCE is a syndromic surveillance system utilized by Epi to view emergency department (ED) data from local hospitals, identify trends, and generate reports. During the oil spill, only Sacred Heart Hospital was transmitting data through



ESSENCE. Since then, West Florida Hospital has begun transmitting data to the ESSENCE system.

Using special queries developed to extract "oil spill"-related words from the chief complaint of ED patients, Epi was able to identify visits that may have been related to the oil spill. A total of 18 ED visits were identified as being oil spill-related.

The Florida Poison Control Hotline served as the central point for citizens and physicians to report oil spill associated symptoms or illness. One hundred thirteen (113) calls were received by them from Escambia County citizens and visitors, mostly reporting respiratory complaints, headaches, and heat-related symptoms.

In addition to increased surveillance, Epi program staff answered health-related questions or concerns and directed citizens to appropriate resources, as needed. Epi received a total of 93 phone calls reporting exposure and/or possible oil-related health symptoms.

Currently, the National Institute of Environmental Health Sciences (NIEHS) is leading a long term study involving oil spill clean-up workers and other volunteers in the response efforts. The health of 55,000 participants will be followed over the course of many years. To find more about this study visit: [www.nihgulfstudy.org](http://www.nihgulfstudy.org) or call 1.855.NIH.GULF.

## Hunter Safety- Weapons Against Brucellosis

Casey Richards, B.S.



Imagine anticipating the first day of hunting season.

During the weeks prior to your first official day in the woods, you may start gathering your supplies, scope out a good spot for the tree stand, or do some target practice. The last thing on your mind will be “zoonotic disease”!

Hunting and other outdoor recreational activities increase your risk for exposure to several infectious diseases. Wild game are carriers for a wide variety of organisms that may cause infectious disease in humans.

One disease caused by a zoonotic organism is Brucellosis. The causative bacterium is classified as a Class B bioterrorism agent and infection with *Brucella* is a nationally-reportable disease. Brucellosis in Florida is often associated with wild hog hunting. It has been reported that Florida has one of the largest wild hog populations in the country. Texas, California, and Hawaii also have large wild hog populations. The Florida Fish and Wildlife Conservation Commission reports that wild hogs are now present in all 67 counties in Florida. The species of *Brucella* that is endemic among the feral swine population in Florida is

### Weapons against Brucellosis

#### 1. Direct contact

Wear eye protection and rubber gloves while handling carcasses. If you have an open wound, wear bandages or dressings to protect against direct exposure. Bacteria in the blood, semen or placenta of an infected animal can enter your bloodstream through a cut or other wound.

#### 2. Inhalation

*Brucella* bacteria spread easily in the air if aerosolized. Farmers, laboratory technicians and slaughterhouse workers can inhale the bacteria. There is a similar risk of exposure for recreational hunters who field dress animals. It is recommended that a protective mask and gloves be worn.

#### 3. Ingestion

Properly cook all meat. Since *Brucella* can be transmitted in raw or undercooked meat from infected animals, always cook pork to an internal temperature of at least 165 °F.

Do not consume unpasteurized dairy products, such as milk, ice cream, or cheese. Do not drink raw milk.

Avoid eating, drinking, or using tobacco when dressing the animal in the field or handling the carcass.

#### 4. Hygiene

Wash your hands thoroughly as soon as possible if you come in contact with the entrails or body fluids of the animal. Use hand sanitizer if hand washing is not immediately available.

Clean and disinfect knives, clothing, or other exposed surfaces.



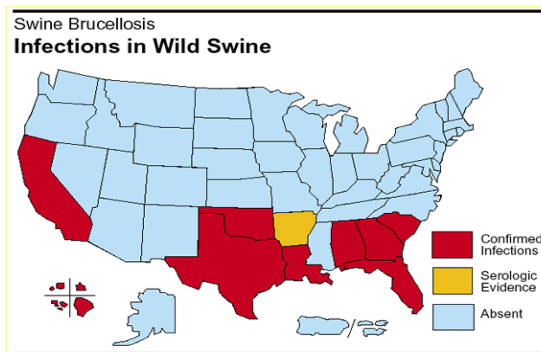
*Brucella suis*.

Symptoms of infection can include flu-like symptoms such as recurrent fever, chills, night sweats, weakness, headaches, back pain, swollen joints, loss of appetite, and weight loss. The illness can become chronic and last for several years, if left untreated. Antibiotics used in combination, such as doxycycline and rifampin, can be prescribed by a physician to treat the infection. Recovery may take a few weeks to several months. Occasionally, relapses may occur and symptoms can return years later.

There is no vaccine for humans; however, there is a vaccine for livestock. The most effective way to prevent *Brucella* infection in humans is to control it within the animal population, as well as ensuring that proper education about prevention is reaching the feral swine hunters in Florida.

Hunting organizations and agricultural and wildlife agencies can serve useful roles in assuring that information about prevention and treatment reaches those at risk of becoming infected.

References: see below



For Additional Information on *Brucella* in wild hogs, please visit:  
<http://www.cdc.gov/nczved/divisions/dfbmd/diseases/brucellosis/>  
<http://www.doh.state.fl.us/environment/medicine/arthoviral/Zoonoses/Hunting.html>  
<http://myfwc.com/wildlifehabitats/health-disease/swine-brucellosis/>



### WHAT IS IT?

*Vibrio vulnificus* is a bacterium that thrives in warm, salty seawater. The bacterium can be found in shellfish (oysters, clams and crabs) in the sediment along the bottom of bodies of water, and in floating plankton. It has been found along most of the coastlines of the U.S., which includes Cape Cod to Florida, along the Gulf of Mexico, and the entire U.S. West Coast.

*Vibrio vulnificus* can invade the body and cause illness when contaminated seawater gets into an open wound or other break in the skin. Wounds of the skin may ulcerate or breakdown, leading to septicemia, an infection of the bloodstream. Invasion can lead to blister-like skin lesions or bullae and rapidly-spreading death of body tissue known as necrosis.

### DANGER!!

*Vibrio vulnificus* is a naturally occurring bacterium that does not affect sea life. However, infection with *V. vulnificus* can be dangerous for people with compromised immune systems. In those with chronic liver disease, the bacteria can infect the bloodstream, causing primary septicemia, with a greater than 50 percent mortality rate. Individuals with compromised immune systems are strongly advised not to consume

## Do You Know About...

### *Vibrio vulnificus* ?

Nadia Kovacevich, MPH



### Recommendations for Reducing the Risk of *Vibrio vulnificus* Infection

- **Avoid eating raw oysters or seafood, especially if an immunocompromising condition exists; the risk is highest in seafood harvested in the summer.**
- **Avoid cross-contamination of cooked seafood and other foods with raw seafood and juices from raw seafood.**
- **Cook shellfish thoroughly!**
- **In the shell: boil until the shells open and continue boiling for an additional five minutes; alternatively, steam until the shells open and continue steaming for an additional nine minutes. Do not eat shellfish that do not open during cooking.**
- **Shucked oysters: boil for at least 3 minutes, or fry for at least 10 minutes at 375°F.**
- **Promptly eat shellfish after cooking and refrigerate leftovers. Wear gloves when handling raw shellfish.**
- **Avoid exposing open wounds with seawater.**
- **Wash any wound that is exposed to seawater with soap and clean water.**
- **Seek medical care for any wound that appears infected.**



raw or inadequately cooked seafood and are also advised to avoid exposure of open wounds or broken skin to warm salty seawater.

There is no evidence that the infection spreads from person to person. Most infections are acute and have no long-term consequences.

### CONTAMINATED SEAFOOD

*Vibrio vulnificus* is frequently isolated from oysters and other shellfish during the summer months, which also correlates with the peak incidence of human disease due to this organism. Consumption of contaminated seafood, such as raw shellfish, is likely to cause vomiting, diarrhea, and abdominal pain within 16 hours of ingestion.

### REPORTED CASES

*V. vulnificus* is a rare cause of illness in the United States, but it is thought to be underreported. In 2007, infections caused by *V. vulnificus* became nationally notifiable. Since 2007, the State of Florida has had 93 reported cases and Escambia County has had 8 reported cases.

Photo credits:

(left) NOAA Fisheries Service.

[www.nwfsc.noaa.gov](http://www.nwfsc.noaa.gov)

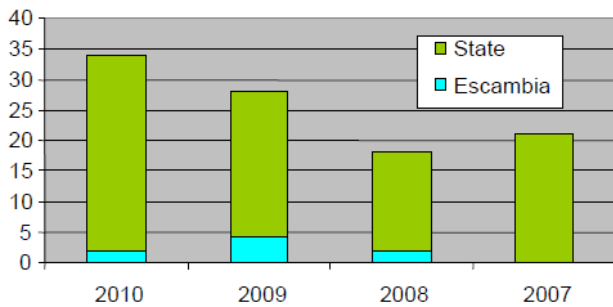
(top) [www.safeoysters.org](http://www.safeoysters.org)

*Continued on Page 4.....*

Information on the dangers of raw oyster consumption can be found at <http://vm.cfsan.fda.gov/>

and a 24/7 FDA Seafood Hotline (1.800.332.4010).

**Reported Cases of *Vibrio vulnificus* in Escambia County and the State of Florida**



**Months of Reported *Vibrio vulnificus* Cases in Escambia County**

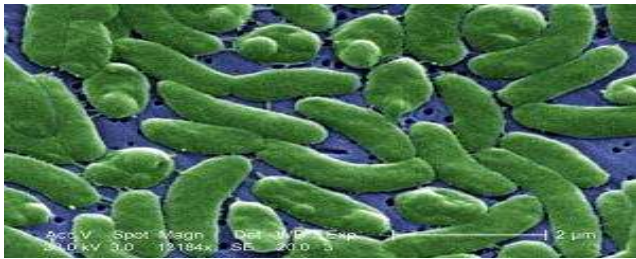
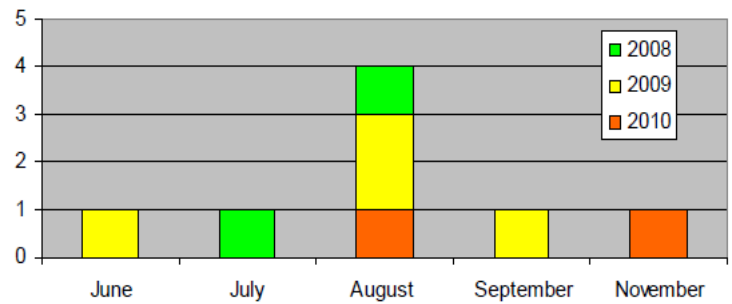


Photo Credit: CDC/Janice Carr/James Gathany

**References**

Centers for Disease Control and Prevention. *Vibrio vulnificus*. Accessed March 1, 2011, at: <http://www.cdc.gov/nczved/divisions/dfbmd/diseases/vibriov/>.

Florida Department of Health. *Vibrio vulnificus*. Accessed March 1, 2011, at: [http://www.doh.state.fl.us/Disease\\_Ctrl/epi/htopics/reports/vib\\_vul.pdf](http://www.doh.state.fl.us/Disease_Ctrl/epi/htopics/reports/vib_vul.pdf).

**Tinea Capitis (Ringworm)**

Sharon Nelson, R.N.

Tinea capitis is a fungal infection of the scalp which is caused by a mold-like fungus called a dermatophyte. Dermatophytes can affect anyone, including people who are otherwise healthy. The dermatophytes that cause tinea infections thrive in warm, moist areas. Summertime in Florida is the perfect setting for tinea infections because of the hot humid climate. Therefore, an increase in reported cases usually occurs during the summer months.



Tinea capitis (Ringworm of the scalp)

Tinea is highly contagious and may spread through contact with contaminated items such as hats, combs, clothing, and even pets. The diagnosis of tinea capitis is usually made by visual inspection of the scalp. The most accurate test is a fungal culture which takes 2 to 3 weeks to produce results.

According to the American Academy of Pediatrics Committee on Infectious Diseases, the treatment of choice for tinea capitis is Griseofulvin, which is an oral antifungal agent.

This medication can be given to individuals over the age of two years. Therapy usually lasts four to six weeks. Shampooing the hair two to three times weekly with a Selenium sulfite shampoo helps to decrease fungal shedding and may prevent the development of secondary infection.

When tinea is untreated, a kerion may occur. This kerion appears as a thick, mushy area of the scalp, accompanied by fever and pain. Lymph nodes behind the ears, along the sides of the neck or at the base of the scalp may enlarge in response to the infection. The kerion can open and drain pus and, if not treated with antifungal medication, can lead to scarring and permanent hair loss.

Early treatment is important. All family members should be assessed for tinea infections and care should be taken to avoid spread and re-infection.

Reference

American Academy of Pediatrics. Committee on Infectious Diseases. Red Book. 28th ed. 2009.

## Recreational Water Illness and Healthy Swimming

James Moore, B.S.

### Health and Safety Risks

Imagine that it is July and 95 degrees outside. What do you want to do? Go jump in some water of course! Whether it's surfing at the beach, or relaxing in your pool, water-related activities can be an enjoyable way to get physical exercise. However, some things you may not be thinking about when you're in the water are safety hazards and recreational water illnesses.

Hazards that we can't see may cause Recreational Water Illnesses (RWIs). RWIs are caused by bacteria, viruses, parasites, and fungi that are spread by swallowing, breathing mists, or having contact with contaminated water from pools, spas, water parks, rivers, etc. There are a variety of RWIs, including gastrointestinal, skin, eye, ear and neurological infections. The most commonly reported RWI symptom is diarrhea. Examples of other infections include "hot tub rash" and "swimmer's ear."

### Protection and Prevention:

The Escambia County Health Department Division of Environmental Health (ECHD EH) has staff that inspects public swimming pools for health and safety standards at least twice a year. Escambia County has nearly 400 permitted sites. Each inspection seeks to minimize safety hazards and RWIs.

In the effort to minimize RWIs and as part of routine inspections, pool water is checked for chlorine and pH levels. In Florida, the proper levels for pools are:



### CDC's Six Steps for Healthy Swimming

[Help decrease germ contamination of pools by following these steps!!!](#)

#### ALL SWIMMERS

Don't swim when you have diarrhea!

Don't swallow the pool water!

Practice good hygiene!

#### PARENTS WITH YOUNG KIDS

Take your kids on bathroom breaks and check diapers often.

Don't change diapers poolside!

Wash your child thoroughly with soap and water before swimming.

#### Reference

CDC. <http://www.cdc.gov/healthywater/swimming/pools/six-steps-healthy-swimming.html>

Photo Credit: James Moore

chlorine 1-10 parts per million and pH of 7.2-7.8. The water must be clear and the pool must be clean and free of algae. Other methods to minimize RWIs are the use of air gaps, backflow preventers, and making sure all water going into the pool system is from an approved source.



The routine inspections also look for proper safety equipment, and other important features such as depth markers, no dive markers, pool rules signs, secure fencing at an appropriate height, and gates that self close and latch.

### Escambia County Water-borne Illness:

In 2010, the ECHD's Epi Program investigated several illnesses caused by organisms that can be associated with water related activities. These include: Cryptosporidium (3), Giardia (16), Vibrio (3), and Legionella (1).

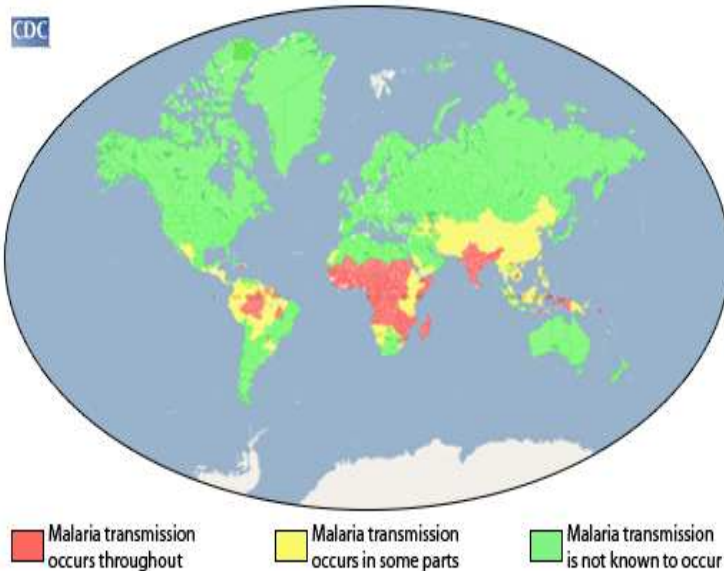
In conjunction with ECHD EH, the Epi Program plays an important role in identifying possible risk factors for water-borne infections, as well as providing important educational information to prevent the spread of disease.

Unfortunately, the most vulnerable populations affected by water-related illnesses include children, pregnant women, and those with weakened immune systems. However, the CDC's "six steps for healthy swimming" can help prevent illness in the community.

## Looking out for Malaria

Robert Cosgrove, MPH

Even though malaria was eradicated from the United States (U.S.) in the 1950s, the Centers for Disease Control and Prevention (CDC) receives on average reports of 1,500 cases per year. Most of those cases are from first and second generation immigrants who recently visited their home countries where malaria still remains endemic. This remains problematic in the U.S. because local mosquitoes have the same capabilities of transmission as in other countries where malaria is more prevalent. North America is home to three *Anopheles* mosquitoes (*Anopheles quadrimaculatus* in the east, *Anopheles freeborni* in the west, and *Anopheles albimanus* in the Caribbean) that are responsible for the transmission of malaria. There have been 63 malaria outbreaks in the United States since 1957. All of these occurred in situations in which a person living in the US visited their "home" country and came back to the U.S. infected. They were then bitten by local mosquitoes which became infected and continued the transmission within the community. Unfortunately, there is a constant threat of malaria being reintroduced anywhere *Anopheles* mosquitoes are present.



### Malaria around the World

- 3.3 billion people (half the world's population) live in areas at risk of malaria transmission in 109 countries and territories.
- 35 countries (30 in sub-Saharan Africa and 5 in Asia) account for 98% of global malaria deaths.
- WHO estimates that in 2008 malaria caused 190 - 311 million clinical episodes, and 708,000 - 1,003,000 deaths.
- 89% of the malaria deaths worldwide occur in Africa.
- Malaria is the 5<sup>th</sup> cause of death from infectious diseases worldwide (after respiratory infections, HIV/AIDS, diarrhea diseases, and tuberculosis).
- Malaria is the 2<sup>nd</sup> leading cause of death from infectious diseases in Africa, after HIV/AIDS.
- Most Deaths occur in young children.

### Florida

Since 2008, there have been 297 cases of malaria within Florida. Most malaria cases have occurred in the southern parts of the state and were imported from other countries. During this same time period, seven cases occurred in the Florida panhandle (Escambia, Okaloosa, Santa Rosa, and Walton Counties). Six of these cases were acquired outside of the U.S. and one was reported as etiology unknown. Even though malaria is rare in northwestern Florida we should remain cautious and always take the necessary precautions to protect ourselves and others.

### Control measures for Malaria

Control of *Anopheles* mosquito populations, human protection against mosquito bites, treatment of infected people, and chemoprophylaxis of travelers to areas with endemic infection are effective. Preventing exposure through use of bed nets saturated with insecticide, repellants containing DEET (N,N-Diethyl-meta-toluamide), and use of protective clothing is recommended and beneficial in reducing risk. Finally, the most current information on country-specific risks, drug resistance, and recommendations from the CDC should be obtained before traveling.

Reference: [www.cdc.gov/malaria/about/index.html](http://www.cdc.gov/malaria/about/index.html)

# Escambia County 2011 Communicable Disease Report

REPORTABLE DISEASES FOR ESCAMBIA COUNTY HEALTH DEPARTMENT -- 2011

DISEASES	2005	2006	2007	2008	2009	2010	**EXPECTED YTD (April)	ACTUAL YTD (Jan- April)
AIDS †	73	60	59	71	49	44	20	18
AMEBIC ENCEPHALITIS *	-	-	-	-	0	0	0	0
ANIMAL BITE, PEP RECOMMENDED	0	67	94	43	64	62	18	17
ANIMAL RABIES	0	0	2	2	7	2	1	0
ARSENIC *	-	-	-	-	1	0	0	0
CAMPYLOBACTER	19	10	17	24	26	30	7	9
CARBON MONOXIDE POISONING *	-	-	-	-	6	3	2	1
CHLAMYDIA †	1256	1353	1650	1826	1727	1677	527	536
CIGUATERA	0	1	0	0	0	0	0	0
CREUTZFELDT-JAKOB DISEASE	1	1	0	2	0	0	0	1
CRYPTOSPORIDIUM	1	7	2	3	1	3	1	0
CYCLOSPORIASIS	2	0	0	0	1	0	0	0
DENGUE FEVER	0	0	0	0	0	1	0	0
EHRlichiosis	0	0	0	0	0	0	0	0
ENCEPHALITIS Other	1	0	2	0	0	0	0	1
E. COLI (O157:H7)	0	1	0	1	0	0	0	0
E. COLI (NON-O157:H7)	0	0	0	0	1	1	0	0
GIARDIA	8	12	13	9	19	16	4	2
GONORRHEA †	642	944	851	720	774	530	248	147
H. INFLUENZAE	4	4	5	8	5	4	2	4
HEMOLYTIC UREMIC SYN.	0	1	1	0	0	0	0	0
HEPATITIS A	0	0	0	0	0	0	0	0
HEPATITIS B acute	9	9	7	4	1	2	2	0
HEPATITIS B chronic	90	91	88	78	90	86	29	29
HEPATITIS B-perinatal	1	0	0	0	0	0	0	0
HEP B-preg woman	19	12	16	18	9	5	4	8
HEPATITIS C acute	0	4	2	0	1	0	0	0
HEPATITIS C chronic	655	723	721	680	582	534	216	180
HEPATITIS NANB acute	1	32	0	0	0	0	2	0
HEPATITIS D	0	1	0	1	0	0	0	0
HIV †	48	64	79	67	51	75	21	35
INFLUENZA A, NOVEL STRAIN	0	0	0	0	56	2	3	0
LEAD LEVEL ≥10	4	5	7	2	6	20	2	3
LEGIONELLOSIS	0	1	0	0	1	2	0	1
LISTERIOSIS	0	1	0	0	0	3	0	0
LYME DISEASE	1	1	0	3	3	1	1	0
MALARIA	0	0	0	0	1	3	0	0
MENINGOCOCCAL (Neisseria)	4	0	5	1	0	1	1	0
MENINGITIS (Bact, Crypto, Mycotic)	15	18	19	16	14	6	5	0
MERCURY POISONING	0	4	0	0	0	0	0	0
MUMPS	0	1	1	0	1	0	0	0
PERTUSSIS	5	13	4	3	85	6	6	1
PESTICIDE-RELATED	0	0	0	0	0	0	0	2
ROCKY MTN SPOTTED FEVER	0	1	2	0	0	1	0	0
SALMONELLA	139	107	189	83	119	97	41	9
SHIGELLA	7	7	163	143	32	3	20	0
STAPH AUREUS MORTALITY *	-	-	-	-	1	0	0	0
STAPH AUREUS ISOLATE *	-	-	-	-	0	0	0	0
STREP. GROUP A, INV	5	16	8	8	7	6	3	5
STREP PNEU, INV.	35	41	34	63	49	57	16	25
SYPHILIS †	17	5	26	37	23	60	9	23
TOXOPLASMOSIS	0	0	0	0	0	0	0	0
TUBERCULOSIS †	10	24	14	10	5	13	4	3
TYPHOID FEVER	0	0	0	1	0	1	0	0
VARICELLA ●	-	5	56	192	78	36	24	8
VIBRIO (vulnificus)	2	2	0	2	4	2	1	1
VIBRIO (other)	4	1	2	0	2	1	1	3
WEST NILE	0	2	0	2	0	0	0	0
TOTAL	3078	3652	4139	4123	3902	3396	1244	1072

Escambia County Health Department  
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† Information is provisional and reflects data reported by the FDOH Bureau of STD Control and Prevention and HIV/AIDS

\*\*Expected Number Based on last 3 Year Average, prorated to date  
 All other data is from the FDOH Bureau of Epidemiology Merlin database (date entered range)  
 \* Newly reportable 2009  
 ● Newly reportable in 2007