STATE OF LOUISIANA

DEPARTMENT OF HEALTH AND HOSPITALS

Louisiana Morbidity Report

Louisiana Office of Public Health - Infectious Disease Epidemiology Section
P.O. Box 60630, New Orleans, LA 70160 - Phone: (504) 219-4563
http://www.dhh.louisiana.gov/offices/reports.asp?ID=249&Detail=7428
Infectious Disease Epidemiology Main Webpage
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July-August 2009 **Volume 20 Number 4**

Healthcare Associated Infections: 'Getting to Zero' Initiative St. Tammany Parish Hospital - Louisiana, 2009

Catrin Jones-Nazar, MD MPH; Linda Polo, RN

Healthcare Associated Infections (HAIs) are considered a significant contributor to unnecessary morbidity and mortality associated with the delivery of care in the United States. Over the last few years, the topic of 'Zero tolerance to HAIs' has generated much discussion among infection preventionists and is a frequently addressed topic in many evidence-based healthcare epidemiology publications. The practice of preventing HAI's is no longer a choice for U.S. hospitals, but a priority for hospital administrators, in order to meet the new pay-for-performance mandates from the Centers for Medicaid and Medicare Services (CMS) recently implemented. As of October, 2008, Medicare no longer pays the costs associated with infections that result from a hospitalization.

Background

Some recent Centers for Disease Control and Prevention (CDC) data reports tell a disturbing story: approximately two million HAIs occur in healthcare facilities in the U.S. every year; approximately 99,000 patients die as a consequence of these infections; hospitalization costs increase by between seventeen and twenty-nine billion dollars per year.

Not only are patients getting sicker, but pathogens are becoming more resistant to current antimicrobial treatments, turning this situation into one of the biggest challenges ever confronted by the infection prevention community. Based on the data discussed in this report, it is more important now than ever to institute appropriate infection prevention and control programs in healthcare facilities.

Contents

Among the experts in the field, it has been fiercely debated if it is really possible to reach a 'zero' number of infections within an individual organization because some HAIs are preventable while others are not. An added concern has been that the concept of zero tolerance itself sets up unrealistic expectations amongst the public and healthcare leaders that could put excessive pressure on infection prevention programs nationwide and even worse, create a punitive environment.

However, various studies have very well documented that it is possible to prevent many of these infections and furthermore that prevention rates can vary anywhere from fifty percent to ninety percent by instituting appropriate infection prevention strategies. In European countries such as Denmark and the Netherlands, hospitals have been able to almost completely eliminate Methicillin Resistant *Staphylococcus Aureus* (MRSA), a frequent cause of HAIs, by developing comprehensive control approaches. Here in the U.S., initiatives such as the Michigan Keystone Project, the Pennsylvania Project and the VHA MRSA Elimination Project have reported up to a ninety percent reduction of HAI's.

For many professionals in the infection prevention field, striving for 'zero' is a worthwhile goal even if in reality every single infection that happens cannot be prevented. Around the nation, many hospitals have begun strong efforts and projects to reduce HAIs with varying degrees of success.

Project Description

St. Tammany Parish Hospital (STPH) is a 223-bed, acute care hospital located in Covington, Louisiana that serves both a large area and large population within Public Health Region IX. (Map of Regions on page 7.)

STPH collaborates with the Louisiana Health Care Review (LHCR)– National Patient Safety Initiative for MRSA. The MRSA Quality Improvement Project is a hospital initiative designed to target hospitals reporting to the CDC's National Healthcare Safety Network (NHSN). The goal is to have hospitals report MRSA to the NHSN Multi-Drug Resistant Organism (MDRO) module in an effort to reduce the infection and transmission rates of MRSA within the hospital. Each hospital participating in this project has access to all LHCR resources including onsite visits, consultations,

(Continued on page 2)

intervention strategies and support for data analysis.

In addition, STPH is also a part of the new VHA Regional MRSA Project for Louisiana, Mississippi and Tennessee which includes the reporting of MRSA rates for central line-associated blood stream infections (CLA-BSI), ventilator-associated pneumonia (VAP), and surgical site infections (SSI). VHA Incorporated is a nationwide network of leading not-for-profit healthcare organizations and their affiliated physicians, that provides information, products and services to help member organizations improve operational efficiency, clinical effectiveness and ultimately community health.

In 2006, the STPH Infection Control Department, with the support of the hospital's leadership, established a multidisciplinary, system-wide committee to ensure that there was "zero tolerance for healthcare-associated infections." The infection prevention team lead by Linda Polo, Department Head of Infection Prevention/Employee Health, began the implementation of the 'Getting to Zero' infections initiative as a way to improve the quality of care offered to patients in the area and as a tool to decrease healthcare-associated infection numbers in the institution. Leslie Kelt, STPH Infection Preventionist and Dr. Michael Hill, STPH Medical Director of Infection Prevention, (whose hard work, support and dedication were instrumental for the success of the project) collaborated very closely with Ms. Polo on the planning and implementation process of the initiative.

The committee began first by outlining the process, requirements and resources necessary to achieve a "zero tolerance" culture for HAIs and then proceeded to identify all stakeholders. In addition, staff started collecting and reviewing internal infection control data, began observing internal infection prevention practices and discussing observations with infection control practitioners, physicians, nurses, quality management personnel, senior leadership and others.

The initial assessment indicated the need for infection control best practices to be standardized across the health system. For the next step of the project, a series of teams were selected. At the implementation of each intervention, new education and training methods were updated. Awareness heightened among staff and patients about infection control and the STPH health system's commitment to zero tolerance.

An administrative committee set forth additional system-wide infection control recommendations as part of the consensus building efforts. Process and outcome measures continued to be collected for each intervention and system-wide recommendations were made available. Evaluation data collected was submitted quarterly and findings were shared with all designated staff.

The main components of the project were: active surveillance, strict barrier precautions, enhanced hand hygiene and risk assessments performed by the Hospital Infection Elimination Team. As part of the protocol, high risk admissions and patients with previous history of MRSA were screened upon admission. Those with previous history of MRSA were isolated on admission. Isolation was discontinued if the MRSA screening was negative. Patients identified as high-risk were screened and isolated only if the screening was positive for MRSA. The monitoring tools used were: the VHA hand hygiene tool; Press Ganey Survey Question; the culturing of employee hands; patient education on isolation precautions and on how MRSA is transmitted.

All together, the introduction of unmonitored best practices for CLA-BSI, VAP and a surgical care improvement project at STPH have contributed to significantly lower the rates of HAIs at this institution. During the years 2007 and 2008, the hospital reported a fifty-five percent decrease in overall MRSA rate as well as a drop in cost related to HAIs. (Figures 1 and 2)

Figure 1: MRSA rates, St. Tammany Parish Hospital
Louisiana, 2006 - 2008

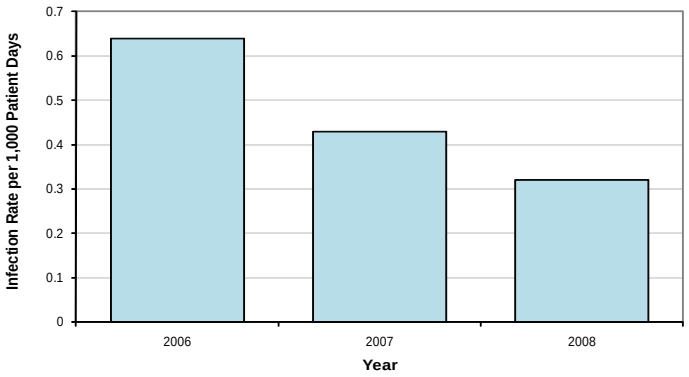
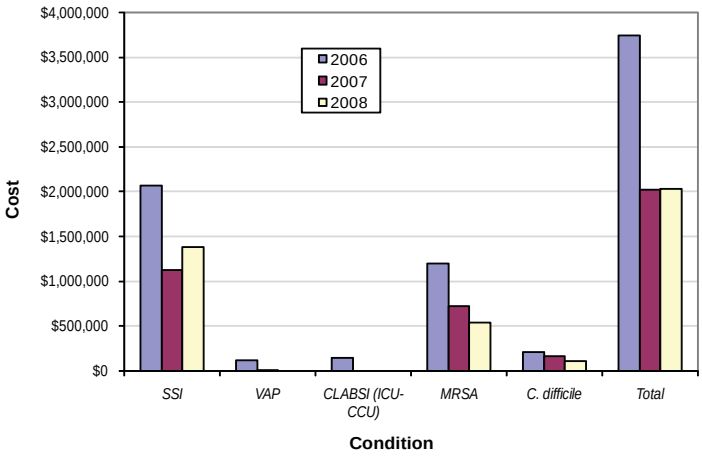


Figure 2: Comparison of HAI cost, St. Tammany Parish Hospital
Louisiana, 2006 - 2008



Louisiana Morbidity Report
Volume 20 Number 4 July-August 2009

The Louisiana Morbidity Report is published bimonthly by the Infectious Disease Epidemiology Section of the Louisiana Office of Public Health 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 and Hospitals, P.O. Box 60630, New Orleans, LA 70160.

Assistant Secretary, OPH ***M. Rony Francois, MD***

State Epidemiologist ***Raoult Ratard, MD MPH***

Editors ***Susanne Straif-Bourgeois, PhD MPH***
Theresa Sokol, MPH
Rosemarie Robertson, BS MT(C) CNMT

Layout & Design ***Ethel Davis, CST***

The program is currently on-going and is considered a success despite some challenges: getting on line with NHSN and VHA MRSA elimination programs; sustaining continued interest among STPH staff; increased workload for the Infection Prevention team; the unavailability of a rapid MRSA detection test, to date.

In the experience and words of the Infection Prevention Manager "the culture changes that were necessary to create this new approach to the HAIs problem at STPH have already been a very positive step and have made it all worth it. The staff believes that they can provide care with no infections; they can adopt unquestionable personal hand hygiene principles, share their knowledge and commitment with others and stand up for the right of each patient to leave the hospital having the best possible outcome."

Discussion

To settle the controversy among those who do the research and set health policy, more published evidence needs to be made available on methodologies for reducing HAIs. Efforts by local hospitals in our state can definitely contribute to the process and keep the discussion active. The CDC has embraced the vision of HAIs elimination despite acknowledging that all HAIs are not preventable. Both the CDC and the Louisiana Office of Public Health (OPH) will continue working with all partners towards the goal of preventing these infections.

For references and additional information please contact the OPH Infectious Disease Epidemiology Section at (504)219-4563.

The Strategic National Stockpile and H1N1 Influenza Louisiana, 2009

Frank Welch, MD; Stacy Hall, RN MSN

Within a two-week period in April, 2009, local, regional, state and federal public health departments identified a novel influenza virus and established its key characteristics. Emergency Operations Centers were working at multiple levels allowing response activities early in the influenza pandemic.

Pandemic Influenza pre-event planning had provided purposeful activities in previous years. In recent events, there were numerous epidemiologic investigations seeking to understand the severity and transmission of the novel H1N1. Laboratories conducted testing and submitted samples for additional testing to the Centers for Disease Control and Prevention (CDC). H1N1 test kits were developed and deployed to public health laboratories. Findings and guidance were communicated in a timely manner using multiple methods of communications to assist health professionals and the public in responding effectively.

Another of these activities was the federal decision to deploy twenty-five percent of pandemic influenza medical countermeasures to states. Nationally, approximately eleven million regimens of antiviral medications, twenty-five million N95 respirators and 12.5 million surgical masks plus gloves, gowns and face shields were delivered within seven days to states and major metropolitan areas. The Louisiana Department of Health and Hospitals Office of Public Health executive leadership decided to retain the State Antiviral Cache (SAC) which had a longer expiration date and to pre-position the twenty-five percent of federal assets in health care facilities across the state.

In a period of approximately fifty hours, the Louisiana Strategic National Stockpile (SNS) Program and response partners - including, but not limited to, the Louisiana National Guard and the Louisiana State Police - pre-positioned SNS assets to 574 health care facilities in Louisiana. The twenty-five percent allocation included 186,732 regimens of antiviral medications and 677,422 items of personal protective equipment (PPE) of gowns, gloves and respiratory protective devices (RPD) of face shields and masks. The PPE and RPD were shared between identified hospitals in the state. The antiviral medications were shared as follows:

- fifty percent of the regimens were shared by Tier 1 hospitals (120)
- forty percent of the regimens were shared by Tier 2 hospitals (132) and nursing homes (291)
- ten percent of the regimens were shared by the Federally Qualified Health Centers (23), military installations (1), federally recognized Indian Tribes (1) and the Department of Corrections infirmaries (16)

The SAC remains intact in a secure, climate controlled facility in Louisiana. In April 2009, pediatric antiviral medications were added to the cache as a continuation of pre-event pandemic influenza preparedness activities within Louisiana. An additional seventy-five percent allocation for Louisiana is still being held by the federal government. This allocation could be released in the future as either by product type or as a percentage of a package containing antivirals, PPEs, RPDs and antibiotics.

On the basis of antiretroviral susceptibility testing at the CDC, novel H1N1 influenza virus is currently sensitive to both of the neuraminidase inhibitors oseltamivir (Tamiflu®) and zanamivir (Relenza®). It is resistant to the adamantanes, amantadine and rimantadine. In December, 2008, the CDC recommended that oseltamivir not be used for seasonal influenza H1N1.

In general, previously healthy persons with mild illness did not require treatment with antiviral medication for influenza. Those persons had received limited benefit from the medications, with the medications having been most helpful to those more seriously ill. As treatment guidelines continue to evolve, it is essential that health care providers remain up-to-date with current recommendations from federal and state health authorities. Current activities in the southern hemisphere (and autumn, 2009 in the United States) may prove to be interesting.

The Louisiana SNS Program and response partners are currently conducting an after action review and will complete corrective action planning.

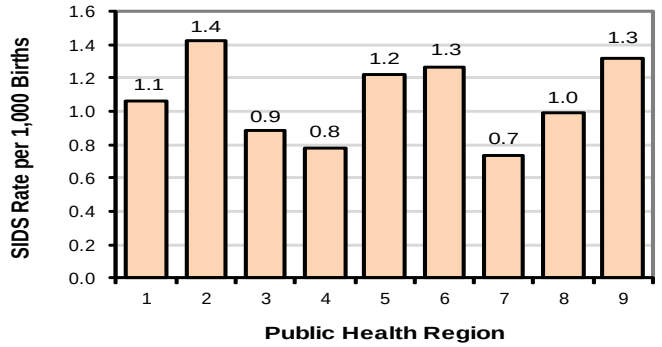
For more information, please call Stacy Hall at (504)568-5022 or email stacy.hall@la.gov

Educational Intervention Reducing the Risk of SIDS Region V* - Louisiana, 2006-2008

Kristie Bardell, MPH; Jenna Klink, MPH; Jeanne Fontenot, RN; Gwen Iguess; Lyn Kieltyka, PhD

Sudden Infant Death Syndrome (SIDS) is the sudden death of an infant under one year of age which remains unexplained after a thorough case investigation, including complete autopsy, death scene investigation and review of the clinical history. SIDS is the leading cause of death of Louisiana infants one to twelve months of age. (Figure 1)

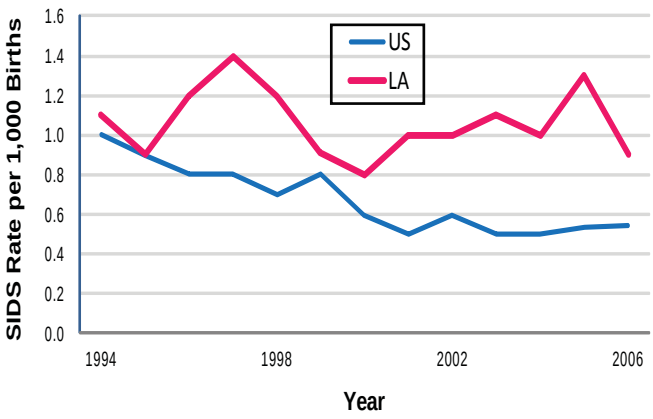
Figure 1: SIDS rates by region - Louisiana, 2004-2006



While there is no way to completely eliminate the risk of SIDS, evidence has shown that certain behaviors are likely to reduce its risk. Specifically, the risk of SIDS may be reduced by always placing an infant to sleep on his/her back, using a firm sleep surface, assuring the infant does not become overheated, using a pacifier at sleep time, adults never sleeping in the same bed with an infant, not smoking around the infant and sharing knowledge of risk reduction practices with anyone who may care for the infant.

The Healthy People 2010 goal is to have less than 0.25 deaths due to SIDS for every 1,000 live births. In 2005, the Louisiana SIDS rate (1.3 deaths per 1,000 live births) was more than double the U.S. SIDS rate (0.5 deaths per 1,000 live births). In 2006, the Louisiana SIDS rate fell to 0.9 deaths per 1,000 births. (Figure 2)

Figure 2: United States and Louisiana SIDS rates, 1994-2006



In order to address concerns of SIDS deaths in the Lake Charles area, the Region V Office of Public Health staff partnered with state Maternal and Child Health staff to implement and evaluate a fifteen-minute SIDS risk reduction education program in parish (county) health units. A randomized controlled trial was designed and implemented from October, 2006 to June, 2008. Pregnant women who participated in the Women, Infants and Children (WIC) Program were recruited at the thirty-six-week prenatal visit and were randomly assigned by clinic day to either the intervention group or control group. Women were included in the study if they: (a) were thirty-six weeks pregnant or more on the day of their appointment (b) planned to maintain residence in the area and (c) were able to complete questionnaires in English with some assistance if needed. Women who were willing to participate were given detailed information about the study and signed a consent form. The intervention group, who received the standard SIDS education brochure and a fifteen-minute in-person educational intervention, completed pre-test, post-test and follow-up surveys. The control group, who received only the SIDS brochure, completed only the follow-up survey. (Table 1)

Table 1. Demographic characteristics of the study sample
Region V - Louisiana, October, 2006 - June, 2008

	Control		Intervention	
Characteristic	Number	Percent	Number	Percent
Mother's age*				
< 25 years	141	57.6	150	63.8
25 + years	104	42.4	85	36.2
Mother's education*				
≤ 12th grade	172	70.2	159	66.8
> 12th grade	73	29.8	79	33.2
Race*				
White	181	73.9	176	74.3
Afr.-Am.	56	22.9	55	23.2

**Difference between intervention and control groups not statistically significant*

Results

A total of 744 women agreed to participate in the study. Loss to follow-up over the two-year study period was thirty-one percent among the intervention group and thirty-three percent among the control group. The process of randomizing women to intervention and control groups should have assured that the groups were similar at baseline. Unfortunately, this could not be confirmed since baseline data were not collected from the control group.

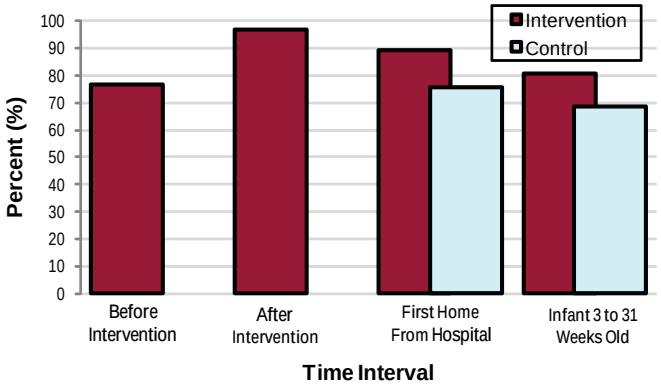
Back Sleep Position

Among the intervention group at baseline, seventy-seven percent of mothers indicated that they would lay their babies to sleep on their backs. This increased to ninety-seven percent immediately after the educational intervention. At follow-up, eighty-nine percent reported the back sleep position immediately after coming home from the hospital but only eighty-one percent reported still placing their infants to sleep on their backs at the time of final survey completion (infant age 3 to 31 weeks). A higher percentage of

younger babies were put to sleep on their backs than older babies, but the difference was not statistically significant.

Compared to the control group, a higher proportion of mothers who attended the intervention reported placing their infants to sleep on their backs immediately after coming home from the hospital (intervention=89% versus control=76%, $p < 0.001$). This difference remained statistically significant at older infant age (intervention=81% versus control=69%, $p<0.01$). (Figure 3)

Figure 3. Percent of mothers reporting back sleeping position at different times - Region V - Louisiana, October, 2006 - June, 2008



Bedsharing

At baseline, ninety-nine percent of mothers in the intervention group said their baby would sleep in their own bassinet or crib. By follow up, only eighty-nine percent reported that their baby sleeps in a separate bed from any adult. African-American mothers reported significantly higher rates of bedsharing than Caucasian mothers (22% versus 7%, $p < 0.001$). There were no statistically significant differences in bedsharing between the intervention and control groups (11% versus 13%, $p > 0.05$).

Smoking

A total of seventeen percent of women reported smoking at baseline. Caucasian women were more likely to smoke than African-American women (21% versus 3%, $p<0.001$). Women with less than a twelfth grade education were also more likely to report smoking compared to women with at least some college education (20% versus 11%, $p<0.05$). Over twenty-three percent of respondents said that someone who will stay with their baby will smoke.

Impact on Knowledge

Before the intervention, sixty-nine percent of mothers knew that the American Academy of Pediatrics' most recent recommendation about infant sleep position for healthy babies was back only. This increased to ninety-eight percent post-intervention. Pre-intervention, thirty percent of women believed that sleeping on the stomach places healthy babies at an increased risk for SIDS compared to seventy percent post-intervention. Women who had a previous child that they laid to sleep on their side or stomach were less likely to believe that a stomach sleeping position increases a healthy baby's risk for SIDS, but the difference was not statistically significant.

Over eighty percent of participants reported understanding more about how to reduce the risk of SIDS as a result of attending the intervention program.

Limitations

This study represents the gold standard of epidemiologic study designs, a randomized trial. A few advantages of this design are that the intervention and control groups are thought to be similar at baseline because of the randomization process. Typically, this is verified by comparing the study groups on measured variables at baseline. The lack of availability of a baseline survey for the control group made this comparison impossible.

A common threat to epidemiologic studies is loss to follow-up. In this study, thirty to thirty-three percent of participants failed to complete a follow-up survey. It is unknown if the women who did not complete the study are different from those who did, requiring caution in interpreting these results.

Finally, it is not known to what extent the women who participated in this study are representative of the women who reside in the Louisiana Public Health Region V geographic area. While it is likely that these women are not representative of the general population, they may be representative of women who seek care in a parish health unit. Understanding the importance of this difference is critical in the evaluation of generalizability before deciding whether to promote adoption of this intervention state-wide.

Conclusions

The percent of mothers who indicated intending to choose a back sleeping position for their infants increased significantly after the intervention and remained significantly higher than the baseline level when the baby first came home from the hospital. However, by follow-up, it decreased to a rate no longer significantly different than the baseline rate. As risk of SIDS decreases with increasing infant age, the short-term impact of increasing back sleeping at the youngest infant ages may still be valuable.

In addition, the intervention group maintained significantly higher rates of back sleep position than the control group, both immediately after coming home from the hospital and when the baby was three to thirty-one weeks old. This suggests that the intervention was successful among these women. However, these results must be interpreted with caution. Despite randomization of participants to groups, the inability to validate the comparability of the groups at baseline limits the ability to draw definitive conclusions. Although unlikely, differences between the two groups could be due to preexisting differences not measured by this study.

For references or more information, please call the SIDS Risk Reduction and Safe Sleep Program at (504) 568-3504 or email *kristie.bardell@la.gov* .

MCH Program/Keating Magee

Risk of Aerosol Transmission of Rabies - Louisiana and United States, 2009

Gary Balsamo, DVM MPH&TM

Aerosol transmission of rabies is extremely unlikely in Louisiana and is only considered in extreme circumstances where large amounts of aerosolized virus are present. These circumstances exist rarely under laboratory conditions and in caves that are home to millions of bats. There are no such caves in Louisiana.

There have been very few hypothesized instances of aerosol transmission of rabies virus. Aerosol transmission of rabies was thought to be the mode of transmission in diseases of both an entomologist and a mining engineer that frequented a cave in Frio, Texas in 1959. This method of transmission was anecdotally confirmed in 1962 when animals, supposedly protected from bites, were placed in the cave and within months, developed rabies. Aerosol transmission was later confirmed in rodents under laboratory conditions where the animals were exposed to heavily concentrated aerosols (1969-1971).

The following two laboratory-transmitted human cases of rabies have historically been attributed to aerosol transmission; one case involved a veterinarian who was utilizing a blender to homogenize rabid goat brains, the other was reported in a laboratory technician who was involved in spraying modified live rabies virus suspensions in a manufacturing machine. There was an additional situation where aerosol transmission was attributed to the infection of forty-four out of 197 laboratory animals that were not exposed to rabies. They were thought to be infected by aerosols produced by power sprayers used to clean urine, feces and saliva from animal cages.

A researcher, Dr. Robert Gibbons, of the Department of Viral Diseases, Walter Reed Army Institute of Research, with assistance from former colleagues at the Centers For Disease Control and Prevention (CDC), conducted a review of these case reports. Dr. Gibbons concluded that the explanations of aerosol transmission in all but one of the above human cases could be called into question and brought forth several more rational explanations for the transmission of the virus. His conclusion was that at least one human case of rabies was likely caused by aerosol transmission under extremely unnatural conditions in a laboratory. He stated that "aerosol transmission of rabies can occur in animals" and humans "in artificial situations." He also stated that, "…aerosol transmission" of rabies "has never been well-documented in the natural environment."

Reports of bat rabies infections from non-bite exposures are often the result of inadequate historical investigation, minimization of importance of direct exposure or other exposures to bats by the victim, failure to recognize the bite by the victim, or transmission of bat rabies by an intermediate animal host that acquired rabies from a bat. (Examples of intermediate animal transmission have been documented in cases of vampire-bat-variant-rabies in Central America.)

For references or more information, please contact Dr. Balsamo at (504)219-4593 or email gary.balsamo@la.gov.

Vibrio Hollisae Causes Illness Region II* – Louisiana, 2009

Erin Stanley, MPH

On March 21st at 4 pm a forty-seven year-old man consumed six raw oysters and a seafood salad with cooked crab and shrimp from a restaurant in Louisiana. At approximately 10 pm the following evening, the otherwise healthy man developed abdominal cramping, nausea, vomiting and severe bloody diarrhea. These symptoms lasted for twelve hours and sent him to a hospital's emergency department; he was subsequently admitted. Stool culture and testing performed at the hospital determined the man was infected with *Vibrio hollisae*; speciation was confirmed at the state laboratory. The patient, hospitalized due to severe dehydration, was discharged two days later. The man's medical history was negative for any condition pre-disposing him to a severe infection such as liver disease, immunodeficiency or the use of antacids or other ulcer medications.

This was the third case of Vibrio infection for Louisiana in 2009. *V. hollisae* is a non-cholera Vibrio species and is one of the six species most commonly associated with gastroenteritis. Septicemia and wound infections due to *V. hollisae* are rarely reported. On average, one case of *V. hollisae* is reported to the Infectious Disease Epidemiology Section of the Office of Public Health each year. Between 1980 and 2007, a total of twenty-five cases of *V. hollisae* infections were reported in Louisiana. In 2007, the Centers for Disease Control and Prevention reported only six cases of *V. hollisae* throughout the country.

For more information. please call Erin Stanley at (504) 219-4622 or email erin.stanley@la.gov .

* *Map of regions on Page 7*

Announcements

Antibiotic 'Get Smart' Week in Louisiana

October 5-9, 2009

Please check the following webpage for more information
http://www.dhh.louisiana.gov/offices/page.asp?id=249&detail=8580

Save The Date

Field Epidemiology Training - New Orleans

September 29-30, 2009

Upcoming details will be posted under 'Events' on the following webpage http://www.infectiousdisease.dhh.louisiana.gov

Updates: Infectious Disease Epidemiology Webpage
http://www.infectiousdisease.dhh.louisiana.gov

ANNUAL REPORTS: Amebiasis; Vibrio
EPIDEMIOLOGY MANUAL: Influenza; Influenza Nasopharyngeal Swab; Measles Summary; Meningococcal Invasive Disease Summary; Pandemic Influenza Summary; Pertussis Summary; Rubella Summary
FOOD: Recall- Nestlé Toll House Cookie Dough
INFLUENZA: Weekly Report
LOUISIANA MORBIDITY REPORT: Index 1986
REGIONAL INFORMATION: Contacts
VETERINARY: Rabies PEP Schedule

LOUISIANA COMMUNICABLE DISEASE SURVEILLANCE

May - June, 2009

Table 1. Disease Incidence by Region and Time Period

DISEASE		HEALTH REGION 1	2	3	4	5	6	7	8	9	TIME PERIOD May-Jun 2009	May-Jun 2008	Jan-Jun Cum 2009	Jan-Jun Cum 2008	Jan-Jun % Chg*
Vaccine-preventable															
Hepatitis B	Cases	1	1	0	1	0	0	1	0	4	8	22	27	53	-49.1
	Rate[1]	0.1	0.2	0	0.2	0	0	0.2	0	1.0	0.2	0.5	0.6	1.2	NA*
Measles		0	0	0	0	0	0	0	0	0	0	1	0	1	NA*
Mumps		0	0	0	0	0	0	0	0	0	0	1	1	1	NA*
Rubella		0	0	0	0	0	0	0	0	0	0	0	0	0	NA*
Pertussis		1	8	1	2	1	0	3	5	2	23	17	76	21	261.9
Sexually-transmitted															
HIV/AIDS	Cases[2]	11	9	0	4	3	5	4	5	3	44	204	447	562	-0.2
	Rate[1]	1.1	1.6	0	0.7	1.1	1.7	0.8	1.4	0.7	1.0	4.7	10.2	12.9	NA*
Chlamydia	Cases	694	518	224	425	175	294	682	466	272	3750	4124	13946	10655	30.9
	Rate[1]	85.9	80.5	56.7	73.5	61.5	97.9	127.8	134.3	52.1	85.1	93.5	316.2	241.6	NA*
Gonorrhea	Cases	220	174	52	150	50	77	287	178	84	1272	1610	4624	4783	-3.3
	Rate[1]	27.3	27.0	13.2	25.9	17.6	25.7	53.8	51.3	16.1	28.8	36.5	104.8	108.4	NA*
Syphilis (P&S)	Cases	14	2	0	2	3	4	14	8	9	56	78	345	252	36.9
	Rate[1]	1.7	0.3	0.0	0.4	1.1	1.3	2.6	2.3	1.7	1.3	1.7	7.8	5.7	NA*
Campylobacter		2	3	3	5	1	1	0	2	4	21	26	46	49	NA*
Hepatitis A	Cases	0	0	0	0	0	0	0	0	0	0	2	2	7	-71.4
	Rate[1]	0	0	0	0	0	0	0	0	0	0	0	0	0.2	NA*
Salmonella	Cases	60	26	17	34	12	3	7	17	32	208	232	380	375	1.3
	Rate[1]	5.8	4.6	4.5	6.6	4.5	1.0	1.4	4.8	8.3	4.8	5.4	8.8	8.7	NA*
Shigella	Cases	3	7	1	2	0	1	3	0	1	18	166	97	328	-70.4
	Rate[1]	0.3	1.2	0.3	0.4	0	0.3	0.6	0	0.3	0.4	3.8	2.2	7.6	NA*
Vibrio cholera		0	0	0	0	0	0	0	0	0	0	0	0	0	NA*
Vibrio, other		1	2	3	3	1	0	0	0	1	11	17	21	23	NA*
Other															
H. influenzae (other)		0	1	0	0	0	0	0	2	0	3	3	11	8	NA*
N. Meningitidis		0	0	0	0	1	0	0	0	0	1	2	9	15	-0.4

[1] = Cases Per 100,000

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

* Percent Change not calculated for rates or count differences less than 5

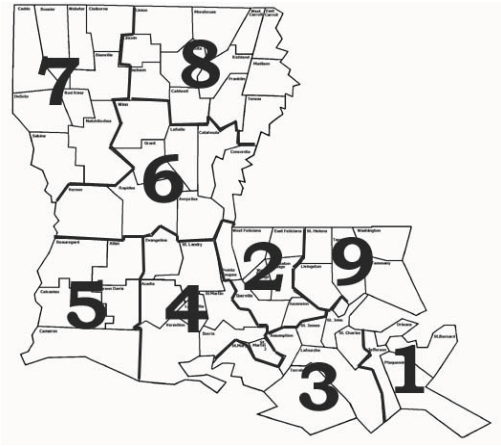


Table 2. Diseases of Low Frequency (January-December, 2009)

Disease	Total to Date
Legionellosis	3
Lyme Disease	0
Malaria	3
Rabies, animal	0
Varicella	75

Table 3. Animal Rabies (May-June, 2009)

Parish	No. Cases	Species
	0	

DEPARTMENT OF HEALTH AND HOSPITALS
OFFICE OF PUBLIC HEALTH
P.O. BOX 60630 NEW ORLEANS LA 70160

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Part II - The Control of Diseases

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.

- Anthrax
- Avian Influenza
- Botulism
- Brucellosis
- Cholera
- Diphtheria
- *Haemophilus influenzae* (invasive disease)
- Influenza-associated Mortality
- Measles (rubeola)
- Neisseria meningitidis (invasive disease)
- Plague
- Poliomyelitis, paralytic
- Q Fever (*Coxiella burnetii)*
- Rabies (animal and human)
- Rubella (congenital syndrome)
- Rubella (German measles)
- Severe Acute Respiratory Syndrome-associated Coronavirus (SARS-CoV)
- Smallpox
- *Staphylococcus Aureus*, Vancomycin Intermediate or Resistant (VISA/VRSA)
- Tularemia
- Viral Hemorrhagic Fever
- Yellow Fever

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

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

- Arthropod-Borne Neuroinvasive Disease and other infections (including West Nile, St. Louis, California, Eastern Equine, Western Equine and others)
- Aseptic meningitis
- Chancroid[1]
- *Escherichia coli*, Shig-toxin producing (STEC), including *E. coli* 0157:H7
- Hantavirus Pulmonary Syndrome
- Hemolytic-Uremic Syndrome
- Hepatitis A (acute disease)
- Hepatitis B (acute illness & carriage in pregnancy)
- Hepatitis B (perinatal infection)
- Hepatitis E
- Herpes (neonatal)
- Legionellosis (acute disease)
- Malaria
- Mumps
- Pertussis
- Salmonellosis
- Shigellosis
- Syphilis[1]
- Tetanus
- Tuberculosis[2]
- 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)3
- Blastomycosis
- Campylobacteriosis
- Chlamydial infection[1]
- Coccidioidomycosis
- Cryptococcosis
- Cryptosporidiosis
- Cyclosporiasis
- Dengue
- Ehrlichiosis
- Enterococcus, Vancomycin Resistant [(VRE), invasive disease]
- Giardia
- Gonorrhea[1]
- Hansen Disease (leprosy)
- Hepatitis B (carriage, other than in pregnancy)
- Hepatitis C (acute illness)
- Hepatitis C (past or present infection)
- Human Immunodeficiency Virus (HIV Syndrome infection)[3]
- Listeria
- Lyme Disease
- Lymphogranuloma Venereum[1]
- Psittacosis
- Rocky Mountain Spotted Fever (RMSF)
- *Staphylococcus Aureus*, Methicillin/Oxacillin Resistant [(MRSA), invasive infection]
- Staphylococcal Toxic Shock Syndrome
- Streptococcal disease, Group A (invasive disease)
- Streptococcal disease, Group B (invasive disease)
- Streptococcal Toxic Shock Syndrome
- *Streptococcus pneumoniae*, penicillin resistant [DRSP]), invasive infection]
- *Streptococcus pneumoniae* (invasive infection in children < 5 years of age)
- Transmissible Spongiform Encephalopathies
- Trichinosis
- Varicella (chickenpox)
- Vibrio Infections (other than cholera)

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

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

Case reports not requiring special reporting instructions (see below) can be reported by Confidential Disease Case Report forms (2430), facsimile (504) 219-4522, telephone (504) 219-4563, or 1-800-256-2748) or web based at *https://ophrdd.dhh.state.la.us.*

[1]Report on STD-43 form. Report cases of syphilis with active lesions by telephone.
[2]Report on CDC72.5 (f.5.2431) card.
[3]Report to the Louisiana Genetic Diseases Program Office by telephone at (504) 219-4413 or facsimile at (504) 219-4452.
[4]Report to the Louisiana HIV/AIDS Program: see www.hiv.dhh.louisiana.gov for regional contact information, or call 504-568-7474.
[5]Report to the Section of Environmental Epidemiology & Toxicology: www.seet.dhh.louisiana.gov or 888-293-7020.

This public health document was published at a total cost of $1,250.00. Seven thousand copies of this public document were published in this first printing at a cost of $1,250.00. The total cost of all printings of this document, including reprints is $1,250.00. This document was published by Moran Printing, Inc., 5425 Florida Blvd., Baton Rouge, LA 70806, to inform physicians, hospitals, and the public of current Louisiana morbidity status under authority of R.S. 40:36. This material was printed in accordance with the standards for printing for state agencies established pursuant to R.S. 43:31. Printing of this material was purchased in accordance with the provisions of Title 43 of Louisiana Revised Statutes.