Louisiana Morbidity Report

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Vibrio metschnikovii, A Rare Pathogen: Louisiana, 2014

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

Vibrio metschnikovii, a Gram-negative bacterium, was first isolated in the 1880s from a fowl that had died from a diarrheal disease. It was later characterized in 1978 and again in 1988.

Although rare, human infections with the bacteria have been documented; however, little is known about the pathogenicity of the organism. *V. metschnikovii* was isolated in 1978 from a blood sample taken from a patient with sepsis and cholecystitis. In 1981, this case became one of the first-published reports of human illness due to the bacterium. Published reports of *V. metschnikovii* infections include cases of wound infections of the leg, septicemia, and pneumonia. For most of these infections, the source or the *V. metschnikovii* could not be determined.

V. metschnikovii is unique to other *Vibrio* species because it can grow in environments with low salt concentrations. In nature, the bacteria have been isolated from marine and fresh water environments and from various animals, including fish, shrimp, crabs, swine, horses, ducks, geese, and chickens.

In 2014, a *V. metschnikovii* wound infection was reported in a 50-year-old Louisiana woman. The case had previously fractured her left ankle, which resulted in the placement of an internal fixation to reinforce the ankle. Two weeks later, she presented to the doctor with symptoms of fever and an infection at the suture site. The case reported walking on the casted foot. Cultures of the wound grew coagulase-negative *Staphylococcus, Enterococcus*

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Carbapenem-Resistant *Enterobacteriaceae* Prevalence in Louisiana Hospitals, 2013

Erica Washington, MPH; Sabria Pillai, MPH Candidate

Antibiotic resistance has accelerated over the past few decades; the development of new resistant organisms is out-pacing that of new antibiotics. This poses a unique problem for the proper treatment and isolation of patients with resistant infections in healthcare settings. Carbapenem-resistant *Enterobacteriaceae* (CRE) are increasingly becoming a significant public health threat nationwide. The 2014 Centers for Disease Control and Prevention (CDC) case definition for CRE includes any *Enterobacteriaceae* that are non-susceptible (intermediate or resistant) to any of the following carbapenems: doripenem, imipenem, or meropenem. In addition, there must be resistance to any of the following third-generation cephalosporins that were tested during the antibiotic sensitivity panel: ceftriaxone, cefotaxime, or ceftazidime.

Interventions that should be implemented upon identification of CRE-infected patients include the following: notifying the proper hospital personnel and public health officials, isolating and placing the patient on contact precautions, maintaining hand hygiene, actively screening epidemiologically linked individuals, thoroughly cleaning the environment, and ensuring that all interventions are continued if the patient is transferred. Preventing the spread of CRE requires cooperation at all levels; patients, nurses, doctors, hospital staff, administration, and public health officials must all work together to reduce CRE morbidity and mortality.

Methods

The Infectious Disease Epidemiology Section of the Louisiana Office of Public Health (IDEpi) conducted a survey of healthcare facilities to determine the prevalence of positive CRE cultures identified in 2013. Infection preventionists representing 86 unique healthcare facilities were contacted to complete the survey. The survey response period spanned from September 5 to October 31, 2014. Forty-eight surveys were received, either by fax or email, yielding a 56% response rate. Surveys were self-responded by facilities, and antibiograms were requested with completed surveys. Survey respondents represented were 38 (79.2%) acute care hospitals, one (2.1%) inpatient psychiatric facility, four (8.3%) surgical hospitals, two (4.2%) critical access hospitals, one (2.1%) children's hospital, one (2.1%) long-term acute care hospital, and one (2.1%) veteran's hospital.

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(Vibrio metschnikovii ... continued from page 1)

faecalis, and *Vibrio* species, the last of which was later confirmed by the Centers for Disease Control and Prevention to be *V. metschnikovii.*

The case had underlying medical conditions including heart disease and renal disease. She reported no exposure to seawater, brackish water, or fresh water; no exposure to live or fresh shellfish, seafood, fish, or other animals; and no seafood consumption. The source of the *V. metschnikovii* could not be determined.

For references or more information contact Erin Delaune at (504) 568-8316 or via email to *erin.delaune@la.gov*.

(Carbapenem-Resistant ... continued from page 1)

Results

According to the CDC reports, *Klebsiella* species and *E. coli* are the most prevalent organisms identified as being resistant to carbapenems. In light of these existing data, the prevalence of these two organisms is shown by public health region in both identified and non-susceptible stratifications in Table 1. Non-susceptible isolates were defined as those isolates that were either intermediate or resistant to carbapenems.

Table 1: Number of *Klebsiella* species and *E. coli* isolates isolated and identified as non-susceptible by species and health region*: Louisiana, 2013

Public Health Region	*Klebsiella spp.*			*E. coli*		
	Isolated	Non-Susceptible	Percent	Isolated	Non-Susceptible	Percent
1	1286	11	0.86	4137	8	0.19
2	1647	2	0.12	8181	0	0.00
3	537	24	4.47	2218	0	0.00
4	1934	16	0.83	6548	9	0.14
5	435	4	0.92	2148	237	11.03
6	677	5	0.74	2609	36	1.38
7	1485	1	0.07	6680	2	0.03
8	927	2	0.22	3272	2	0.06
9	844	7	0.83	3615	0	0.00
Total	**9772**	**72**	**0.74**	**39408**	**294**	**0.75**

The delay between collection and laboratory identification of CRE organisms is also important because it affects the decision to treat and isolate. Although standard precautions should reduce the risk of transmission, studies show that hand washing and the proper use of gloves is approximately 40% at best in US health care settings. Most facility laboratories notified the infection control department of preliminary culture results on CRE isolates within 24 hours (Table 2).

Table 2: Laboratory notification time: Louisiana, 2013

Lab Time	Frequency	Percent
24 to 48 hours	14	29.16
< 24 hours	20	41.67
Other	8	16.67
Missing	6	12.50
Total	**48**	**100.00**

Lastly, the survey tool captured additional CRE organisms that were both included inside and outside of the *Enterobacteriaceae* family: *Citrobacter freundii, Enterobacter cloacae, Enterobacter* spp., *Proteus mirabilis, Proteus vulgaris*, and *Serratia marcescens*. Non-*Enterobacteriaceae* detected were *Acinetobacter baumanii* and *Pseudomonas aeruginosa*.

* *Map of Regions on Page 7*

Discussion

Although prevalence of CRE in 2013 statewide was low, it is important to properly handle multi-drug resistant organisms (MDROs). Lab alert systems are useful to alert healthcare professionals about patients that have been identified with an MDRO in the past or during the stay at the healthcare facility. Among respondent hospitals, 40 (83.33%) had lab alert systems in place. Upon identifying CRE in an inpatient, it is also important to conduct surveillance in order to detect other positive CRE. Of the respondent facilities, only two (4.26%) conducted surveys upon the identification of a positive CRE.

Hospital laboratories should retain CRE isolates for further investigation and conducting of pulse field gel electrophoresis (PFGE) in the event of outbreaks. Of facilities that responded to the surveys, 13 (27.08%) stated their laboratories do retain samples for at least seven days. This is especially useful for IDEpi to determine if isolates are similar when conducting investigations regarding intra- and inter-facility transmission. Similarly, laboratories can conduct their own internal validation methods for identifying CRE isolates, specifically by reviewing six to 12 months of microbiology records to detect any previously unrecognized CRE cases. Of respondent facilities, 14 (29.17%) conducted reviews of microbiology records.

Lastly, communication is key for managing CRE patients. The healthcare landscape is interconnected with patients going between points of care during their illnesses. Because patients that are infected with CRE can become colonized with the resistant organisms, it is important that facilities communicate through notification mechanisms outside of medical records regarding patients who have been identified as having MDROs. Of the facilities that participated in this survey, 42 (89.36%) reported having a transfer protocol and 35 (77.78%) reported having a transfer form that was utilized when sending patients to different points of care.

The CDC will change the CRE case definition in 2015 to include ertapenem results, omitting the clause regarding third generation cephalosporins and only accepting resistant results for tested carbapenems. IDEpi will continue to accept reports of CRE organisms and infected patients and assist facilities with case classifications.

For references or more information, please contact Erica Washington at (504) 568-8319 or via email to *erica.washington@la.gov*.

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Factors Associated with Newborn Hearing Loss, Early Hearing Detection and Intervention Data in Louisiana, 2005-2010

Yewande Olugbade, MPH Candidate; Tri Tran, MD, MPH ; Mary Jo Smith, BS; Jeanette Webb, MEd; Terri Mohren, MEd; Melinda Peat, MCD, CCCA

Hearing loss (HL) is an important health risk for children because it affects their development; delays acquisition of vital skills such as speech and language; can cause social isolation and poor self-concept; and can potentially have an impact on vocational choices later in life. HL should be recognized by three months after birth, with formal diagnosis and initiation of early intervention begining before the sixth month of age. If intervention services are initated by six months of age, children have been known to achieve language scores at or near their cognitive scores.

The objectives for this study were to describe the prevalence of HL among young children born between 2005 and 2010 in the state of Louisiana by maternal and newborn characteristics, and evaluate an association between HL and maternal and newborn characteristics.

Methods:

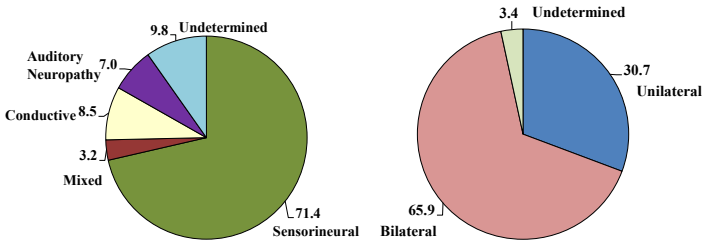
Early Hearing Detection and Intervention (EHDI) data linked with birth records from 2005-2010 were used for analysis. All newborns who failed hearing screening prior to hospital discharge were referred for further tests. HL was confirmed by audiologists. Hearing screening and diagnosis were performed with otoacoustics emissions (OAE) and/or auditory brainstem responses (ABR).

HL was categorized into conductive, sensorineural, and mixed HL or auditory neuropathy and into levels I to IV. Poisson regression was used to determine associations of HL with newborn and maternal characteristics. SAS and LinkPro were used for data linkage and analysis.

Results:

Of the 381,960 children born between 2005 and 2010 and included in the study, 588 children were diagnosed with HL. The overall prevalence rate of HL was 15.0 per 10,000 live births (LB). Sensorineural HL (69.37%) and bilateral HL (65.14%) were the most commonly seen (Figure).

Figure: Distribution (%) of hearing loss by type and laterality: Louisiana, 2005-2010



The prevalence rate was very high (67.7 per 10,000 LB) among children with very low birth weights (VLBW < 1,500 grams), Apgar scores less than seven at the fifth minute after birth (51.3 per 10,000 LB), and low birth weights (LBW = 1,500-2499 grams) (25.8 per 10,000 LB). In the adjusted regression model, prevalence rate of HL among VLBW and LBW was approximately 4.5 and two times higher than among children with normal weight (≥ 2,500 grams), respectively. In addition, maternal diabetes, age, race, number of previous live births, payment method for delivery (p values < 0.05), and APGAR score (p value < 0.10) were statistically significant in the adjusted regression model (Table).

Table: Prevalence rate (per 10,000 live births) and prevalence ratio (PR) of HL by maternal and newborn characteristics: Louisiana, 2005-2010

Maternal/Newborn's Characteristics		HL (n)	Rate (95%CI)	Adjusted PR (95%CI)	P Value
Maternal Race	White	341	15.6 (14.0-17.4)	1.0	
	Black	238	16.0 (14.0-18.2)	0.87 (0.73-1.04)	0.1234
	Other	9	6.0 (2.7-11.3)	0.39 (0.20.75)	0.0050
Maternal Age	< 20	83	16.2 (12.9-20.1)	1.0	
	20-34	440	14.8 (13.5-16.3)	1.19 (0.87-1.45)	0.3783
	35+	65	19.2 (14.8-24.4)	1.63 (1.13-2.35)	0.0087
Mother's Residence	Rural	248	17.7 (15.6-20.1)	1.24 (1.05-1.46)	0.0128
	Urban	340	14.0 (12.6-15.6)	1.0	
Previous Live Birth	None	252	16.6 (14.6-18.8)	1.30 (1.05-1.61)	0.0184
	One	183	15.1 (13.0-17.5)	1.1795 (0.95-1.47)	0.1405
	Two+	151	14.0 (11.8-16.4)	1.0	
Medicaid Paid For Delivery	No	155	12.7 (10.8-14.9)	1.0	
	Yes	433	16.6 (15.1-18.3)	1.38 (1.12-1.70)	0.0021
Child's Sex	Male	317	16.2 (14.5-18.1)	1.16 (0.98-1.36)	0.0818
	Female	271	14.5 (12.8-16.3)	1.0	
Mother's Diabetes	No	566	15.2 (14.0-16.5)	1.0	
	Yes	21	24.9 (15.4-38.1)	1.57 (1.01-2.43)	0.0445
Apgar Score at 5 Minutes	< 7	29	51.3 (34.4-73.7)	1.52 (0.99-2.34)	0.0573
	7+	557	14.9 (13.6-16.1)	1.0	
Birth Weight	VLBW	55	67.7 (51.0-88.2)	4.48 (3.23-6.23)	<.0001
	LBW	88	25.8 (20.7-31.8)	1.97 (1.56-2.48)	<.0001
	NW	445	13.1 (11.9-14.4)	1.0	

Conclusions:

VLBW and LBW had the greatest association with HL. Moreover, mothers who were aged 35 years or older, lived in rural areas, had their first live birth, had Medicaid-paid delivery, and were diabetic had a higher risk of having children with HL. Interventions to reduce LBW were also significant at reducing a newborn's HL. Further studies are needed to evaluate HL differentiated among mothers with chronic and gestational diabetes.

For more information, please contact Dr. Tran at (504) 568-3532 or via email to *tri.tran@la.gov*.

Water Testing in Louisiana, 2015

The Office of Public Health (OPH) Laboratory in Baton Rouge, in conjunction with Corona Environmental, a Vermont-based environmental consulting firm, is currently in the process of developing, testing, and implementing methodologies for the effective detection of the pathogenic amoeba *Naegleria fowleri* in Louisiana drinking water systems. Building on methods currently employed by the Centers for Disease Control and Prevention as well as those established and utilized by the Western Australia Water Authority, the lab is participating in research to optimize sampling and testing procedures for use in Louisiana.

In addition, the OPH Laboratory is working to establish and certify its own *Cryptosporidium* and *Giardia* testing procedures. Laboratory monitoring of these organisms will begin in April, 2015. The US Environmental Protection Agency's second installment of the Long-Term 2 Surface Water Treatment Rule mandates this testing for the reduction of disease incidence associated with disease-causing microorganisms in drinking water.

For more information, please go to *http://water.epa.gov/lawsregs/rulesregs/sdwa/lt2/regulations.cfm* or contact Jake Causey at (225) 342-7499 or via email to *jake.causey@la.gov*.

Comparison of Three Critical Syndrome Classifications: Louisiana vs. BioSense

Jenna Iberg Johnson, MSPH

The Louisiana Office of Public Health (OPH) Infectious Disease Epidemiology Section (IDEpi) conducts emergency department (ED) syndromic surveillance using the Louisiana Early Event Detection System (LEEDS). IDEpi has the capability to define and change syndrome definitions in LEEDS based on surveillance needs and quality assurance activities. IDEpi submits all of the ED data to BioSense, a national syndromic surveillance system operated by the Centers for Disease Control and Prevention (CDC), which uses different syndrome definitions than LEEDS. Both BioSense and LEEDS use text and International Classification of Diseases (ICD) code searches in any available chief complaint, admit reason, and diagnosis data. The results of LEEDS and BioSense syndrome classifications for influenza-like-illness (ILI), gastrointestinal (GI), and upper respiratory infections (URI) applied to Louisiana's ED data were compared to examine if the different syndrome definitions yield similar results when applied to the same data.

Methods

Daily electronic emergency department data is imported to both the LEEDS and BioSense databases and processed for syndrome classification. IDEpi queried the LEEDS database and the BioSense front-end application to pull weekly visits classified by each system as ILI, GI, and URI for the period of CDC weeks 1327 through 1426 (6/30/13-6/28/14). There were 41 EDs participating at the start of the study period and 52 participating at the end of the study period, with an average of 28,000 visits per week during the period.

The syndrome percentage means of BioSense and LEEDS syndrome pairs were compared with paired t-tests. The linear relationship between BioSense and LEEDS syndrome pairs were measured with Pearson correlation coefficients. The syndrome results were also split into the age groups used by the BioSense front-end application, and Pearson correlation coefficients were calculated for each syndrome age-group pair. The Early Aberration Reporting System (EARS) C2 method was applied to all syndrome results to examine if alerts were generated during corresponding weeks for each syndrome pair. Weekly data were exported from LEEDS and BioSense and analyzed in R statistics package.

Results

The syndrome percentage means of BioSense ILI and LEEDS ILI were significantly different (paired t-test, $p<0.000$). The correlation coefficient for BioSense ILI and LEEDS ILI was 0.98 and age group correlation coefficients ranged from 0.83 to 0.99 (Pearson's correlation, $p<0.000$). C2 generated 11 alarms for BioSense ILI and 12 for LEEDS ILI, of which nine occurred on corresponding weeks.

The syndrome percentage means of BioSense GI and LEEDS GI were significantly different (paired t-test, $p<0.000$). The correlation coefficient for BioSense GI and LEEDS GI was 0.90 and age group correlation coefficients ranged from 0.69 to 0.96 (Pearson's correlation, $p<0.000$). C2 generated two alarms for BioSense GI and one for LEEDS GI, of which one occurred on a corresponding week.

The syndrome percentage means of BioSense URI and LEEDS URI were significantly different (paired t-test, $p<0.000$). The correlation coefficient for BioSense URI and LEEDS URI was 0.96 and age group correlation coefficients ranged from 0.81 to 0.97 (Pearson's correlation, $p<0.000$). C2 generated six alarms for BioSense URI and seven for LEEDS URI, of which six occurred on corresponding weeks.

Conclusions

The results of BioSense and LEEDS syndrome classifications for ILI, GI, and URIs applied to Louisiana ED syndromic surveillance data were highly correlated for each syndrome. However, the syndrome percentage means were significantly different for each syndrome pair. Therefore, while percentages of total visits attributed to a syndrome as a measurement of syndrome burden may not be comparable, trends over time are comparable. In addition, the majority of C2 alerts were generated on corresponding weeks for each syndrome pair, providing confidence in the use of C2 applied to current syndrome definition results as a means of aberration detection (Figure).

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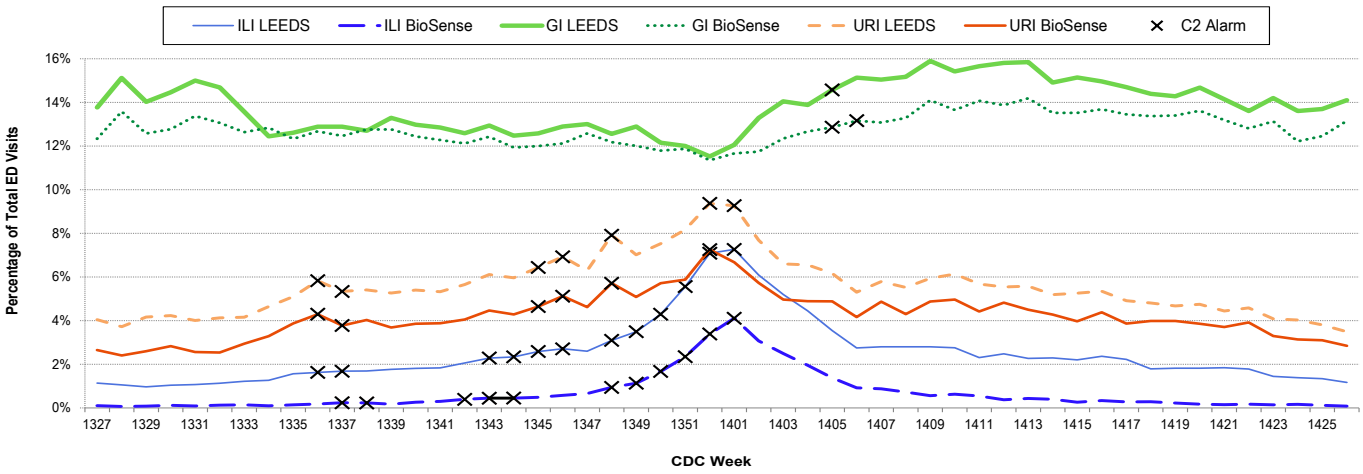
Comparison of Three ... *continued from page 5)*

Figure: Results of BioSense and LEEDS syndrome definitions applied to ED Data: Louisiana, June 30, 2013 - June 28, 2014



As public health jurisdictions work towards developing common syndrome classifications to increase data comparability across jurisdictions, this analysis provides evidence that the current differences in syndrome definitions between jurisdictions does not hinder comparability of trends over time.

For more information, please contact Jenna Iberg Johnson at (504) 568-8312 or via email to *jenna.ibergjohnson@la.gov*.

Announcements

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

Annual Reports: Several Year Comparison 2012-2014

Epidemiology Manual: Tickborne Rickettsial Disease Educational Materials

Influenza: Early Estimates of Seasonal Influenza Vaccine Effectiveness - United States, January 2015 - MMWR-CDC; Weekly Report

West Nile Virus: Weekly Report

Public Health Central Laboratory Relocation

The Office of Public Health Central Laboratory has moved from the Metairie location to a new facility in Baton Rouge as of January 2015. The new laboratory address is as follows:

Office of Public Health Laboratories
Baton Rouge Laboratory
1209 Leesville Avenue
Baton Rouge, Louisiana 70802
Main Lab Phone Number: 225-219-5200
Main Lab Fax Number: 225-219-4903

World Tuberculosis Day - March 24, 2015

Louisiana Fact

Maritime Quarantine Stations

By 1881, Louisiana had three main maritime quarantine stations for the control of imported contagious diseases, the Mississippi River, Rigolets and Atchafalaya stations. Three minor stations, Port Eads, Calcasieu Pass, and Lake Borgne Canal, were only kept open from April to November (Figures 1, 2, 3, 4, 5 and 6).

Figure 1: Three Quarantine Stations: Louisiana, 1884; The Progressive Years, Gordon E. Gillson

Figure 2: Approximate Locations of Four Quarantine Stations (Mississippi River 1, Rigolets 2, Atchafalaya 3, Port Eads 4): Louisiana, 1839; *Source: USGS*

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(Louisiana Fact ... continued from page 5)

Figure 3: Lake Borne Separated From the Gulf of Mexico by Wetlands: Louisiana, 1759 (Location of station is approximate); http://en.wikipedia.org/wiki/File:Lake_Borgne_de_la_Tour_map_1720.jpg

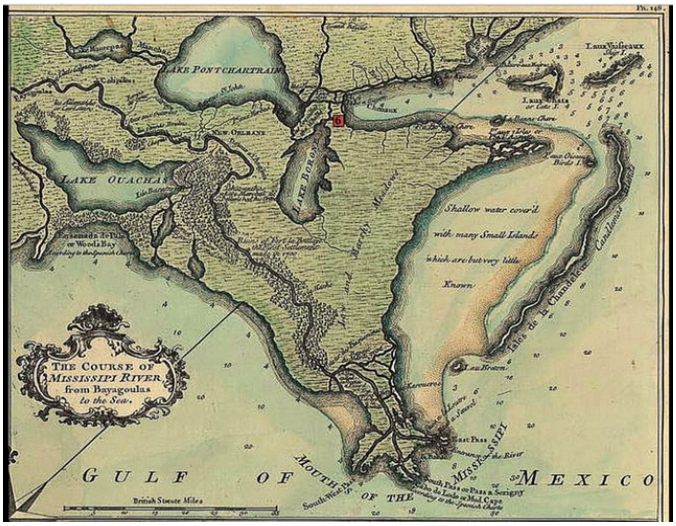


Figure 4: Approximate Location Port Eads Coordinates 29.016N, 89.161W: Louisiana, 2014; Google Maps

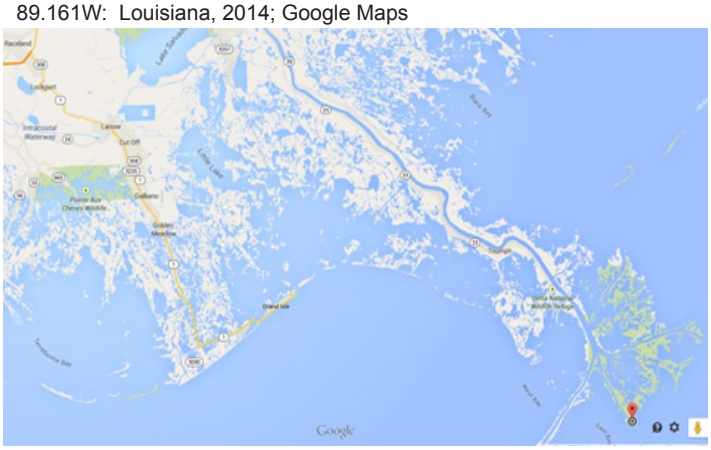


Figure 5: Approximate Locations of Four Quarantine Stations (Mississippi River 1, Rigolets 2, Atchafalaya 3, Port Eads 4): Louisiana, 1993; *Source: USGS*

In 1893 Congress passed legislation that further clarified the federal government's role in quarantine activities. As local authorities came to realize the benefits of federal involvement, local quarantine stations were gradually turned over to the US government. Additional federal facilities were built and the number of staff was increased to provide better coverage.

The quarantine system was fully nationalized by 1921 when administration of the last quarantine station was transferred to the US government. In 1967, the agency now known as the Centers for Disease Control and Prevention (CDC) took over quarantine responsibilities. By 1995, all US ports of entry were covered by only seven quarantine stations, with none in Louisiana. Concerns about bioterrorism and the worldwide spread of disease necessitated the increase to the current 20 stations*. None of the stations are in Louisiana.

**Anchorage, Atlanta, Boston, Chicago, Dallas, Detroit, El Paso, Honolulu, Houston, Los Angeles, Miami, Minneapolis, Newark, New York, Philadelphia, San Diego, San Francisco, San Juan, Seattle, and Washington D.C.*

Figure 6: Land Area Change: Coastal Louisiana, 1932 to 2010; US Department of the Interior US Geological Survey (Approximate Locations of Stations (Mississippi River 1, Rigolets 2, Atchafalaya 3, Port Eads 4, Calcasieu Pass 5, and Lake Borgne Canal 6)

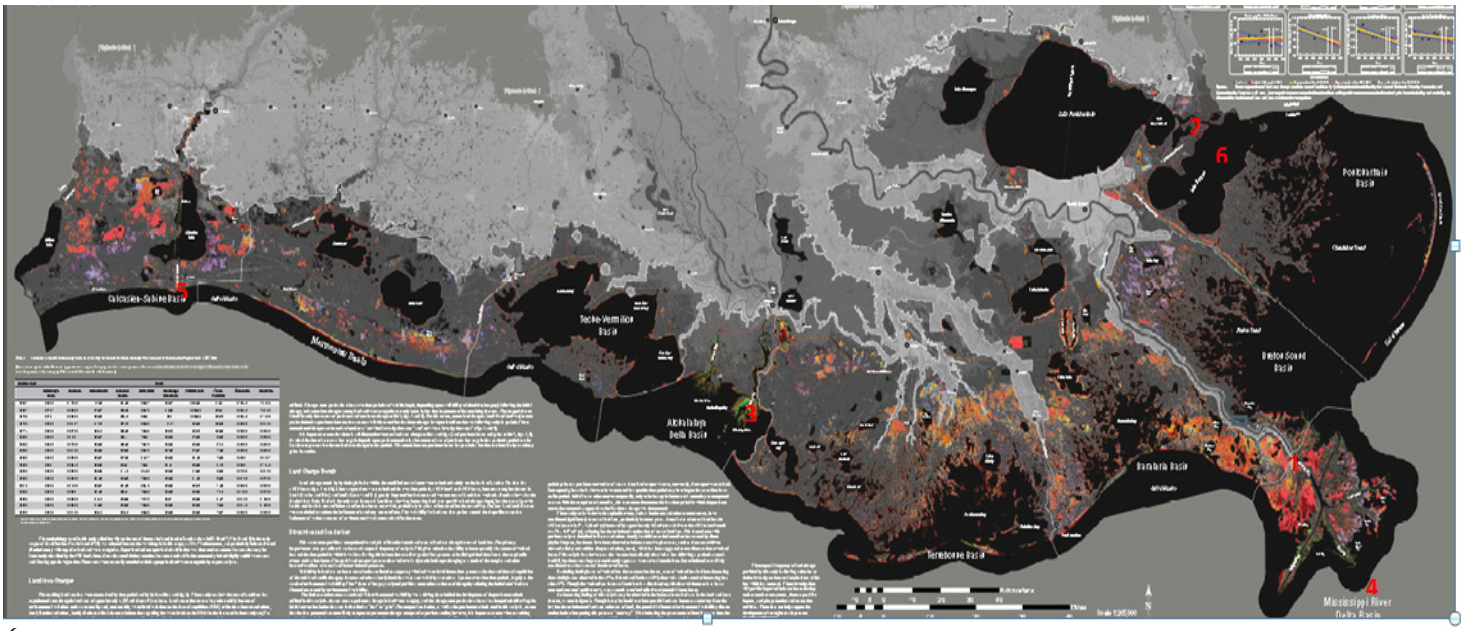


Table: Communicable Disease Surveillance, Incidence by Region and Time Period, November-December, 2014

DISEASE		HEALTH REGION 1	2	3	4	5	6	7	8	9	TIME PERIOD Nov-Dec* 2014	Nov-Dec 2013	Jan-Dec Cum 2014	Jan-Dec Cum 2013	Jan-Dec % Chg*
Vaccine-preventable															
Hepatitis B	Cases	2	2	1	3	1	1	2	1	6	19	5	85	44	93.2
	Rate[1]	0.2	0.4	0.3	0.6	0.4	0.3	0.4	0.3	1.6	0.4	0.1	2.0	1.0	NA*
Measles		0	0	0	0	0	0	0	0	0	0	0	0	0	NA*
Mumps		0	0	0	0	1	0	0	0	0	1	0	2	1	NA*
Rubella		0	0	0	0	0	0	0	0	0	0	0	0	0	NA*
Pertussis		0	2	0	5	1	4	4	5	3	24	9	182	63	188.9
Sexually-transmitted															
HIV/AIDS	Cases[2]	71	39	12	13	7	4	21	11	8	186	205	1437	1295	11.0
	Rate[1]	8.5	5.9	2.9	2.2	2.4	1.3	3.9	3.1	1.5	4.1	4.5	31.7	28.6	NA*
Chlamydia	Cases[1,3]	374	175	129	193	47	80	299	202	107	1,606	6,616	24,175	28,739	-15.9
	Rate[1]	43.1	26.0	31.9	32.6	16.0	25.8	54.3	56.7	19.4	34.9	143.8	525.3	621.3	NA*
Gonorrhea	Cases[1,3]	163	97	37	77	29	31	136	115	26	711	1,935	7,427	8,669	-14.3
	Rate[1]	18.8	14.4	9.1	13.0	9.8	10.0	24.7	32.3	4.7	15.5	42.0	161.4	187.4	NA*
Syphilis (P&S)	Cases[1,3]	23	13	8	4	0	0	9	7	1	65	72	530	423	25.3
	Rate[1]	2.6	1.9	2.0	0.7	0	0	1.6	2.0	0.2	1.4	1.6	11.5	9.1	NA*
Enteric															
Campylobacter	Cases	2	3	3	3	5	4	1	4	9	34	30	254	188	35.1
Hepatitis A	Cases	1	0	1	1	0	0	0	1	0	4	3	13	7	85.7
	Rate[1]	0.1	0	0.3	0.2	0	0	0	0.3	0	0.1	0.1	0.3	0.2	NA*
Salmonella	Cases	8	15	9	30	15	15	9	21	18	140	186	1226	1548	-20.8
	Rate[1]	0.8	2.6	2.4	5.8	5.6	4.9	1.8	6.0	4.7	3.2	4.3	28.4	35.9	NA*
Shigella	Cases	4	32	2	3	2	1	1	0	5	50	47	373	216	72.7
	Rate[1]	0.4	5.6	0.5	0.6	0.7	0.3	0.2	0	1.3	1.2	1.1	8.6	5.0	NA*
Vibrio, cholera	Cases	0	0	0	0	0	0	0	0	0	0	0	0	0	NA*
Vibrio, other	Cases	0	0	2	0	0	0	0	0	0	2	4	36	53	-32.1
Other															
H. influenzae (other)		0	4	3	0	1	0	1	2	2	13	6	53	57	NA*
N. Meningitidis		0	0	0	0	1	0	0	0	0	1	1	11	4	175.0

[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] = Prelminary data.

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

Table 2. Diseases of Low Frequency, January-December, 2014

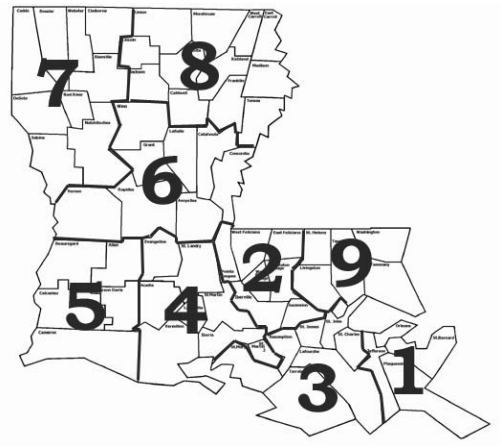
Disease	Total to Date
Legionellosis	29
Lyme Disease	0
Malaria	8
Rabies, animal	5 **
Varicella	62

Table 3. Animal Rabies, November-December, 2014

Parish	No. Cases	Species
	0	

** The July-August report was missing two bats, one each from E. Baton Rouge and Lafayette parishes. The cat reported as Washington Parish was actually in the September-October time frame.

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

- Amoeba (free living infection: *Acanthamoeba, Naegleria, Balamuthia,* others)
- Anaplasmosis
- Arthropod-Borne Neuroinvasive Disease (West Nile, St, Louis, California, Eastern Equine, Western Equine, others)
- Aseptic Meningitis
- Babesiosis
- Chagas Disease
- Chancroid
- Dengue Fever
- *Escherichia coli*, Shig-toxin producing (STEC), including *E. coli* 0157:H7
- Granuloma Inguinale
- Hantavirus (infection or Pulmonary Syndrome)
- Hemolytic-Uremic Syndrome
- Hepatitis A (acute disease)
- Hepatitis B (acute illness and carriage in pregnancy)
- Hepatitis B (perinatal infection)
- Hepatitis E
- Herpes (neonatal)
- Human Immunodeficiency Virus[2] [(HIV), infection in pregnancy]
- Human Immunodeficiency Virus[2] [(HIV), perinatal exposure]
- Legionellosis (acute disease)
- Malaria
- Mumps
- Salmonellosis
- Shigellosis
- Syphilis[1]
- Tetanus
- Tuberculosis[3] (*M. tuberculosis, M. bovis, M. africanum*)
- 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[3] (AIDS)
- Anaplasma Phagocytophilum
- Blastomycosis
- Campylobacteriosis
- Chlamydial infection[1]
- Coccidioidomycosis
- Cryptococcosis
- Cryptosporidiosis
- Cyclosporiasis
- Ehrlichiosis (human granulocytic and monocytic, *Ehrlichia chaffeensis)*
- Enterococcus, Vancomycin Resistant [(VRE), invasive disease]
- Giardia
- Glanders
- Gonorrhea[1] (genital, oral, ophthalmic, pelvic inflammatory disease, rectal)
- Hansen's Disease (leprosy)
- Hepatitis B (carriage, other than in pregnancy)
- Hepatitis C (acute illness)
- Hepatitis C (past or present infection)
- Human Immunodeficiency Virus[2] (HIV (infection other than as in Class B)
- Human T Lymphocyte Virus (HTLV I and II infection)
- Leptospiriosis
- Listeria
- Lyme Disease
- Lymphogranuloma Venereum[1]
- Meliodosis (*Burkholderia pseudomallei)*
- Meningitis, Eosinophilic
- Nipah Virus Infection
- Psittacosis
- Spotted Fevers [Rickettsia species including Rocky Mountain Spotted Fever (RMSF)]
- *Staphylococcus aureus*,(MRSA) invasive infection
- Staphylococcal Toxic Shock Syndrome
- Streptococcal Disease, Group A (invasive disease)
- Streptococcal Disease, Group B (invasive disease)
- Streptococcal Toxic Shock Syndrome
- *Streptococcus pneumoniae*, invasive disease
- Transmissible Spongiform Encephalopathies (Creutzfeldt-Jacob Disease & variants)
- Trichinosis
- Varicella (chickenpox)
- Vibrio Infections (other than cholera)
- Yersiniosis

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]
- Heavy Metal (Arsenic, Cadmium, Mercury) Exposure and/or Poisoning (all ages)[5]
- 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[4] (newborns)
- 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