Louisiana Morbidity Report

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September-October, 2018 **Volume 29, Number 5**

Acute Flaccid Myelitis Louisiana, 2018

Kristine Oines, MPH

Acute flaccid myelitis (AFM) is an illness characterized by acute onset of flaccid limb weakness and magnetic resonance imaging (MRI) showing lesions in the gray matter of the spinal cord. AFM has been under investigation by the Infectious Disease Epidemiology section (IDEpi), of the Louisiana Department of Health (LDH), Office of Public Health (OPH), and the Centers for Disease Control and Prevention (CDC) since late 2014. Surveillance has shown that AFM cases generally peak in the months of September and October. The CDC has observed a biennial pattern, with the majority of cases reported in 2014 and 2016, and smaller numbers reported in 2015 and 2017.

In 2018, this pattern has continued with an increase in AFM cases nationwide. As of October 16, 2018, the CDC has confirmed 62 cases of AFM in 22 states. Out of the 62 cases, 58 have been in individuals younger than 18 years old. These 62 confirmed cases are among the total of 127 reports that the CDC received of patients under investigation (PUIs). CDC recently received increased reports for PUIs with onset of symptoms in August and September.

AFM appears to start with a prodromal respiratory or gastrointestinal illness about one week before limb weakness onset. Pain in the neck or back often directly precedes weakness in one or more limbs, and cranial nerve findings such as slurred speech, difficulty swallowing, and eyelid or facial droop may occur. On exam, the weak limb(s) displays poor tone and diminished reflexes. Cerebrospinal fluid (CSF) may show a lymphocytic pleocytosis and elevated protein. MRI findings in AFM cases include lesions in the central, or gray matter, of the spinal cord.

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Inside

Infant Safe Sleep: Louisiana

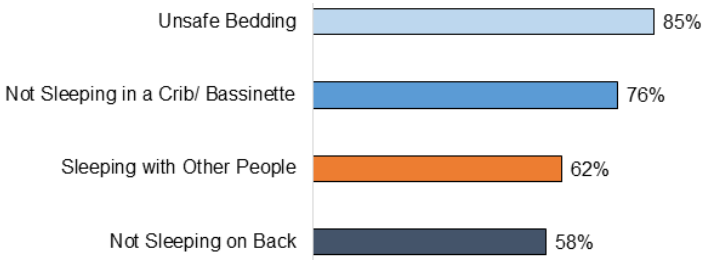
Jia Benno, MPH

October is *Safe Sleep Awareness Month* in Louisiana. Each year, approximately 100 infants in Louisiana (equivalent to five kindergarten classrooms) do not make it to their first birthday due to unsafe sleep factors. The goal of safe sleep month is to focus on the issues related to safe sleep and the best ways to reduce the risk of sleep-related deaths in infants.

Historically, October focused solely on SIDS, or Sudden Infant Death Syndrome, which is thought of as a natural and unpreventable cause of death. However, SIDS only accounts for a fraction of Sudden Unexpected Infant Deaths (SUIDs). SUIDs are any sudden and unexpected death, whether explained or unexplained, occurring during infancy. Sleep-related SUIDs are often related to occlusion of an infant's airway and eventual suffocation.

SUID deaths primarily occur in the sleep environment, but can also occur on sofas, in car seats, and other places where the infant's airway might be covered, bent, or in the case of belly sleeping, where the infant may aspirate. SUID is most common in male infants between the ages of two and three months. Of the deaths reviewed from 2014 to 2016 in Louisiana, the infants not sleeping in a crib or bassinette, sleeping with other people, and not sleeping on their back and unsafe bedding, were the largest contributing factors (Figures 1, 2, 3 and 4).

Figure 1: Risk Factors Present* in SUIDs - Louisiana, 2014-2016



**Multiple risk factors per death may be present*

Figure 2: SUID Cases by Age at Death - Louisiana, 2014-2016

Age at Death	Percentage
Newborn-1 Month	30%
2-3 Months	43%
4-5 Months	15%
6 Months - 1 Year	12%

Figure 3: SUID Cases by Sex - Louisiana, 2014-2016

Sex	Percentage
Male	55%
Female	45%

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Nursing Home Residents and Staff - Influenza Vaccination Louisiana, 2018

Stacy Hall MSN RN; Julie Hand MSPH; Erica Washington MPH

The Louisiana Office of Public Health is encouraging annual influenza vaccination for nursing home residents and all staff. The 2017-2018 influenza season was one of the worst in the United States since public health officials began tracking flu seasons more than 10 years ago. During the 2017-2018 season, flu outbreaks in Louisiana nursing homes accounted for 1,271 cases, 152 hospitalizations, and 31 deaths.

Severe and even fatal influenza illness can be introduced by newly admitted residents, health care or any general nursing home staff, and by visitors. Vaccination of all persons, including residents, all employees (not just the nursing or care staff), and accessory staff is the first step in preventing transmission of influenza viruses and other infectious agents in long-term care facilities.

Influenza prevention requires planning and infection prevention education. **Each nursing home should have influenza vaccination policies for residents and all staff members**. A comprehensive influenza infection prevention plan may include:

1) offering free influenza vaccination to all healthcare personnel (HCP) across varying work shifts, locations, and days. Vaccination may be offered on site, and is also readily available from health care providers and community pharmacies. Parish Health Units offer flu vaccination for a $10 administration fee, which can be waived if a staff member is unable to pay.

2) providing targeted, interactive education programs annually to all HCP to explain the impact of influenza, particularly among high-risk patients; also to address misconceptions and concerns about the safety of influenza vaccination; and

3) educating HCP about the importance of influenza vaccination in promoting patient and employee safety.

The OPH Infectious Disease Epidemiology Section (IDEpi) is available to assist with planning and outbreak response. As a reminder, two or more suspected cases of influenza in a nursing home should be reported immediately to IDEpi's 24-hour hotline: (800) 256-2748.

For more information, go to webpage *For Health Care Providers,* or contact Julie Hand at *julie.hand@la.gov* or (504) 568-8298.

National Influenza Vaccination Week

December 2-9, 2018

IDEpi Question/Answer Corner

Why are fungal diseases public health issue in Louisiana?

- Opportunistic infections such as cryptococcosis and aspergillosis are becoming increasingly problematic as the number of people with weakened immune systems rises. This group includes cancer patients, transplant recipients, people taking medications that weaken the immune system, and people with HIV/AIDS.

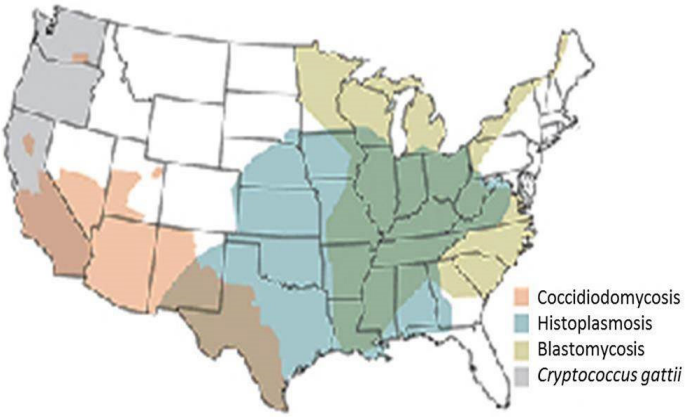
- Hospital-associated infections such as candidemia are a leading cause of bloodstream infections in the United States. Advancements and changes in healthcare practices can provide opportunities for new and drug-resistant fungi to emerge in hospital settings.

- Community-acquired infections such as blastomycosis and histoplasmosis are caused by fungi that live in the environment in state of Louisiana. These fungi are sensitive to changes in temperature and moisture, and we do not know how long-term climate change may be affecting their growth and distribution.

Louisiana tracks six local fungi or "endemic mycoses" (Figure). Given the high likelihood of exposure to these pathogenic organisms, the health department has been tracking these diseases for many years. However, these diseases often go undiagnosed as a "generalized pneumonia" or worse – are incorrectly treated with an antibiotic or antiviral medication.

For more information, contact Jose Antonio Serrano at *jose.serrano@la.gov* or (504) 568-8292 or go to *http://ldh.la.gov/index.cfm/page/2856.*

Figure: Map of Endemic Mycoses* - Courtesy of the Centers for Disease Control and Prevention.



**Not shown: Aspergillosis and Candidiasis, which are ubiquitous in the environment*

Louisiana Morbidity Report
Volume 28, Number 5 September - October, 2018

The Louisiana Morbidity Report is published bimonthly by the LDH, OPH Infectious Disease Epidemiology Section to inform physicians, nurses, and public health professionals about disease trends and patterns in Louisiana. Address correspondence to Louisiana Morbidity Report, Infectious Disease Epidemiology Section, Louisiana Department of Health, P.O. Box 60630, New Orleans, LA 70160.

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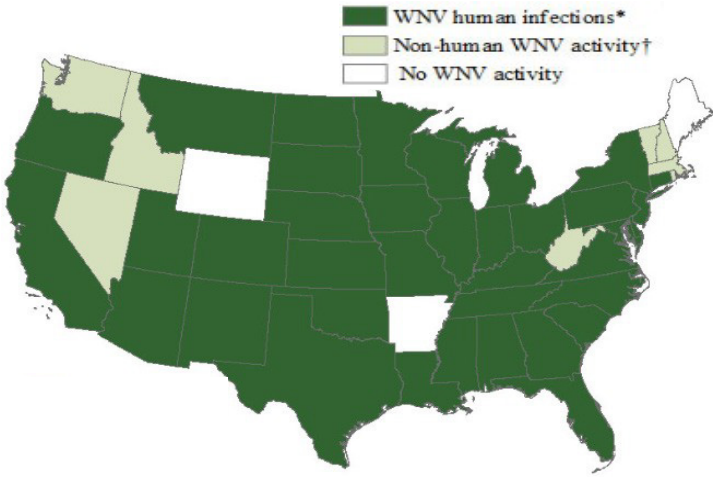
Is There a Correlation Between the Frequency of West Nile in Louisiana and the United States?

Christine Scott-Waldron, MSPH; Julius Tonzel, MPH

West Nile is a single-stranded RNA virus from the family Flaviviridae, specifically from the genus Flavivirus. In North America, cases of West Nile virus (WNV) occur during mosquito season, which starts in the summer and continues through fall. West Nile virus is primarily transmitted by mosquito bites, mostly species of the genus Culex, but ticks have also been found to carry the virus. The primary hosts of WNV are birds, so that the virus remains within a "bird-mosquito-bird" transmission cycle WNV cases have been reported in all of the continental United States (Figure 1).

Figure 1: West Nile Virus Activity by State – United States, 2018 (as of 8/21/18) - Courtesy of the Centers for Disease Control and Prevention



**WNV human disease cases or presumptive viremic blood donors. Presumptive viremic blood donors have a positive screening test which has not necessarily been confirmed.*

†WNV veterinary disease cases, or infections in mosquitoes, birds, or sentinel animals.

Is there a correlation (parallel) between the frequency of West Nile in Louisiana and the U.S.?

Answer: Yes and No

The best indicator to measure the intensity of West Nile is the number of cases of the severe disease caused by West Nile virus in the central nervous system (brain and spine). This West-Nile Neuro-Invasive Disease (WN-NID) is so severe that most, if not all cases, get hospitalized and reported (Table).

Table: Number of Cases of WN-NID Reported in Louisiana and the U.S.,

Year	LA	U.S.	Ratio LA/U.S.
2001	1	66	1.5%
2002	204	4,156	4.9%
2003	101	9,862	1.0%
2004	84	2,539	3.3%
2005	118	3,000	3.9%
2006	91	4,269	2.1%
2007	27	3,630	0.7%
2008	19	1,356	1.4%
2009	11	720	1.5%
2010	20	1,021	2.0%
2011	6	712	0.8%
2012	160	5,674	2.8%
2013	34	2,469	1.4%
2014	61	2,205	2.8%
2015	41	2,175	1.9%
2016	38	2,149	1.8%
Total	**1,016**	**46,003**	**2.2%**

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(Acute Flaccid Myelitis ... continued from page 1)

Since 2014, the CDC has learned that most AFM patients are children, and their symptoms have been most similar to complications of infection with certain viruses, including poliovirus, non-polio enteroviruses, adenoviruses, and West Nile virus. The CDC has tested many different specimens from AFM patients for a wide range of pathogens. To date, no pathogen has been consistently detected in the patients' CSF; a pathogen detected in the spinal fluid would be good evidence to indicate the cause of AFM since this condition affects the spinal cord.

Of note, the increase in AFM cases in 2014 coincided with a national outbreak of severe respiratory illness caused by enterovirus D68 (EV-D68). Among confirmed cases of AFM in 2014, the CDC did not consistently identify EV-D68 as the pathogen. In 2015, no large EV-D68 outbreaks were reported in the United States. So far in 2018, Colorado and Minnesota have had AFM cases in children confirmed to have enterovirus A71.

Since AFM is a relatively new condition, the CDC and LDH need information on all patients to help better understand the spectrum of illness, and all possible causes, risk factors, and outcomes for AFM. Healthcare workers are encouraged to be aware of the symptoms of AFM and to call IDEpi for all patients that meet the clinical criterion for AFM (sudden onset of flaccid limb weakness). Information should be sent on patients who meet the clinical criterion regardless of any laboratory results or MRI findings.

The CDC continues to search for potential causes of AFM by broadening laboratory approaches that test for potential infectious, noninfectious, and post-infectious causes. Clinicians are urged to collect specimens from patients suspected of having AFM as early as possible in the course of illness. Early specimen collection has the best chance to yield a cause of AFM. Requested specimens include CSF, serum, whole stool, and a respiratory swab (nasopharyngeal or oropharyngeal). Instructions for specimen collection and storage can be found at *https://www.cdc.gov/acute-flaccid-myelitis/hcp/instructions.html*. Healthcare providers should contact IDEpi to coordinate submission of specimens to the CDC.

For more information about the case definition for AFM, go to *https://www.cdc.gov/acute-flaccid-myelitis/hcp/case-definition.html*. For questions, or to report a suspected case of AFM call the IDEpi main line at (504) 568-8313 or the 24/7 on-call epidemiologist at (800) 256-2748.

STD Surveillance Update - Louisiana, 2017

Catherine Desmarais, DrPH; Ashley Hoover, MPH

Louisiana experiences some of the highest rates of sexually transmitted diseases (STD) in the nation. The Louisiana Department of Health, Office of Public Health, STD/HIV Surveillance Program (SHP) collects and analyzes data on cases of chlamydia, gonorrhea, syphilis (all stages), and congenital syphilis. Louisiana's Sanitary Code* mandates that all medical providers and laboratories report these STDs to SHP along with basic demographic and residence information.

The majority of new cases are received through paper and electronic laboratory reporting. Cases are also provided directly from public health providers throughout the state (Table).

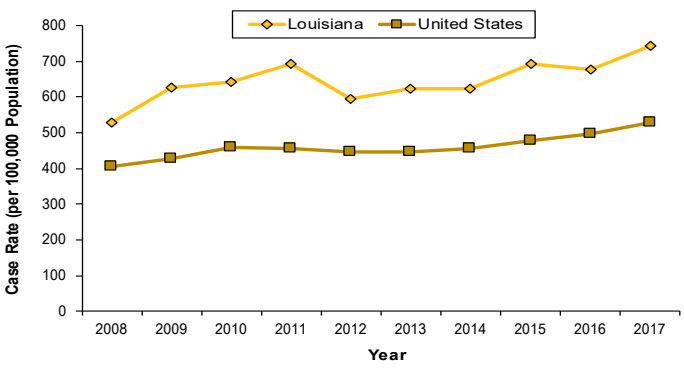
Table: Cases and Case Rates of STDs by Sex at Birth, Race/Ethnicity, Age Group, and Region of Residence - Louisiana, 2017

	Chlamydia		Gonorrhea		P&S Syphilis	
	Case Number	Rate per 100,000	Case Number	Rate per 100,000	Case Number	Rate per 100,000
TOTAL	**34,749**	**741.8**	**12,014**	**256.5**	**679**	**14.5**
Reported Sex at Birth						
Female	24,542	1,024.8	5,975	249.5	186	7.8
Male	10,207	445.8	6,039	263.8	493	21.5
Reported Race/Ethnicity						
Black/African-American	24,175	1,605.5	9,121	605.7	462	30.7
Hispanic/Latinx	1,353	551.9	234	95.5	12	4.9
White	8,814	320.8	2,562	93.2	194	7.1
Other/Multi-race	*344*	-	*87*	-	*11*	-
Unknown	*63*	-	*10*	-	*0*	-
Age Group at Diagnosis						
0-9	11	1.8	9	1.5	0	0.0
10-14	333	108.8	83	27.1	3	1.0
15-19	11,220	3,744.1	2,812	938.4	56	18.7
20-24	12,753	3,989.3	4,090	1,279.4	171	53.5
25-29	5,675	1,618.5	2,313	659.7	164	46.8
30-34	2,501	760.1	1,206	366.5	109	33.1
35-39	1,196	385.8	683	220.3	68	21.9
40-44	492	183.3	296	110.3	40	14.9
45+	568	30.2	522	27.7	68	3.6
Region of Residence						
1-New Orleans	8,060	893.7	3,170	351.5	189	21.0
2-Baton Rouge	5,296	772.5	1,683	245.5	90	13.1
3-Houma	2,604	648.5	853	212.4	41	10.2
4-Lafayette	3,628	596.0	1,217	199.9	59	9.7
5-Lake Charles	1,622	534.6	513	169.1	26	8.6
6-Alexandria	2,148	705.0	739	242.6	33	10.8
7-Shreveport	5,005	923.2	1,840	339.4	95	17.5
8-Monroe	3,268	927.5	1,125	319.3	116	32.9
9-Hammond/Slidell	3,077	526.8	869	148.8	30	5.1
Unknown	*41*	-	*5*	-	0	-

The Chlamydia Epidemic in Louisiana

Nationally in 2017, chlamydia was the most frequently reported disease to the Centers for Disease Control and Prevention (CDC), with the highest number of reports of a single disease ever. In the most recent CDC STD Surveillance Report, Louisiana ranked second in the nation for chlamydia case rates. In 2017, there were 34,749 cases of chlamydia diagnosed in Louisiana with a case rate of 741.8 per 100,000 population, which was 40% higher than the national case rate of 528.8 per 100,000 population (Figure 1).

Figure 1: Chlamydia Case Rates - Louisiana and the United States, 2008-2017



The majority of new chlamydia cases were diagnosed among women between the ages of 15 to 24 years. Nearly 70% of cases with a reported race were diagnosed among non-Hispanic Blacks. Louisiana has a targeted gonorrhea and chlamydia screening program in family planning clinics for women younger than 31 years of age, where the majority of cases are diagnosed and treated.

The Gonorrhea Epidemic in Louisiana

In 2017, Louisiana ranked third in the nation for gonorrhea case rates. In 2017, there were 12,014 cases of gonorrhea diagnosed in Louisiana with a case rate of 256.5 per 100,000 population. The gon-

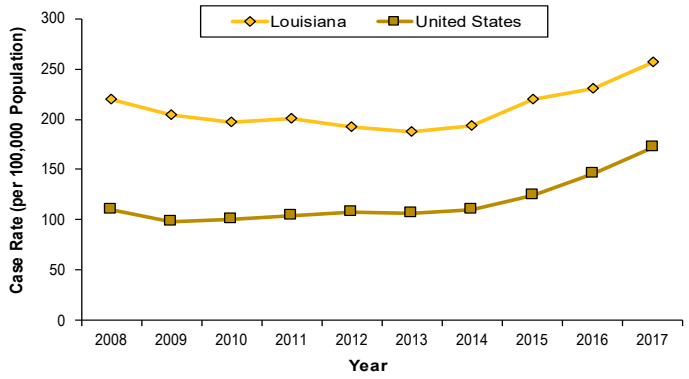
(continued on page 5)

** Sanitary Code list on page 8*

(STD Surveillance ... continued from page 4)

orrhea case rate has increased in Louisiana from 2013 to 2017, and it was 1.5 times higher than the national rate of 171.9 per 100,000 population in 2017 (Figure 2).

Figure 2: Gonorrhea Case Rates - Louisiana and the United States, 2008-2017

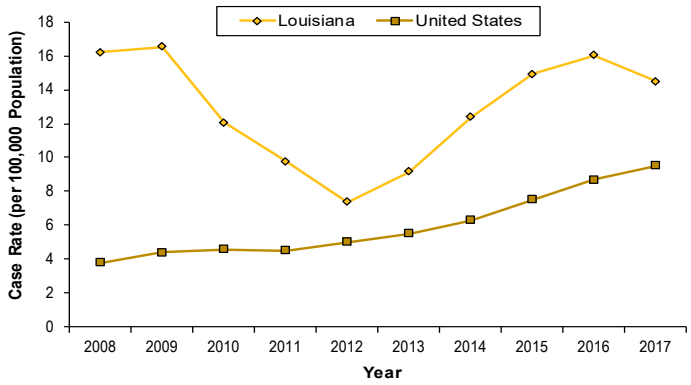


The majority of new gonorrhea cases diagnosed in Louisiana in 2017 were among persons between the ages of 15 to 24 years. Females made up half of gonorrhea cases. A total of 76% of cases with a reported race were diagnosed among non-Hispanic Blacks.

The Syphilis Epidemic in Louisiana

In 2017, for the first time in four years, Louisiana did not rank first for primary and secondary (P&S) syphilis case rates, dropping to third in the nation. In 2017, there were 679 cases of P&S syphilis diagnosed in Louisiana with a case rate of 14.5 per 100,000 population. In 2017, Louisiana's case rate decreased 9% from 2016. The P&S syphilis rate in Louisiana is 1.5 times higher than the national rate (9.5 per 100,000 population) (Figure 3).

Figure 3: Primary and Secondary Syphilis Case Rates - Louisiana and the United States, 2008-2017

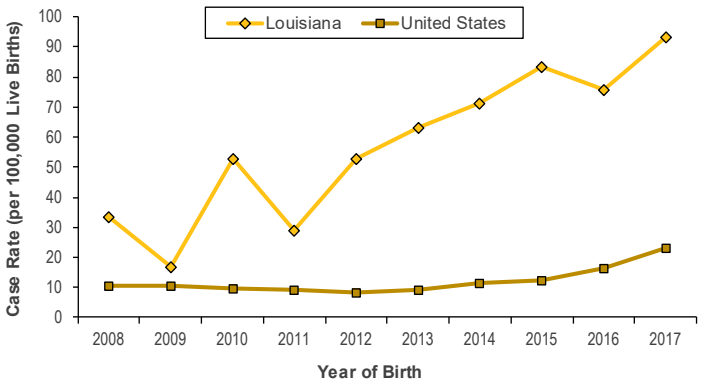


In 2017, new P&S syphilis cases occurred in 52 of Louisiana's 64 parishes. The New Orleans region had the highest number of new cases (189 cases). The Monroe region had the second highest number of new cases (116 cases), followed by the Shreveport region (95 cases). Although non-Hispanic Blacks make up only 32% of Louisiana's population, 68% of all new syphilis cases were non-Hispanic Black. The majority of new syphilis cases were diagnosed in persons between the ages of 20 to 29 years.

The Congenital Syphilis Epidemic in Louisiana

Across the nation, the number of reported congenital syphilis cases increased from 639 in 2016 to 918 in 2017. The number of cases reported in Louisiana increased from 48 cases in 2016 to 59 cases in 2017. Louisiana ranked first in the nation for congenital syphilis rates, with a rate of 93.4 per 100,000 live births, which was four times higher than the national rate of 23.3 per 100,000 live births (Figure 4).

Figure 4: Congenital Syphilis Case Rates - Louisiana and the United States, 2008-2017



More than half of all congenital syphilis cases in 2017 were born in the Shreveport, Lafayette, and Monroe regions. A total of 54% of mothers of congenital syphilis cases were under 25 years of age. Approximately 85% of the mothers of congenital syphilis cases were non-Hispanic Black.

The SHP office regularly reports and publishes data on websites www.std.dhh.louisiana.gov and www.louisianahealthhub.org. For more information, please contact Jessica Fridge at (504) 568-5566 or email to jessica.fridge@la.gov.

Announcements

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

Annual: Arthropod-Borne Encephalitis; Chagas; Eastern Equine (EEE) and La Crosse (LAC) Encephalitis; Hepatitis B; Hepatitis D; Hepatitis E; Histoplasmosis; Malaria; Saint Louis Encephalitis (SLE); Vibrios

Arboviral: Week 38 Surveillance Report

Epi Manual: Botulism Outcome Report (CDC); Hansen's Disease Summary; Hantavirus Case Form (CDC); Hepatitis A Supplemental Form; Mumps Public Information; Mumps Summary; Murine Typhus Investigation Form; Norovirus Cleaning Guidelines; Nucleic Acid-Poymerase Chain Reaction (PCR) Summary; Zika Summary

Fungal/Mycotic: Assessing Your Risk of Getting a Fungal Infection

Influenza: Week 40 Surveillance Report

Special Studies: Necrotizing Pneumonia Caused by *Chromobacterium violaceum* Soil Bacterium: Report of a Rare Human Pathogen Causing Disease in a Previously Undiagnosed Immunodeficient Child

Veterinary: Zoonotic Potential of Giardia Species

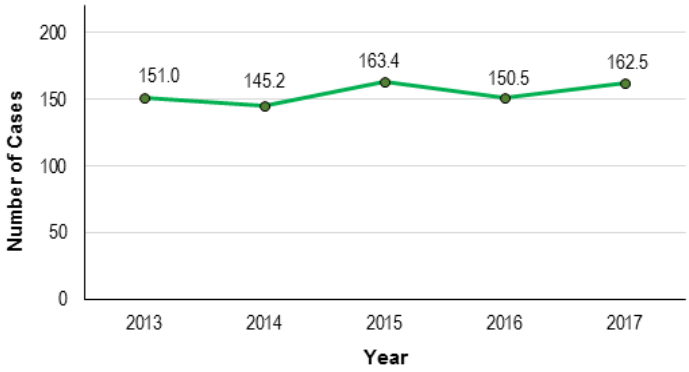
(Infant Safe Sleet ... continued from page 1)

Figure 4: SUID Cases by OPH Region* (Using CDC Definition of SUIDs by ICD-10 Code Only) Louisiana, 2014-2016

Region	Number of Cases
1	50
2	42
3	22
4	36
5	18
6	17
7	44
8	35
9	30

Louisiana consistently ranks in the top 10 for states with the highest rates of SUID-related deaths in the United States. The rate of SUID categorized deaths have remained relatively steady over the past several years, hovering between 145 deaths per 100,000 live births and 164 deaths per 100,000 live births (Figure 5).

Figure 5: SUID Infant Mortality Rate - Louisiana, 2013-2017



While there hasn't been a major increase in the SUID rate for Louisiana over the past five years, there also hasn't been the desired decrease. Louisiana has the fourth highest infant mortality rate in the country as of 2016 data, with a rate of 8.1 deaths per 1,000 live births. Reducing the rate of SUID deaths would have a tremendous impact on the overall infant mortality rate. Encouraging research reflect that SUID deaths are largely preventable through safe sleep practices and promoting protective factors among parents. Two of the greatest protective factors for families are breastfeeding and smoking cessation. Additional prevention efforts may include:

- Place a baby to sleep on his/ her back, not on the tummy or side
- Do not bed share with a baby. Do not sleep with a baby in an adult bed or on a sofa
- Do not allow children, toddlers, or animals to share a sleep space with a baby
- Place a baby to sleep in a safety-approved crib with a firm mattress that fits snugly and is covered with only a tight-fitting crib sheet
- Do not have comforters, pillows, loose blankets, or quilts in the crib where the baby sleeps
- Do not put bumper pads, toys, or stuffed animals in the baby's crib
- Do not overheat a baby. Dress the baby in light clothing and do not keep the room too warm.
- Do not smoke around infants or allow them to sleep in smoke-filled environments

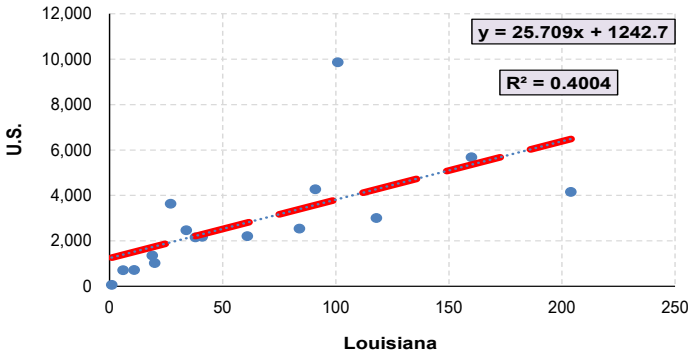
** Map of Regions on Page 7*

October is a great time to get the word out about SUID related deaths. Please visit www.GiveYourBabySpace.com or email Jia Benno at jia.benno@la.gov for more information.

(Is There a Correlation ... continued from page 3)

Over the past 16 years, Louisiana represented 2.2% of all the U.S. cases of WN-NID. In the early years (from 2002 to 2005) Louisiana represented almost twice that proportion (4.9% in 2002, more than 3% in 2004 and 2005). After 2005, Louisiana proportions were similar with those in the rest of the United States. However, in 2007 and 2011 they were well below the U.S. (0.7% and 0.8%), (Figure 2).

Figure 2: Number of Cases of WN-NID Reported in Louisiana and the U.S., 2001-2016



The linear regression calculates an equation that minimizes the distance between the fitted line and all of the data points. Technically, ordinary least squares (OLS) regression minimizes the sum of the squared residuals.

R-squared is a statistical measure of how close the data are to the fitted regression line. It is also known as the coefficient of determination, or the coefficient of multiple determination for multiple regression. The definition of R-squared is fairly straightforward; it is the percentage of the response variable variation that is explained by a linear model, or

R-squared = Explained variation / Total variation

R-squared is always between 0 and 100%.

Depending on the year, there is a correlation between the frequency of West Nile in Louisiana and the United States.

For more information, please contact Christine Scott-Waldron at (504) 568-8301 or christine.scott-waldron@la.gov.

Know the Site and Get It Right

As influenza season approaches and mass flu vaccination campaigns are occurring, now is a great opportunity to ensure staff who provide vaccines know how to do them right. The Center for Diease Control and Prevention (CDC)'s Immunization Services Division has developed tools to educate and remind providers about proper influenza vaccine administration technique to help avoid shoulder injuries and other adverse events. The materials include links to comprehensive vaccine administration information, a short video on the correct technique for intramuscular injection, an infographic on administering flu vaccine to an adult, and a link to the CDC's vaccine administration e-Learn which provides CEUs.

Table 1: Communicable Disease Surveillance, Incidence by Region and Time Period, July - August, 2018

DISEASE		HEALTH REGION 1	2	3	4	5	6	7	8	9	TIME PERIOD Jul-Aug 2018	Jul-Aug 2017	Jan-Dec Cum 2018	Jan-Dec Cum 2017	Jan-Dec % Chg*
Vaccine-preventable															
Hepatitis B Acute	Cases[4]	1	3	2	0	1	0	1	0	3	11	17	31	66	-53.0
	Rate[1]	0.1	0.5	0.5	0	0.4	0	0.2	0	0.8	0.3	0.4	0.7	1.5	NA*
Measles (Rubeola)	Cases[5]	1	0	0	0	0	0	0	0	0	1	0	2	0	NA*
Mumps	Cases[5]	8	0	0	0	0	0	0	0	0	8	7	14	69	-79.7
Rubella	Cases[4]	0	0	0	0	0	0	0	0	0	0	0	0	0	NA*
Pertussis	Cases[5]	2	0	12	2	0	0	2	0	7	25	12	92	68	35.3
Sexually-transmitted															
HIV/AIDS	Cases[2]														
	Rate[1]														NA*
Chlamydia	Cases[1,3]	1,456	922	488	647	310	364	895	560	522	6,171	5,924	23,831	24,085	-1.1
	Rate[1]	161.4	134.5	121.5	106.3	102.2	119.5	165.1	158.9	89.4	131.7	126.5	508.7	514.2	NA*
Gonorrhea	Cases[1,3]	535	300	132	199	89	120	337	223	147	2,082	2,145	7,702	8,193	-6.0
	Rate[1]	59.3	43.8	32.9	32.7	29.3	39.4	62.2	63.3	25.2	44.4	45.8	164.4	174.9	NA*
Syphilis (P&S)	Cases[1,3]	31	24	1	6	2	10	10	9	7	100	142	387	494	-21.7
	Rate[1]	3.4	3.5	0.2	1.0	0.7	3.3	1.8	2.6	1.2	2.1	3.0	8.3	10.5	NA*
Enteric															
Campylobacter	Cases[5]	11	20	2	69	12	7	12	7	18	158	161	523	572	-8.6
Hepatitis A	Cases[4]	2	8	0	0	0	0	0	0	0	10	2	14	7	100.0
	Rate[1]	0.2	1.4	0	0	0	0	0	0	0	0.2	0	0.3	0.2	NA*
Salmonella	Cases[5]	22	25	23	37	24	23	22	34	44	254	229	662	678	-2.4
	Rate[1]	2.1	4.4	6.1	7.2	9.0	7.5	4.3	9.7	11.4	5.9	5.3	15.3	15.7	NA*
Shigella	Cases[5]	6	3	0	9	4	0	2	0	1	25	46	132	181	-27.1
	Rate[1]	0.6	0.5	0.0	1.7	1.5	0	0.4	0	0.3	0.6	1.1	3.1	4.2	NA*
Vibrio, Cholera	Cases[4]	0	0	0	0	0	0	0	0	0	0	1	0	1	NA*
Vibrio, Other	Cases[5]	1	12	3	2	2	0	0	0	8	28	16	76	56	35.7
Other															
H. influenzae (invasive) [5]		1	0	2	1	0	3	2	1	4	14	7	60	43	39.5
N. Meningitidis (invasive) [5]		0	0	0	0	0	0	0	0	0	0	0	0	3	NA*

[1] = Cases Per 100 000 Population.

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

[3] = Prelminary data.

[4] = Confirmed cases

[5] = Confirmed and Probable cases

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

Figure: Department of Health Regional Map

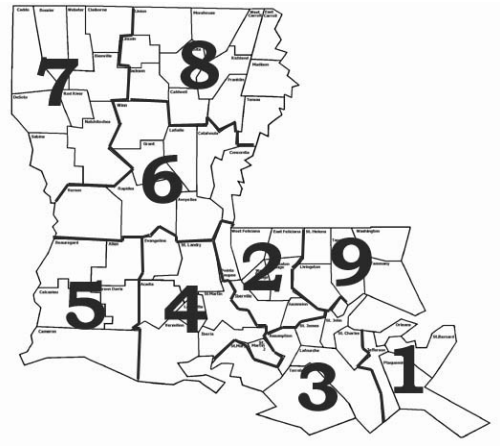


Table 2: Diseases of Low Frequency, January-December, 2018

Disease	Total to Date
Legionellosis	24
Lyme Disease	4
Malaria	6
Rabies, animal	8
Varicella	79

Table 3: Animal Rabies, July-August, 2018

Parish	No. Cases	Species
Ascension	2	Bat
DeSoto	1	Skunk
E. Baton Rouge	1	Bat
Ouachita	1	Bat
St. Helena	1	Cat
St. Tammany	1	Bat

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 shellfish poisoning, ciguatera, paralytic shellfish poisoning, scombroid)
- Foodborne Infection
- *Haemophilus influenzae* (invasive infection)
- Influenza-associated Mortality
- Measles (Rubeola imported or indigenous)
- *Neisseria 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 (Ebola, Lassa, Marburg, Crimean Congo, etc.)
- 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 Viral Infections (West Nile, Dengue, St, Louis, California, Eastern Equine, Western Equine, Chikungunya, Usutu, and others)
- Aseptic Meningitis
- Babesiosis
- Chagas Disease
- Chancroid
- *Escherichia coli*, Shiga-toxin producing (STEC), including *E. coli* O157:H7
- Granuloma Inguinale
- Hantavirus (infection or Pulmonary Syndrome)
- Hemolytic-Uremic Syndrome
- Hepatitis A (acute illness)
- 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
- Malaria
- Mumps
- Salmonellosis
- Shigellosis
- Syphilis[1]
- Tetanus
- Tuberculosis[3] (due to *M. tuberculosis*, *M. bovis, or 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 (*C. neoformans* and *C. gattii*)
- Cryptosporidiosis
- Cyclosporiasis
- Ehrlichiosis (human granulocytic, human monocytic, *E. chaffeensis* and *E. ewingii)*
- *Enterococcus*, Vancomycin Resistant [(VRE), invasive disease]
- Giardiasis
- Glanders (*Burkholderia mallei*)
- Gonorrhea[1] (genital, oral, ophthalmic, pelvic inflammatory disease, rectal)
- Hansen's Disease (leprosy)
- Hepatitis C (acute illness)
- Histoplasmosis
- Human Immunodeficiency Virus[2] (HIV (infection other than as in Class B)
- Human T Lymphocyte Virus (HTLV I and II infection)
- Leptospirosis
- Listeriosis
- Lyme Disease
- Lymphogranuloma Venereum[1]
- Melioidosis (*Burkholderia pseudomallei)*
- Meningitis, Eosinophilic (including those due to *Angiostrongylus* infection)
- Nipah Virus Infection
- Non-gonococcal Urethritis
- Ophthalmia neonatorum
- 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 (all ages)[4, 5]
- Pesticide-Related Illness or Injury (all ages)[5]
- Phenylketonuria[4]
- Pneumoconiosis (asbestosis, berylliosis, silicosis, byssinosis, etc.)
- Radiation Exposure, Over Normal Limits
- 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 (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 form TB 2431 (8/94). Mail form to TB Control Program, DHH-OPH, P.O. Box 60630, New Orleans, LA. 70160-0630 or fax both sides of the form to (504) 568-5016

[4]Report to the Louisiana Genetic Diseases Program and Louisiana Childhood Lead Poisoning Prevention Programs: www.genetics.dhh.louisiana.gov or fascimile (504) 568-8253, telephone (504) 568-8254, or (800) 242-3112

[5]Report to the Section of Environmental Epidemiology and Toxicology: www.seet.dhh.louisiana.gov or call (225) 342-7136 or (888) 293-7020

All **laboratory facilities** shall, in addition to reporting tests indicative of conditions found in §105, report positive or suggestive results for additional conditions of public health interest. The following findings shall be reported as detected by laboratory facilities: 1. adenoviruses; 2. coronaviruses; 3 .enteroviruses; 4. hepatitis B (carriage other than in pregnancy); 5. hepatitis C (past or present infection); 6. human metapneumovirus; 7. parainfluenza viruses; 8. respiratory syncytial virus; and 9. rhinoviruses.