

Louisiana Morbidity Report



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March - April, 2019

Volume 30, Number 2

A Case of *Shewanella putrefaciens*: Louisiana

Photo: Courtesy of <https://microbewiki.kenyon.edu>. Scanning electron-micrograph image of *Shewanella putrefaciens* CN32 cells taken by the Department of Energy



A 66-year-old male patient was hospitalized for a multibacterial infection including *Shewanella putrefaciens*. This patient had a past history of coronary artery disease and was operated on four years prior (a coronary artery bypass including five vessels). The

patient was obese (BMI=35-39) with chronic obstructive pulmonary disease, hyperlipidemia, hematuria syndrome, sleep apnea, hypertension, and cirrhosis of the liver. He had smoked about three packs of cigarettes per day for more than 30 years and drank a case of beer per day.

For the past year he had lower extremity cellulitis for which he received wound care. He was hospitalized experiencing an acute episode of shortness of breath and increased edema, pain and drainage in his wounds. A chest Xray showed no acute cardio-pulmonary process; he had no deep venous thrombosis and no bone involvement in his lower limb.

The patient was treated with a vancomycin IV, and a piperacillin/tazobactam IV. There was no improvement following the initial treatment. He remained tachycardic with regular rhythm, and no abnormal cardiac sounds. He was anemic (HGB 11.0 g/dL); with low platelet count (67,000/uL); unremarkable WBC; a low eGFR (23.0, creatinine 2.80 mg/dL); liver enzymes moderately elevated (AST 122 U/L); and C Reactive Protein (60.3). Wound and blood cultures were performed.

The patient died the next day with the cause of death listed as sepsis due to left lower extremity cellulitis.

Microbiology

The initial blood culture grew *S. putrefaciens* which was sensitive to ciprofloxacin, levofloxacin, meropenem, piperacillin/tazobactam, trimethoprim/sulfa, ceftriaxone, and gentamicin. Wound cultures showed Gram-positive cocci and Gram-negative rods. There was a heavy growth of MRSA, *Serratia marcescens* and *Aeromonas veronii*. *Staphylococcus aureus* were resistant to augmentin, clindamycin, erythromycin, and sensitive to doxycycline, rifampin, trimethoprim/sulfagenticin. *S. marcescens* was resistant to augmentin and cefazolin-sensitive to ceftriaxone, ciprofloxacin, and vancomycin.

Although the antibiotics prescribed were adequate, the patient did not survive this polymicrobial sepsis.

Shewanella putrefaciens

Shewanella was first isolated in 1931 in putrified butter (hence the species name) and has undergone several genus name changes (*Achromobacter*, *Pseudomonas* and *Alteromonas*). It is part of the marine flora in tropical and semitropical climates.

Cases of *Shewanella* are rare occurrences; there were only 279 reports of infection or colonization in the literature since 1973 (only 27 from North America). Soft tissue infections are a common initial infections along with skin, ear, abdominal and biliary tract infections. Contact with the marine environment is often

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National HIV Testing Day June 27, 2019

This National HIV Testing Day (NHTD), the Louisiana Department of Health, Office of Public Health, STD/HIV Program (SHP) will be introducing, *Start It! Louisiana*, a statewide, non-stigmatizing campaign that will be implemented from June 24 through June 27, 2019 that encourages conversations about optimal holistic health. The *Start It! Louisiana* campaign seeks to encourage meaningful conversations and support individual decisions about one's health. The campaign's slogan is, "It doesn't matter how, it matters that you do," whether it is getting tested for HIV, getting into care, exercising, eating healthier, starting pre-exposure prophylaxis (PrEP), using condoms, or visiting the www.louisianahealthhub.org website as a resource for information.

Everyone may be at a different stage in their health care journey. *Start It! Louisiana* strives to motivate and encourage Louisiana citizens to Start It!!! Online digital promotions and a statewide tabling tour will reinforce the *Start It! Louisiana* campaign and promote NHTD.

During the month of May, SHP will conduct pop-up tabling sessions at different locations throughout the state leading up to the actual campaign, June 24 – 27, 2019. Follow us on Instagram @LAHEALTHHUB to stay up to date on *Start It! Louisiana*, coming to a town near you.

Hepatitis Testing Day May 19, 2019

Hepatitis Awareness Month May, 2019

Save the Date!

Field Epidemiology Training - 2019

Morgan City - July 17
Shreveport - August 13
Leesville - August 21

This is a one-day workshop sponsored by the Department of Health's, Office of Public Health, Infectious Disease Epidemiology Section. It targets nurses, laboratory personnel, sanitarians, and other health care professionals interested in epidemiological principles and outbreak investigations.

This workshop is free to attend, but must be registered for because of seating limitations and to provide the adequate number of handouts. Applications for education credits will be made for nurses, sanitarians and laboratory MTs.

Registration information may be found on <http://www.ldh.la.gov/index.cfm/page/1816>.

(A case of *Shewanella* ... continued from page 1)

noted (about 40%); however, contact with soil and other decaying matter is also reported. It is thought to be rarely pathogenic, but pathogenicity is difficult to establish since *Shewanella* is usually associated with other pathogens. Soft tissue infections are the most frequent with leg ulcers being the most common portal of entry. A majority of patients have severe underlying conditions. A majority of strains show sensitivity to multiple antibiotics. Elderly males are to the greatest degree commonly affected. Bacteremia is the most common complication with about 30% mortality.

Shewanella algae is a commonly encountered *Shewanella* that appears to be more pathogenic than *S. putrefasciens*. Most biochemical conventional systems cannot identify *S. algae*; it can only be identified by bimolecular typing (16S RNA sequence analysis).

Individuals with leg ulcers should be advised to stay clear from the marine environment.

IDEpi Question/Answer Corner

My physician says that I was infected with Giardia. I have a well. How do I submit a water sample for testing?

The Louisiana Department of Health (LDH) does not test private well water. Well owners are responsible for checking and testing their own water supply. Supported by a grant from the Centers for Disease Control and Prevention, the Private Well Owner Network (<http://www.ldh.la.gov/index.cfm/subhome/56>) was launched for Louisiana residents. Cost and methods for testing services are among other listed resources found on this website.

For more information on water quality indicators (WQI) and possible contaminants, please go to websites <https://www.cdc.gov/healthywater/drinking/private/wells/testing.html> and www.epa.gov/safewater.

Louisiana Morbidity Report
Volume 30, Number 2 March - April, 2019

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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Postcards-Increasing Vaccination Rates Among Elderly: U.S. Office Of Evaluation Sciences and LDH Immunization Program

Nuole Chen, MA; Pompa Debroy, MS; Stacy Hall, RN MSN; Quan Le, RN

The U.S. General Services Administration, Office of Evaluation Sciences (OES) collaborated with the Louisiana Department of Health (LDH) Immunization Program to evaluate the effect of sending a postcard reminder on elderly vaccination rates. The Centers for Disease Control and Prevention (CDC) identifies adults older than 65 years of age as higher-risk for vaccine preventable diseases, and recommends a series of vaccinations for the elderly, including influenza, tetanus, pneumococcal, and herpes zoster (shingles). The CDC estimates that last flu season, an estimated 48.8 million people had the flu, (<https://www.cdc.gov/flu/about/burden/estimates.htm>) resulting in 959,000 hospitalizations, and 79,400 deaths. Seventy percent of the hospitalizations occurred in adults aged 65 years or older.

The LDH Immunization Program engages the elderly through a variety of initiatives to increase vaccination rates. One initiative includes mailing postcard reminders to Louisiana residents aged 65 to 70 years who are listed as overdue for receiving at least one of four vaccines in the Louisiana immunization registry. Reminder-based interventions can improve healthcare-related compliance, including medication adherence and healthy behaviors. They are also an effective way to increase compliance with vaccination schedules, as these initiatives aim to reduce rates of forgetfulness and complacency.

LDH mailed postcard reminders to 208,867 seniors during the 2017-18 flu season. OES randomized when an individual received the postcard reminder, and evaluated the effect of sending the postcard earlier and later in the season on proportion of vaccinations individuals received. OES compared individuals who were

sent the postcards in October, November and December to people who received the postcards in January.

This study showed that a postcard reminder can encourage the elderly to vaccinate, and that the timing of that reminder matters. The main result of interest is the proportion of vaccinations received out of all four vaccinations (influenza, tetanus, pneumococcal, and shingles) during the study period, September 2017 to January 2018. The postcard reminder had a small effect among individuals who received the postcard in October: the test group received 0.27% ($p = 0.001$, 95% CI [0.11%, 0.42%]) more vaccinations, resulting in 563 additional vaccinations, than individuals in the control group. Individuals in the November test group received an additional 313 vaccinations (0.15%, $p=0.13$, 95% CI [-0.008%, 0.3%]); individuals in the December test group received an additional 125 vaccinations (0.06%, $p = 0.48$, 95% CI [-0.01%, 0.21%]). LDH continued this initiative and chose to send postcards in the beginning of October, November, December, and January during the 2018-2019 flu season. (Large numbers required that the postcards had to be divided into four mailings.)

The study also showed that immunization registry data can be used effectively to analyze the impact of targeted, time-sensitive information. More information about this initiative is available at <https://oes.gsa.gov/projects/increasing-vaccine-uptake-among-seniors/>. Learn more about OES and their work in the vaccination space at <https://oes.gsa.gov/vaccines/>. For more information about the LDH Immunization Program go to [LDH Immunizations \(http://ldh.la.gov/index.cfm/page/547\)](http://ldh.la.gov/index.cfm/page/547).

Hospital Emergency Department Syndromic Surveillance Mardi Gras - Louisiana, 2019

Dayaamayi Kurimella, MPH; Gillian Richardson, MPH

The Infectious Disease Epidemiology Section (IDEpi), Office of Public Health, Louisiana Department of Health, conducted syndromic surveillance in Regions 1, 2, 3, 4 and 9* during the 2019 Mardi Gras season using the Louisiana Early Event Detection System (LEEDS). LEEDS processes emergency department (ED) records by using chief complaint, admit reason, and discharge diagnosis fields to tag records to syndromes defined by IDEpi. IDEpi has conducted Mardi Gras Surveillance since 2012 with the primary purpose of maintaining situational awareness by tracking several infectious disease and injury syndromes during and leading up to Mardi Gras. The dates for the Mardi Gras season shift from year-to-year. For 2019, the beginning day was

* *Map of Regions on Page 7*

January 6 with the culminating day being March 5.

The Mardi Gras season sees an influx of visitors into New Orleans as well as other areas that host Mardi Gras parades and festivities. IDEpi conducts Mardi Gras surveillance in Regions 1, 2, 3, 4, and 9 because these regions either host Mardi Gras activities or have a large number of people who travel to other regions to participate in Mardi Gras activities. Mardi Gras activities such as parades; parties; balls; and crowds; and sometimes cold weather, can help spread infectious diseases as well as make certain injuries more likely. For this reason, IDEpi monitors six syndromes related to infectious disease: fever; gastrointestinal complaints (GI); influenza-like illness (ILI); lower respiratory tract

(continued on page 4)

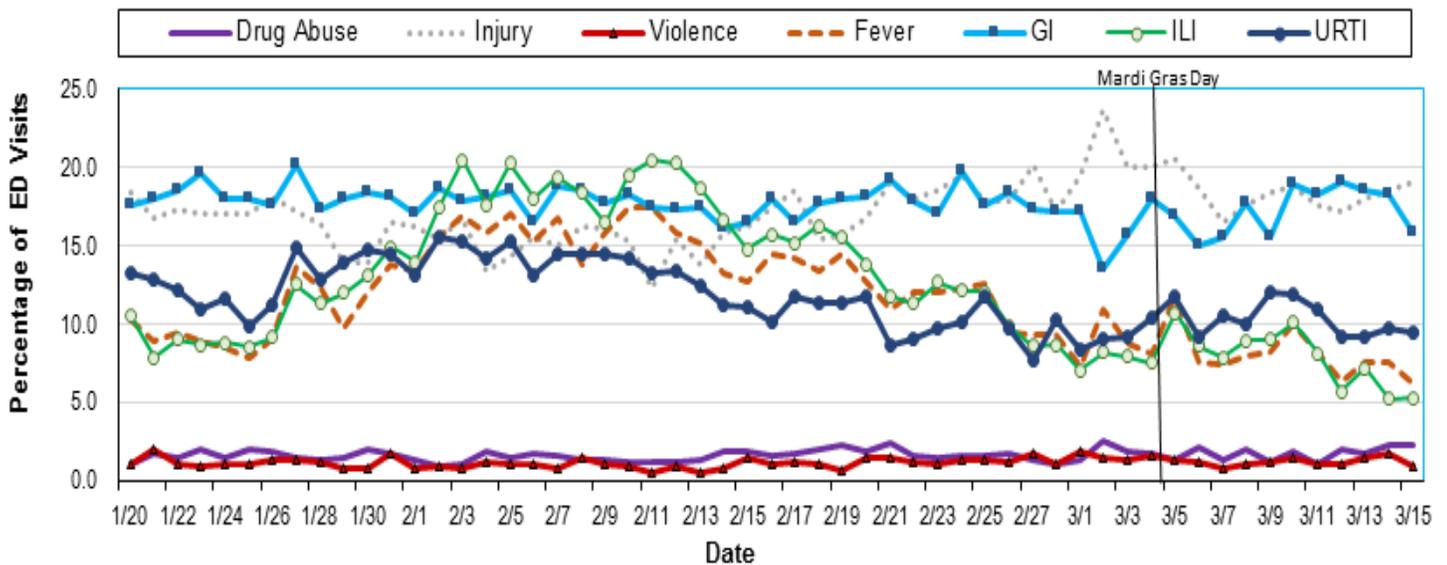
(Hospital Emergency Department ... continued from page 3)

infections; skin and soft tissue infections; and upper respiratory tract infections (URTI) as well as five syndromes related to injury: alcohol; drug abuse; personal injuries (Injury); motor vehicle accident; and violence.

The percentage of ED visits related to the syndromes of interest are tracked and monitored by region for any sustained increases detected by an exponentially weighted moving average (EWMA) algorithm. The graph below shows seven of the syndromes that were monitored in Region 1 as a visual example of the surveillance conducted. IDEpi has yet to find a sustained increase in a syndrome of interest, but will continue to conduct annual Mardi Gras surveillance for situational awareness, which will allow public health to respond quickly whenever necessary.

For more information, please contact Ms. Richardson at (504) 568-8316 or gillian.richardson@la.gov. For more information on LEEDS, go to <http://ldh.la.gov/index.cfm/page/1000>.

Figure 1: Daily Summaries of ED Visits Related to Selected Infectious Disease and Injury Syndromes
Region 1: Louisiana, January 20 - March 15, 2019



Kissing Bug Identification Tool

Julius Tonzel, MPH

Chagas disease is an infection caused by the parasite *Trypanosoma cruzi*. It is widespread throughout Mexico, Central America and South America, affecting over eight million people worldwide, attributing to 10,000 deaths per year. The Centers for Disease Control and Prevention (CDC) estimates that there are over 300,000 infections in the United States, mostly related to travel. The vector, triatomine bugs or kissing bugs, have been identified throughout the United States.

There are multiple species of kissing bugs in the U.S., but Louisiana has mainly identified *Triatominae sanguisuga* as the primary vector. Various researchers have done studies where these vectors have tested positive for *T. cruzi*. The Louisiana Department of Health, Office of Public Health, Infectious Disease Epidemiology section has implemented a 'Kissing Bug Identification Tool' to assist Louisiana residents with correctly identifying and potentially testing kissing bugs for *T. cruzi*. Kissing bugs are roughly the size of a penny and can be identified by their cone-shaped heads (Figure).

Figure: Kissing Bugs and Chagas Disease. Photo courtesy of the Texas Chagas Taskforce



Please visit <http://ldh.la.gov/index.cfm/page/531> for more information on Chagas or <http://bit.ly/idepitcruzi> for more information on kissing bug identification.

Smoking Update Louisiana, 2019

Win Guan, PhD

According to the Centers for Disease Control and Prevention (CDC) tobacco use continues to prevail as the leading cause of preventable deaths in the United States in 2018. This is problematic given that according to the [Campaign for Tobacco Free Kids](https://www.tobaccofreekids.org/), 2019 website (<https://www.tobaccofreekids.org/>), Louisiana spends nearly two billion dollars annually on health care costs directly caused by smoking. Smokers miss more work, visit a doctor more often, are hospitalized more often, and die 10 to 12 years earlier than nonsmokers.

Based on data from the 2017 Behavioral Risk Factor Surveillance System, Louisiana still has some of the highest tobacco use rates in the country, especially for certain portions of Louisiana's population. A staggering 23.1% of Louisiana adults smoke cigarettes, which is well above the national average of 17.1%. This ranks our state third in the nation for smoking. Across the 64 parishes in the state, only 12 parishes are below the national average and three parishes have a smoking prevalence that is twice as high as the national average.

In addition, there are significant disparities across socio-demographic populations in the state in smoking prevalence. People without a high school education are significantly more likely to smoke cigarettes (37.2%) than college graduates (8.7%). Persons with a household income of \$15,000 or less are more than twice as likely (35.0%) to smoke cigarettes than persons who with a household income of \$50,000 or more. Men are more likely to smoke compared to women (25.4% and 21.0%, respectively).

Smoking prevalence is also problematic among Louisiana youth. According to data from a CDC 2017 Louisiana Youth Tobacco Survey, 3.8% of middle school and 13.5% of high school students currently smoke cigarettes compared to 1.8% and 8.1% nationally (http://wellaheadla.com/Portals/0/Tobacco%20Free/Tobacco%20Reports/YTS_2017_FINAL.pdf?ver=2019-03-20-091553-937).

Additionally, use of e-cigarettes among youth is rapidly rising in Louisiana. Among middle school students 8.6% currently use e-cigarettes, compared to 4.9% nationwide. Among high school students 12.3% currently use e-cigarettes, compared to 20.8% nationwide. No tobacco product is safe for young people to use. E-cigarettes contain nicotine, which is highly addictive and can harm teens' developing brains.

Three main goals of the Louisiana Tobacco Coalition is to:

- reduce ability of tobacco industry to target African-American (adults and youth) and low income populations through an increase in the sales tax of noncigarette tobacco products;
- reduce tobacco use prevalence by increasing awareness and use of cessation services, and increasing the number of quit attempts and successful quits;
- and increase the proportion of the state population covered by smoke-free indoor air law and community level smoke-free or tobacco-free policies and ordinances.

For more information, please go to <http://wellaheadla.com>.



Announcements

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

Annual: Hepatitis C

Epi Manual: Hantavirus Disease Videos (CDC); Hepatitis A Public Information; Hepatitis A Summary; Lassa Fever Videos (CDC); Plague Summary; Q Fever Public Information- English and Spanish -CDC

Foodborne/Waterborne Disease: Healthy and Safe Swimming Week -CDC

HAI/AR: Statewide Trainings -Louisiana Antibiotic Stewardship Summit

Influenza: CDC Health Alert Network Advisory: Influenza Season Continues with an Increase in Influenza A(H3N2)

Activity; Interim Estimates of 2018-19 Seasonal Influenza Vaccine Effectiveness - United States, February 2019 (CDC MMWR 2/15/19); Prevention and Control of Seasonal Influenza with Vaccines: Recommendations of the Advisory Committee on Immunization Practices, United States, 2018-19 Influenza Season (CDC MMWR 8/24/18); Week 15 Surveillance Report

Louisiana Morbidity Report: Section of Environmental Epidemiology and Toxicology March 2019 Special Issue; Louisiana Public Health Newsletter - 1960, 1961, 1964, 1968 and 1969

Tickborne Diseases: Lyme Disease Brochure (CDC)

Veterinary: Rabies - Louisiana Hospitals That Carry the Rabies Vaccine; Zoonotic- Giardia in Small Animal Practice, Kennels and Animal Shelters; Veterinarians Exposed to Mycobacteria in Dogs and Cats.

Mosquito-Transmitted Diseases

Julius Tonzel, MPH

Summer is coming and with it concerns about mosquito-transmitted diseases. Here are some notes on the various diseases identified in Louisiana, as well as information regarding the epidemiology of the viruses and prevention messaging for the upcoming transmission season.

West Nile virus is the most common mosquito-transmitted disease identified in Louisiana each year. *Culex* species mosquitoes and birds maintain the transmission cycle; some infected birds develop a high level of virus in their bloodstream and mosquitoes can become infected by biting these infected birds. Infected mosquitoes can also bite humans and horses, but they are dead-end hosts; they do not develop enough virus in their bloodstream to be infectious to other biting mosquitoes. The seasonality and intensity of the virus are affected by the interaction of multiple complex factors. For example, the temperatures during the winter and spring seasons influence mosquito activity during the bird-nesting season, as does the number of tree canopies that house the birds while they nest and the replication of the virus in the mosquitos. Rainfall followed by a short drought helps produce the best breeding place for the mosquitoes transmitting the virus.

Human behavior during the height of West Nile season is also influential. Warm weather will bring the younger population outside in the evening, but may also be protective if it causes the elderly to stay indoors with air conditioning and not being exposed to mosquito bites. Those age groups older than 60 years are at the highest risk for the most serious disease West Nile encephalitis; with 10% of those with neurologic infection resulting in death or disability.

Mosquitoes in Louisiana also transmit other encephalitides such as Saint Louis encephalitis, Eastern equine encephalitis and

California encephalitis. These occur less frequently than West Nile encephalitis, but may cause severe disease or death. These viruses are maintained in nature through animal reservoirs, such as birds, small mammals, deer and humans - which serve as dead-end hosts.

Zika, chikungunya and dengue have a different epidemiologic profile than West Nile and other encephalitides. In the United States, humans serve as the only reservoir for these diseases; they share similar incubation periods of multiplication in mosquitoes and in humans, with the viremia lasting about a week. *Aedes aegypti* mosquitoes are the primary vector for these viruses.

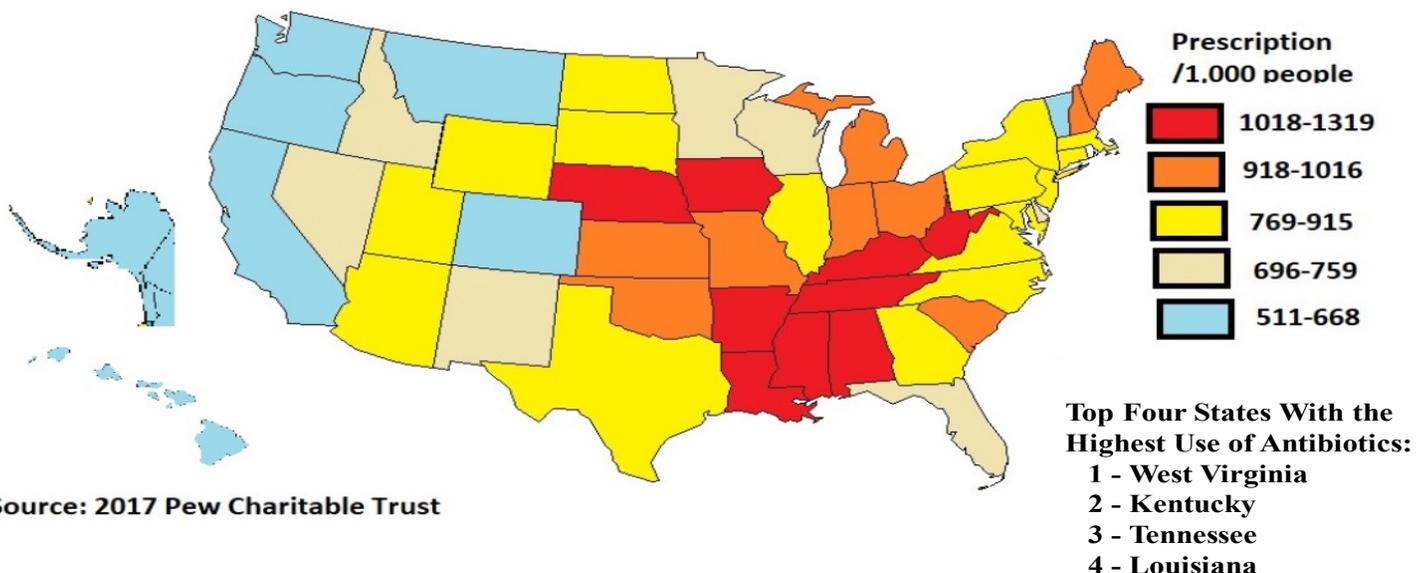
There are few *Ae. aegypti* foci in Louisiana, partly as the result of historical *Ae. aegypti* reduction campaigns and the large presence of *Ae. albopictus*, which outcompetes *Ae. aegypti*. *Ae. albopictus* is a less competent vector of these three diseases.

Louisiana has never reported any local transmission of Zika, or chikungunya viruses; the last locally acquired case of dengue was identified in 1945 when the veterans of the South West Pacific theatre of World War II returned home. The majority of the cases identified in Louisiana are acquired from other countries.

Approximately two weeks after a flood or a heavy rainfall, several species of floodwater mosquitoes can be extremely abundant. While a nuisance, most of these are not very efficient vectors of human diseases. To prevent mosquito-transmitted diseases, it is important to “tip and toss” any standing water in the yard once a week that may breed mosquitoes. Wearing protective clothing can prevent mosquitoes from reaching skin and applying insect repellent to exposed skin when outdoors. Homes can be mosquito-proofed by using screens on doors and windows, using an air conditioner when available.

For more information on mosquito-transmitted diseases go to the Infectious Disease Epidemiology Arboviral webpage at <http://ldh.la.gov/index.cfm/page/2495> or contact Julius Tonzel at (504) 568-8296 or julius.tonzel@la.gov.

Outpatient Antibiotic Prescriptions per 1,000 Population by State, 2015



Source: 2017 Pew Charitable Trust

Table 1: Communicable Disease Surveillance, Incidence by Region and Time Period, January - February, 2019

| DISEASE | HEALTH REGION | | | | | | | | | TIME PERIOD | | | | | |
|--|---------------|-------|-------|------|------|-------|-------|-------|------|-----------------|-----------------|------------------------|------------------------|--------------|--|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | Jan-Feb 2019 | Jan-Feb 2018 | Jan-Feb Cum 2019 | Jan-Feb Cum 2018 | Jan-Feb % | |
| | | | | | | | | | | Chg* | | | | | |
| Vaccine-preventable | | | | | | | | | | | | | | | |
| Hepatitis B Acute Cases ⁴ | 2 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 3 | 8 | 10 | 8 | 10 | NA* | |
| Rate ¹ | 0.2 | 0 | 0 | 0 | 0.7 | 0.3 | 0.0 | 0.0 | 0.8 | 0.2 | 0.2 | 0.2 | 0.2 | NA* | |
| Measles (Rubeola) Cases ⁵ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NA* | |
| Mumps Cases ⁵ | 0 | 0 | 0 | 18 | 0 | 0 | 0 | 0 | 1 | 19 | 1 | 19 | 1 | 1800.00 | |
| Rubella Cases ⁴ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NA* | |
| Pertussis Cases ⁵ | 0 | 2 | 2 | 1 | 0 | 3 | 2 | 0 | 9 | 19 | 19 | 19 | 19 | NA* | |
| Sexually-transmitted | | | | | | | | | | | | | | | |
| HIV/AIDS Cases ² | 61 | 38 | 15 | 21 | 9 | 11 | 20 | 11 | 14 | 200 | 151 | 200 | 151 | 32.4 | |
| Rate ¹ | 6.8 | 5.5 | 3.7 | 3.4 | 3.0 | 3.6 | 3.7 | 3.1 | 2.4 | 4.3 | 3.2 | 4.3 | 3.2 | NA* | |
| Chlamydia Cases ^{1,3} | 1,531 | 947 | 455 | 582 | 236 | 337 | 866 | 569 | 500 | 6,023 | 5,720 | 6,023 | 5,720 | 5.3 | |
| Rate ¹ | 169.8 | 138.1 | 113.3 | 95.6 | 77.8 | 110.6 | 159.7 | 161.5 | 85.6 | 128.6 | 122.1 | 128.6 | 122.1 | NA* | |
| Gonorrhea Cases ^{1,3} | 510 | 271 | 124 | 172 | 99 | 86 | 277 | 145 | 131 | 1,815 | 1,738 | 1,815 | 1,738 | 4.4 | |
| Rate ¹ | 56.5 | 39.5 | 30.9 | 28.3 | 32.6 | 28.2 | 51.1 | 41.2 | 22.4 | 38.7 | 37.1 | 38.7 | 37.1 | NA* | |
| Syphilis (P&S) Cases ^{1,3} | 10 | 22 | 2 | 4 | 1 | 9 | 10 | 2 | 7 | 67 | 92 | 67 | 92 | -27.2 | |
| Rate ¹ | 1.1 | 3.2 | 0.5 | 0.7 | 0.3 | 3.0 | 1.8 | 0.6 | 1.2 | 1.4 | 2.0 | 1.4 | 2.0 | NA* | |
| Enteric | | | | | | | | | | | | | | | |
| Campylobacter Cases ⁵ | 5 | 12 | 4 | 83 | 11 | 12 | 11 | 14 | 10 | 162 | 93 | 162 | 93 | 74.2 | |
| Hepatitis A Cases ⁴ | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 12 | 10 | 25 | 2 | 25 | 2 | 1150.0 | |
| Rate ¹ | 0 | 0.5 | 0 | 0 | 0 | 0 | 0 | 3.4 | 2.6 | 0.6 | 0 | 0.6 | 0 | NA* | |
| Salmonella Cases ⁵ | 14 | 16 | 13 | 12 | 11 | 5 | 6 | 2 | 5 | 84 | 86 | 84 | 86 | NA* | |
| Rate ¹ | 1.3 | 2.8 | 3.4 | 2.3 | 4.1 | 1.6 | 1.2 | 0.6 | 1.3 | 1.9 | 2.0 | 1.9 | 2.0 | NA* | |
| Shigella Cases ⁵ | 2 | 4 | 2 | 10 | 0 | 0 | 1 | 0 | 3 | 22 | 25 | 22 | 25 | NA* | |
| Rate ¹ | 0.2 | 0.7 | 0.5 | 1.9 | 0 | 0 | 0.2 | 0 | 0.8 | 0.5 | 0.6 | 0.5 | 0.6 | NA* | |
| Vibrio, Cholera Cases ⁴ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NA* | |
| Vibrio, Other Cases ⁵ | 0 | 5 | 0 | 0 | 2 | 0 | 0 | 0 | 5 | 12 | 6 | 12 | 6 | 100.0 | |
| Other | | | | | | | | | | | | | | | |
| <i>H. influenzae (invasive)</i> ⁵ | 4 | 3 | 2 | 2 | 2 | 0 | 3 | 1 | 1 | 18 | 26 | 18 | 26 | -30.8 | |
| <i>N. Meningitidis (invasive)</i> ⁵ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NA* | |

¹ = Cases Per 100 000 Population.

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

³ = Preliminary data.

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

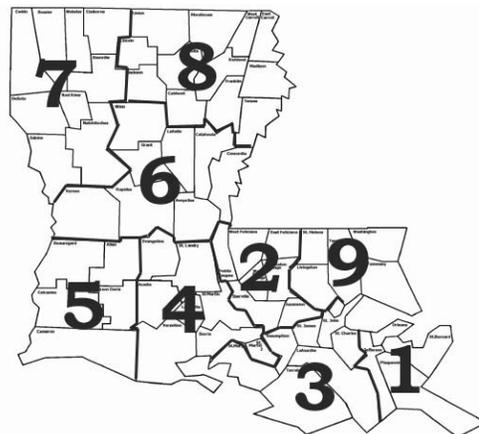


Table 2: Diseases of Low Frequency, January-February, 2019

| Disease | Total to Date |
|----------------|---------------|
| Legionellosis | 3 |
| Lyme Disease | 0 |
| Malaria | 0 |
| Rabies, animal | 0 |
| Varicella | 12 |

Table 3: Animal Rabies, January-February, 2019

| Parish | No. Cases | Species |
|--------|-----------|---------|
| | 0 | |

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

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

Class A Diseases/Conditions - Reporting Required Within 24 Hours

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

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

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

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

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|---|--|---|---|
| Amoeba (free living infection: <i>Acanthamoeba</i> , <i>Naegleria</i> , <i>Balamuthia</i> , others) | Chagas Disease | Hepatitis B (perinatal infection) | Mumps |
| Anaplasmosis | Chancroid | Hepatitis E | Salmonellosis |
| Arthropod-Borne Viral Infections (West Nile, Dengue, St. Louis, California, Eastern Equine, Western Equine, Chikungunya, Usutu, and others) | <i>Escherichia coli</i> , Shiga-toxin producing (STEC), including <i>E. coli</i> O157:H7 | Herpes (neonatal) | Shigellosis |
| Aseptic Meningitis | Granuloma Inguinale | Human Immunodeficiency Virus ² [(HIV), infection in pregnancy] | Syphilis ¹ |
| Babesiosis | Hantavirus (infection or Pulmonary Syndrome) | Human Immunodeficiency Virus ² [(HIV), perinatal exposure] | Tetanus |
| | Hemolytic-Uremic Syndrome | Legionellosis | Tuberculosis ³ (due to <i>M. tuberculosis</i> , <i>M. bovis</i> , or <i>M. africanum</i>) |
| | Hepatitis A (acute illness) | Malaria | Typhoid Fever |
| | Hepatitis B (acute illness and carriage in pregnancy) | | |

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

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

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| Acquired Immune Deficiency Syndrome ³ (AIDS) | Giardiasis | Listeriosis | Staphylococcal Toxic Shock Syndrome |
| <i>Anaplasma Phagocytophilum</i> | Glanders (<i>Burkholderia mallei</i>) | Lyme Disease | Streptococcal Disease, Group A (invasive disease) |
| Blastomycosis | Gonorrhea ⁴ (genital, oral, ophthalmic, pelvic inflammatory disease, rectal) | Lymphogranuloma Venereum ¹ | Streptococcal Disease, Group B (invasive disease) |
| Campylobacteriosis | Hansen's Disease (leprosy) | Melioidosis (<i>Burkholderia pseudomallei</i>) | Streptococcal Toxic Shock Syndrome |
| Chlamydial infection ¹ | Hepatitis C (acute illness) | Meningitis, Eosinophilic (including those due to <i>Angiostrongylus</i> infection) | <i>Streptococcus pneumoniae</i> , invasive disease |
| Coccidioidomycosis | Histoplasmosis | Nipah Virus Infection | Transmissible Spongiform Encephalopathies (Creutzfeldt-Jacob Disease & variants) |
| Cryptococcosis (<i>C. neoformans</i> and <i>C. gattii</i>) | Human Immunodeficiency Virus ² (HIV) (infection other than as in Class B) | Non-gonococcal Urethritis | Trichinosis |
| Cryptosporidiosis | Human T Lymphocyte Virus (HTLV I and II infection) | Ophthalmia neonatorum | Varicella (chickenpox) |
| Cyclosporiasis | Leptospirosis | Psittacosis | <i>Vibrio</i> Infections (other than cholera) |
| Ehrlichiosis (human granulocytic, human monocytic, <i>E. chaffeensis</i> and <i>E. ewingii</i>) | | Spotted Fevers [<i>Rickettsia</i> species including Rocky Mountain Spotted Fever (RMSF)] | Yersiniosis |
| <i>Enterococcus</i> , Vancomycin Resistant [(VRE), invasive disease] | | <i>Staphylococcus aureus</i> (MRSA), invasive infection | |

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

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| Cancer | Heavy Metal (arsenic, cadmium, mercury) Exposure and/or Poisoning (all ages) ⁵ | Phenylketonuria ⁴ | Severe Traumatic Head Injury |
| Carbon Monoxide Exposure and/or Poisoning ⁵ | Hemophilia ⁴ | Pneumoconiosis (asbestosis, berylliosis, silicosis, byssinosis, etc.) | Severe Undernutrition (severe anemia, failure to thrive) |
| Complications of Abortion | Lead Exposure and/or Poisoning (all ages) ^{4,5} | Radiation Exposure, Over Normal Limits | Sickle Cell Disease ⁴ (newborns) |
| Congenital Hypothyroidism ⁴ | Pesticide-Related Illness or Injury (all ages) ⁵ | Reye's Syndrome | Spinal Cord Injury |
| Galactosemia ⁴ | | | 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), facsimile (504) 568-8290, telephone (504) 568-8313, or (800) 256-2748 for forms and instructions.

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

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

³Report on 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

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

⁵Report 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.