

Louisiana Morbidity Report



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Raw Milk: Just the Facts

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

As the popularity of raw milk consumption increases, physicians are advised to consider the possibility of the re-emergence of infectious diseases that have been occurring at reduced rates for generations. Growth in consumption of raw milk will likely increase health risks from bacterial infections, including brucellosis, Q fever, and tuberculosis, which have had little association with domestic milk consumption in recent years.

Physicians should also be somewhat familiar with the true effects of pasteurization on the products themselves. A basic knowledge of pasteurization's effects on nutritional components, shelf life and allergen potential will provide practitioners with the tools to better respond to questions put forth by the public.

Advocates of raw milk consumption contend that milk pasteurization destroys nutrients, enzymes and beneficial bacteria. Proponents of raw milk sales also often state that raw milk is less allergenic than pasteurized milk and that raw product is less likely to affect those with lactose intolerance.

Although some vitamins are destroyed during pasteurization, these are vitamins for which milk is not thought to be an important source. Other foods are much more likely to be consumed as sources of vitamin B2, B6 and C, of which pasteurization destroys about 10 percent, 10 percent and 20 percent respectively. Although some mineral levels are reduced, the percentage of daily requirements affected is insignificant considering the relatively high level
(continued on page 2)

Update - Malaria Louisiana, 2013

Christine Scott-Waldron, M.S.P.H.; Andrew Smith, M.P.H.

Malaria is caused by a protozoan parasite that is transmitted by Anopheles mosquitoes. There are five species of malaria parasite: *Plasmodium falciparum*, *P. vivax*, *P. ovale*, *P. malariae*, and *P. knowlesi*. The fifth species, *P. knowlesi*, a simian malaria parasite, has recently been observed transmitting malaria to humans in Southeast Asia. It was first discovered in Malaysia; several human cases have also been reported in Thailand, Myanmar, and the Philippines.

Malaria is transmitted to humans through the bite of an infective mosquito who has previously taken a blood meal from an infected human. Therefore, people usually only become infected with malaria if they live in, or travel to countries where there is regular malarial transmission. Congenital and blood transfusion transmission rarely occurs.

Symptoms usually begin ten days to four weeks after infection. Two malaria species, *P. vivax* and *P. ovale*, can cause relapses. Symptoms commonly include fever and flu-like illness (chills, headache, muscle aches and tiredness), but can also include nausea, vomiting, diarrhea, anemia and jaundice. If left untreated, malaria can cause kidney failure, seizures, mental confusion, coma and death. There are several antimalarial drugs available that should be taken early on in the course of illness.

In the 1940s, Louisiana had a peak case rate of 57 cases per 100,000, (reported in 1944). In 1947, after the initiation of the National Malaria Eradication Program, the case rate reduced to eight cases per 100,000, and was further reduced to 0.2 cases per 100,000 four years later. Malaria was successfully eradicated in the U.S. in 1951.

Almost all of the malaria cases that have been reported among Louisiana residents since the eradication of transmission were acquired elsewhere ("imported") by travelers or immigrants. The epidemiologic picture of malaria in Louisiana is that of an imported disease; it reflects the pattern of travel from malarious areas. Therefore, it would be expected to observe peaks and troughs following the arrivals of: immigrations and refugees, military campaigns, business trips, foreign students and tourists.

In the early 1950s, there was a peak of malaria cases amongst travelers secondary to the Korean War, with 18 cases per 100,000 (reported in 1952). Small rises in case numbers were observed during times of war (Vietnam, 1967-71, Gulf War -1990).

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els of minerals present in milk. There are minimal reductions in available copper and iron; additionally soluble phosphorus and calcium are only reduced by five percent.

Pasteurization also destroys or inactivates most enzymes in milk. Raw milk advocates often espouse the benefits of these enzymes, but in reality the effect of enzyme destruction has no bearing on health. Lipase in milk is destroyed; however, this lipase provides no nutritional benefit. In fact, lipase in raw milk is destroyed completely by stomach acid. Lipase is only present in milk because the enzyme is involved in manufacture of triglycerides and is present in mammalian mammary glands. Alkaline phosphatase is also affected by pasteurization; however, alkaline phosphatase and other phosphatases are naturally present in all mammalian tissues and in other living organisms. There is no evidence that the level of phosphatase in milk has any bearing on the nutritional status of those who ingest the enzyme.

Over the past century, agricultural agencies have conducted several programs that, in addition to pasteurization, reduced the risk of disease from milk. Examples still in use are programs that routinely test for *Brucella abortus* and *Mycobacterium bovis*, etiologic agents of brucellosis and tuberculosis respectively. These programs have dramatically reduced the prevalence of these agents in cattle, and thus reduced risk of transmission to humans. Nevertheless, recent history has informed us that these agricultural programs cannot eliminate the risk completely. Free-range cattle, feral swine and wild ruminants have been shown to have the capability to infect dairy cattle with these or closely related agents, and several confirmed or suspected cases of this type of transmission have been detected.

There is no evidence that raw milk is less allergenic than pasteurized milk. Studies of farm populations in Europe have demonstrated a correlation between drinking raw milk on the farm and reduced incidence of childhood allergies. On the surface these conclusions seem to confirm the contention of the hypo-allergenic nature of raw milk; however the researchers that conducted these studies have admitted that there is no evidence of causation. Farm life includes a much higher frequency of youthful exposure to animals, feed, feces and other features of farm environments that may be associated with a lower incidence of allergies than in urban children. In fact, the researchers that conducted the studies warned against children consuming raw milk to mitigate allergies due to the multitude of risks from bacteria and other pathogens.

In addition to the above stated misconceptions, misrepresentations and downright myths of raw milk's beneficial qualities, several other contentions have crept into the debate over raw milk consumption. Examples include contentions that raw milk is superior to pasteurized milk because homogenization causes negative effects in milk, "good" bacteria in raw milk kills pathogens, and milk from "factory" farms is dangerous, but not milk from "certified" raw milk producers. Ample scientific evidence exists to debunk each of these contentions. Homogenization only breaks up milk fat globules and has no effect on the nutritional benefits of the remaining fat. Higher levels of beneficial bacteria in raw milk may inhibit some pathogens, but it has been shown that pathogens such as *E. coli* O157 H7, *Listeria* and *Salmonella* species are often found in raw milk storage containers on farms,

proving that presence of so called "good" bacteria does not suppress growth of dangerous pathogens. Without protection from pasteurization, these pathogens would most certainly constitute a significant risk. Although early studies indicated that carriage of *E. coli* O157 H7 may have been associated with grain feeding, the type of feed used in concentrated animal feeding operations, other studies have shown high levels of carriage in pasture fed cattle and in free-ranging wildlife.

Many of the beneficial claims of raw milk have been gleaned from misinterpretation of epidemiological studies and out-of-context interpretation of experimental research. The health benefits and superiority of pasteurized milk has been illustrated through the decline in incidence of milk-borne pathogens since the initiation of wide-spread commercial pasteurization. In less developed areas of the world that lack efficient agricultural and commercial supply chains, raw milk is routinely boiled to reduce risk to infants and children. Pasteurization dramatically improves shelf-life, and ultra high temperature pasteurization is used to produce a "shelf-stable" product for use when refrigeration is not available. Persons seeking guidance on this issue should be reminded of the historical record and of the many inaccuracies of the beneficial claims, as well as the documented reality of raw milk risk.

For more information, please contact Dr. Gary Balsamo, Public Health State Veterinarian at (504) 568-8315 or email to gary.balsamo@la.gov.



Photo: Courtesy of Jonathunder @Wikimedia Commons

Louisiana Morbidity Report	
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Healthy Swimming Louisiana, 2013

Erin Delaune, M.P.H.

Stinging and reddening of the eyes and a strong chemical smell from an indoor pool area may not be due to too much chlorine in the pool; it may be due to the chloramines that are produced when chlorine reacts with urine and sweat from swimmers. This chloramine is different from the chloramines that are used to treat drinking water, and can cause eye and throat irritation. Mixing chlorine with sweat or urine also depletes the pool's chlorine, whose job it is to kill germs, leaving these germs alive and available to infect healthy swimmers. Germs enter the water when they are washed off of swimmers' bodies, or when infected swimmers have diarrheal incidents in the water.

Even in a properly maintained pool, germs are not killed instantly. This is why it is important to shower before getting into the pool and why people with diarrhea should not swim.

Giardia, a parasite with the potential to be waterborne, can survive in a properly maintained pool for up to 45 minutes. The incidence rate of giardiasis in Louisiana has been increasing over the last 10 years. In 2013, the incidence rate was 5.5 cases per 100,000 population.

Cryptosporidium, a parasite and the leading cause of recreational waterborne disease outbreaks, is resistant to chlorine and can survive in a properly maintained pool for more than 10 days. The incidence rate of cryptosporidiosis in Louisiana from 1996 to 2012 ranged from 0.05 to 3.4 cases per 100,000 population. There was a significant increase in reported cases of cryptosporidiosis in 2013 with an incidence rate of eight cases per 100,000 population.

A case control study was performed from August to September, 2013 to determine if water exposure among cases was statistically significant. It was found that over 50 percent of cryptosporidiosis

cases reported exposure to surface or recreational water in the two weeks prior to onset compared to 20 percent of controls. Those with a diagnosis of cryptosporidiosis were five times more likely to have been exposed to surface or recreational water prior to onset compared to those without a diagnosis of cryptosporidiosis. This association was significant.

Not one water venue could be determined to be the cause of the illnesses; however, some recreational water venues were reported more than once. Private family pools and various public pools such as neighborhood pools and various hotel pools were also reported, but not by more than one case or family. Although water exposure was significantly associated with illness, this did not appear to be a point source outbreak, but a continuous community outbreak involving multiple water venues including public and private recreational water venues.

To prevent recreational waterborne illnesses, here are a few simple steps all swimmers can take:

- Keep feces and urine out of the water.
- Don't swim when you have diarrhea.
- Shower with soap before starting to swim.
- Take regular bathroom breaks.
- Don't swallow the water while swimming.
- Wash your hands after using the toilet or changing diapers.
- Take children on bathroom breaks every 60 minutes, or check diapers every 30 minutes.
- Change diapers in the bathroom or diaper-changing area, and not at poolside where germs can rinse into the water.
- Check the chlorine level and pH before getting into the water. Proper chlorine levels (1–3 mg/L, or parts per million [ppm]) and pH (7.2–7.8) maximize germ-killing power. Most superstores, hardware stores and pool-supply stores sell pool test strips.

For more information, please go to www.dhh.louisiana.gov/index.cfm/page/535, or email to Erin Delaune at erin.delaune@la.gov.

Save The Date

Field Epidemiological Workshop

New Orleans-July 30, 2014 Alexandria- August 19, 2014
Ruston- September 17, 2014

The Department of Health & Hospitals' Office of Public Health's, Infectious Disease Epidemiology Section will hold three one-day trainings for people who are not members of the Infectious Disease Rapid Response Team. This training is for sanitarians, public health nurses, infection control professionals, disease surveillance specialists, epidemiologists, health care providers and other public health care professionals interested in epidemiological principles and outbreak investigations. The workshops are free and open to the public. Registration is required to assure seating. CEUs will be available.

For a registration form, agenda and more information, please go to www.dhh.louisiana.gov/index.cfm/page/1816.

World Hepatitis Testing Day Monday, July 28, 2014

As part of World Hepatitis Testing Day, testing events are being held in Baton Rouge on Friday July 18, 2014 and New Orleans on Saturday, July 26, 2014.

The Baton Rouge event will take place at the Mall of Louisiana, 6401 Bluebonnet Blvd., Baton Rouge, LA. 70836. There will be hepatitis and HIV testing. This event will also feature prize giveaways.

The New Orleans event will be at Audubon Park Shelter #10, at 6500 Magazine St., New Orleans, LA. 70118. In addition to testing, there will be live music, food, prize giveaways and family fun and games and attractions.

More information including registration form and schedule of each location's events can be found at www.dhh.louisiana.gov/index.cfm/page/1009. Volunteers are welcome to contact Dielda Robertson at (504) 568-8289 or email to dielda.robertson@la.gov.

Anaphylactic Shock Deaths Louisiana, 1999-2012

“Are there any data that identifies any instances of anaphylactic shock deaths in restaurants or other places?”

The data were extracted from the death register that is maintained by Louisiana’s Department of Health and Hospitals’ Office of Public Health’s Vital Records and Statistics. Data from 1999 to 2012 (14 years) were available in a standardized database (ICD-10 codes).

ICD-10 Codes:

Death certificates include up to eight causes of deaths, with the main cause of death listed first and contributory causes listed in order of importance. For example, the main cause of death may be “cardiac arrest;” one of the contributory causes may be “anaphylactic shock” which would also be included in this dataset.

The following ICD-10 codes were used from the eight first causes of death:

- T78.0 Anaphylactic shock due to adverse food reaction
- T78.1 Other adverse food reactions, not elsewhere classified
- T78.2 Anaphylactic shock, unspecified
- T78.3 Angioneurotic edema*
- T78.4 Allergy, unspecified.

There were 68 deaths spread throughout age groups, with one of the death causes meeting these ICD-10 codes; an average of five deaths per year, (range = 1 to 11) (Table 1).

Table 1: Base for Data, Death Within Age Group Louisiana, 1999-2012

Age Group (Years)	Count
Newborn - 19	6
20 - 44	14
45 - 64	27
65 and Over	21

Since the main question is related to the usefulness of anaphylactic shock in restaurants and other places of business, the first variable to study would be the place of death. For those who are already hospitalized, or are in the Emergency Department (ED) or outpatient setting, nursing home or residence, any epi-pen in the community would not be relevant to prevent these deaths. The only preventable deaths would be those who arrived ‘dead at the hospital’ (DOA) (Type 3), ‘Other’ (Type 6) and ‘Unspecified’ (Type 7); approximately one per year (14 deaths over a 14 year period) (Table 2).

* Note: Angioedema (British English: angioneurotic edema) or Quincke is the rapid swelling (edema) of the dermis, subcutaneous tissue, mucosa and submucosal tissues. It is very similar to urticaria, but urticaria, commonly known as hives, occurs in the upper dermis. The term angioneurotic edema was used for this condition in the belief that there was nervous system involvement, but this is no longer thought to be the case. Cases where angioedema progresses rapidly should be treated as a medical emergency, as airway obstruction and suffocation.

Table 2: Place of death – Louisiana, 1999-2012

Type	Location	Number
1	Hospital in-patients	31
2	Hospital E.D./Outpatient	17
4	Nursing home	3
5	Residence	3
3	Hospital DOA	1
6	Other	6
7	Unspecified	7

It is useful to look more into the details of these 14 deaths that could be prevented by epinephrine auto-injectors (Table 3).

Table 3: Specific Cause of Death for Those Who Died in Other or Unspecified Places – Louisiana, 1999-2012

Death	Sex, Age (Years)	ICD-10 Code Description
1	DOA	Obese, with chronic coronary disease, had an “anaphylactic shock during a procedure”, (obviously some kind of health care-related procedure).
2	Male, 47	Accidental poisoning due to alcohol and anaphylactic shock
3	Male, 66	Anaphylactic shock due to medication
4	Female, 39	Anaphylactic shock due to medication
5	Female, 35	Anaphylactic shock due to medication, asthma
6	Male, 71	Acute myocardial infarction, anaphylactic shock due to medication
7	Male, 65	Ventricular fibrillation, Anaphylactic shock due to medication
8	Female, 63	Anaphylactic shock due to medication
9	Female, 83	Angioneurotic edema
10	Male, 61	Angioneurotic edema
11	Male, 18	Allergy
12	Female, 84	Malignant neoplasm of the ovary, Anaphylactic shock
13	Male, 30	Anaphylactic shock, contact with hornets, bees or wasps
14	Male, 27	Allergy unspecified, bitten or stung by an insect

In addition, Table 4 presents data on deaths in specified places.

Table 4: Specific Cause of Death for Those Who Died in Hospital, E.D., Nursing Home or Residence – Louisiana, 1999-2012

Cause of Death	Number
Accidental poisoning by exposure to drug	1
Chronic medical condition, allergy unspecified as a minor contributing factor	5
Angioneurotic edema	7
Acute medical condition, Anaphylactic shock due to medication	5
Anaphylactic shock due to medication unspecified or **	23
Anaphylactic shock due to venomous arthropod	3
Misadventure during surgical or medical care	1
Anaphylactic shock unspecified or ***	1
Acute asthma attack	1
Adverse food reaction, other acute medical condition ****	3
Ingestion of food causing obstruction of respiration	1
** Penicillin (2) cephalosporin (1)	
*** Food (2)	
**** Congestive heart failure (1), septicemia	

Limitations:

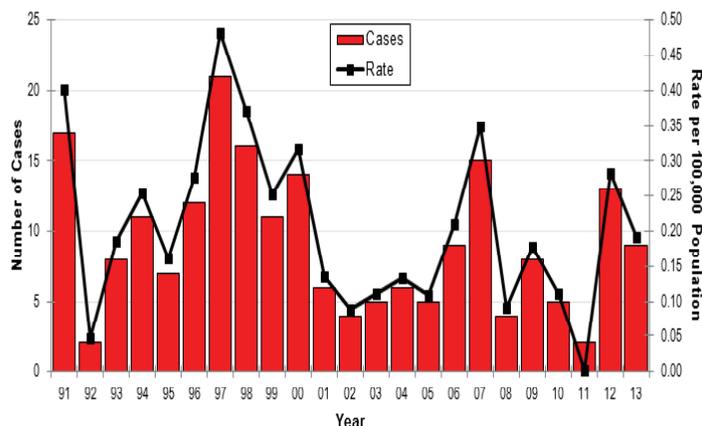
These data are limited by accuracy of death certificates, erroneous entries and incomplete filling of data elements.

For more information, call Infectious Disease Epidemiology Section at (504) 568-8313.

(Update - Malaria ... continued from page 1)

In the last ten years, there were only two years during which the number of cases of malaria presented above the expected average (9.13 cases per year over the past 20 years); in 2007 and 2012 the number of cases was 15 and 13 respectively. In 2013, there were nine cases of malaria reported in Louisiana (Figure).

Figure: Malaria Cases and Incidence Rate - Louisiana, 1991-2013



Anti-malarial Resistance, 2012-2013

Sporadic reports of malaria cases with resistance to atovaquone-proguanil, one of the leading treatments for uncomplicated malaria, have been observed. Two returning travelers and residents of Louisiana infected with *P. falciparum* were reported seven months apart. Both cases stayed in the same location in Nigeria, were non-compliant with doxycycline prophylaxis, and experienced atovaquone-proguanil treatment failure. Samples from these patients were shown to be genetically distinct, indicating that while the infections were likely contracted from

the same site in Nigeria, the mutations for resistance developed independently during treatment in both individuals.

Prevention

Due to the resurgence of malaria during the past decade, travelers to malarious areas must protect themselves against acquiring infection. Preventing mosquito bites by using insect repellent and bed nets, as well as preventing malaria infection through the use of chemo-prophylaxis are both preventive measures. The traveler's risk of acquiring malaria in areas to be visited determines the appropriate prevention regimen. Anti-malarial drugs are often highly important in preventing malaria infection; however, failure of prophylaxis may occur for numerous reasons:

- 1) Travelers may not seek or follow advice or may receive inaccurate advice regarding anti-malarial medication.
- 2) Travelers may forget to use prophylaxis, may not completely understand chemo-prophylactic advice, or may be advised by peers not to use chemoprophylaxis.
- 3) Persons who visit friends or relatives living in areas with endemic malaria often are less likely than other tourists to obtain pre-travel advice to use chemoprophylaxis.

4) Many physicians infrequently provide pre-travel advice to patients, and may not be aware of the current recommendations.

5) Travelers may have side effects from the chemoprophylaxis regimen prescribed for them, so they discontinue their regimen while in malarious endemic regions.

For more information, please go to www.dhh.louisiana.gov/index.cfm/page/531, or contact Christine Scott-Waldron at (504) 568-8301, or email to christine.scott-waldron@la.gov.

Infectious Disease Epidemiology Workshop May 7, 2014 - Shreveport, Louisiana



Erin Delaune, Department of Health and Hospitals' Infectious Disease Epidemiologist, presents Naegleria information to members of the Infectious Disease Rapid Response Team from northern Louisiana parishes.

Louisiana Fact Hookworms, 1910-1914

The Rockefeller Sanitary Commission (RSC) for the Eradication of Hookworm Disease was an organization created to eradicate the disease in the American South. In 1910, the Louisiana State Board of Health accepted financial aid from the RSC to institute a program to combat 'ground itch' with Dr. Sidney D. Porter, Chief Medical Inspector and State Sanitarian heading it.

Of the 31 parishes investigated, hookworm infection varied from less than 10 percent to more than 50 percent. At that time, the heaviest infection sites were found in north and central Louisiana and the West Florida parishes (Regions 2 and 9* - East Baton Rouge, East Feliciana, Livingston, St. Helena, St. Tammany, Tangipahoa, Washington, and West Feliciana.). From January 1 until June 30, 1912, 80,990 cases of hookworm were treated by 321 Louisiana physicians. Random examinations (38,487) done in 1914 at dispensaries showed the entire state as 47 percent in-

* Map of Regions on Page 7

Hookworm larvae live in soil and typically enter humans through the soles of their feet. The larvae flow through the bloodstream and into the lungs and throat before latching on to the small intestine. Hookworm eggs are expelled through the stool of a carrier, re-contaminating the soil for the next host. Symptoms vary, but often include stunted growth, anemia and digestive

ected with higher percentages in the following parishes: Beau regard (Region 5) and Grant (Region 6) - 60 percent infected, Vernon (Region 6) - 66 percent, Ouachita (Region 8) -70 percent, Jackson (Region 8) - 79.8 percent.

There were 1,943 public lectures on hookworm and sanitation with 236,600 attendees. A pamphlet describing the hookworm disease in detail was circulated with emphasis placed upon the need of drinking pure water and of wearing shoes. Soil pollution was addressed by campaigns against unsanitary waste facilities (e.g. outhouses, sewage services). Public skepticism regarding the need for an antihookworm campaign was finally overcome.

Louisiana State Board of Health-The Progressive Years, Gordon Gillson pp 223, 236-238; New Orleans Medical and Surgical Journal vol 67 July 1914 to June 1915 p 481; 100 Years The Rockefeller Foundation <http://rockefeller100.org>.



Photo: Infective, third-stage (L3), filariform larva. Courtesy of the Centers for Disease Control and Prevention.

Announcements

Act 459 - Third Trimester HIV and Syphilis Testing

Effective June 4, 2014, Louisiana enacted legislation requiring physicians to offer "opt-out" syphilis and HIV testing to women during the third trimester of pregnancy, in addition to testing at the first prenatal care visit. The full text of Act 459 is available at www.legis.la.gov. Act 459 provides additional opportunities for the detection and treatment of syphilis and HIV among pregnant women in the third trimester, in time to reduce mother-to-child transmission of these serious illnesses. Prenatal testing should be used in combination with the treatment guidelines for HIV (<http://AIDSinfo.nih.gov>) and syphilis (www.cdc.gov/STD/treatment/2010) during pregnancy. The Louisiana Department of Health and Hospitals' Office of Public Health offers technical assistance, educational support and access to a network of resources to help health care providers with the care of patients.

The Centers for Disease Control and Prevention and the U.S. Preventive Services Task Force recommend that pregnant women living in areas with high HIV and syphilis rates be tested for HIV and syphilis at their first prenatal visit and again in the third trimester. In Louisiana, from 2010 to 2012, 15 infants were born with an HIV infection and 83 infants were born with congenital syphilis. Some of the mothers of these infected infants tested negative during the first trimester of their pregnancy, yet were found to be positive at the time of delivery. For more information please contact: Dr. Stephanie Taylor, STaylo2@lsuhsc.edu.

Updates: Infectious Disease Epidemiology (IDEpi) Webpages

www.infectiousdisease.dhh.louisiana.gov

Annual Reports: Arthropod-Borne Encephalitis; Campylobacter; Cryptococcus; Cryptosporidiosis; Eastern Equine Encephalitis (EEE) and La Crosse (California Group) Encephalitis (LAC); Giardiasis; Hantavirus Pulmonary Syndrome; *Haemophilus Influenzae* Invasive Disease; Legionella; Legionella Case Form (CDC); Malaria; Meningococcal Infections; Methicillin Resistant *Staphylococcus Aureus* Invasive Disease (MRSA); Pertussis; Saint Louis Encephalitis (SLE); Salmonella; Shigella; Streptococcus Group A Invasive (GAS); Three-Year Comparison 2012-2014; Trichinosis
Epidemiology Manual: Chikungunga Summary; Clostridium Difficile Public Information-Spanish; Eosinophilic Meningitis Public Information; Malaria Public Information; Middle East Respiratory Syndrome (MERS); Swimming and Other Activities in Recreational Waters Public Information; West Nile Virus Blood Transfusions and Organ Donations Public Information; Wild Animals in Swimming Pools Public Information

Hepatitis: Co-Infection-HIV and Viral Hepatitis (CDC)

Influenza: Confirmed MERS-CoV Case in Indiana, 2014 (CDC); First Confirmed Cases of MERS-CoV Infection in the U.S. (MMWR 5/14/14-CDC); Weekly Report

Veterinary: Louisiana Bat Removal Companies

Table: Communicable Disease Surveillance, Incidence by Region and Time Period, March-April, 2014

DISEASE	HEALTH REGION									TIME PERIOD					
	1	2	3	4	5	6	7	8	9	Mar-Apr 2014	Mar-Apr 2013	Jan-Dec 2014 Cum	Jan-Dec 2013 Cum	Jan-Dec % Chg*	
Vaccine-preventable															
Hepatitis B	Cases	0	1	1	1	0	0	0	1	2	6	8	16	18	NA*
	Rate ¹	0	0.2	0.3	0.2	0	0	0	0.3	0.5	0.1	0.2	0.4	0.4	NA*
Measles		0	0	0	0	0	0	0	0	0	0	0	0	0	NA*
Mumps		0	0	0	0	0	0	0	0	0	0	0	1	NA*	
Rubella		0	0	0	0	0	0	0	0	0	0	0	0	NA*	
Pertussis		1	0	0	2	0	2	1	0	1	7	18	23	30	-23.3
Sexually-transmitted															
HIV/AIDS	Cases ²	72	52	14	10	7	9	14	10	12	200	220	429	441	-2.7
	Rate ¹	7.2	9.0	3.6	1.9	2.5	3.0	2.8	2.9	2.8	4.6	5.0	9.8	10.1	NA*
Chlamydia	Cases ^{1,3}	252	166	82	142	77	72	155	123	74	1,143	5,174	4,943	8,009	-38.3
	Rate ¹	29	24.7	20.3	24.0	26.2	23.2	28.1	34.5	13.4	24.8	112.4	107.4	174.0	NA*
Gonorrhea	Cases ^{1,3}	71	37	13	43	12	14	48	43	16	297	1386	394	2247	-82.5
	Rate ¹	8.2	5.5	3.2	7.3	4.1	4.5	8.7	12.1	2.9	6.5	30.1	8.6	48.8	NA*
Syphilis (P&S)	Cases ^{1,3}	22	5	5	4	0	3	11	5	2	57	57	125	110	13.6
	Rate ¹	2.5	0.7	1.2	0.7	0.0	1.0	2.0	1.4	0.4	1.2	1.2	2.7	2.4	NA*
Enteric															
Campylobacter	Cases	1	2	2	2	5	4	4	2	4	26	35	47	68	-30.9
Hepatitis A	Cases	0	0	0	1	0	0	0	0	0	1	0	4	5	NA*
	Rate ¹	0	0	0	0.2	0	0	0	0	0	0	0	0.1	0.1	NA*
Salmonella	Cases	11	8	4	4	4	6	7	6	15	65	127	155	218	-28.9
	Rate ¹	1.1	1.4	1.1	0.8	1.5	2.0	1.4	1.7	3.9	1.5	2.9	3.6	5.1	NA*
Shigella	Cases	5	1	0	3	2	1	1	8	1	22	47	56	73	-23.3
	Rate ¹	0.5	0.2	0	0.6	0.7	0.3	0.2	2.3	0.3	0.5	1.1	1.3	1.7	NA*
Vibrio, cholera	Cases	0	0	0	0	0	0	0	0	0	0	0	0	0	NA*
Vibrio, other	Cases	2	1	0	1	0	0	0	0	2	6	7	6	9	NA*
Other															
<i>H. influenzae (other)</i>		1	1	1	0	1	0	1	0	0	5	7	18	19	NA*
<i>N. Meningitidis</i>		0	0	0	0	0	0	0	0	0	0	3	3	6	NA*

¹ = Cases Per 100,000.

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

³ = Preliminary data.

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

Figure: Department of Health and Hospitals Regional Map

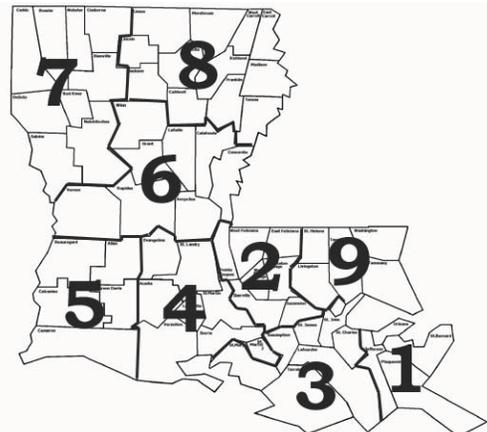


Table 2. Diseases of Low Frequency, January-December, 2014

Disease	Total to Date
Legionellosis	11
Lyme Disease	0
Malaria	2
Rabies, animal	0
Varicella	12

Table 3. Animal Rabies, March-April, 2014

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, Ciguatera, paralytic, 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 disease)	Q Fever (<i>Coxiella burnetii</i>)	Staphylococcal Enterotoxin B (SEB)
Botulism	Influenza-associated Mortality	Rabies (animal and human)	Pulmonary Poisoning
Brucellosis	Measles (Rubeola imported or indigenous)	Ricin Poisoning	Tularemia (<i>Francisella tularensis</i>)
Cholera	<i>Neisseria meningitidis</i> (invasive infection)	Rubella (congenital syndrome)	Viral Hemorrhagic Fever
<i>Clostridium perfringens</i> (foodborne infection)	Outbreaks of Any Infectious Disease	Rubella (German Measles)	Yellow Fever
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.

Amoeba (free living infection: <i>Acanthamoeba</i> , <i>Naegleria</i> , <i>Balamuthia</i> , Others)	Chancroid	Hepatitis B (perinatal infection)	Mumps
Anaplasmosis	Dengue Fever	Hepatitis E	Salmonellosis
Arthropod-Borne Neuroinvasive Disease (West Nile, St. Louis, California, Eastern Equine, Western Equine, Others)	<i>Escherichia coli</i> , Shig-toxin producing (STEC), including <i>E. coli</i> 0157:H7	Herpes (neonatal)	Shigellosis
Aseptic Meningitis	Granuloma inguinale	Human Immunodeficiency Virus (HIV), infection in pregnancy] ²	Syphilis ¹
Babesiosis	Hantavirus (infection or Pulmonary Syndrome)	Human Immunodeficiency Virus (HIV), perinatal exposure] ²	Tetanus
Chagas Disease	Hemolytic-Uremic Syndrome	Legionellosis (acute disease)	Tuberculosis ³ (<i>M. tuberculosis</i> , <i>M. bovis</i> , <i>M. africanum</i>)
	Hepatitis A (acute disease)	Malaria	Typhoid Fever
	Hepatitis B (acute illness & 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.

Acquired Immune Deficiency Syndrome (AIDS) ³	Enterococcus, Vancomycin Resistant [(VRE), invasive disease]	Human T Lymphocyte Virus (HTLV I & II infection)	Staphylococcal Toxic Shock Syndrome
Anaplasma Phagocytophilum	Giardia	Leptospirosis	Streptococcal Disease, Group A (invasive disease)
Blastomycosis	Glanders	Listeria	Streptococcal Disease, Group B (invasive disease)
Campylobacteriosis	Gonorrhea ⁴ (genital, oral, ophthalmis, pelvic inflammatory disease, rectal)	Lyme Disease	Streptococcal Toxic Shock Syndrome
Chlamydial infection ¹	Hansen Disease (leprosy)	Lymphogranuloma venereum 1	<i>Streptococcus pneumoniae</i> , invasive disease
Coccidioidomycosis	Hepatitis B (carriage, other than in pregnancy)	Melioidosis (<i>Burkholderia pseudomallei</i>)	Transmissible Spongiform Encephalopathies (Creutzfeldt-Jacob Disease & variants)
Cryptococcosis	Hepatitis C (acute illness)	Meningitis, Eosinophilic	Trichinosis
Cryptosporidiosis	Hepatitis C (past or present infection)	Nipah Virus infection	Varicella (chickenpox)
Cyclosporiasis	Human Immunodeficiency Virus (HIV (infection other than as in Class B) ²	Psittacosis	Vibrio Infections (other than cholera)
Ehrlichiosis (human granulocytic & monocytic, <i>Ehrlichia chaffeensis</i>)		Spotted Fevers (Rickettsia species including Rocky Mountain Spotted Fever (RMSF)]	Yersiniosis
		<i>Staphylococcus aureus</i> , (MRSA) invasive infection	

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

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

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 1-800-256-2748 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 CDC72.5 (f.5.2431) card

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

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