Louisiana Morbidity Report

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November - December 2011 **Volume 22 Number 6**

Elizabethkingia meningoseptica Louisiana, 2011

Caroline E. Holsinger, MPH

In June 2011, the Louisiana Office of Public Health, Infectious Disease Epidemiology Section received notification from a local hospital of a case of *Elizabethkingia meningoseptica*, previously known as *Flavobacterium meningosepticum* and *Bethkingia meningosepticum. E. meningoseptica* is a Gram-negative bacillus that is widely distributed in the sea, lakes, ponds, streams, rivers and in the soil. The appearance of small, oxidate-positive, light yellow-pigmented colonies on blood agar media after 24 hours incubation suggests evidence of this bacterial infection.

E. meningoseptica is not typically considered a human pathogen but it is capable of causing a variety of nosocomial infections in cerebrospinal fluid, blood, skin, respiratory system and other body sites. While *E. meningoseptica* is rarely isolated from clinical specimens, there have been a number of outbreaks associated with this bacterium causing meningitis in newborns - linked to environmental sources, mainly water-containing equipment. High mortality rates and neurological sequelae in surviving neonates often result from these outbreaks. Rarely, it is the cause of nosocomial pneumonia, endocarditis, postoperative bacteremia and meningitis in immunocompomised individuals. *E. meningoseptica* is typically resistant to antibiotics that effectively treat other Gram-negative bacterial infections; therefore, the current recommendations are to use ciprofloxacin, minocycline, trimethoprim-sulfamethoxaxole, rifampin and novobiocin, which are most often

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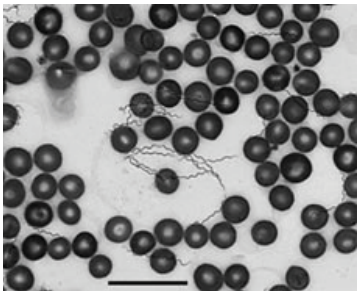
Tick-Borne Relapsing Fever Infection - Louisiana, 2011

Christine Scott-Waldron, MSPH

In August 2011, the Louisiana Office of Public Health, Infectious Disease Epidemiology Section received notification from the Centers for Disease Control and Prevention (CDC) Division of Vector-Borne Diseases, Bacterial Diseases Branch that a sample from a male patient in his early 70s seen at a Region 2* hospital was confirmed for recent infection with tick-borne relapsing fever (TBRF). TBRF is caused by a spirochete type *Borrelia* bacteria transmitted by *Ornithodoros* spp. soft-bodied ticks endemic in many tropical and subtropical regions across the world (Figures 1 and 2).

Figure 1: *Ornithodoros hermsi; Photo - CDC*

Figure 2: *Ornithodoros hermsi Spirochetes; Photo - CDC*



TBRF is not a reportable disease in Louisiana but it is endemic in many states and reportable in 11 western states. The first documented case occurred in 1905 among a New York resident whom traveled to Texas. Although many states had reported cases during the first half of the 20th century, TBRF was not recognized as endemic in western states until 1939 when the *Borrelia* bacteria were isolated in ticks.

Louse-borne relapsing fever, sometimes confused with TBRF, is caused by *Borrelia recurrentis* with humans as the only reservoir for the body louse *Pediculus humanus*; it has been associated with poor living conditions. TBRF can be caused by 14 species of *Borrelia* bacteria. With high vector specificity, each *Borrelia* species is associated with only one species of *Ornithodoros* tick acting as a vector. Spirochetes are are Gram-negative helical or cork-screw shaped bacteria that are ingested by a soft tick during a blood meal.

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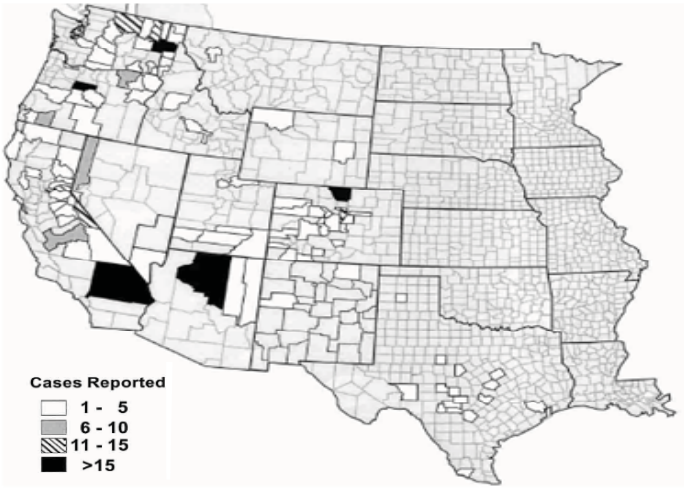
Tick Borne Relapsing Fever ... Continued from Page 1)

They gradually spread throughout the arthropod's body including the salivary glands. The *Borrelia* are maintained in zoonotic cycles circulating between rodents and ticks. The primary reservoirs are rodents, such as deer mice, chipmunks, squirrels and rats. Humans are considered accidental hosts, becoming infected when the infected ticks feed on hosts in order to lay eggs.

Soft ticks, behaving differently from the hard ticks (*Ixodidae* species) which transmit Lyme disease, hide in cracks and crevices in houses or animal burrows during daylight hours, and emerge at night to feed on hosts. Most persons do not recall any arthropod bites since the ticks feed less than 15 to 30 minutes during the night and their bites are painless. Spirochetes can be transstadially transmitted by ticks from the nymph stage to adult, therefore infecting the tick for life; but also rarely are capable of transovarial transmission by ticks (vertically by succeeding generations). These *Ornithodoros* ticks also can live many years between blood meals.

The specific *Borrelia* identified was *Borrelia hermsii* which is found in the tick *Ornithodoros hermsi* and commonly found in fallen logs, log cabins, in coniferous forests and mountainous areas where it feeds on rodents. Multiple outbreaks and state specific case studies of TBRF associated with *Borrelia hermsii* have been reported since 1968 in Washington, Idaho, Montana, Oregon, California, Nevada, Colorado and northern parts of Arizona and New Mexico (Figure 2).

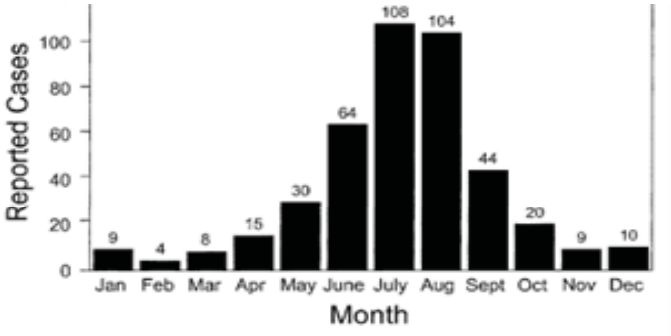
Figure 2: Tick borne relapsing fever geographic distribution by county of exposure - United States, 1977 - January, 2000



N = 416 cases in 113 counties; 32 of these cases had multiple exposures (not included); Am. J.Trop. Med. Hyg,,66(6), 202 p755

The largest outbreak of relapsing fever in North America among 62 persons was attributed to infection with this bacterium in 1973. All persons slept overnight in rustic cabins at the North Rim, Grand Canyon National Park in Arizona. From 1977 to 2000, 450 cases of TBRF were reported to the CDC with sporadic cases reported from states including Idaho, Kansas, Nebraska, Oklahoma, Texas, Utah and Wyoming. While the cases occurred during all months of the year, 70% were reported from June through September. The cases included 52% male and age ranged from birth to 81 years with a median age of 35 years. (Figure 3).

Figure 3: Tick borne relapsing fever cases, by month of onset United States, 1977 - January, 2000



N = 425 cases; 25 other cases had an unknown onset month. Am. J.Trop. Med. Hyg,,66(6), 202 p754

TBRF caused by *Borrelia hermsii* causes recurring episodes of fever, but may also include headache, myalgia, arthralgia, chills, nausea, vomiting and abdominal pain. When the fever reaches high temperatures, persons can develop confusion, delirium and increased metabolic rates (heart and breathing rates). Uncommon manifestations include dry cough, iritis, acute respiratory distress syndrome (ARDS), uveitis, cranial nerve palsy, and other focal neurologic deficits, myocarditis and spleen rupture.

With a rather large range, the incubation period varies from four to 18 days. Borrelia species vary their presentation of different sequential outer surface antigens to evade the immune system. This causes repeated stimulation of the immune system by each new antigen resulting in repeated febrile illness by the patient. Typically the first episode lasts three to seven days. The average time between the first episode and the first relapse is seven days but can be up to two weeks with mild or no symptoms. Patients may experience multiple episodes of febrile illness until antibiotic treatment. The average number of episodes with relapsing symptoms is three times but has been reported up to ten episodes. Once appropriate antibiotics have been given, most patients feel better within a few days. Jarisch-Herxheimer reactions defined as acute exacerbation of the patient's symptoms have been reported in 39% of the cases within the first four hours after antibiotic treatment is started. Mortality rates vary by geographical region but range

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from 0% to 8%.

In mid-June 2011, the Louisiana patient became ill with high fever, dizziness, nausea and weakness; after a presyncopal episode, he presented to a local emergency department. The patient was discharged with heat exhaustion, altitude sickness and thrombocytopenia (relative decrease of platelets in blood). Over the course of several weeks, symptoms continued while fluctuating in intensity including syncopal episodes along with fevers and shaking chills each night.

In early July 2011, the patient (with a past medical history of polymyalgia rheumatica and hypertension), consulted his rheumatologist and cardiologist. Significant laboratory findings revealed mild anemia, thrombocytopenia, low blood pressure and tachycardia (increased heart rate). Soon thereafter, he consulted his ophthalmologist with subjective fever (highest 102°F), malaise and double vision; he was diagnosed with pan uveitis. The next day after another syncopal episode, he presented to a Region 2 hospital with a three-week history of fevers, chills, recurrent syncope, increased leg swelling, weakness, anorexia and a 15 to 20 pound weight loss. Chest x-ray and CT scans were reported as normal. Numerous coiled organisms compatible with spirochetes were identified on a routine blood smear. The infectious disease physician contacted the Office of Public Health to send a serum sample to the CDC as the provider suspected a *Borrelia* infection. The sample was positive for enzyme-linked immunosorbant assays (Elisa) which measure antibody reactivity to *Borrelia hermsii* whole cell sonicate (WCS) antigens. The sample was confirmed as reactive with IgM and IgG antibodies by Western immunoblot.

Further investigation revealed that in late May or early June, the Louisiana resident visited his property in south-central Colorado that had a spring-fed pond, seasonal cabin-type dwelling, cabin-like shed and 1960s mobile home. The patient reported that the trailer had holes in the floor large enough for feral cats to enter/exit the vehicle to control rodents and squirrel problems. He reported exposure to feral cat and rodent feces while cleaning out the trailer prior to dismantling the dilapidated structure. The patient reported no rash or tick bites. He was treated with doxycycline; within two days his condition improved and he was discharged from the hospital. Within two weeks all symptoms resolved.

The signs and symptoms of this case were similar to previous clinical descriptions of the disease in the geographical area which this case traveled. It should be noted that TBRF caused by *Borrelia hermsii* are not found among Louisiana residents without a travel history to the specific geographic area of the vector *Ornithodoros hermsi*. A diagnosis of TBRF should be suspected in patients who resided in, or vacation in Washington, California, Colorado and northern parts of Arizona and New Mexico four to 18 days prior to seeking treatment for recurrent febrile illness. Spirochetes are not seen in Wright-Giemsa stained blood smears or dark field microscopy for other spirochete infections. The observation of spirochetes in a peripheral blood smear collected during a febrile episode is considered diagnostic of TBRF.

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West Nile Virus Infections - Region 5* - Louisiana, 2011

Christine Scott-Waldron, MSPH; Caroline Holsinger, MPH; Scott Willis, MS

West Nile Virus (WNV) infection is naturally spread from bird to bird by mosquito bites. Occasionally humans or other mammals are bitten by an infective mosquito and they also become infected. A majority of persons, 80% whom are infected, have no symptoms or may experience mild illness before fully recovering. A small proportion develop West Nile Fever (10% to 18%) presenting with febrile, influenza-like illness, with an abrupt onset of moderate to high fever, headache, sore throat, backache, myalgia, arthralgia, fatigue, a mild transient rash and lymphadenopathy. A minority of infected people experience acute aseptic meningitis or encephalitis (0.2% below age 65 years, 2% above age 65). These cases are classified as WNV neuroinvasive disease (NID). Symptoms generally begin three to14 days following the bite of an infected mosquito and last two to six days before self-resolving.

In 2011, the Louisiana Office of Public Health, Infectious Disease Epidemiology Section received notification of two WNV neuroinvasive disease (NID) cases in Calcasieu Parish. Human cases had not been reported among residents in this parish since 2008 (Table).

Table: West Nile Virus Neuroinvasive Disease - Calcasieu Parish - Louisiana, 2002-2010

Parish	Reported Infections 2011				Previously Reported NID Cases								
	Incidence	NID	Fever	Asymptomatic	2002	2003	2004	2005	2006	2007	2008	2009	2010
Calcasieu	1.1	2	0	0	8	1	3	2	5	0	1	0	0

According to the Calcasieu Mosquito Abatement District (MAD), drought conditions kept mosquito populations below average for most of the season which ran from May to October 2011. West Nile virus activity, monitored by the surveillance of daily mosquito pool infection rates, weekly seroconversion of sentinel chicken flocks and reports of disease among horses and humans, was at an all time

* Map of Regions on page 7

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An Analysis of Low Back Pain Disorders in Workers Louisiana, 1998-2009

Cassandra Davis, MPH; Michelle Lackovic, MPH; Chelsea Singleton, MPH

Background

Low Back Pain (LBP) disorders are one of the most commonly occurring musculoskeletal injuries in Louisiana; they are also one of the leading occupationally related conditions and are the most frequent reason for filing a workers' compensation claim. Work-related LBP disorders that require surgery are of public health importance, as this process can be invasive, requires rehabilitation and has an economical burden. The Louisiana Department of Health and Hospitals recently added LBP disorders to the list of occupational health indicators routinely tracked. This article examines surgical LBP disorders among the Louisiana workforce.

LBP disorders can be defined as chronic or acute pain of the lumbosacral, buttock or upper leg region occasionally with pain radiating from the back region down one or both legs. They include spinal disc problems such as hernias and spondylolisthesis, and muscle and soft tissue injuries. Recurrence of low back disorders is very high; once injured, the back is susceptible to re-injury, particularly if risk factors are not corrected. Factors due to poor ergonomics in the workplace contribute to low back disorders.

Several epidemiologic studies have revealed strong evidence of a positive association between LBP, heavy physical work and whole body vibration. Heavy physical work, including but not limited to jobs such as construction laborers, nurses and maids, has been defined as work that has high energy demands, heavy tiring tasks, manual materials handling tasks (lifting), or dynamic, intense work requiring some measure of physical strength. Whole body vibrations (forceful movements) affecting truck/bus drivers, helicopter pilots, crane or earth movers, refer to mechanical energy oscillations which are transferred to the body as a whole, usually through a supporting system such as a seat or platform. These two main risk factors impose large compressive and/or stretching forces on the spine.

Although surgeries are rarely done to treat LBP disorders, they can be performed for people with chronic pain, herniated discs, spinal stenosis or spondolythesis for which other treatment options have failed, and for people who have degenerative disc disease.

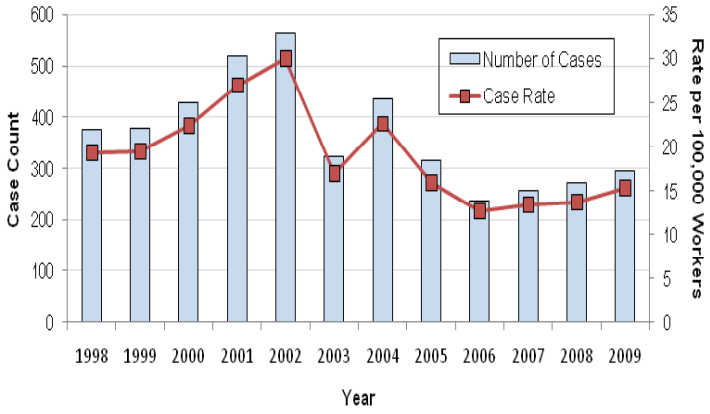
Methods/Results

Louisiana Hospital Inpatient Discharge Data (LAHIDD) from the years 1998-2009 served as the data source for this analysis. Cases were selected if they were Louisiana residents at least 16 years old who were hospitalized with a relevant LBP diagnosis and LBP surgery code. Only work-related hospitalizations were included. Payment by workers' compensation was used an indicator of work-relatedness.

Surgical hospitalizations accounted for 83% of all work-related LBP disorder hospitalizations among Louisiana workers (N=5,267). Linear regression was used to determine rate trends and a two tailed t-test to compare surgical rates stratified by gender. A p-value of 0.05 is considered statistically significant. Data was analyzed using SAS version 9.2.

From 1998 to 2009, there were 4,383 total surgical hospitalizations, or approximately 365 surgical cases in Louisiana each year. The surgical rate showed a significant decrease over the study period with a mean annual rate of 19.05 per 100,000 employed persons ranging from a high of 30.0 in 2002 to a low of 15.3 in 2006 (p=0.036) (Figure 1).

Figure 1: Case count and crude case rate of lower back disorder surgical hospitalizations - Louisiana, 1998-2009



The most common LBP disorder was herniated discs (65% of all diagnosis). Herniated discs occur when the hard outer coating of the discs that cushion the bones of the spine are damaged, allowing the discs' jelly-like center to leak and irritate nearby nerves (Table 1).

Table 1: Diagnosis categories - Louisiana, 1998-2009

Diagnostic Categories	N	Percent
Herniated Disc	2845	64.9
Probable Degenerative Changes	767	17.5
Spinal Stenosis	423	9.7
Possible Instability	241	5.5
Miscellaneous	107	2.4
Total	4383	100

'Fusions', a surgical technique to join two or more vertebrae to eliminate pain caused by abnormal motion, and 'discectomies', the surgical removal of a herniated disc that presses on a nerve root or the spinal cord, accounted for approximately 49% and 43% of all procedures, respectively (Table 2).

Table 2: Procedure categories - Louisiana, 1998-2009

Procedure Categories	N	Percent
Fusion	2126	48.5
Discectomy	1898	43.3
Laminectomy	322	7.3
Other	37	0.8
Total	4383	100

The mean age of surgical cases was 43 years (SD=10.1 range 19-79) with 65% of procedures occurring among individuals aged 35 to 54 years. Men had a higher rate of LBP disorders surgical hospitalizations than women (27.6 per 100,000 employed persons vs. 9.10 per 100,000 employed persons, respectively). The mean length of stay in the hospital was approximately three days (SD=2.09 range 0-31). However, women had a significantly higher mean length of stay than men (3.1 days versus 2.8 days, respectively) (p=0.0035). The mean cost of LBP disorders was $37,731 with women having a significantly higher cost burden than men ($41,099 versus $36,719, respectively) (p=0.002).

Discussion

Results indicate that the highest percentage of Louisiana's workforce that had surgeries for LBP disorders were middle-aged, and that herniated discs dominated the list of those disorders. These results are consistent with the literature that herniated discs are more common among middle-aged people as over time, these discs lose water content, become narrower and less flexible. Age, compounded with repetitive, incorrect lifting techniques and other strenuous occupational activities, exacerbate the natural degeneration of these discs. The elevated surgical LBP disorder rates among men compared with women may reflect differences in occupational patterns in Louisiana.

LBP disorders have high costs to society and the economic burden is primarily related to costs of losses in productivity. In 2008, the United States spent $7.4 billion of direct and indirect costs (loss wages and productivity) related to back injuries and low back pain accounted for 818,000 disability-adjusted life years lost annually.

Several interventions have been developed to help prevent LBP disorders among workers in high risk occupations. For example, nurses and other healthcare workers experience serious back injuries during the handling and transferring of patients; therefore the use of mechanical lifting devices and repositioning aids can be effective. Studies have demonstrated that facilities implementing these interventions have shown a reduction of lifting-related injuries, days away from work and workers' compensation claims. In construction, ergonomic solutions such as the reduction of the weight, size and shape of the load have been introduced. Using lifting devices and having job rotations are other methods to reduce the risk of low back injury. Interventions to address whole body vibrations are limited due to the nature of the machine. However, recommendations about implementing vibration limits that require oscillation acceleration of no more than 0.3-0.45 m/s² have been made. Oscillation speed can be decreased by jointly engineering the suspension of the vehicle's axles and the drivers' and passengers' seats.

Conclusion

Although hospitalization data are useful for describing occupational injuries and illnesses, there are limitations. Occupation and industry information is not recorded on hospital data therefore proxy variables, such as patient's source of payment, are used to capture work-relatedness. In addition, not all work-related surgeries are captured in this analysis if sources of payment were used other than workers' compensation. Therefore, these results underestimate the total LBP disorder burden. In addition, national rates for comparison with Louisiana were not available. Low back pain disorders afflict many workers and can cause lifelong pain and disability. Changing workplace practices known to cause LBP disorders is an important first step in improving workers' safety and reducing these debilitating musculoskeletal injuries. More emphasis should be placed on implementing effective solutions into workplace wellness programs, such as broader education/ training approaches that encompass anatomy, biomechanics, lifting and materials handling techniques, and recognition and correction of workplace risks. A comprehensive approach will focus not only on the physical risk factors, but the individual and psychosocial factors as well. Health departments can assist in efforts to improve the health of workers by tracking and evaluating LBP disorders to identify high risk populations, occupations and industries.

For more information, please contact Ms. Lackovic at (504) 568-8160 or email to *michelle.lackovic@la.gov*. For references and the full text of the article please go to *http://new.dhh.louisiana.gov/assets/oph/Center-EH/envepi/occ_health/Low_Back_Pain_Article_9192011.pdf.*

Announcements

Updates: Infectious Disease Epidemiology (IDES) Webpages
http://www.infectiousdisease.dhh.louisiana.gov

ANNUAL REPORTS: Amebiasis; Blastomycosis; Cyclosporiasis; Disease Listing by Year 1990-2010; Hepatitis A; Hepatitis B; Hepatitis C; Histoplasmosis; Influenza; Listeria; Meningococcal Infections; Respiratory Syncytial Virus (RSV); Rubella; Summary of Reportable Diseases 2009-2011; Tetanus; Trichinosis

EPIDEMIOLOGY MANUAL: Amebiasis; Free-living Ameba Case Report Form (CDC); Hepatitis A; Ice Machines and Ice; Ice Machine Sanitary Care Pamphlet; Scabies; Tick-Borne Relapsing Fever-Public Information; Water Bacteria

HAI: 2011 NHSN Training Binder; Fall, 2011 Newsletter; Long Term Acute Care Hospitals-Transmission; LTACH HAI Source; LTACH Isolations, Precautions; LTACH Elderly Common Infections; LTACH Elderly Risk Factors; LTACH Infection Control Program; LTACH Surveillance and Definitions; LTACH Norvirus Summary; LTACH Norovirus Manual; LTCF MRSA Guidelines; LTACH UTI Prevention; CAUTI-HICPAC Guideline for Prevention-2009; LTACH Antimicrobial Use-SHEA 2000; MDRO Guideline 2006

INFLUENZA: Crisis Standards of Care Summary (CSOC); Limited Human-to-Human Transmission of Novel Influenza A (H3N2) Virus - Iowa, November 2011 (MMWR-CDC); Weekly Report

LOUISIANA EARLY EVENT DETECTION SYSTEM: LEEDS Explanation and Purpose

SCHOOL RESOURCES: School Manual

VETERINARY: Compendium of Animal Rabies Prevention and Control-2011 (CDC); Rabies Form (DHH); Use of a Reduced (4-Dose) Vaccine Schedule for Postexposure Prophylaxis to Prevent Human Rabies-ACIP

WEST NILE VIRUS: Health Education Materials; Louisiana Arbovirus Surveillance Summary 2011; Repellent and Pesticides; Safe Handling Guidelines for Dead Birds

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used to treat Gram-positive bacteria.

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West Nile Virus ... Continued from Page 3)

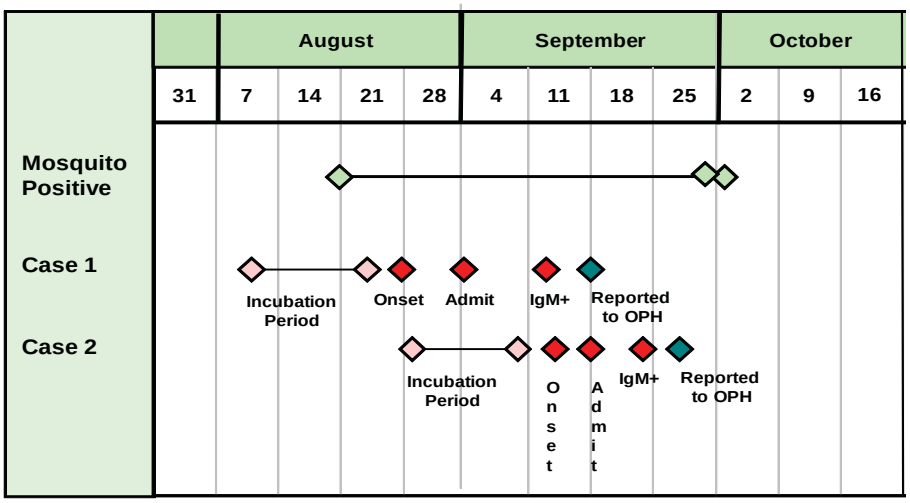
low for the year.

By August 18, 2011, the Calcasieu MAD reported only three positive mosquito pools, which were all found in Lake Charles. In mid-September, the first human WNV NID case was reported by a hospital in Lake Charles. Within the ensuing two weeks, a second human WNV NID case was reported from the same residential area in Lake Charles. The NID cases were only 3.5 miles from the first positive mosquito pool found on August 18, 2011. Calcasieu MAD reported that viral activity continued in this area after several aerial treatments and consistent ground ultra low volume (ULV) treatments. The last positive mosquito pool was identified on September 29th, two weeks after the first human case was reported.

Case 1 was a female 65 years or older who presented to a Region 5 hospital on August 31, 2011. She was admitted with a week-long history of subjective fevers and confusion which progressed to weakness and decreased responses to stimuli. It was reported by family members that she had been normal aside from persistent chronic disease conditions that existed prior to her hospital admission. On September 1, 2011, Case 1 underwent a lumbar puncture. It was determined several days later, that she was positive for WNV IgM antibodies in her cerebrospinal fluid. Within a few weeks from onset, Case 1 expired due to secondary causes of WNV.

Case 2 was a 15 to 29-year old female who presented to a Region 5 hospital with a three-day history of progressive headache, photophobia, and fever. Bacterial meningitis was ruled out but viral studies indicated that she was positive for WNV IgM antibodies in her cerebrospinal fluid. Case 2 resolved without any medical complications associated with the diagnosis of WNV. It is coincidental that these cases were infected so close temporally and geographically; due to the difference in dates for the incubation periods, the two cases could not have been infected at the same time (Figure).

Figure: West Nile Virus - Region 5
Louisiana, 2011



Although some years have a higher number of WNV reported cases, this case summary demonstrates the importance of daily routine surveillance of mosquito populations and infection rates. Even when mosquito populations are at low density, WNV is an important health concern. If persons are outside, they are at risk for WNV. Residents should take preventive measures to protect themselves from mosquito bites.

For more information, please call Ms Scott-Waldron at (504) 568-8301 or email to christine.scott-waldron@la.gov.

Infectious Diseases Field Epidemiology Training
Lake Charles, Louisiana - September 29, 2011

Table. Communicable Disease Surveillance, Incidence by Region and Time Period, September-October, 2011

DISEASE		HEALTH REGION 1	2	3	4	5	6	7	8	9	TIME PERIOD Sep-Oct 2011	Sep-Oct 2010	Jan-Dec Cum 2011	Jan-Dec Cum 2010	Jan-Dec % Chg*
Vaccine-preventable															
Hepatitis B	Cases	0	2	0	1	0	0	0	0	2	5	4	41	47	-12.8
	Rate[1]	0	0.4	0	0.2	0	0	0	0	0.5	0.1	0.1	1.0	1.1	NA*
Measles		0	0	0	0	0	0	0	0	0	0	0	0	0	NA*
Mumps		0	0	0	0	0	0	0	0	0	0	1	0	6	-100.0
Rubella		0	0	0	0	0	0	0	0	0	0	0	0	0	NA*
Pertussis		1	0	0	0	0	0	0	0	0	1	5	20	26	-23.1
Sexually-transmitted															
HIV/AIDS	Cases[2]	17	11	5	9	8	3	7	3	6	69	192	1032	971	6.3
	Rate[1]	1.7	1.9	1.3	1.7	2.9	1.0	1.4	0.9	1.4	1.6	4.4	23.6	22.2	NA*
Chlamydia	Cases[3]	1059	162	110	211	125	116	370	147	138	2438	5515	18515	22509	-17.7
	Rate[1]	131.2	25.2	27.9	36.5	43.9	38.6	69.3	42.4	26.5	55.3	125.0	419.8	510.3	NA*
Gonorrhea	Cases[3]	336	53	23	79	21	40	195	76	36	859	1607	5430	6856	-20.8
	Rate[1]	41.6	8.2	5.8	13.7	7.4	13.3	36.5	21.9	6.9	19.5	36.4	123.1	155.4	NA*
Syphilis (P&S)	Cases[3]	14	0	3	3	1	2	33	3	3	62	138	335	481	-30.4
	Rate[1]	1.7	0.0	0.8	0.5	0.4	0.7	6.2	0.9	0.6	1.4	3.1	7.6	10.9	NA*
Enteric															
Campylobacter	Cases	1	4	1	0	0	4	1	1	2	14	43	159	195	-18.5
Hepatitis A	Cases	0	0	0	0	0	0	0	0	0	0	5	3	10	-70.0
	Rate[1]	0	0	0	0	0	0	0	0	0	0	0.1	0.1	0.2	NA*
Salmonella	Cases	11	36	30	41	20	13	13	37	38	239	354	1151	1183	-2.7
	Rate[1]	1.1	6.3	8.0	7.9	7.5	4.3	2.6	10.5	9.9	5.5	8.2	26.7	27.4	NA*
Shigella	Cases	14	8	7	7	2	11	2	2	3	56	69	370	249	48.6
	Rate[1]	1.3	1.41	1.857	1.4	0.7	3.6	0.4	0.57	0.8	1.3	1.6	8.6	5.8	NA*
Vibrio cholera	Cases	0	0	0	0	0	0	0	0	0	0	0	0	0	NA*
Vibrio, other	Cases	2	0	0	2	0	0	0	0	1	5	7	47	26	80.8
Other															
H. influenzae (other)		2	2	0	0	1	0	0	0	0	5	7	45	28	60.7
N. Meningitidis		1	0	0	0	0	0	0	0	0	1	0	10	12	NA*

[1] = Cases Per 100,000.

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

[3] = Prelminary data.

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

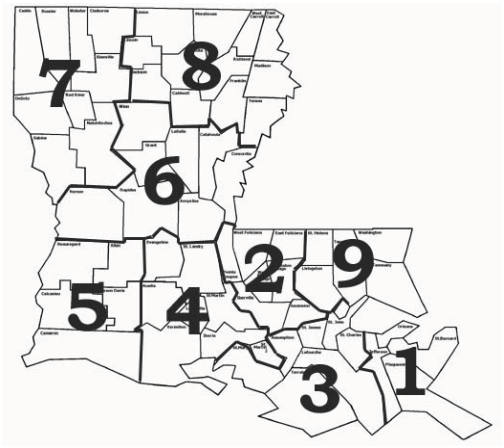
Table 2. Diseases of Low Frequency, January-December, 2011

Disease	Total to Date
Legionellosis	16
Lyme Disease	1
Malaria	2
Rabies, animal	5
Varicella	80

Table 3. Animal Rabies, September - October, 2011

Parish	No. Cases	Species
Bossier	1	Skunk
Caddo	1	Bat
E. Baton Rouge	1	Bat

Figure: Department of Health and Hospitals Regional Map



DEPARTMENT OF HEALTH AND HOSPITALS
OFFICE OF PUBLIC HEALTH
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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.

- Anthrax
- Avian Influenza
- Botulism
- Brucellosis
- Cholera
- Diphtheria
- *Haemophilus influenzae* (invasive disease)
- Influenza-associated Mortality
- Measles (rubeola)
- Neisseria meningitidis (invasive disease)
- Plague
- Poliomyelitis, paralytic
- Q Fever (*Coxiella burnetii)*
- Rabies (animal and human)
- Rubella (congenital syndrome)
- Rubella (German measles)
- Severe Acute Respiratory Syndrome-associated Coronavirus (SARS-CoV)
- Smallpox
- *Staphylococcus Aureus*, Vancomycin Intermediate or Resistant (VISA/VRSA)
- Tularemia
- Viral Hemorrhagic Fever
- Yellow Fever

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.

- Arthropod-Borne Neuroinvasive Disease and other infections (including West Nile, St. Louis, California, Eastern Equine, Western Equine and others)
- Aseptic meningitis
- Chancroid[1]
- *Escherichia coli*, Shig-toxin producing (STEC), including *E. coli* 0157:H7
- Hantavirus Pulmonary Syndrome
- Hemolytic-Uremic Syndrome
- Hepatitis A (acute disease)
- Hepatitis B (acute illness & carriage in pregnancy)
- Hepatitis B (perinatal infection)
- Hepatitis E
- Herpes (neonatal)
- Human Immunodeficiency Virus [(HIV), infection in pregnancy][2]
- Human Immunodeficiency Virus [(HIV), perinatal exposure][2]
- Legionellosis (acute disease)
- Malaria
- Mumps
- Pertussis
- Salmonellosis
- Shigellosis
- Syphilis[1]
- Tetanus
- Tuberculosis[2]
- Typhoid Fever

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 (AIDS)[3]
- Blastomycosis
- Campylobacteriosis
- Chlamydial infection[1]
- Coccidioidomycosis
- Cryptococcosis
- Cryptosporidiosis
- Cyclosporiasis
- Dengue
- Ehrlichiosis
- Enterococcus, Vancomycin Resistant [(VRE), invasive disease]
- Giardia
- Gonorrhea[1]
- Hansen Disease (leprosy)
- Hepatitis B (carriage, other than in pregnancy)
- Hepatitis C (acute illness)
- Hepatitis C (past or present infection)
- Human Immunodeficiency Virus [(HIV syndrome infection)][2]
- Listeria
- Lyme Disease
- Lymphogranuloma Venereum[1]
- Psittacosis
- Rocky Mountain Spotted Fever (RMSF)
- *Staphylococcus aureus*, Methicillin/Oxacillin Resistant[(MRSA), invasive infection]
- Staphylococcal Toxic Shock Syndrom
- Streptococcal disease, Group A (invasive disease)
- Streptococcal disease, Group B (invasive disease)
- Streptococcal Toxic Shock Syndrome
- *Streptococcus pneumoniae*, penicillin resistant [DRSP]), invasive infection]
- *Streptococcus pneumoniae* (invasive infection in children < 5 years of age)
- Transmissible Spongiform Encephalopathies
- Trichinosis
- Varicella (chickenpox)
- Vibrio Infections (other than cholera)

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

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

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

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

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

[3]Report on CDC72.5 (f.5.2431) card

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

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

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