An Unusual Case of Neisseria Louisiana, 2016

A 51-year old male presents at an emergency department with fever (104°F, 40°C) and tachycardia (136). His job required him to be outside delivering materials to multiple addresses and to wear a uniform not well adapted to summer temperatures. The presumptive diagnoses were heat exhaustion or early sepsis. Multiple workup tests done did not show any major abnormalities.

After being admitted, a blood culture was done and the patient was treated empirically with ceftriaxone. During the night, his temperature decreased to 101°F and his white blood cell count increased from 9,000 to 16,200. His other lab tests were unremarkable. The patient was well hydrated and was discharged the next day with diagnoses of heat exhaustion, hypertension and hypokalemia.

At 24 hours the blood culture showed no growth, but the next day after discharge a presumptive identification of Neisseria species was made and later confirmed by polymerase chain reaction (PCR) as Neisseria cinerea.

N. cinerea is part of a group of non-pathogenic Neisseria (N. lactamica, N. polysaccharea, N.sicca, N.subflava, N.flavescens, N.mucosa, N.elongate) that are colonizers of the human upper respiratory tract.

Sudden Unexpected Infant Death: Louisiana, 2013-2014

Cara Bergo, MPH

The Louisiana infant mortality rate, death before the age of one year, is the third highest in the United States at 8.0 deaths per 1,000 live births compared to the United States at 5.8 deaths. The third leading cause of infant mortality in Louisiana is Sudden Unexpected Infant Death (SUID). SUID is defined by the Centers for Disease Control and Prevention (CDC) as the death of an infant younger than one year of age that cannot be explained after a thorough investigation is conducted, including a full autopsy, examination of the death scene, and a review of the infant’s clinical history.

In 2013, there were 100 SUID cases in Louisiana; in 2014, there were 104. With help from the CDC SUID Case Registry Grant, the nine Louisiana Regional Maternal and Child Health (MCH) Coordinators with the Bureau of Family Health collect records regarding these deaths to abstract and review each case. Of the 204 SUID deaths in Louisiana from 2013 and 2014, 199 were abstracted and reviewed within regional case review teams. The abstraction and reviews provide information on demographics, scene of event, risk factors involved, and possible prevention strategies to implement in the future.

There are four types of SUID: Sudden Infant Death Syndrome (92 cases, 46.2%), unknown cause of death (7 cases, 3.5%), accidental suffocation and strangulation in bed (84 cases, 42.2%) and asphyxiation and suffocation (ASSB), (16 cases, 8.0%), (Table 1, Figure).

Table 1: Characteristics of Sudden Unexpected Infant Deaths Louisiana, 2013-2014

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Count (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age at Death</td>
<td>N=199</td>
</tr>
<tr>
<td>&lt;28 days</td>
<td>17 (8.5)</td>
</tr>
<tr>
<td>28-112 days</td>
<td>119 (59.8)</td>
</tr>
<tr>
<td>113-224 days</td>
<td>52 (26.1)</td>
</tr>
<tr>
<td>225-365 days</td>
<td>11 (5.5)</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>91 (45.7)</td>
</tr>
<tr>
<td>Female</td>
<td>108 (54.3)</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td></td>
</tr>
<tr>
<td>Black, Non-Hispanic</td>
<td>106 (53.3)</td>
</tr>
<tr>
<td>White, Non-Hispanic</td>
<td>83 (41.7)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>10 (5.0)</td>
</tr>
</tbody>
</table>
The Behavioral Risk Factor Surveillance System (BRFSS) is a cross-sectional annual health-related telephone survey of civilian, non-institutionalized state residents aged 18 years and older. It is coordinated by the Centers for Disease Control and Prevention and conducted by all US states, Washington D.C. and several U.S. territories. The BRFSS uses a multistage sampling design to select a representative sample of the adult population in each state, allowing for state-to-state and national comparisons.

Beginning in 2013, Louisiana added an optional industry and occupation module to collect information from employed respondents about their “type of business/industry” and the “type of work/occupation.” Verbatim responses were collected, coded by the National Institute of Occupational Safety and Health certified coders into 3-digit census occupation codes and then aggregated into broader occupational categories. Using a combined 2013/2014 data set, population-based estimates on the health and well-being of service workers in Louisiana were calculated. For Louisiana and many other states, the BRFSS is the only available data source of timely and accurate data on health-related behaviors.

Service workers represent a broadly defined group that includes: healthcare support, protective service, food service, cleaning and maintenance and personal care and service occupations. Together, these workers make up about 17 percent of Louisiana’s workforce, with food service workers making up almost one-third of all service workers, followed by personal care and service workers at 21 percent. Although there is variation among service occupations, many of the jobs are held by women and minorities and involve shift work, low wages and minimum job security. These jobs, especially service jobs that pay below $20 per hour and require only a high school education or less, are predicted to grow far more quickly than higher-wage jobs over the next decade. Between 2010 and 2014, the number of food service workers increased approximately 12 percent. The other service occupations also experienced growth during this time period, excluding protective service workers.

Prevalence estimates for 19 survey responses from the BRFSS were calculated to compare Louisiana service workers with all other workers. These 19 were key questions addressing issues of chronic health and risk behaviors grouped into six main categories: health care access; health status; chronic health conditions; housing and food insecurity; risk factors and behaviors and immunization. The BRFSS criteria for publicly reporting data results are that: 1) each cell size must have a count of at least 50 and 2) the coefficient of variation (CV) of the prevalent estimate must be less than 0.30 to indicate stability. Unreliable estimates are not included in the report. SAS 9.3 was used for all data analyses, and Microsoft Excel was used to create all figures and tables. Rao-Scott chi-squared tests were calculated for all prevalence estimates to determine differences between occupation groups. Statistical significance for all tests was set at $p < 0.05$.

**Results**

Table 1 shows the annual average distribution of 2013 and 2014 LA BRFSS Service worker respondents grouped by 2010 US Census Bureau Occupation Codes compared to the Bureau of Labor Statistics’ Current Population Survey (CPS). The CPS is a monthly survey of approximately 60,000 randomly sampled US households representative of the civilian non-institutional population. It includes demographic and labor force and employment data for each household member at least 15 years-old. The five service workers’ occupational categories were combined to create a service group, and all other occupation groups were combined to form the all other workers group for comparison.

Table 1: Average Workforce Distribution of BRFSS Service Worker Respondents by Major Occupation Group - Louisiana, 2013 and 2014

<table>
<thead>
<tr>
<th>Occupation Group/Service</th>
<th>Example Occupations</th>
<th>Workforce Distribution (percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthcare Support</td>
<td>massage therapist, dental assistant, phlebotomist, pharmacy aides</td>
<td>3.1</td>
</tr>
<tr>
<td>Protective Service</td>
<td>detective, fish and game warden, firefighter, police officer, correctional officer, security guard</td>
<td>3.6</td>
</tr>
<tr>
<td>Food Prep and Serving Related</td>
<td>chef, bartender, dishwasher, counter attendant, host and hostess, waiter and waitress</td>
<td>6.7</td>
</tr>
<tr>
<td>Building and Grounds Cleaning and Maintenance</td>
<td>janitor, housekeeper, pest control worker, groundskeeper, lawn service worker</td>
<td>4.3</td>
</tr>
<tr>
<td>Personal Care and Service</td>
<td>barber, animal trainer, hairdresser, usher, mortician, baggage porter, tour guide, childdare attendant</td>
<td>3.8</td>
</tr>
</tbody>
</table>

(continued on page 3)
Table 2 shows the distribution of socio-demographic characteristics among Louisiana service workers and all other workers combined for Louisiana’s BRFSS 2013 and 2014 data. Service workers in Louisiana were more likely to be female, younger than 45 years-old, African-American, not have a high school education, and have an annual income less than $50,000 in comparison with other workers.

Table 2: Distribution of Demographic Data Among Service Workers and All Other Workers - BRFSS - Louisiana, 2013 and 2014

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Service Occupation Group (N=913)</th>
<th>All Other Workers (N=4,270)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>41.1</td>
<td>56.5</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>58.9</td>
<td>43.5</td>
<td></td>
</tr>
<tr>
<td>Age Group (Years)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-44</td>
<td>68.4</td>
<td>54.9</td>
<td></td>
</tr>
<tr>
<td>45-54</td>
<td>17.9</td>
<td>23.8</td>
<td></td>
</tr>
<tr>
<td>55-64</td>
<td>10.6</td>
<td>15.9</td>
<td></td>
</tr>
<tr>
<td>Older than or equal to 65</td>
<td>3.2</td>
<td>5.6</td>
<td></td>
</tr>
<tr>
<td>Race/ethnicity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White non-Hispanic</td>
<td>47.0</td>
<td>66.5</td>
<td></td>
</tr>
<tr>
<td>Black non-Hispanic</td>
<td>44.1</td>
<td>26.3</td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>5.7</td>
<td>4.0</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>3.2</td>
<td>3.3</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some high school</td>
<td>21.4</td>
<td>11.6</td>
<td></td>
</tr>
<tr>
<td>High school graduate</td>
<td>41.9</td>
<td>29.8</td>
<td></td>
</tr>
<tr>
<td>Some college</td>
<td>28.4</td>
<td>29.8</td>
<td></td>
</tr>
<tr>
<td>College graduate</td>
<td>8.2</td>
<td>28.8</td>
<td></td>
</tr>
<tr>
<td>Household Income</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than $50,000</td>
<td>77.3</td>
<td>44.1</td>
<td></td>
</tr>
<tr>
<td>Greater or equal to $50,000</td>
<td>22.7</td>
<td>55.9</td>
<td></td>
</tr>
</tbody>
</table>

Table 3 shows that service workers reported significantly greater prevalences of poor health, chronic health conditions, food and housing insecurity, and risk behaviors than other workers.

Table 3: Significant Prevalence Estimates - BRFSS - Louisiana, 2013 and 2014

<table>
<thead>
<tr>
<th>BRFSS Variable</th>
<th>Significant Prevalence Estimates (%)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Service Workers</td>
<td>All Other Workers</td>
</tr>
<tr>
<td>Health Care Access</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No health care coverage</td>
<td>38.5</td>
<td>18.7</td>
</tr>
<tr>
<td>Unable to see doctor due to medical costs</td>
<td>29.5</td>
<td>14.9</td>
</tr>
<tr>
<td>Health Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poor total health (physical and/or mental health poor 11-30 days)</td>
<td>20.9</td>
<td>14.9</td>
</tr>
<tr>
<td>Chronic Health Conditions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current asthma</td>
<td>7.4</td>
<td>5.0</td>
</tr>
<tr>
<td>Chronic obstructive pulmonary disease</td>
<td>6.0</td>
<td>3.5</td>
</tr>
<tr>
<td>Depressive disorder</td>
<td>17.7</td>
<td>13.2</td>
</tr>
<tr>
<td>Diabetes</td>
<td>8.4</td>
<td>6.3</td>
</tr>
<tr>
<td>Insecurities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food insecurity</td>
<td>34.2</td>
<td>19.2</td>
</tr>
<tr>
<td>Housing/shelter insecurity</td>
<td>17.0</td>
<td>14.3</td>
</tr>
<tr>
<td>Risk Factors and Behaviors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current smoking</td>
<td>32.1</td>
<td>23.8</td>
</tr>
</tbody>
</table>

Conclusion

This report provides critical information on the health and well-being of service workers in Louisiana that can be used by policymakers, community leaders, and business leaders to better understand the economic hardships, chronic health conditions, and other quality of life issues faced by this growing occupational sector. This information, in turn, can better inform policy and legislation and health intervention and prevention programs.

Data in this report pre-date Medicaid expansion which, as pointed out in the recently released Louisiana State Health Assessment and Improvement plan, is the single greatest action our state can take to ensure that every working Louisianan has access to health care.

Lastly, for the purposes of presenting data that meet minimum reporting standards, data for the five service occupations were aggregated, which may have resulted in masking occupation-specific issues. As additional years of data are received, a similar analysis can be done for each of the five service sectors. This analysis sets the important foundation for that work.

The full Louisiana Service Worker BRFSS Report can be accessed at http://new.dhh.louisiana.gov/assets/oph/Center-EH/envepi/occ_health/Documents/LA_Service_Worker_Wellness_Report_BRFSS_2016_FINAL.pdf For more information, please contact Dr. Jocelyn Lewis at Jocelyn.lewis@la.gov.

Announcements

National Healthcare Safety Network/Emerging Infectious Diseases Workshops - 2016

Metairie - November 14  Bossier City - November 16  Alexandria - November 17

This is a one-day workshop sponsored by the Department of Health’s, Office of Public Health, Infectious Disease Epidemiology Section. It is targeted towards infectious disease preventionists that are seeking to reduce the number of hospital acquired infections and prepare for emerging infectious disease threats that may present in their facility.

This workshop is free to attend, but must be registered for because of seating limitations and to provide the adequate number of handouts. Nurse and laboratory education credits have been applied for.

Please go to http://new.dhh.louisiana.gov/index.cfm/page/2566 for a registration form and more information.

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

Annual: Brucellosis; Creutzfeldt Jakob Disease; Cryptosporidiosis; Cyclosporiasis; Eastern Equine and La Crosse (California) Encephalitis; Gullain Barre; Hepatitis C; St. Louis Encephalitis

Arboviral: WNV Weekly Report

Epidemiology Manual: Brain-eating Ameba (Naegleria) Public Information; Pertussis; U.S. Laboratories Testing for Zika Virus Infection

Hepatitis: Epidemiologic Profile of Hepatitis C Virus Infection in Louisiana - 2015; What is the Prevalence of Hepatitis C in Louisiana?

Influenza: ACIP Recommendations 2016-17; Monthly Report
Figure: Type of SUID by Year: Louisiana, 2004-2014

The majority of deaths (75.6%) occurred before the infant was 4-months old and the deaths were more likely to be female, (54.3%). East Baton Rouge Parish (Region 2*) had 26 deaths in 2013 and 2014, the most of any parish in Louisiana. Out of parishes with at least 10 SUID deaths, East Baton Rouge Parish had the highest incidence rate of SUID at 2.12 deaths per 1,000 live births during 2013-2014 followed by Calcasieu (Region 7) at 2.02 per 1,000 live births, Orleans (Region 1) at 1.72 per 1,000 live births, and Lafayette (Region 4) at 1.58 per 1,000 live births.

Following a SUID case, a death scene investigation is done by the parish coroner’s office or local law enforcement. The scene of the event is investigated, caregiver is interviewed and a doll reenactment is done to better understand the situation surrounding the death. SUID cases were most likely to occur in the child’s home (83.4%) and secondly in a relative’s home (12.1%). The majority of cases had supervision at the time of death (91.5%) and the caregiver at the time of death was usually the female biological parent (97.0%). More than half (59.8%) were receiving social services. (Table 2).

<table>
<thead>
<tr>
<th>Factor</th>
<th>Count (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biological Parent</td>
<td>192 (96.5)</td>
</tr>
<tr>
<td>≤ 20 Years Old</td>
<td>28 (14.1)</td>
</tr>
<tr>
<td>Female</td>
<td>193 (97.0)</td>
</tr>
<tr>
<td>Unemployed</td>
<td>59 (29.6)</td>
</tr>
<tr>
<td>Low Income</td>
<td>105 (52.8)</td>
</tr>
<tr>
<td>Receiving Social Services</td>
<td>119 (59.8)</td>
</tr>
<tr>
<td>Any Substance Abuse</td>
<td>43 (21.6)</td>
</tr>
<tr>
<td>Supervision at Time of Incident</td>
<td>182 (91.5)</td>
</tr>
</tbody>
</table>

Table 2: Scene of Event of SUID Death: Louisiana, 2013-2014

The ASSB cause of death has increased over the past decade partly due to better investigation and reporting surrounding the scene and situation of the death.

There are known sleep environment risk factors associated with SUID including not sleeping on the back, soft bedding, and sleeping on an adult mattress. In Louisiana, about half of cases were sleeping in an adult bed (50.8%) and 48.3% were found sleeping on their stomach or side. Known risk factors of SUID were present in the sleep environment including pillows (44.7%), comforters (40.7%) and other people (65.8%). Many of these deaths (79.4%) were tragically found to be preventable after review due to the ability to mitigate many of these risk factors (Table 3).

Table 3: Sleep Environment Risk Factors: Louisiana, 2013-2014

The Louisiana Department of Health, Bureau of Family Health implements a multifaceted prevention effort, including community awareness campaigns for safe sleep, providing safe sleep resources to community partners, such as child care centers and all birthing hospitals. Training coroners and death scene investigators on proper protocol and procedures including doll reenactment and maternal interview has helped better correctly classify and understand SUID. At the local level, the Regional MCH Coordinators convene community action teams that work to build community capacity to prevent these deaths. SUID is a risk for all young babies and the Bureau of Family Health is working to minimize the risk and reduce infant deaths in Louisiana.

For more references or more information, email jane.herrwehe@la.gov or go to http://dfcslouisiana.gov/index.cfm?md=pagebuilder&tmpl=home&pid=357 or http://www.cdc.gov/sids/aboutsuidandsids.htm.
National Lead Poisoning Prevention Week
October 23-29, 2016

Trina Evans Williams, MPH

Lead poisoning is the most preventable environmental disease among young children, yet half a million US children have blood lead levels above 5 mcg/dl, the reference level at which Centers for Disease Control and Prevention (CDC), recommends public health actions be initiated. A simple blood test can prevent permanent damage that will last a lifetime.

Homes painted before 1978, when household lead paint was outlawed, are more likely to have lead, as are older water pipes and service lines.

Other actions include:
- getting the home tested if there are children with elevated blood lead levels, or whose parents suspect lead contamination;
- warn workers not to spread lead from job sites to the family vehicle or home if there has been contact within church or community… especially with disaster volunteers;
- share dangers of remodeling or refinishing old homes and furnishings with young women who are pregnant or have toddlers.

Resources on lead safety can be found at websites: National Lead Poisoning Prevention Week (CDC); You Can Prevent Lead Poisoning (LSU Ag Center); and Louisiana Healthy Homes and Childhood Lead Poisoning Prevention Program’s “Toolkit” (LDH OPH).

For more information, please contact Trina Evans Williams at (504) 568-8254 or email Trina.Evans@la.gov.

Louisiana Fact
At the Forefront of Modern Dentistry

In the 1820’s sales of teeth instruments to physicians and laymen were quite common. Although dentistry was beginning to emerge as a distinct profession, in the 1860’s and 1870’s most dental work was still performed by general practitioners or charlatans. A rural doctor could make and sell his own medicines as well as perform veterinary or dental services. Some medical account books in these years show that the extraction of one tooth would have a standard price of one dollar, the same price as administering medicine to a horse.

Dental education has a long history in Louisiana, dating as far back as 1861, with the establishment of the New Orleans Dental College. Classes in the dental college were suspended due to the Civil War but started again in 1867 and continued until 1877. This dental college accepted women on an equal basis, unlike the medical school which refused to accept them.

C. Edmund Kells of New Orleans dentist, researcher, and inventor, who did pioneering work with x-rays, was the first in the U.S. to use dental xrays on a live patient in April, 1896.

He also was the first dentist to use compressed air in the dental office for drying the teeth and invented the oral suction pump. Surgeons around the world quickly adopted his suction pump for use in operating rooms, the idea of which is still in use today. Besides his many innovations for the dental profession, Dr. Kells had among his 30 patents, the fire extinguisher, automotive jack, electric thermostat, automatic window closer, and elevator starter and brake.

He was a vocal proponent of keeping natural teeth, pulpless or not, which were regularly pulled by most of the dental community. Dr. Kells believed that the diagnosis of dental disease should be done by dentists, not physicians and followed the latest treatments of infection available.

In 1885, the first female dental assistant was employed by Dr. Kells to offer chair-side assistance, instrument cleaning, inventory, appointments, bookkeeping, and reception. He believed that the ‘lady assistant’ was absolutely essential to the modern dental office and would survive as long as dentistry lived.

- Thanks to the American Dental Association and Andrea Matlak, Archivist
- Rudolph Matas, Edited by John Duffy, The History of Medicine in Louisiana Vol II, 29,352, 549-550

Submitted by Abhaykumar Unjiya, BDS, MSPH Candidate

Photo: C. Edmund Kells, The Dentist’s Own Book, 1925

Photo courtesy of Yahoo.com
Zika and Animals

Gary A. Balsamo, DVM, MPH & Dawn M. Wesson, PhD

There is still so much unknown about the Zika virus. Nowhere is that statement more factual than in the knowledge available about Zika virus in animals. Although the virus was first discovered in a yellow fever sentinel monkey in the Zika (a.k.a. Zika) forest of Uganda, very little scientific information is available regarding the epidemiology of the disease in non-human primates specifically, and in animals generally. It is not thought that animals play a major role in the transmission of the virus to people; certainly there is no evidence that animals, even primates, play a major role in the outbreak that is presently affecting the United States. In fact, the prevalence of the virus in non-human primates in Africa, Asia and South America is unknown. Concern also exists as to whether other species of animals might be infected with this virus.

It is known that non-human primates can be infected with the virus, and that Zika virus does, on occasion, cause a very mild illness in these animals. Evidence has been gathered in Indonesia, that Zika virus can also infect horses, cows, domestic water buffalo known as carabao, goats, ducks and bats, but there is no indication yet that these infections lead to disease. Even in non-human primates, the Zika-related severe birth defects, including microcephaly, that have been demonstrated in humans have not been observed.

In the United States, the chances that imported non-human primates might play a role in a domestic transmission cycle are extremely unlikely. Non-human primates are held in quarantine when entering the U.S., and if exposed to the virus in the country of origin, would develop an antibody response and, at the time of release from quarantine, no longer exhibit a sufficient viremia to threaten local mosquito populations. The primary concern with Zika is that some other animal may potentially play a role in maintaining the disease in nature.

A sero-survey of rodents, domestic ruminants, and humans completed in Pakistan in the early 1980s, indicated that rodents, goats and sheep generated antibodies against the virus. Out of 157 rodents from mountainous regions of Pakistan, six (3.8%) were positive on complement fixation for antibodies to the virus. Out of 172 domestic ruminants, one sheep and one goat were also found to be positive. The seroprevalence of Zika in the humans tested was 2.3%, although the number of humans tested was extremely small (n=43, one positive). Nevertheless, it is interesting to note that the seroprevalence in rodents was higher, than that in humans. The question remains as to whether these rodents play a role in the natural ecology of the disease in these areas.

Another more recently published study analyzed the genetic changes in Zika virus as the virus spread throughout Africa and into Asia. This analysis demonstrated that Zika virus, unlike other Flaviviruses, exhibited a much more rapid recombination of genes in nature than what has been observed in related viruses. The authors offer the explanation that this more rapid recombination, a noted increased frequency in the enzootic cycle of Zika virus in comparison with dengue and yellow fever viruses, and the discovery of multiple Zika genotypes in mosquito species that primarily feed on the blood of lower mammals, indicate the likelihood that multiple animal reservoirs do exist in West Africa. This conclusion increases concern that animals other than non-human primates may play a role in the ecology of the disease within other geographic areas.

Could rodents or other animals play a role in disease transmission, should local transmission occur in Louisiana? That question will persist until answered through additional epidemiological analyses and further studies in the characteristics of this virus.

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

Zika - Confirmed and Probable Cases
United States, 2016

Figure: Number of Confirmed and Probable Zika Virus Disease Cases United States and the District of Columbia - January 1-July 31, 2016

* Morbidity and Mortality Weekly Report, Vol 65, 9/13/16 (CDC)

(An Unusual Case of Neisseria ... continued from page 1)

N. cinerea has sometimes been found colonizing the genital tract. By DNA hybridization, N. cinerea exhibits 50% similarity to N. gonorrhoeae and is often mistaken for N. gonorrhoeae when isolated from endocervical and rectal infections, neonatal conjunctivitis, and lymphadenitis. Although commonly considered non-pathogenic, N. cinerea has been isolated from several infections such as acute meningitis.

**Table: Communicable Disease Surveillance, Incidence by Region and Time Period, July-August, 2016**

### Vaccine-preventable

<table>
<thead>
<tr>
<th>Disease</th>
<th>Total to Date</th>
<th>Jul-Aug</th>
<th>Jul-Aug</th>
<th>Jan-Dec</th>
<th>Jan-Dec</th>
<th>Jan-Dec</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hepatitis B</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Cases</strong></td>
<td>0 3 0 0 2 0 1 0 3</td>
<td>9 12 35 55</td>
<td>-36.4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Rate</strong></td>
<td>0 0.5 0 0 0.7 0 0.2 0 0.8</td>
<td>0 0.2 0.3 0.8 1.3</td>
<td>NA*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Measles</strong></td>
<td>0 0 0 0 0 0 0 0 0</td>
<td>0 0 0 0</td>
<td>NA*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Mumps</strong></td>
<td>0 0 0 0 0 0 0 0 0</td>
<td>0 0 0 0</td>
<td>NA*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Rubella</strong></td>
<td>0 0 0 0 0 0 0 0 0</td>
<td>0 0 0 0</td>
<td>NA*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Pertussis</strong></td>
<td>1 3 0 0 0 0 6 0 1</td>
<td>11 4 35 31</td>
<td>NA*</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Sexually-transmitted

<table>
<thead>
<tr>
<th>Disease</th>
<th>Total to Date</th>
<th>Jul-Aug</th>
<th>Jul-Aug</th>
<th>Jan-Dec</th>
<th>Jan-Dec</th>
<th>Jan-Dec</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HIV/AIDS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Cases</strong></td>
<td>72 60 13 13 6 5 27 16 6</td>
<td>218 200 863 770</td>
<td>12.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Rate</strong></td>
<td>8.6 9.0 3.2 2.2 2.1 1.6 5.0 4.5 1.1</td>
<td>4.8 4.4 19.0 17.0</td>
<td>NA*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Chlamydia</strong></td>
<td>1,382 636 394 572 241 377 657 544 458</td>
<td>5,261 5,730 20,936 20,763</td>
<td>0.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Rate</strong></td>
<td>154.4 93.2 97.1 94.1 80.6 123.1 120.4 153.2 79.9</td>
<td>112.6 122.7 448.2 444.5</td>
<td>NA*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Gonorrhea</strong></td>
<td>553 270 130 222 81 112 228 205 133</td>
<td>1,934 1,935 7,401 6,608</td>
<td>12.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Rate</strong></td>
<td>61.8 39.6 32.0 36.5 27.1 36.6 41.8 57.7 23.2</td>
<td>41.4 41.4 158.5 141.5</td>
<td>NA*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Syphilis (P&amp;S)</strong></td>
<td>33 5 16 13 8 7 26 2 5</td>
<td>115 177 428 457</td>
<td>-6.3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Enteric

<table>
<thead>
<tr>
<th>Disease</th>
<th>Total to Date</th>
<th>Jul-Aug</th>
<th>Jul-Aug</th>
<th>Jan-Dec</th>
<th>Jan-Dec</th>
<th>Jan-Dec</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Campylobacter</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Cases</strong></td>
<td>1 12 5 1 2 5 9 9</td>
<td>46 50 168 159</td>
<td>5.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Hepatitis A</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Cases</strong></td>
<td>0 0 0 0 0 0 0 0 0</td>
<td>0 0 1 0 3 200.0</td>
<td>NA*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Rate</strong></td>
<td>0 0 0 0 0 0 0 0 0</td>
<td>0 0 0.2 0.1</td>
<td>NA*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Salmonella</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Cases</strong></td>
<td>26 35 28 60 19 27 18 27 46</td>
<td>286 342 808 820</td>
<td>-1.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Rate</strong></td>
<td>2.5 6.2 7.4 11.6 7.1 8.9 3.6 7.7 11.9</td>
<td>6.6 7.9 18.7 19.0</td>
<td>NA*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Shigella</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Cases</strong></td>
<td>8 5 9 6 1 5 6 12 4</td>
<td>56 42 247 123</td>
<td>100.6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Rate</strong></td>
<td>0.8 0.9 2.4 1.2 0.4 1.6 1.2 3.4 1.0</td>
<td>1.3 1.0 5.7 2.9</td>
<td>NA*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Vibrio, cholera</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Cases</strong></td>
<td>0 0 0 0 0 0 0 0 0</td>
<td>0 0 0 0 0</td>
<td>NA*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Vibrio, other</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Cases</strong></td>
<td>5 1 3 2 0 0 0 0 3</td>
<td>14 8 35 40</td>
<td>-12.5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Other

<table>
<thead>
<tr>
<th>Disease</th>
<th>Total to Date</th>
<th>Jul-Aug</th>
<th>Jul-Aug</th>
<th>Jan-Dec</th>
<th>Jan-Dec</th>
<th>Jan-Dec</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>H. influenzae (other)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Cases</strong></td>
<td>0 3 0 0 0 0 0 2 1</td>
<td>6 6 37 49</td>
<td>-24.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>N. Meningitidis</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Cases</strong></td>
<td>0 0 0 0 0 0 0 0 0</td>
<td>0 0 2 4</td>
<td>NA*</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

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 was first 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.

---

**Table 2. Diseases of Low Frequency, January-December, 2016**

<table>
<thead>
<tr>
<th>Disease</th>
<th>Total to Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Legionellosis</td>
<td>20</td>
</tr>
<tr>
<td>Lyme Disease</td>
<td>4</td>
</tr>
<tr>
<td>Malaria</td>
<td>10</td>
</tr>
<tr>
<td>Rabies, animal</td>
<td>2</td>
</tr>
<tr>
<td>Varicella</td>
<td>46</td>
</tr>
</tbody>
</table>

**Table 3. Animal Rabies, Jul-Aug, 2016**

<table>
<thead>
<tr>
<th>Parish</th>
<th>No. Cases</th>
<th>Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caddo</td>
<td>1</td>
<td>Bat</td>
</tr>
</tbody>
</table>

---

Figure: Department of Health Regional Map
Syndrome

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.

- Babesiosis
- Hepatitis B (acute illness and carriage in pregnancy)
- Malaria

Class A Diseases/Conditions - Reporting Required Within 24 Hours

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

- Anthrax
- Avian or Novel Strain Influenza A (initial detection)
- Botulism
- Brucellosis
- Cholera
- Clostridium perfringens (foodborne infection)
- Diphtheria
- Fib/Shellfish Poisoning (domino acid, neurotoxic shellfish poisoning, ciguatera, paralytic shellfish poisoning, scombroid)
- Hepatitis A (acute illness)
- Meningitis
- 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, Vancocynin
- Intermediate or Resistant (VISA/VRSA)
- Staphylococcal Enteroxin 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)
- Brucellosis
- Anthrospod-Borne Viral Infections (West Nile, Dengue, St. Louis, California, Eastern Equine, Western Equine, Chikungunya, Usuta, and Others)
- Aseptic Meningitis
- Babesiosis
- Chagas Disease
- Chancroid
- Escherichia coli, Shiga-toxin producing (STE C, including E. coli O157:H7)
- Granuloma Inguneale
- 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 (HIV), infection in pregnancy
- Human Immunodeficiency Virus (HIV), perinatal exposure
- Legionellosis
- Malaria
- Mumps
- Salmonellosis
- Shigellosis
- Syphilis
- Tetanus
- Tuberculosis (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 (AIDS)
- Anaplasmaphagocytophilum
- Blastomycosis
- Campylobacteriosis
- Chlamydia infection
- Coccidioidomycosis
- Cryptococcus (C. neoformans and C. gattii)
- Cryptosporidiosis
- Cyclosporiasis
- Ehrlichiosis (human granulocytic, human monocytic, E. chaffeensis and E. ewingii)
- Enterococcus, Vancocynin Resistant [VRE], invasive disease
- Giardiasis
- Gonorrhea (genital, oral, ophthalmic, pelvic inflammatory disease, rectal)
- Hansen’s Disease (leprosy)
- Hepatitis C (acute illness)
- Histoplasmosis
- Human Immunodeficiency Virus (HIV)
- Human T Lymphocyte Virus (HTLV)
- Influenza
- Hepatitis B (past or present infection)
- Human Metapneumovirus
- Human Parainfluenza Virus
- Legionellosis
- Listeriosis
- Lyme Disease
- Lymphogranuloma Venereum
- Melioidosis (Burkholderia pseudomallei)
- Meningitis, Eosinophilic (including those due to Angiostrongylius infection)
- Meningitis, Listerial
- Meningitis, Tuberculous
- Meningitis, Viral
- Mumps
- Syphilis
- Tetanus
- Tuberculosis (due to M. tuberculosis, M. bovis, or M. africanum)
- Typhoid Fever
- Varicella (chickenpox)
- Vibrio Infections (other than cholera)
- Yersiniosis
- 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
- Complications of Abortion
- Congenital Hypothyroidism
- Galactosemia
- Heavy Metal (arsenic, cadmium, mercury)
- Exposure and/or Poisoning (all ages)
- Hemophilia
- Lead Exposure and/or Poisoning (all ages)
- Pesticide-Related Illness or Injury (all ages)
- Phenylketonuria
- Pneumococcosis (asbestosis, berylliosis, silicosis, byssinosis, etc.)
- Radiation Exposure, Over Normal Limits
- Rey’s Syndrome
- Severe Traumatic Head Injury
- Severe Undernutrition (severe anemia, failure to thrive)
- Sickle Cell Disease (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 (2403), 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 on form TB 2431 (8/94). Mail form to TB Control Program, DHF-OIP, P.O. Box 60630, New Orleans, LA. 70160-0630 or fax both sides of the form to (504) 568-5016
3Report to the Louisiana Genetic Diseases Program and Louisiana Childhood Lead Poisoning Prevention Programs:
4Report to the Section of Environmental Epidemiology and Toxicology: www.spectrum.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. adenovirus; 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.