

Louisiana Morbidity Report



BOBBY JINDAL
GOVERNOR

Office of Public Health - Infectious Disease Epidemiology Section
P.O. Box 60630, New Orleans, LA 70160 - Phone: (504) 568-8313
www.dhh.louisiana.gov/LMR



KATHY KLIEBERT
SECRETARY

Infectious Disease Epidemiology Main Webpage
www.infectiousdisease.dhh.louisiana.gov

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Human Exposure to Leprosy from a Nine-banded Armadillo: Louisiana, 2015

Lauren Stump, DVM Candidate

Clinical History

Early in 2015, three children and one adult were potentially exposed to *Mycobacterium leprae* through an infected armadillo killed in Louisiana. All four handled the carcass, touching both blood and tissue. Prior to this exposure they had no knowledge that armadillos in the southern United States could be infected with and transmit leprosy to humans. The Infectious Disease Epidemiology Section (IDEpi) of the Louisiana Office of Public Health and the National Hansen's Disease Program (NHDP) were contacted, and the body of the animal was submitted to the Louisiana Animal Disease Diagnostic Laboratory for testing. In addition to leprosy, exposure concerns included rabies, leptospirosis, and salmonella.

Tests performed on the armadillo demonstrated the presence of acid-fast bacilli in the liver and spleen along with multifocal, slightly raised, pink cutaneous nodules approximately 2 mm to 5 mm in diameter, present especially on the hind limbs. Both of these could be consistent with leprosy. Due to these findings and the prevalence of leprosy in wild armadillos, it was presumed by IDEpi that this armadillo was infected with *M. leprae*, and all four individuals who handled the armadillo were considered exposed. Post-exposure recommendations were to perform self-surveillance for skin lesions at least every three to six months for approximately the next 10 years and report to a dermatologist if any suspicious lesions arise. Prophylactic antibiotic treatment was not recommended.

Figure 1: *D. novemcinctus*; Image Courtesy of Encyclopedia Britannica, www.brittanica.com



Leprosy (Hansen's Disease)

Leprosy, caused by *M. leprae*, is a chronic, bacterial infection that primarily affects the skin and nervous tissues. When left untreated, it can have devastating consequences. Although commonly considered an ancient disease, it is still present in some human populations in tropical and semi-tropical regions. In 2011, the World Health Organization (WHO) reported 219,075 new cases in 105 countries. An estimated 150 to 250 people are diagnosed with the disease in the United States each year.

The disease has a variety of presentations and progressions. Permanent disfigurement, loss of function of the extremities, ulceration, infection, and loss of sight are all potential sequelae. However, the disease is curable with prompt and appropriate treatment. Unfortunately, cases in the United States are sometimes misdiagnosed due to a lack of awareness by medical professionals. These misdiagnoses result in the delay of treatment, risking further progression and permanent consequences.

A historic prejudice against those affected is the result of multiple factors, including the sometimes shocking disfigurement in severely affected individuals as well as the assumption that the disease is very contagious. The negative stigma associated with it is, in fact, not warranted as the disease is not easily transmitted. Over 95% of the human population, if exposed, would not become infected or develop disease.

The etiologic agent itself is an acid-fast, Gram-positive bacillus with a long doubling time of 14 days, resulting in lengthy incubation periods. An obligate intracellular pathogen, it cannot be grown on conventional laboratory media. The majority
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Human Exposure ... *continued from page 1*

of infected individuals will show symptoms within two to five years, although some may begin showing symptoms as many as 10 to 20 years post-exposure. *M. leprae* prefers to replicate at cooler temperatures than the average human body temperature of 98.6°F (37°C). It is speculated that this is one reason it infects the nine-banded armadillo (*Dasypus novemcinctus*), a species with a resting body temperature of 93.2°F (34°C).

Connection to the Nine-banded Armadillo

D. novemcinctus is the only known mammal other than humans that is susceptible to leprosy. Some wild armadillos in the southern United States are infected with *M. leprae*, and disease prevalence in armadillo populations exceeds 20% in some areas. This infection was established decades prior to the animal's use in leprosy research and is suspected to have originated through human-to-armadillo transmission.

Truman et al and the NHDP reported that leprosy is a probable zoonosis in the southern United States. The majority of affected individuals in the United States can identify an exposure in a foreign country, but some cannot. Most of these cases occur in Texas and Louisiana, where *D. novemcinctus* is a native species and is known to maintain infection in the wild population. A high percentage of human cases and natural infection in wild armadillos in the same region share the same strain of bacteria. The genome sequence of the bacteria involved in these cases is essentially identical and has not been reported elsewhere in the world. There are also individuals in some of these cases that report previous handling of armadillos. Assuming this to be true, armadillos in this region are a substantial reservoir for human infection, and the likelihood of developing the disease must be a consideration for those who handle live or dead armadillos and their tissues. The NHDP discourages direct contact with armadillos and the cooking and consumption of armadillo meat.

In addition, it appears that, unlike in humans, leprosy spreads readily among armadillos. The disease has emerged rapidly in the population and spread quickly across five southern states, and the strains recovered from armadillos show a relative lack of diversity. New cases linked to contact with armadillos have been the topic of recent news in Florida.

Transmission

It is difficult to study the disease in both humans and armadillos. From what is known, human-to-human transmission likely occurs via aerosol. Nasal wash samples from untreated lepromatous cases contain from 10,000 to 10,000,000 *M. leprae*. Rhinitis and nose bleeds are common in early lepromatous leprosy, and the resultant fluid is probably a major source of infection. The primary infection site may be the respiratory tract or the skin. Skin-to-skin transmission is also suspected as a route, as bacilli are present in large numbers in ulcers. Armadillo-to-human transmission is suspected to be through direct handling of armadillos, their blood, and their tissues.

Little is known about transmission between armadillos and humans. Through human studies we know the disease is not very communicable, with only 5% to 10% of the global human population susceptible to infection. It appears that the majority of people have a poorly understood innate immunity. The US close

contact incidence is 1:300 (0.3%).

Course of Disease

Leprosy in people usually begins as one or few small lightly-colored skin lesions. From there, further skin infection and impairment of nerve function may occur. The disease may progress to cause a peripheral neuropathy resulting in ulcers, secondary bacterial infection, and inadvertent self-trauma. The eye and associated structures may be involved. Osteolysis with or without osteomyelitis, tendon contraction, and disfigurement may occur. Renal involvement, testicular atrophy, and secondary gynecomastia are also recognized sequelae. A small percentage of cases experience spontaneous regression early on; however, no characteristics can be identified to preliminarily differentiate these cases from others.

Following laboratory confirmation, clinical criteria are used to characterize the infection using the Ridley-Jopling scale:

- Tuberculoid: one or few well-demarcated, hypopigmented, and hypoesthetic or anesthetic skin lesions, frequently with active, spreading edges and a clearing center; peripheral nerve swelling or thickening also may occur. Indicative of a vigorous host immune response (Figures 2 and 3).

Figures 2 and 3: Leprosy Skin Lesions; Images Courtesy of <http://images.md.laneproxy.stanford.edu/>



Figure 2: Borderline Tuberculoid

Figure 3: Hypopigmented Macule Leprosy

- Lepromatous: a number of erythematous papules and nodules or an infiltration of the face, hands, and feet with lesions in a bilateral and symmetrical distribution that progress to thickening of the skin, possibly with reduced sensation; indicative of a minimal host immune response.

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<i>Assistant Secretary, OPH</i>	J.T. Lane
<i>State Epidemiologist</i>	Raoult Ratard, MD, MPH
<i>Editors</i>	Theresa Sokol, MPH Julie Hand, MSPH Rosemarie Robertson, BS, MT(C), CNMT

Cryptosporidiosis Outbreaks Associated with Inflatable Waterslides: Louisiana, 2014

Lauren Elmendorf, MPH; Michele Pogue, MT (ASCP); Erin Delaune, MPH

Cryptosporidium is a parasite that can infect and reproduce in the digestive tract of most vertebrates (fish, birds, reptiles, and mammals). It can be spread person-to-person and from animals to humans by fecal-oral transmission either directly or indirectly. A person can become infected with Cryptosporidium by direct hand-to-mouth transfer of oocysts or by consuming contaminated food or water, including accidental ingestion of contaminated surface or pool water.

In the summer of 2014, the Infectious Disease Epidemiology Section (IDEpi), of the Office of Public Health, investigated two separate Cryptosporidiosis outbreaks associated with playing on inflatable waterslides. The water slides had been rented from different companies for events taking place in different regions of the state. The first event (Party A) was a large party that involved multiple inflatable waterslides and kiddie pools. The second event (Party B) was a smaller party that involved two inflatable waterslides. IDEpi contacted as many event attendees as possible to determine the scope of the outbreaks, to assess for exposures, and to give recommendations for preventing further spread of the disease. A case control study was conducted for both investigations. Cases were those who attended the event and experienced vomiting or diarrhea within two weeks. Controls were those who attended the event and did not experience vomiting or diarrhea within two weeks.

For Party A, 32 attendees were reached for an interview. Those who became sick were 100 times more likely to have had exposure to either the waterslides or to the kiddie pools. This association was significant (OR= 100 [95% C.I., 3.77, 4938]).

For Party B, 26 attendees were reached for an interview. All of the cases and the controls reported playing on the waterslide. The attack rate, or the percentage of attendees that played on the waterslides and became sick, was 85%.

These are considered confirmed outbreaks of Cryptosporidium associated with playing on inflatable waterslides and in kiddie pools. Most likely the inflatable waterslides were not contaminated with Cryptosporidium, but rather acted as vessels for contaminated water to transmit the parasite. Cryptosporidium has a low infectious dose; as few as 10 oocysts can cause infection in a healthy person. Symptoms of a Cryptosporidium infection include watery diarrhea, abdominal cramps, fatigue, vomiting, and weight loss. Some infected persons have been reported to shed up to 10⁹ oocysts in their stool per day while infected. The oocysts are infectious immediately upon being excreted in feces, and shedding can occur for up to 15 days after symptoms have resolved. Cryptosporidium is resistant to chlorine, making it a common cause of waterborne disease outbreaks.

To prevent the spread of any waterborne illnesses, including Cryptosporidium, people should avoid swallowing or getting pool water in their mouths, and symptomatic individuals should avoid swimming in pools, splash parks, waterslides, and other recreational water venues until two weeks after cessation of diarrhea. Babies' diapers should be changed in the bathroom, not at

the poolside. Everyone should shower before entering the water. Inflatable waterslides and fill-and-drain kiddie pools should be thoroughly washed and allowed to completely dry in the sun between each use.

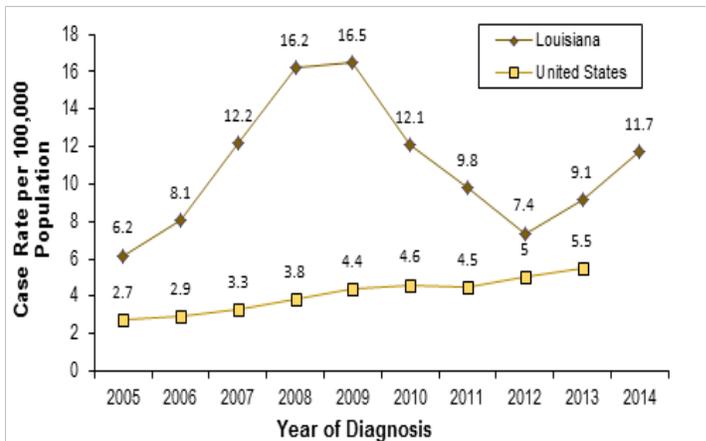
For more information, please go to <http://new.dhh.louisiana.gov/index.cfm/page/813> or contact Erin Delaune at (504) 568-8316 or erin.delaune@la.gov.

Syphilis Surveillance Update Louisiana, 2012-2014

Catherine Desmarais, MPH;
 Mohammad Rahman, MBBS, MPH, PhD

April was “STD Awareness Month” across the nation. In 2013, Louisiana’s rates for gonorrhea, congenital syphilis, chlamydia, and primary and secondary (P&S) syphilis were very high. P&S syphilis diagnoses in Louisiana increased 60%, from 339 diagnoses in 2012 to 541 diagnoses in 2014. The case rate increased from 7.4 per 100,000 in 2012 to 11.7 per 100,000 in 2014 (Figure).

Figure: P&S Syphilis Case Rates – Louisiana and the United States*



While the national 2014 statistics have not yet been released by the U.S. Centers for Disease Control and Prevention (CDC), now is the time to raise awareness of the transmission rates of sexually transmitted infections (STIs).

The majority of P&S syphilis cases in Louisiana were seen in males, increasing 96% from 2012 to 2014. Blacks are disproportionately affected by syphilis in Louisiana. Although Blacks make up only 32% of the population, they account for 75% of new P&S syphilis diagnoses in 2014. The number of P&S syphilis diagnoses has increased in all age groups, with nearly half of all diagnoses in persons aged 20 to 29 years in 2014 (Table).

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Mardi Gras - Hospital Emergency Department Syndromic Surveillance: Louisiana, 2015

Jenna Iberg Johnson, MSPH; Andrew Smith, MPH

The Department of Health and Hospitals' Infectious Disease Epidemiology (IDEpi) Section conducted enhanced syndromic surveillance in Regions 1, 3 and 9* during the 2015 Mardi Gras season. Daily summaries of emergency department (ED) chief complaint data were extracted from the Louisiana Early Event Detection System (LEEDS), IDEpi's syndromic surveillance system, to monitor visits indicative of symptoms related to infectious diseases and injuries. Fat Tuesday fell on February 17, 2015; the period of enhanced surveillance took place from January 18, 2015 through February 22, 2015.

Infectious Disease

IDEpi tracked six syndromes related to infectious disease: fever, gastrointestinal complaints (GI), influenza-like illness (ILI), lower respiratory tract infections (LRTI), upper respiratory tract infections (URTI), and skin and soft tissue infections (SSTI). The data were monitored for spikes and increases in percentage of ED visits associated with each syndrome. EARS C2 method was used to detect aberrations in the percentage of ED visits attributed to each syndrome. The syndrome aberrations that generated alerts were not sustained and therefore did not warrant investigation (Figures 1,2,3).

Figure 1: Daily Summaries of ED Visits Related to Infectious Disease Syndromes - Region 1: Louisiana, January 18 - February 22, 2015

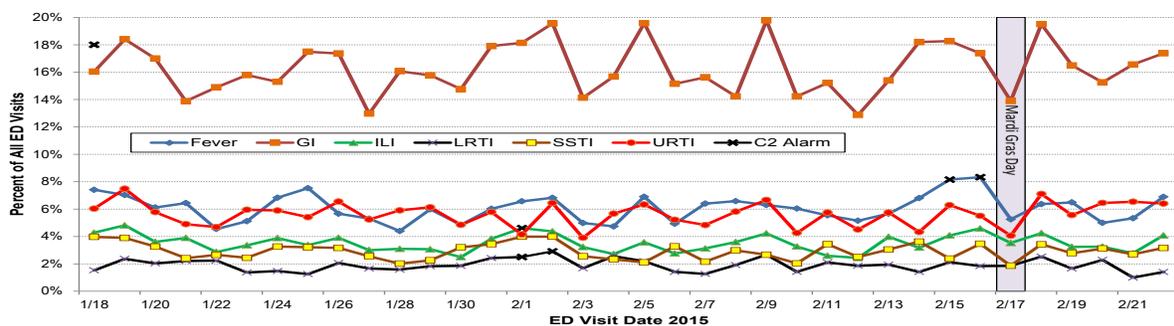


Figure 2: Daily Summaries of ED Visits Related to Infectious Disease Syndromes - Region 3: Louisiana, January 18 - February 22, 2015

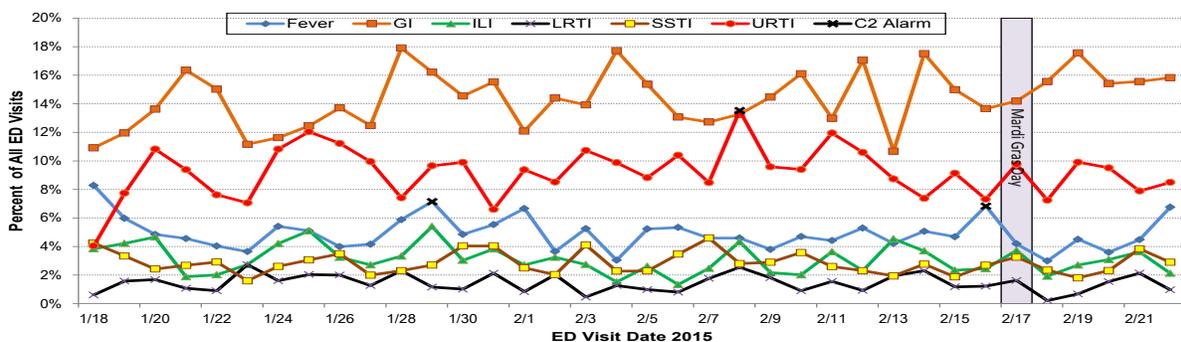
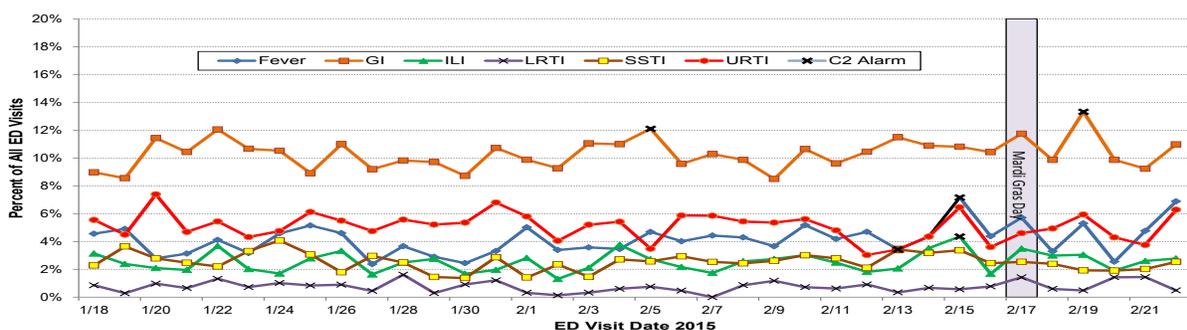


Figure 3: Daily Summaries of ED Visits Related to Infectious Disease Syndromes - Region 9: Louisiana, January 18 - February 22, 2015



Injury

IDEpi tracked five injury syndromes in visits related to alcohol use, drug use, personal injuries (lacerations, falls, fractures, etc.),

motor vehicle accidents (MVA), and violence. Data was monitored for spikes and increases in percentage of ED visits associated with each syndrome. The EARS C2 alarms that were generated for alcohol use, drug use, violence, motor vehicle accidents, and

* Map of Regions on Page 7

personal injuries were syndrome aberrations that did not warrant investigation (Figures 4, 5, 6).

Figure 4: Daily Summaries of ED Visits Related to Injury Syndromes - Region 1: Louisiana, January 18 - February 22, 2015

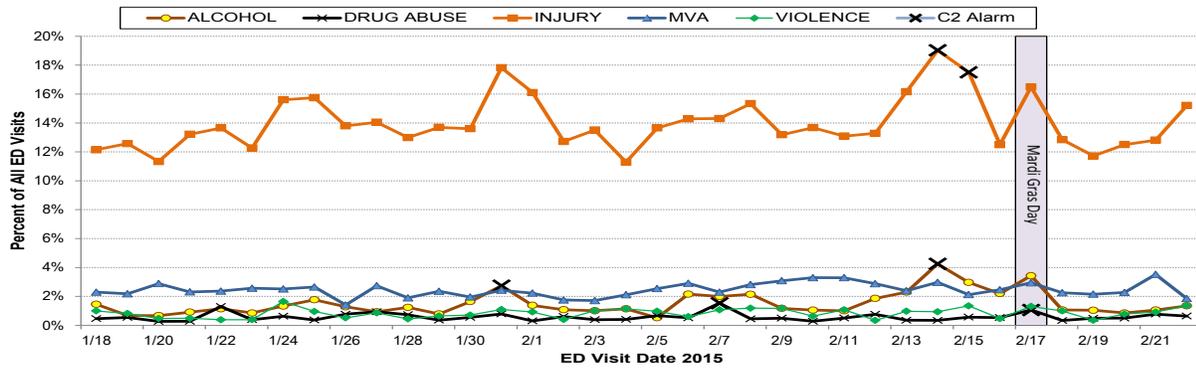


Figure 5: Daily Summaries of ED Visits Related to Injury Syndromes - Region 3: Louisiana, January 18 - February 22, 2015

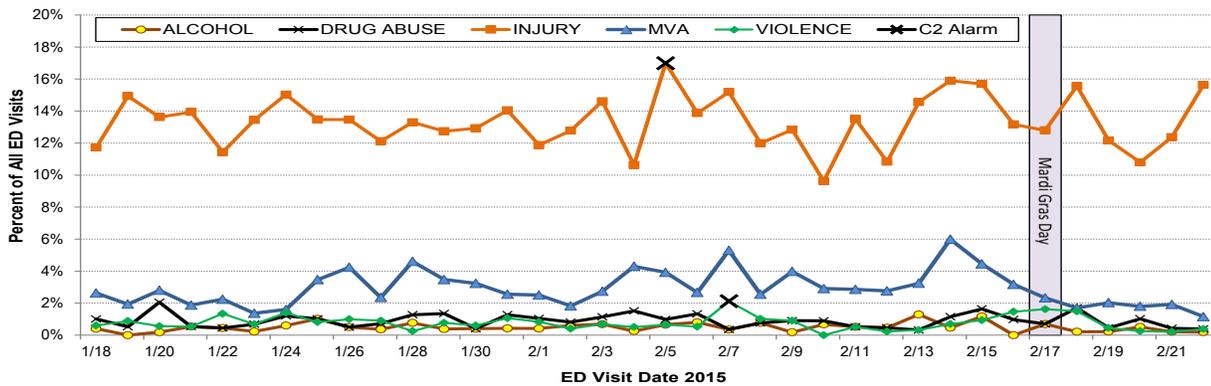
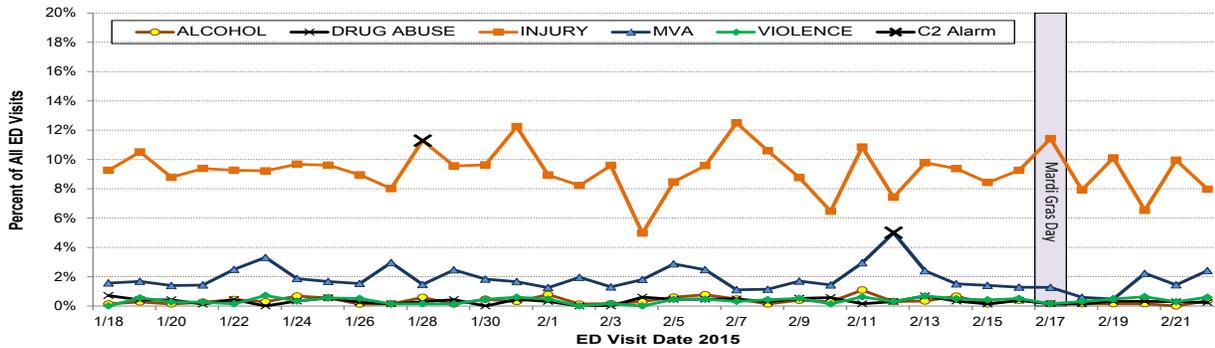


Figure 6: Daily Summaries of ED Visits Related to Injury Syndromes - Region 9: Louisiana, January 18 - February 22, 2015



For more information, contact Andrew Smith at (504) 568-8328 or andrew.smith@la.gov.

Announcements

Updates: *Infectious Disease Epidemiology (IDEpi) Webpages*
www.infectiousdisease.dhh.louisiana.gov

Annual Reports: Disease List Summary 1990-2013; Infectious Disease State Comparison 1999-2012; Measles; Norovirus; Outbreak Investigations; Rabies; Several Year Comparison 2013-2015

Epidemiology Manual: Listeria Public Information; Listeriosis Summary; Melioidosis; Plague Summary; STEC Public Information

Foodborne/Waterborne: Healthy Swimming Brochure - English & Spanish versions; Reporting a Potential Waterborne Outbreak Form

HAI: Spring Newsletter

Infection Control Manual: Policy Memo 205-Protocol for Managing Needle Stick Injuries and HIV/ Other Unintentional Exposures to Blood or Potentially Infectious Body Fluids

Influenza: Weekly Report

Veterinary: Bat Information page; Excluding Bats From a Structure; Bat Guano in Attics and Crawlspace; Information for Ordering Rabies Vaccines

Save The Date

Healthy and Safe Swimming Week: May 18–24



May is Hepatitis Awareness Month

http://www.cdc.gov/hepatitis/TestingDay/?s_cid=bb-DVh-HTD_004

Field Epidemiological Workshop 2015

Chalmette - July 16 Sulphur - August 13 Winnboro - September 17

Human Exposure ... *continued from page 2*)

- **Borderline (dimorphous):** skin lesions and histologic characteristic of both tuberculoid and lepromatous forms. The majority of cases are borderline but may be classified as either tuberculoid or lepromatous for various reasons.
- **Indeterminate:** early lesions, usually hypopigmented macules, without developed tuberculoid or lepromatous features but with definite identification of acid-fast bacilli in acid-fast stained sections. This type may heal spontaneously (12%), remain indefinitely at this stage, or progress into one of the other types.

The WHO uses an alternative scale ranging from paucibacillary (tuberculoid) to multibacillary (lepromatous) leprosy.

Diagnosis

The key to a diagnosis is a thorough clinical examination. Examination of suspect lesions includes light touch, temperature, and pain recognition tests to determine nerve function. Particular attention should be focused on the following: a detailed examination of the extremities for superficial nerve involvement as well as contracture and trophic changes, evaluation of the eyes for hypoaesthesia of the cornea and paralysis of the eyelid muscle, and evaluation for motor deficits. According to the NHDP, there is no serologic test that can confirm *M. leprae* infection. The most definitive method is biopsy and histopathology demonstrating acid-fast bacilli in a suspect skin lesion. However, a skin smear of a lesion or earlobe may be performed to demonstrate acid-fast bacilli in the skin. Two standard criteria for laboratory diagnosis are:

- 1) the demonstration of acid fast bacilli in the skin or dermal nerve from a biopsy of a skin lesion using acid-fast stain, without growth of mycobacteria on conventional media (if done) (lepromatous), and
- 2) the identification of noncaseating granulomas with peripheral nerve involvement, without growth of mycobacteria on conventional media (if done) (tuberculoid).

Treatment

When the disease is diagnosed early and treatment is initiated, leprosy is easily cured and leaves no lasting effects such as neuropathy or deformity. The current treatment for leprosy recommended by the Centers for Disease Control and Prevention (CDC) and NHDP in the United States is a combination of three antibiotic drugs that must be taken once per month for anywhere from one to two years, depending on the individual case. Due to the nature of *M. leprae*, treatment is lengthy and must be completed as directed to be effective. However, individuals are no longer contagious after initiation of treatment.

Conclusion

The lack of awareness of potential *M. leprae* exposure through handling wild armadillos has become a public health concern necessitating education. People should limit contact with wild armadillos, as they are a reservoir for zoonotic leprosy in the southern United States. In addition, physicians should consider leprosy when evaluating chronic cutaneous lesions, especially when they are not responsive to the usual treatments. Any individual with previous exposure to *M. leprae* via armadillos should be considered suspect if skin lesions develop. Treat-

ment is very effective, but must be initiated early in the disease course to avoid unwanted permanent effects.

Physicians, family members, and neighbors should be especially sensitive to the stigma associated with the disease and use the utmost discretion when a diagnosis of leprosy is confirmed. For more information go to <http://www.hrsa.gov/hansensdisease/> or <http://new.dhh.louisiana.gov/assets/oph/Center-PHCH/Center-CH/infectious-epi/EpiManual/LeprosyManual.pdf>. For references, please contact IDEpi at (504) 568-8313.

Syphilis Surveillance ... *continued from page 3*)

Table: P&S Syphilis Cases and Case Rates by Sex at Birth, Race/Ethnicity, Age Group, and Region - Louisiana, 2012 - 2014

	2012		2013		2014	
	Cases	Rate	Cases	Rate	Cases	Rate
TOTAL	339	7.4	423	9.1	541	11.7
Sex at Birth						
Female	127	5.4	115	4.9	125	5.4
Male	212	9.4	308	13.6	416	18.4
Race/Ethnicity						
Black/Afr-American	289	19.6	329	22.2	407	27.5
Hispanic/Latino	5	2.4	7	3.2	10	4.6
White	43	1.6	86	3.1	118	4.3
Other/Multi-race	2	-	1	-	6	-
Age Group						
			Age at Diagnosis			
0-9	0	0.0	0	0.0	0	0.0
10-14	0	0.0	3	0.8	2	0.5
15-19	50	16.3	51	17.7	62	21.5
20-24	101	28.7	112	33.5	146	43.6
25-29	78	23.2	86	27.3	107	34.0
30-34	41	12.9	57	18.7	74	24.3
35-39	19	7.0	29	11.1	43	16.5
40-44	20	7.0	24	8.9	36	13.4
45+	30	1.7	61	3.5	71	4.0
Region						
1-New Orleans	62	7.1	93	10.6	192	21.8
2-Baton Rouge	66	9.8	70	10.4	72	10.7
3-Houma	14	3.5	21	5.2	50	12.4
4-Lafayette	29	4.9	49	8.2	38	6.4
5-Lake Charles	12	4.1	7	2.4	5	1.7
6-Alexandria	17	5.5	13	4.2	10	3.2
7-Shreveport	124	22.5	126	22.9	102	18.6
8-Monroe	13	3.7	30	8.4	54	15.2
9-Hammond/Slidell	1	0.2	14	2.5	18	3.2
Unknown	1	-	0	-	0	-

In 2014, new diagnoses of P&S syphilis occurred in 48 of Louisiana’s 64 parishes. Since 2012, the number of P&S syphilis diagnoses has increased in the New Orleans, Baton Rouge, Houma, Lafayette, Monroe, and Hammond/Slidell regions. The New Orleans region had the highest number of new diagnoses, 192, which was more than triple the number of cases in 2012. This rise has largely been observed among men who have sex with men (MSM). More than half of all P&S syphilis cases diagnosed in the New Orleans region in 2014 were co-infected with HIV.

Some successes have also been achieved: a 58% decrease in the number of cases in Lake Charles region, a 41% decrease in the Alexandria region, and an 18% decrease in the Shreveport region. Despite the decrease in the Shreveport region, it still ranks second for the total number of cases in Louisiana in 2014 with 102 cases.

The STD/HIV Program regularly reports and publishes data at websites www.std.dhh.louisiana.gov and www.HIV411.org. For more information, please contact Mohammad Rahman at (504) 568-7474 or email mohammad.rahman@la.gov.

Table: Communicable Disease Surveillance, Incidence by Region and Time Period, January-February, 2015

DISEASE	HEALTH REGION									TIME PERIOD					
	1	2	3	4	5	6	7	8	9	Jan-Feb*	Jan-Feb	Jan-Dec	Jan-Dec	Jan-Dec	
	2015	2014	2015	2014	2015	2014	2015	2014	2015	Cum	Cum	Cum	Cum	%	
Vaccine-preventable															
Hepatitis B	Cases	0	2	0	1	0	0	0	1	4	8	13	8	13	-38.5
	Rate ¹	0	0.4	0	0.2	0	0	0	0.3	1.0	0.2	0.3	0.2	0.3	NA*
Measles	Cases	0	0	0	0	0	0	0	0	0	0	0	0	0	NA*
Mumps	Cases	0	0	0	0	0	0	0	0	0	0	0	0	0	NA*
Rubella	Cases	0	0	0	0	0	0	0	0	0	0	0	0	0	NA*
Pertussis	Cases	1	5	1	0	0	0	1	0	2	10	16	10	16	-37.5
Sexually-transmitted															
HIV/AIDS	Cases ²	78	42	7	10	5	8	23	10	8	192	223	192	223	-13.9
	Rate ¹	9.3	6.3	1.7	1.7	1.7	2.6	4.2	2.8	1.5	4.2	4.9	4.2	4.9	NA*
Chlamydia	Cases ^{1,3}	516	275	150	252	75	94	248	214	155	1,979	3,616	1,979	3,616	-45.3
	Rate ¹	58.6	40.7	37.1	42.3	25.4	30.4	45.1	60.0	27.7	42.8	78.2	42.8	78.2	NA*
Gonorrhea	Cases ^{1,3}	184	110	47	102	26	31	83	66	37	686	1,048	686	1,048	-34.5
	Rate ¹	21.2	16.4	11.6	17.2	8.8	10.0	15.1	18.5	6.7	14.9	22.7	14.9	22.7	NA*
Syphilis (P&S)	Cases ^{1,3}	14	13	2	5	2	4	8	6	1	55	71	55	71	-22.5
	Rate ¹	1.6	1.9	0.5	0.8	0.7	1.3	1.5	1.7	0.2	1.2	1.5	1.2	1.5	NA*
Enteric															
Campylobacter	Cases	4	0	2	3	4	1	1	1	3	19	19	19	13	46.2
Hepatitis A	Cases	0	0	0	1	0	0	0	0	0	1	2	1	2	NA*
	Rate ¹	0	0	0	0.2	0	0	0	0	0	0	0	0	0	NA*
Salmonella	Cases	8	9	4	10	1	4	13	8	9	66	87	66	87	-24.1
	Rate ¹	0.8	1.6	1.1	1.9	0.4	1.3	2.6	2.3	2.3	1.5	2.0	1.5	2.0	NA*
Shigella	Cases	2	1	1	2	2	0	2	5	2	17	34	17	34	-50.0
	Rate ¹	0.2	0.2	0.3	0.4	0.7	0	0.4	1.4	0.5	0.4	0.8	0.4	0.8	NA*
Vibrio, cholera	Cases	0	0	0	0	0	0	0	0	0	0	0	0	0	NA*
Vibrio, other	Cases	1	0	0	2	0	0	0	0	0	3	0	3	3	NA*
Other															
<i>H. influenzae (other)</i>	Cases	1	1	1	0	2	0	0	0	0	5	12	5	12	-58.3
<i>N. Meningitidis</i>	Cases	0	0	0	0	0	0	0	0	2	2	3	2	3	NA*

¹ = Cases Per 100,000 Population.

² = These totals reflect people with HIV infection whose status was first detected during the specified time period. This includes people who were diagnosed with AIDS at the time HIV first was detected. Because of delays in reporting HIV/AIDS cases, the number of persons reported is a minimal estimate. Data should be considered provisional.

³ = Preliminary data.

* = Percent change not calculated for rates or count differences less than 5.

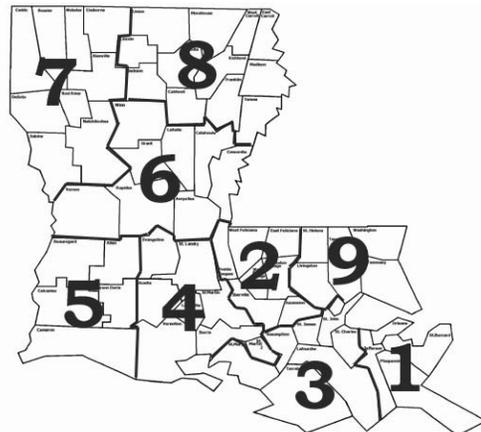
Table 2. Diseases of Low Frequency, January-February, 2015

Disease	Total to Date
Legionellosis	6
Lyme Disease	0
Malaria	1
Rabies, animal	1
Varicella	14

Table 3. Animal Rabies, January-February, 2015

Parish	No. Cases	Species
Calcasieu	1	Skunk

Figure: Department of Health and Hospitals Regional Map



Sanitary Code - State of Louisiana Part II - The Control of Disease

LAC 51:II.105: The following diseases/conditions are hereby declared reportable with reporting requirements by Class:

Class A Diseases/Conditions - Reporting Required Within 24 Hours

Diseases of major public health concern because of the severity of disease and potential for epidemic spread-report by telephone immediately upon recognition that a case, a suspected case, or a positive laboratory result is known; in addition, all cases of rare or exotic communicable diseases, unexplained death, unusual cluster of disease and all outbreaks shall be reported.

Acute Flaccid Paralysis	Fish/Shellfish Poisoning (Domoic Acid, neurotoxic, Ciguatera, paralytic, Scombroid)	Plague (<i>Yersinia pestis</i>)	Smallpox
Anthrax	Foodborne Infection	Poliomyelitis (paralytic & non-paralytic)	<i>Staphylococcus aureus</i> , Vancomycin Intermediate or Resistant (VISA/VRSA)
Avian or novel strain Influenza A (initial detection)	<i>Haemophilus influenzae</i> (invasive disease)	Q Fever (<i>Coxiella burnetii</i>)	Staphylococcal Enterotoxin B (SEB)
Botulism	Influenza-associated Mortality	Rabies (animal and human)	Pulmonary Poisoning
Brucellosis	Measles (Rubeola imported or indigenous)	Ricin Poisoning	Tularemia (<i>Francisella tularensis</i>)
Cholera	<i>Neisseria meningitidis</i> (invasive infection)	Rubella (congenital syndrome)	Viral Hemorrhagic Fever
<i>Clostridium perfringens</i> (foodborne infection)	Outbreaks of Any Infectious Disease	Rubella (German Measles)	Yellow Fever
Diphtheria	Pertussis	Severe Acute Respiratory Syndrome-associated Coronavirus (SARS-CoV)	

Class B Diseases/Conditions - Reporting Required Within 1 Business Day

Diseases of public health concern needing timely response because of potential of epidemic spread-report by the end of the next business day after the existence of a case, a suspected case, or a positive laboratory result is known.

Amoeba (free living infection: <i>Acanthamoeba</i> , <i>Naegleria</i> , <i>Balamuthia</i> , others)	Chancroid	Hepatitis B (perinatal infection)	Mumps
Anaplasmosis	Dengue Fever	Hepatitis E	Salmonellosis
Arthropod-Borne Neuroinvasive Disease (West Nile, St. Louis, California, Eastern Equine, Western Equine, others)	<i>Escherichia coli</i> , Shig-toxin producing (STEC), including <i>E. coli</i> 0157:H7	Herpes (neonatal)	Shigellosis
Aseptic Meningitis	Granuloma Inguinale	Human Immunodeficiency Virus ² [(HIV), infection in pregnancy]	Syphilis ¹
Babesiosis	Hantavirus (infection or Pulmonary Syndrome)	Human Immunodeficiency Virus ² [(HIV), perinatal exposure]	Tetanus
Chagas Disease	Hemolytic-Uremic Syndrome	Legionellosis (acute disease)	Tuberculosis ³ (<i>M. tuberculosis</i> , <i>M. bovis</i> , <i>M. africanum</i>)
	Hepatitis A (acute disease)	Malaria	Typhoid Fever
	Hepatitis B (acute illness and carriage in pregnancy)		

Class C Diseases/Conditions - Reporting Required Within 5 Business Days

Diseases of significant public health concern-report by the end of the workweek after the existence of a case, suspected case, or a positive laboratory result is known.

Acquired Immune Deficiency Syndrome ³ (AIDS)	Enterococcus, Vancomycin Resistant [(VRE), invasive disease]	Human T Lymphocyte Virus (HTLV I and II infection)	Staphylococcal Toxic Shock Syndrome
Anaplasma Phagocytophilum	Giardia	Leptospirosis	Streptococcal Disease, Group A (invasive disease)
Blastomycosis	Glanders	Listeria	Streptococcal Disease, Group B (invasive disease)
Campylobacteriosis	Gonorrhea ¹ (genital, oral, ophthalmic, pelvic inflammatory disease, rectal)	Lyme Disease	Streptococcal Toxic Shock Syndrome
Chlamydial infection ¹	Hansen's Disease (leprosy)	Lymphogranuloma Venereum ¹	<i>Streptococcus pneumoniae</i> , invasive disease
Coccidioidomycosis	Hepatitis B (carriage, other than in pregnancy)	Melioidosis (<i>Burkholderia pseudomallei</i>)	Transmissible Spongiform Encephalopathies (Creutzfeldt-Jacob Disease & variants)
Cryptococcosis	Hepatitis C (acute illness)	Meningitis, Eosinophilic	Trichinosis
Cryptosporidiosis	Hepatitis C (past or present infection)	Nipah Virus Infection	Varicella (chickenpox)
Cyclosporiasis	Human Immunodeficiency Virus ² (HIV (infection other than as in Class B)	Psittacosis	Vibrio Infections (other than cholera)
Ehrlichiosis (human granulocytic and monocytic, <i>Ehrlichia chaffeensis</i>)		Spotted Fevers [Rickettsia species including Rocky Mountain Spotted Fever (RMSF)]	Yersiniosis
		<i>Staphylococcus aureus</i> , (MRSA) invasive infection	

Class D Diseases/Conditions - Reporting Required Within 5 Business Days

Cancer	Hemophilia ⁴	Severe Undernutrition (severe anemia, failure to thrive)
Carbon Monoxide Exposure and/or Poisoning ⁵	Lead Exposure and/or Poisoning (children) ⁴ (adults) ⁵	Sickle Cell Disease ⁴ (newborns)
Complications of Abortion	Pesticide-Related Illness or Injury (all ages) ⁵	Spinal Cord Injury
Congenital Hypothyroidism ⁴	Phenylketonuria ⁴	Sudden Infant Death Syndrome (SIDS)
Galactosemia ⁴	Reye's Syndrome	
Heavy Metal (Arsenic, Cadmium, Mercury) Exposure and/or Poisoning (all ages) ⁵	Severe Traumatic Head Injury	

Case reports not requiring special reporting instructions (see below) can be reported by mail or facsimile on Confidential Disease Report forms (2430), facsimile (504) 568-8290, telephone (504) 568-8313, or 1-800-256-2748 for forms and instructions.

¹Report on STD-43 form. Report cases of syphilis with active lesions by telephone, within one business day, to (504) 568-8374.

²Report to the Louisiana HIV/AIDS Program: Visit www.hiv.dhh.louisiana.gov or call 504-568-7474 for regional contact information.

³Report on CDC72.5 (f.5.2431) card

⁴Report to the Louisiana Genetic Diseases Program and Louisiana Childhood Lead Poisoning Prevention Programs: www.genetics.dhh.louisiana.gov or call (504) 568-8254.

⁵Report to the Section of Environmental Epidemiology and Toxicology: www.seet.dhh.louisiana.gov or call 1-888-293-7020