Louisiana Morbidity Report

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The Changing Dynamics of Brucellosis - Louisiana and the United States, 1951-2012

Gary A. Balsamo, D.V.M., M.P.H.&T.M.

Brucellosis historically has been one of the most important zoonotic diseases related to consumption of milk and dairy products. Adoption of pasteurization practices in the early 20th century and agricultural herd surveillance programs greatly reduced the incidence of the disease. A precipitous decline in the number of human cases from 1951 through 1960 has been followed by a fairly stable level of sporadic cases, roughly 100 to 250 cases per year nationwide, reported over the past 20 years.

Brucellosis is the moniker given to infectious diseases with an etiology of the genus *Brucella*, a Gram-negative intracellular bacteria. The disease is distributed worldwide and can be important economically in livestock areas, due to this infectious agent's association with reproductive failures in animals. The disease persists as a major problem in developing areas of the world where laboratory and surveillance systems are inadequate. Historically the most important agent in the United States was *Brucella abortus*, primarily found in cattle and other wild ungulate hosts. The relationship of this microorganism to dairy products was the cause for the disease's prevalence in the early part of the 20th century. Other species of Brucella organisms infectious to humans are *B.melitensis* (common in sheep and goats, but not in U.S. animnals); *B.suis* (common in swine); *B.canis* (common in dogs); and the *Brucella* species of sea mammals.

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The organism is transmitted through ingestion, or by contact with mucus membranes or abraded skin, with the primary risk of infection being through ingestion of unpasteurized milk and soft cheeses. Consumption of undercooked meat, contact with animal reproductive discharges and fomite transmission are also important. Infants have been infected in utero or through milk. Sexual transmission has also been rarely reported in humans, although venereal transmission of *B.suis* and *B.canis* in animals is very common.

Secondary hosts for *Brucella* species may also be important in maintaining niches that negatively influence efforts to eradicate brucellosis in more common reservoirs. *B.abortus* can also infect bison, buffalo, elk and camels. *B.suis* has been isolated in horses, caribou and reindeer.

In the past 20 years in Louisiana and in the rest of the U.S., more traditional means of transmission, the consumption of unpasteurized dairy products and undercooked meat, remain important but primarily in imported cases. Immigrants from or travelers to endemic areas consume these risky items while overseas and become ill after immigration or their return to the United States. Occasionally, unpasteurized products are brought back to the U.S. illegally, and cases are reported related to domestic consumption of clandestine imports. Nationwide, most of these infections are caused by *B. melitensis*, considered the most virulent agent of brucellosis.

An additional concern to public health authorities is the consumption of unpasteurized dairy products legally sold in domestic markets, a trend that may be increasing because of often unsubstantiated claims of health benefits. In Louisiana, sale of such products is illegal; however laws vary considerably in other states.

Brucellosis has been eliminated from commercial swine operations in the U.S., with the exception of a few reactors within the state of Texas. The concern now is associated with the expanding range and increasing numbers of feral swine. The estimated seroprevalence of antibodies to *B.suis* in some populations of feral swine in Louisiana is approximately 50 percent. Many of the incident cases of brucellosis reported in Louisiana during the past 10 years appear to be associated with hunting, field dressing and/or butchering feral swine. Cattle can also be transiently infected with *B.suis*, when feral swine are present in the environment.

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(The Changing Dynamics ... Continued from Page 1)

Laboratory exposures are also an important concern. In Louisiana, several instances of laboratory exposure to various species of Brucella organisms have been reported sporadically over the past ten years. The U.S. Centers for Disease Control and Prevention counts brucellosis among the 10 most commonly reported laboratory-acquired infections. Laboratory exposures often occur when unknown agents progress through the identification process, exemplifying the need for standard safe handling of unknown isolates. Laboratory infections can occur through direct or indirect contact of the organism with mucous membranes or non-intact skin. Inhalation of the organism can also be a problem when workers are in the immediate vicinity of Brucella isolates handled outside of biological safety cabinets. Improper centrifugation and laboratory accidents also foster transmission of the organism to laboratory personnel.

B.canis, the etiologic agent of brucellosis in canines, is frequently discovered to be the cause of abortion outbreaks in breeding kennels; therefore risk groups include kennel workers, dog breeders and veterinary medical personnel. *B.canis* was not known to be zoonotic until the first human case was identified in 1968; current thought is that *B.canis* infections in humans are under-reported. *B.canis* is considered less pathogenic than other *Brucella* species, and several problems exist in diagnosing infection in humans; diagnostic tests for identification are generally unavailable. Despite reduced pathogenicity, more severe presentations of the disease, such as endocarditis and osteomyelitis, have been reported.

Marine *Brucella* species may also pose a risk to those people who work or interact with marine mammals, such as Native American hunters, wildlife researchers, marine mammal rescuers, veterinary personnel, etc. The National Marine Fisheries Service is presently monitoring an unusual mortality event (UME), strandings and die-offs of marine mammals, in the northern Gulf of Mexico. From February 2010 until June 17, 2012, 747 whales and dolphins, primarily deceased bottlenose dolphins (5% have been discovered alive), have been stranded in an area of the coast from the Texas/Louisiana border east through Franklin County, Florida. Out of 48 dolphins available for testing, 12 were found to be positive or suspect positive for Brucella. *B.ceti* is the organism that has been identified in the dolphins involved. *B.pinnipedialis* is another species of marine brucellosis that is prevalent in sea lions and seals. Although preliminary evidence suggests that the specific strain of *B.ceti* involved in the northern Gulf UME lacks genes enabling virulence in humans, a few cases of marine brucellosis in humans have been reported from other parts of the world, sometimes resulting in severe conditions such as osteomyelitis and neurological disease. Public health officials are warning the public to avoid contact with stranded or dead marine mammals. The public is advised to contact state wildlife officials if any such animal is discovered.

Brucella organisms appear to have an affinity for reproductive organs in all animal species. The disease often results in high infertility rates, spontaneous abortions and weak neonates. Males also harbor the organism in the reproductive tract (testis, epididymis, seminal vesicles). Abortions and placentitis have been observed in marine mammals with brucellosis. Exposure to birth and reproductive fluids is a major route of transmission. Arthritis is also a common manifestation in most animal species. In dogs, the organism can affect the lymphatic system, eye (uveitis), kidney and intervertebral disc space (diskospondylitis). In marine mammals, meningoencephalitis, pneumonia, skin and bone infections have been associated with the agent.

In humans the bacteria initially colonize local lymph nodes. After an incubation period that averages from two to four weeks (range: five days to five months), Brucella infections progress to a bacteremic phase characterized by fever along with non-specific, flu-like symptoms, such as arthralgia, anorexia, fatigue, headaches, myalgia, night sweats and weight loss. Roughly one-third of patients develop signs and symptoms of arthritis, meningitis, spondylitis and focal localization of the organism in organs throughout the body (endocarditis, epididymitis/orchitis, hepato- and splenomegaly). Diagnosis can be difficult and failure to recognize the disease is frequently the result of failure to consider the possibility of brucellosis, often because of inadequate history taking. Signs and symptoms may resolve, but relapses and chronic complications may develop. The archaic term, "undulant fever," describes those cases where intermittent fever is observed. Mortality in brucellosis cases is most frequently due to endocarditis; however this condition is only observed in approximately two percent to three percent of cases. Rarely, concentration deficits, depression and sleep disturbances are associated with the disease.

The Louisiana Department of Health and Hospitals (DHH) requires culture and identification of the organism, or a minimum four-fold increase in titer between acute and convalescent sera collected at least two weeks apart (definitive laboratory criteria), as well as the presence of a clinically compatible illness to confirm diagnosis. Laboratory evidence of a total antibody titer greater than or equal to 160 by the SAT (standard tube agglutination) test or a BMAT (Brucella microagglutination test) in one or more serum specimens obtained after symptom onset, and PCR identification of the Brucella DNA in a clinical specimen are considered presumptive laboratory evidence. A clinically compatible case with presumptive laboratory evidence, or with an epidemiological link to a confirmed human or animal case in the absence of definitive laboratory criteria, is classified probable. Acute serum samples should be collected soon after fever onset. BMAT and other agglutination tests may fail to diagnose brucellosis in chronic infec-

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tions. Laboratory isolation of *B.abortus*, *B.melitensis* or *B.suis*, category B select agents, must be reported to state public health authorities.

ELISA tests are also commonly employed in the diagnosis of brucellosis; however these tests have not proven reliable in case investigations conducted at DHH. The IgM assay has identified many false positives and cross-reactivity with other non-*Brucella* species has been noted. At present, positive results on these tests must be confirmed with more reliable tests.

Therapy in the bacteremic phase is fairly straight forward; however, treatment after focal organ involvement is often complicated. Although doxycycline/streptomycin therapy is likely the most effective combination, because of ease of acquisition and administration, doxycycline (100 mg twice per day)/rifampin (600 to 900 mg per day) combination therapy for a minimum of six weeks is often the preferred first-line therapy. In children eight years of age or younger and pregnant women, trimethoprim/sulfamethoxazole is often substituted for doxycycline. Alternative therapies include doxycycline in combination with gentamicin or fluoroquinilones. Practitioners are advised to consult the scientific literature for dosages and durations of alternative therapies. When focal organic involvement has occurred and the disease is considered chronic, longer courses of therapy are recommended.

Because of the currently changing epidemiology of the disease in the U.S., public health officials should thoroughly investigate potential cases of brucellosis. Although the disease is nationally notifiable, often minimal information has been gathered in past investigations. Frequently laboratory test information and risk factors are not reported. Investigations should include travel information and data on foreign residence, as well as information on high-risk activities such as domestic consumption of unpasteurized dairy products, recreational activities such as hunting and contact with animals. The DHH Infectious Disease Epidemiology Section and the DHH Public Health Laboratory are available to provide assistance in identifying the specific *Brucella* species involved.

For references or more information, please contact Dr. Balsamo at (504)568-8315 or email to *gary.balsamo@la.gov*.

Perinatal HIV Surveillance Louisiana, 1994-2010

Jessica Cole Diedling, M.P.H.

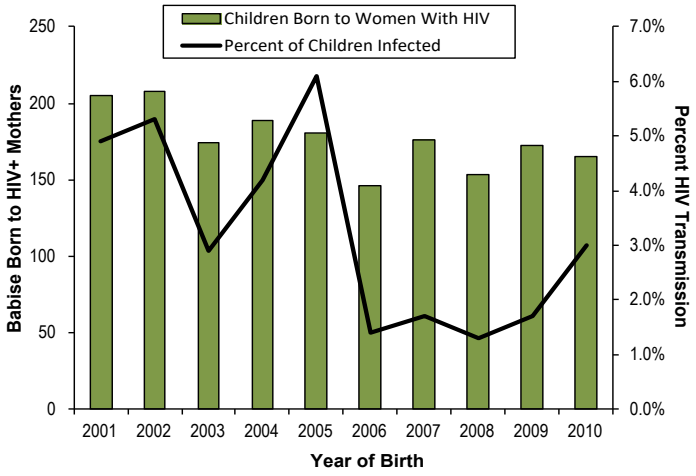
As a part of routine HIV Surveillance, the Louisiana Department of Health and Hospital's STD/HIV Program (DHH SHP) monitors all cases of pediatric HIV exposure and HIV transmission. Perinatal surveillance is carried out to monitor all children born to women with HIV, and the mother's care during pregnancy, at delivery and postpartum. Information is collected about the mother and infant's HIV medication, HIV test results, maternal risk factors, mode of delivery, prenatal care, co-morbidity with other STDs, birth outcomes and the mother's substance abuse. Reports are collected from clinicians, laboratory reports and other public health providers via a birth registry match with Louisiana's DHH, Section of Vital Records.

Mother-to-Child Transmission (MTC) in Louisiana

Louisiana has had a significant decline in perinatal transmission rates, from a high of nearly 16 percent in 1994 to three percent in 2010. This success is due in part to the Pediatric AIDS Clinical Trials Group (1994), who demonstrated that zidovudine (ZDV) given to the mother during pregnancy and labor, and to the neonate immediately after birth could reduce the risk of MTC. As a result, the United States Public Health Service issued recommendations for the use of ZDV to reduce perinatal transmission. These guidelines are continuously updated to include additional treatment guidelines for HIV-infected pregnant women and their infants (web address *http://aidsinfo.nih.gov/*).

There are between 150 to 200 children born in Louisiana to women with HIV every year. Since 2006, there are between two to five cases of HIV transmission annually (between 1.5 percent to three percent transmission rate) (Figure 1).

Figure 1: Perinatal Exposures and Transmission - Louisiana, 2000-2010



While these results are promising, they remain above the Centers for Disease Control and Prevention's (CDC) goal to eliminate MTC's rate to less than one percent.

Pregnant Women Living with HIV

Women living with HIV who delivered an infant in 2010 were predominately Black (86 percent) and between 25 to 34 years old (57 percent). The majority of mothers (59 percent) had an unknown risk factor for HIV, 35 percent were likely infected through heterosexual contact, four percent were likely infected through injection drug use, and four mothers were themselves infected through perinatal transmission. In 2010, 35 percent of women with HIV infection who gave birth lived in Region 2* and 25 percent lived in Region 1.

The percentage of women who know their HIV status prior to delivery has increased over time because of the increased empha-

** Map of Regions on Page 7*

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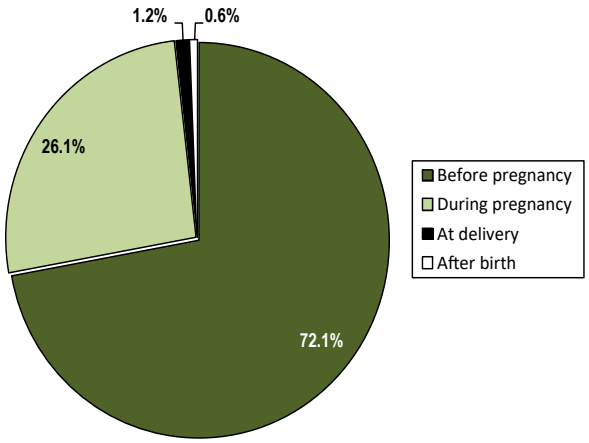
sis on screening pregnant women as well as Louisiana law (RS 40:1300:13) requiring providers to offer an HIV test during pregnancy unless a woman specifically declines ("opts out"). The CDC identifies Louisiana as a high-prevalence area where third trimester HIV testing during pregnancy is highly recommended (Figure 2).

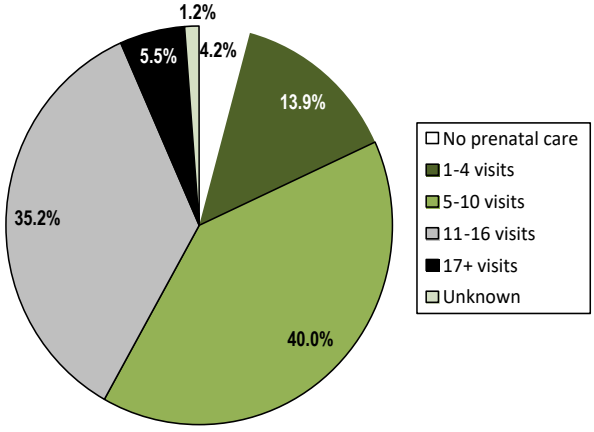
Figure 2: Timing of Mother's Diagnosis - Louisiana, 2010



In Louisiana, 72 percent of the women with HIV infection who delivered in 2010 were diagnosed with HIV prior to their delivery, 26 percent were diagnosed during their pregnancies, one percent were diagnosed with HIV at the time delivery, and fewer than one percent were diagnosed after delivery.

Comprehensive prenatal care and ARVs for pregnant women living with HIV have been shown to reduce rates of perinatal transmission (Figure 3).

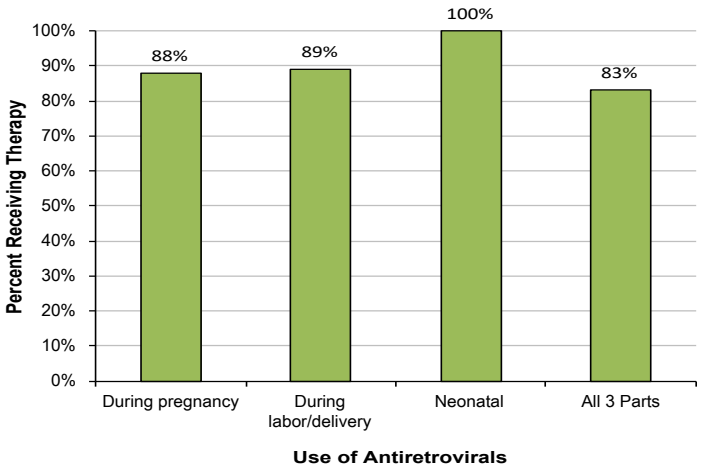
Figure 3: Prenatal Care - Louisiana, 2010



In 2010, 4.2 percent of mothers with HIV infection did not receive any prenatal care and only 40.7 percent had more than 10 visits. Nine percent of mothers did not start prenatal care until the third trimester.

Overall, in 2010, the majority of women received the recommended ARV treatment during pregnancy and 100 percent of infants received ZDV. However, there is still a discrepancy between the percentage of women and infants receiving all three arms of recommended perinatal ARV treatment and the percentage of each individual arm of therapy (Figure 4).

Figure 4: Three-Part Antiretroviral Therapy - Louisiana, 2010



The American College of Obstetricians and Gynecologists recommends that HIV-infected pregnant women with plasma viral loads of more than 1,000 copies per milliliter be counseled regarding the benefits of elective Cesarean delivery to prevent MTC of HIV. In 2010, 34 percent of HIV-positive women delivered vaginally; 51 percent delivered via an elective C-section; 13 percent delivered via non-elective C-section; two percent delivered via unknown type of C-section.

Birth Outcomes of HIV-Exposed Infants

There were five cases of HIV transmission in 2010. Of the five infants born in 2010 who were infected with HIV, four infants were Black; four mothers had fewer than four prenatal care visits; four mothers did not receive ARVs during pregnancy; three mothers did not receive ZDV during delivery; one mother was diagnosed with HIV after delivery.

Birth outcomes for infants exposed to HIV varied from state averages. In 2010, 27 percent of infants born to women living with HIV in Louisiana were low birth weight (less than 2500g), and 25 percent were born preterm (before 37 weeks gestational age). These are higher percentages compared to all babies born in Louisiana in 2009, where 10.6 percent were low birth weight and 14.7 percent were born preterm.

SHP Activities for Perinatal Surveillance

SHP has implemented programmatic activities to address the needs of women living with HIV and their children. SHP participates in the DHH Office of Public Health (OPH) Perinatal Surveillance Workgroup. The aim of the group is to streamline and improve reporting of HIV, syphilis and Hepatitis B during pregnancy. All three conditions are dependent on provider reporting, since laboratory results do not indicate if a woman is pregnant. Through the efforts of this workgroup, reporting electronically for all three conditions is available through the Infectious Disease Reporting Information System (IDRIS) in addition to previous reporting routes. SHP has also implemented the Fetal Infant Mortality Review/HIV Prevention Methodology in Regions 1 and 2. The goal of this methodology is to improve perinatal HIV prevention systems by conducting case reviews and making recommendations to community action teams.

For references or more information, please contact Jessica Cole Diedling at (504)568-5133 or email to *jessica.cole@la.gov*.

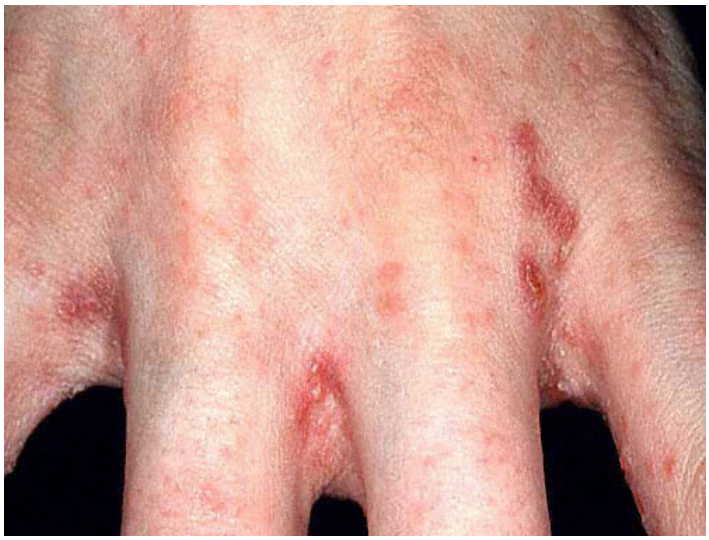
Scabies - Louisiana, 2012

Christine Scott-Waldron, M.P.H.

In February, the Department of Health and Hospitals Infectious Disease Epidemiology Section began receiving reports of scabies in Region 2*. The outbreaks occurred in different facilities including a hospital ward, rehab unit, nursing home, day care, school and prison. Scabies is a not reportable condition; however, the health department is often called to provide information on how to control the infestation.

Scabies is an infectious disease of the skin caused by a mite, *Sarcoptes scabiei,* that burrows into the skin. Infestation is characterized by rash and an intense itching, especially at night. Skin lesions predominantly occur around the finger webs (Figure), anterior surfaces of the wrists, anterior surface of the elbows, under the arms, belt line, thighs, nipples, abdomen, buttocks and male genitalia.

Figure: Scabies in Finger Webs



Itching may not begin for as long as six weeks after exposure during which time infested contacts are capable of transmitting mites to previously treated or untreated persons. The lesions begin as tiny erythematous papules and can progress to vesicles or pustules. Linear burrows are a classic feature but are not seen commonly. Excoriation and ulceration also may be present and a more generalized hypersensitivity reaction, including urticaria, may occur. In severe cases and in immuno-compromised hosts, large areas of crusting may be seen. The mite that causes scabies has not been shown to transmit an infectious agent; however, a secondary infection of the skin with staphylococci or streptococci may occur, with resulting complications.

Transmission is by direct skin-to-skin contact. There is evidence that mites can live for up to three days without a human host. A reported outbreak of scabies among laundry workers provides evidence that fomites may spread disease.

To prevent any new cases, one person at the affected facility should be responsible for preventive measures. That person should:

1-Identify suspect cases: Since the incubation period (from infection to first lesions) is long (up to six weeks), companions or household members should be searched for unreported or unrecognized cases. The surveillance described above has to be maintained for about four weeks after the last case was treated.

2-Instruct close contacts, family, etc. to search for unreported or unrecognized cases among companions or household members; single infestation in a family is uncommon. If at a school, try to identify the case's best friends and recommend treatment at once for them and exposed family members. (Measures should be taken to preserve the dignity and right to privacy of students.)

3-Refer suspect cases to be examined by a nurse practitioner or physician to confirm the diagnosis and eventually be treated.

4-Ensure that cases should be excluded until effective treatment has been administered. Contact isolation until 24 hours after the start of effective therapy for the hospitalized patient.

5-Ensure that treated cases are examined to make sure the lesions have disappeared before returning to the facility.

6-Prophylaxis: All persons who have had skin-to-skin contact with infested persons (including all family members, sexual contacts, etc.) should be treated prophylactically. Most individuals don't develop the rash or itching for two to six weeks - but during that period, they can actively transmit the parasite to other people. If they are treated only after symptoms develop, undoubtedly, several other individuals are already exposed. Treatment is effective even though a patient has not yet developed symptoms. Staff members and patients in hospital and institutional outbreaks who have had prolonged skin-to-skin contact with infested patients require prophylactic treatment.

7-Environmental disinfection: The primary source is not in the environment. Therefore, closing a school or facility for extensive cleaning and disinfection will not do anything to stop the spread. Humans are the main source of infection. As soon as the facility re-opens, an untreated case will start spreading mites again. These mites do not survive very long in the environment (maximum one to three days). Routine cleaning and surface disinfection done regularly is the only environmental measure to be taken. Bedding and clothing worn next to the skin should be laundered. Clothing that cannot be laundered should be stored for a week to avoid re-infestation.

For more information, go to webpage *http://new.dhh.louisiana.gov/assets/oph/Center-PHCH/Center-CH/infectious-epi/Epi-Manual/ScabiesManual.pdf* or contact Christine Scott-Waldron at (504) 568-8301 or *christine.scott-waldron@la.gov*.

* *Map of Regions on Page 7*

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Lafayette - October 2, 2012
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Rare *Aurantimonas altamirensis* Infection - Louisiana, 2012

Mallory Becnel, M.P.H.

A 33-year-old on peritoneal dialysis for end-stage renal disease was recently admitted to a Louisiana hospital with nausea and vomiting blood. The patient had a history of these symptoms in the past and was started on vancomycin and gentamicin for possible peritonitis. A scope revealed reflux esophagitis with gastritis and diffuse duodenitis with no active bleeding. The hospital laboratory initially reported a presumptive positive culture of *Brucella sp.* from the patient's peritoneal dialysis fluid; however, a reference lab identified the organism as *Aurantimonas altamirensis* by PCR.

A. altamirensis is a rare organism that was originally isolated from growth on a cave wall in coastal Spain. Isolates of the organism from human clinical materials were first described in 2006 and 2007 in Canada.

For references or more information, please contact Mallory Becnel at (504) 568-8309 or mallory.becnel@la.gov.

Announcements

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

ANNUAL REPORTS: Chagas Disease; How Many Cases of Foodborne Illnesses in Louisiana?; Rotavirus: Summary-Past Three Years; Vibrio

EPIDEMIOLOGY MANUAL: Chagas; Measles; Scabies; STEC Form

HEPATITIS: Know More Hepatitis Campaign

INFLUENZA: Weekly Report

VETERINARY: Zoonotic Disease Posters(CDC) in English/Spanish/French- Animal Exhibits and Handwashing, Handling Reptiles, Amphibian/Reptile Pets, Chicks/Ducklings and Salmonella-Handwashing

Youth Risk Behavior Surveillance - Louisiana and the United States, 2011*

Priority health-risk behaviors, behaviors that contribute to the leading causes of morbidity and mortality among youth and adults, often are established during childhood and adolescence, extend into adulthood, and are interrelated and preventable. The Youth Risk Behavior Surveillance System (YRBSS) monitors six categories of priority health-risk behaviors among youth and young adults: 1) behaviors that contribute to unintentional injuries and violence; 2) tobacco use; 3) alcohol and other drug use; 4) sexual behaviors that contribute to unintended pregnancy and sexually transmitted diseases (STDs), including human immunodeficiency virus (HIV) infection; 5) unhealthy dietary behaviors; and 6) physical inactivity. In addition, YRBSS monitors the prevalence of obesity and asthma. YRBSS includes a national school-based Youth Risk Behavior Survey (YRBS) conducted by the Centers for Disease Control and Prevention (CDC) and state and large urban school district school-based YRBSs conducted by state and local education and health agencies. This report summarizes results from the 2011 national survey, 43 state surveys and 21 large urban school district surveys conducted among students in grades nine through 12 for the period of time between September 2010 and December 2011. Five states (Georgia, Louisiana, Maryland, Utah and Virginia) do not ask any questions on sexual risk behaviors.

Of the 109 behaviors categorized, 14 risk-behavior questions were not broken out by state, and 12 were not asked to Louisiana students.

Of the remaining behaviors and out of the 43 states, Louisiana's youth had the highest percentage for 18 risk items; the second highest percentage for five risk items, was below the median for seven items and was above the median for 37 risk items (Table).

Table: Youth Behaviors with the Higest Percentage for Risk - Louisiana, 2011

Highest	Second Highest
Rarely or Never Wore a Bicycle Helmet	Rode with a Driver Who Had Been Drinking Alcohol
Drove When Drinking Alcohol	Carried a Gun
In a Physical Fight	Drank Alcohol Before Age 13 Years
In a Physical Fight on School Property	Injured in a Physical Fight
Suicide Attempt Treated by a Doctor or Nurse	Watched Television 3 or More Hours per Day
Ever Smoked Cigarettes	
Ever Drank Alcohol	**Below Median**
Current Alcohol Use	Ate Fruit or Drank 100% Fruit Juices One or More Times per Day
Ever Used Methamphetamines (tied with Georgia)	Ate Fruit or Drank 100% Fruit Juices Two or More Times per Day
Ever Took Steroids Without a Doctor's Prescription	Ate Fruit or Drank 100% Fruit Juices Three or More Times per Day
Did Not Eat Vegetables	Ate Vegetables Three or More Times per Day
Ate Vegetables One or More Times per Day	Did Not Drink Soda or Pop
Ate Vegetables Two or More Times per Day	Physically Active at Least 60 Minutes per Day on All 7 Days
Drank Soda or Pop Three or More Times per Day	Played on at Least One Sports Team
Overweight	
Did Not Eat For More Than or Equal to 24 Hours to Lose Weight or to Keep from Gaining Weight	
Took Diet Pills, Powders, or Liquids to Lose Weight or to Keep from Gaining Weight	
Vomited or Took Laxatives to Lose Weight or to Keep from Gaining Weight	

** Excerpted from The MMWR / June 8, 2012 / Vol. 61 / No. 4*

Table: Communicable Disease Surveillance, Incidence by Region and Time Period, May-June, 2012

DISEASE		HEALTH REGION 1	2	3	4	5	6	7	8	9	TIME PERIOD May-Jun 2012	May-Jun 2011	Jan-Dec Cum 2012	Jan-Dec Cum 2011	Jan-Dec % Chg*
Vaccine-preventable															
Hepatitis B	Cases	0	1	0	0	0	0	0	0	2	3	9	25	29	NA*
	Rate[1]	0	0.2	0	0	0	0	0	0	0.5	0.1	0.2	0.6	0.7	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	0	0	0	NA*
Rubella		0	0	0	0	0	0	0	0	0	0	0	0	0	NA*
Pertussis		0	1	0	0	0	0	2	0	0	3	4	11	17	-35.3
Sexually-transmitted															
HIV/AIDS	Cases[2]	34	19	2	6	2	3	3	9	6	84	243	480	656	-26.8
	Rate[1]	3.4	3.3	0.5	1.1	0.7	1.0	0.6	2.6	1.4	1.9	5.6	11.0	15.0	NA*
Chlamydia	Cases[3]	1,230	333	133	419	152	254	527	372	189	3,609	6,828	7,263	14,061	-48.3
	Rate[1]	147.2	50.2	32.7	71.7	51.9	82.0	96.8	104.6	34.9	79.6	150.6	160.2	310.2	NA*
Gonorrhea	Cases[3]	324	69	24	108	34	41	216	142	32	990	1,775	1926	3,979	-52.0
	Rate[1]	38.8	10.4	5.9	18.5	11.6	13.2	39.7	39.9	5.9	21.8	39.2	42.5	87.8	NA*
Syphilis (P&S)	Cases[3]	7	7	3	2	1	1	12	3	0	36	91	128	206	-37.9
	Rate[1]	0.8	1.1	0.7	0.3	0.3	0.3	2.2	0.8	0.0	0.8	2.0	2.8	4.5	NA*
Enteric															
Campylobacter	Cases	1	2	1	3	2	2	3	1	2	17	54	60	118	-49.2
Hepatitis A	Cases	0	0	0	0	0	0	0	0	1	1	1	2	2	NA*
	Rate[1]	0	0	0	0	0	0	0	0	0.3	0	0	0	0	NA*
Salmonella	Cases	18	29	27	32	18	10	8	14	35	191	251	463	454	2.0
	Rate[1]	1.7	5.1	7.2	6.2	6.7	3.3	1.6	4.0	9.1	4.4	5.8	10.7	10.5	NA*
Shigella	Cases	1	0	4	11	2	0	1	0	2	21	111	85	196	-56.6
	Rate[1]	0.1	0	1.1	2.1	0.7	0.0	0.2	0.0	0.5	0.5	2.6	2.0	4.5	NA*
Vibrio cholera	Cases	0	0	0	0	0	0	0	0	0	0	0	0	0	NA*
Vibrio, other	Cases	0	0	4	1	0	0	0	0	1	6	16	25	26	NA*
Other															
H. influenzae (other)		1	1	0	0	1	0	2	0	1	6	10	29	36	-19.4
N. Meningitidis		0	0	0	0	0	0	0	0	0	0	2	2	8	-75.0

[1] = Cases Per 100,000.

[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] = Prelminary data.

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

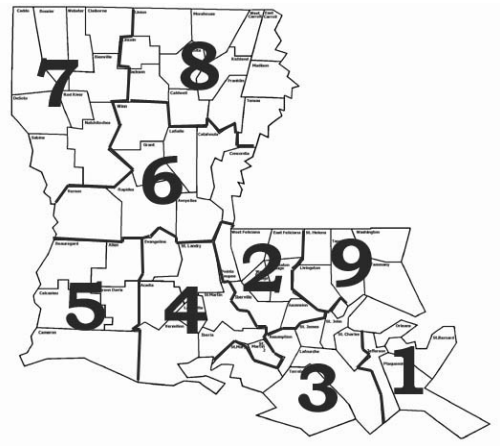
Table 2. Diseases of Low Frequency, January-December, 2012

Disease	Total to Date
Legionellosis	13
Lyme Disease	0
Malaria	2
Rabies, animal	1
Varicella	31

Table 3. Animal Rabies, May-June, 2012

Parish	No. Cases	Species
Bossier	1	Skunk

Figure: Department of Health and Hospitals Regional Map



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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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