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Louisiana Morbidity Report

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January-February 2006 **Volume 17 Number 1**

Pandemic Influenza in Louisiana: What to Expect?

Influenza viruses are unique in their ability to cause infection in all age groups on a global scale. In addition to the highly transmissible nature of influenza, the virus can change its antigenic structure resulting in novel sub-types that have never occurred in humans before. Major shifts in the viral sub-types are associated with influenza pandemics. The 1918 influenza pandemic caused more than twenty million deaths worldwide while the pandemics of 1957 and 1968 resulted in lower mortality rates due in part to antibiotic therapy for secondary bacterial infections and more aggressive supportive care. All three, however, were associated with high rates of morbidity and social disruption.

There have been ten pandemics of influenza A in the past three hundred years. The pandemic of 1918-1919 was considered one of the most severe. Although its severity is often considered very high, the pandemic of 1830-1832 was also similarly severe. The three pandemic viruses that emerged in the twentieth century were the:

- 1918 "Spanish influenza" (Swine flu) H1N1 virus
- 1957 "Asian influenza" H2N2 virus
- 1968 "Hong Kong influenza" H3N2 virus

Although all three spread rapidly around the world, only the 1918 virus was associated with mortality measured in percents.

The 1918 Influenza Pandemic in Louisiana

The bulk of the epidemic occurred between October, 1918 and March, 1919. The number of cases reported between October 1, 1918 and February 28, 1919 was 244,857 out of a population of 1,750,000, (approximately 10% to 15% of the population). There were about 5,500 deaths, a mortality rate of 2.2% of cases reported. Hospital staffs were incapacitated. People died without medical attention as hospitals were overwhelmed. Restrictions on public meetings were put in placed in October and November, then lifted, although the epidemic continued until March.

Emergence of New Strains of Influenza

Pandemic influenza may originate through at least two mechanisms:

1 - reassortment between an animal influenza virus and a human influenza virus that yields a new virus

2 - direct spread and adaptation of a virus from animals to humans.

The 1918 virus did not originate through a reassortment event involving a human influenza virus; all eight genes of the H1N1 virus are more closely related to avian influenza viruses than to influenza from any other species, indicating that an avian virus must have infected humans and adapted to them in order to spread from person to person.

In both 1957 and 1968, a new influenza virus emerged because of reassortment events involving two influenza viruses. In 1957, there was reassortment between an avian H2N2 influenza and a human H1N1 influenza resulting in the emergence of a new influenza virus containing the hemagglutinin, the neuraminidase and the gene for one of the polymerase proteins systems (PB1) from the avian virus, along with the remaining five genetic segments from the human H1N1 influenza virus. The H3N2 Hong Kong virus was created by the replacement of the hemagglutinin (H2) and PB1 genes of the H2N2 virus with two new avian genes, H3 and a new PB1.

The Swine Flu Fiasco

In 1976, two recruits at Fort Dix, New Jersey, had an influenza-like illness. Isolates of virus taken from them included A/New Jersey/76 (Hsw1n1), a strain similar to the virus believed at the time to be the cause of the 1918 pandemic, commonly known as swine flu. Serologic studies at Fort Dix suggested that greater than two hundred soldiers had been infected and that person-to-person transmission had occurred. However most of the isolates were identified as the circulating seasonal influenza (H3N2). A massive immunization was undertaken. In December 1976, with greater than forty million persons immunized and no evidence of H1N1 transmission, federal health officials decided that the possibility of an association of Guillain-Barré Syndrome with the vaccine, however small, necessitated stopping immunization, at least until the issue could be explored.

Avian Strains

Most avian strains are of low pathogenicity for birds and are widespread in migratory birds and water fowl. There are fifteen hemagglutinin and nine neuraminidase types. Highly pathogenic strains of avian influenza are rare, with H5 and H7 being the highly pathogenic types now in circulation. Viruses of low pathogenicity can,

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after circulating for sometimes short periods in a poultry population, mutate into highly pathogenic viruses (1983-84 H5N2 in the U.S., 1999-2001 H7N1 in Italy).

Two other avian influenza viruses have recently caused illness in humans. An outbreak of highly pathogenic H7N7 avian influenza, which began in the Netherlands in February, 2003, caused the death of one veterinarian two months later and mild illness in eighty-three other humans. Mild cases of avian influenza H9N2 in children occurred in Hong Kong in 1999 (two cases) and in mid-December, 2003 (one case). H9N2 is not highly pathogenic in birds.

The Present Avian Influenza Virus (H5N1)

The present type avian A (H5N1) viruses that spread throughout fowls recently started in 1997 in Hong Kong. There was direct transmission from poultry to humans in eighteen human cases including six deaths. It was the first time that an avian influenza virus was transmitted directly to humans and caused severe illness with high mortality. Two more cases, including one death, occurred in Hong Kong in early 2003.

A comparison between the genetic sequences of the 1997 Hong Kong H5N1 virus and the 2004 Vietnam H5N1 virus reveal that several human isolates of these viruses contain one of the five amino acid changes in PB2 that have been identified as important to the ability of the 1918 virus to infect humans. This finding suggests that several additional genetic changes must occur before these viruses will begin to spread efficiently from person to person.

Conditions to Meet for a New Pandemic

These conditions are:

1. A new influenza A virus arising from a major genetic change, i.e., an antigenic shift
2. A susceptible population with little or no immunity
3. A virus that is transmitted efficiently from person to person
4. A virulent virus with the capacity to cause serious illness and death

The H5N1 avian strain does **not** meet the third criteria. Some authors have expressed doubts about the ability of an H5 virus to become a pandemic strain.

The Onset of a Pandemic

At onset, the novel virus with the ability to be easily transmitted from humans to humans will cause small outbreaks. These small outbreaks will multiply in the original focus and progressively spread throughout the region. Once the epidemic has reached urban areas with airline connections to the rest of the world, the epidemic will spread worldwide. Airline travelers will bring the virus in a matter of hours to all of the continents. It will be impossible to contain the pandemic.

The incubation period averages two days. The affected individuals shed viruses about one day before onset with viral shedding at the highest during the first two days of illness. On average there are two (or three) secondary infections as a result of transmission from one ill individual. A theoretical chain of transmission where one individual infects two others in two days etc... would result in 32,000 infections in one month and two million in six weeks. In an affected community, a pandemic outbreak would last from six to eight weeks. A second pandemic wave is likely to follow the first.

The assumption is that everyone will be susceptible to infection. The attack rate of annual influenza is about ten percent but for a pandemic strain it could be up to thirty percent, ranging from forty percent in children to twenty percent in working adults. Fifty percent of affected individuals will seek medical care, with one percent to ten percent requiring hospitalization depending on the severity of infection, fifteen percent of hospitalization would require being in an Intensive Care Unit. (Table 1)

Table 1: Pandemic in Louisiana based on extrapolation from past pandemics

Characteristic	Moderate Pandemic	Severe Pandemic
Illness	1,500,000 (30%)	1,500,000 (30%)
Outpatient Medicare	750,000 (50% of illness)	750,000 (50% of illness)
Hospitalization	15,000 (1% of illness)	150,000 (10% of illness)
ICU Care	2,250 (15% of hospitalization)	22,500 (15% of hospitalization)
Mech.ventilation	1,125 (50% of ICU Care)	11,250 (50% of ICU Care)
Death	3,750 (0.25% of illness)	37,500 (2.5% of illness)

Once the epidemic develops, the emphasis moves from case based surveillance to community based surveillance. The number of cases would be so large that individual case investigations could not be carried out.

There are about 120 acute care hospitals in Louisiana containing approximately 20,000 beds. Estimating that hospitalizations would be evenly spaced during the first wave (8 weeks, ~ 50 days), a moderate pandemic would cause three hundred hospitalizations per day, a severe pandemic would cause 3,000 hospitalizations per day (impossible to handle with only 20,000 beds).

For more information or references, please call (504) 219-4563.

Important Notice: Hypothyroidism Testing in Louisiana After Katrina

Charlie Myers, GSW

Newborn Heel Stick Screening blood specimens submitted to the Louisiana Office of Public Health (OPH) Laboratory since September, 2005 have been performed by the University of Iowa Hygienic Laboratory (UIHL). One significant difference is that UIHL screens newborns for congenital hypothyroidism by analyzing specimens for Thyroid Stimulating Hormone (TSH), whereas the OPH Laboratory was analyzing samples for both T4 (thyroxine) and TSH.

The most common causes of congenital primary hypothyroidism are total or partial failure of the thyroid gland to develop (aplasia

Louisiana Morbidity Report
Volume 17 Number 1 **January-February 2006**

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.

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or hypoplasia), or the gland's development in an abnormal (ectopic) location. Screening, using the blood level of TSH, will detect the most common causes but will not detect less common causes of congenital hypothyroidism such as those caused by pituitary insufficiency. If other forms of congenital hypothyroidism are suspected based on history, physical findings and/or clinical symptoms, appropriate examinations and studies are indicated even in the presence of a normal initial newborn screening test (TSH) for congenital hypothyroidism.

Please direct inquiries to the Louisiana Genetic Diseases Program at (504)219-4413 or the OPH Laboratory at (504)219-4475.

Breastfeeding Profiles in Louisiana's Mothers, 2000-2001

Tri Tran, MD MPH; Dionka Pierce, MPH;
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Frances Mather, PhD; Juan Acuña, MD MSc

Among states participating in PRAMS (The Pregnancy Risk Assessment Monitoring System, a CDC sponsored surveillance system), Louisiana has a particularly low proportion of mothers who breastfeed. Black women reported the lowest breastfeeding participation among Louisiana PRAMS participants.

Recent analysis done at the Maternal and Child Health (MCH) Epidemiology unit, at the Louisiana Office of Public Health (LOPH), has demonstrated a decreasing trend of breastfeeding prevalence among Louisiana mothers (annual percent change from 1998 to 2001: -8.7 for early postpartum period and –2.0 for breastfeeding at six months after delivery, respectively). If this trend continues, Louisiana will not reach the Healthy People 2010 breastfeeding objectives for early postpartum period (75%) and breastfeeding at six months after delivery (50%).

In order to increase the proportion of mothers that breastfeed, it is important to define risk markers associated with not breastfeeding, short duration of breastfeeding and breastfeeding cessation. Louisiana PRAMS data for 2000-2001 was analyzed to determine factors associated with the breastfeeding circumstances previously described and to adjust for confounding variables. Due to the scope of the report, statistical tests will not be reported. However, statistically significant findings are shown here, unless specifically noted. (Figure 1, Table 1)

Figure 1: Main reasons for not breastfeeding, Louisiana, 2000-2001

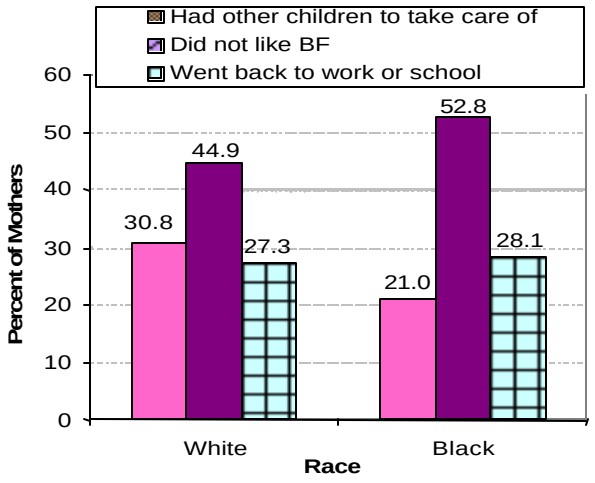


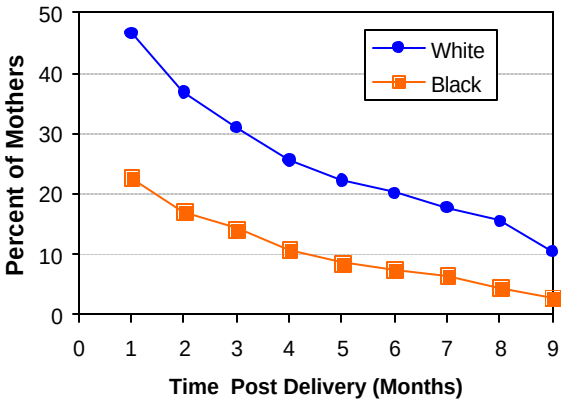
Table 1: Main reasons for early breastfeeding cessation*

	Reasons	% White	% Black
1st month	Difficulty nursing	36.2	42.3
	Milk not satisfying baby	30.5	24.2
	Sore, cracked, bleeding nipples	26.8	33.1
	Breast milk insufficiency	34.6	18.2
2nd month	Difficulty nursing	26.2	11.1
	Milk not satisfying baby	42.2	25.8
	Sore, cracked, bleeding nipples	18.1	29.2
	Breast milk insufficiency	34.8	26.3
	Return to work/school	26.8	27.3
3rd month	Milk not satisfying baby	32.0	44.1
	Breast milk insufficiency	31.8	26.9
	Return to work/school	39.3	33.1
4- 6th months	Milk not satisfying baby	38.5	26.1
	Breast milk insufficiency	22.8	30.0
	Return to work/school	40.3	38.6
	Right time to stop	32.9	25.4

* Some women mention more than one reason

Breastfeeding prevalence in the first month was 46.6 % for White mothers and 22.6% for Black mothers. These prevalences remained 20.2% for White mothers and 7.5 % for Black mothers at the sixth month and 10.5% for White mothers and 2.9% for Black mothers at the ninth month. (Figure 2)

Figure 2: Prevalence of breastfeeding Louisiana, 2000-2001



Breastfeeding initiation was higher in White women than in Black women (Adjusted Odds Ratio (OR): 2.8, 95% Confidence Limit (CL): 2.2, 3.6). Once breastfeeding was started however, adjusted hazards of breastfeeding for White and Black women were not different statistically (P-value > 0.05).

Both White and Black women were more likely to initiate breastfeeding if breastfeeding information was given by the hospital staff (White: OR = 9.4, CL: 6.4, 13.6; Black: OR = 3.5, CL: 2.0, 6.1). Older, married, the higher educated and White women as well as those with twin births and those above poverty level were more likely to try breastfeeding.

Conclusions

For women initiating breastfeeding, those who were current smokers, had a preterm delivery, were of a younger age and had a

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Breastfeeding Profiles... (Cont. from page 3)

lower education level, were at a higher risk of breastfeeding cessation.

Breastfeeding information given by the hospital staff is strongly encouraged to increase breastfeeding initiation.

Black, young, less educated and unmarried women need additional support for their breastfeeding initiation.

Additional support is also needed to increase breastfeeding duration among women who smoke, are less educated, are younger in age and whose pregnancy resulted in a preterm birth.

Hurricanes Katrina and Rita Related Education

National Live Satellite Broadcast and Webcast

Several Louisiana State employees will be featured on the University of North Carolina Public Health Grand Rounds. This live satellite broadcast and webcast, "**Learning from Katrina: Tough Lessons in Preparedness and Emergency Response**" will air on March 31, 2006 from 1:00-2:00 PM Central time and will include interviews from Dr. Jimmy Guidry, State Health Officer, Sharon Howard, Assistant Secretary – Office of Public Health, Dr. Raoult Ratard, State Epidemiologist and Coletta Barrett, Louisiana Hospital Association.

For more information or to register for this broadcast go to: http://www.publichealthgrandrounds.unc.edu.

Katrina-Rita Related Articles

A weekly **publication** from the CDC, the *Morbidity and Mortality Weekly Report* (MMWR) Vol. 55, No. 2 includes several articles that have Katrina/Rita information:

- Public Health Response to Hurricanes Katrina and Rita – Louisiana 2005
- Two Cases of Toxigenic *Vibrio chloerae* 01 Infection After Hurricanes Katrina and Rita – Louisiana, October 2005
- Surveillance in Hurricane Evacuation Centers – Louisiana, September-October 2005
- Injury and Illness Surveillance in Hospitals and Acute-Care Facilities After Hurricanes Katrina and Rita – New Orleans Area – Louisiana, September 25 – October 15, 2005
- Assessment of Heath-Related Needs After Hurricanes Katrina and Rita – Orleans and Jefferson Parishes, New Orleans Area, Louisiana, October 17-22, 2005
- Health Concerns Associated with Mold in Water-Damaged Homes After Hurricanes Katrina and Rita – New Orleans Area, Louisiana, October 2005

For more information see http://www.cdc.gov/mmwr/.

Bioterrorism Incident Tracking System - End of Year Review, 2005

Stacy Hall, MSN: Kerri Gerage, BS

In October, 2001, the Infectious Disease Epidemiology (IDE) Section of the Louisiana Office of Public Health began recording possible bioterrorism events using the Bioterrorism (BT) Incident system. There were 959 events recorded within the last three months of 2001. In 2002, there were 444 events which included 196 threatening letters containing powder, mailed within the Lafayette area. Fifty-nine events were recorded in 2003, 101 reported in 2004 and seventy-two entries in 2005.

The Bioterrorism Incident Tracking System (BITS) was developed in 2004 and offered improvements over BT Incident, which it replaced. BITS includes data from 2004 and 2005. Entries fall into four major categories. These categories are Alerts, Clinical Samples, Environmental Samples and Screenings. (Table 1)

Table 1: BITS reports by incident type – Louisiana, 2004-2005

Incident Type	2004	2005
Alerts	8	21
Clinical Samples	36	19
Environmental Samples	35	16
Screening	22	16
Total	**101**	**72**

Alerts record the follow up investigations of possible bioterrorism events that were reported to the IDE Section, but which had no sample submitted for laboratory testing. It also includes the follow up investigations of alerts on state and national surveillance systems. The states' syndromic surveillance systems are utilized by emergency medical services, emergency departments and intensive care units. Louisiana began participation in the Center of Disease Control and Prevention's national system, BioSense in September, 2004.

Clinical Samples are submissions from hospital or reference laboratories that require additional testing by the State Laboratory to rule out bioterrorism threat agents.

Environmental Samples are suspicious substances, often called "white powder events" which have been deemed a credible threat by local or state law enforcement personnel and are submitted for testing to the State Laboratory.

Screenings are environmental samplings done by the Louisiana State Police at specific locations before, during and/or after events (e.g. the Governor's Inauguration and national sporting events) which were submitted to the State Laboratory for testing.

For more information, email shall@dhh.la.gov or call (504) 219-4542 .

Analysis of Fetal and Infant Mortality Rates - Using Perinatal Period of Risk Approach- Louisiana 2000-2002

Genet Burka, MD MPH; Fran Mather, PhD; Juan M. Acuña, MD; Tri Tran, MD MPH

The Perinatal Periods of Risk (PPOR) approach is a simple method to examine fetal and infant mortality. It is based on a strong conceptual prevention framework and can be a tool for local public health officials and community partners to understand perinatal deaths and prioritize prevention efforts.

Risk factors for, (or potential preventive interventions of), perinatal mortality differ according to whether the time of death occurs before, during, or after delivery and whether the newborn is smaller or larger in birth weight. Based on the time of death and birth weight of the fetal and infant death, the PPOR approach divided the perinatal mortality into four groups of contributors to perinatal health: 1) Maternal Health & Prematurity 2) Maternal Care 3) Newborn Care 4) Infant Health.

The distribution of fetal and infant deaths in each group is affected by different factors which may need specific interventions. This report describes the fetal and infant mortality rates (FIMR) of Louisiana for the years 2000-2002. The analysis was done using the linked birth/infant death and fetal deaths and restricted to maternal residents of Louisiana at birth, (with birth weight being greater than 499 grams for all live births and fetal deaths and gestational age that was greater than twenty-three complete weeks for fetal deaths).

The FIMRs were calculated for each of four groups by race. To estimate the excess mortality and determine which population group and risk categories are contributing most, a reference group (births to White mothers twenty years of age or older with more than twelve years of education) with better pregnancy outcomes in the population was selected. The result showed that the overall FIMR per 1000 live births and fetal deaths during this period was 11.3. The group specific mortality rates are shown in Table 1.

Table 1: Feto-infant mortality rates (per 1000 live births and fetal deaths) Louisiana, 2000-2002 - PPOR framework

Birth weight in grams	Time of Death		
	Fetal Death **Neonatal Death**		**Postneonatal Death**
500–1499	Maternal Health & Prematurity 4.8		
1500+	Maternal Care 2.2	Newborn Care 1.7	Infant Health 2.6

The group specific rates are a direct reflection of their contribution to the overall FIMR (11.3). The higher mortality is concentrated in the maternal health/prematurity group which is related to Very Low Birth Weight (VLBW) births, followed by infant health.

Compared to the 1997-99 PPOR report, the state's overall FIMR increased two percent (from 11.1 to 11.3). The FIMR also increased seven percent for maternal health/prematurity and four percent for infant health group. The FIMR for the maternal care group declined by 8% from 2.4 to 2.2, which showed a reduction in late pregnancy loss, i.e. fetuses weighing more than 1500 grams.

Since over ninty-seven percent of Louisiana's births are classified as either Black or White, the race specific analysis was restricted to these two groups. The overall and group specific FIMR for Blacks and Whites are shown in Table 2.

Table 2: Feto-infant mortality rates by race- Louisiana 2000-2002

Groups	All Rate (%)	White Rate (%)	Black Rate (%)
Maternal Health/Prematurity	2.2 (43)	0.5(22)	4.6(52)
Maternal Care	0.9 (18)	0.5(22)	1.3(15)
Newborn Care	0.5 (9.8)	0.4(17)	0.6(7)
Infant Health	1.5 (29)	0.9(39)	2.3(26)
Overall FIMR	5.1(100)	2.3(100)	8.8(100)

The difference (excess FIMR) between the overall FIMR for all races (11.3) and the reference group (6.2) was 5.1 per 1000 live births & fetal deaths. Approximately forty-three percent of the excess mortality rate fell into the maternal health/prematurity group. Excess mortality rate was also examined by race, for Blacks and Whites. The highest excess rate was experienced by infants of Black women (8.8 per 1000 live births and fetal deaths) and fifty-two percent of this excess rate fell into maternal health/prematurity group (Table 3).

Table 3: Group-specific excess FIMR* - Louisiana 2000-2002

Groups	All Races	White	Black	Ref.
Maternal Health/Prematurity	4.8	3.1	7.2	2.6
Maternal Care	2.2	1.8	2.6	1.3
Newborn Care	1.7	1.6	1.8	1.2
Infant Health	2.6	2.0	3.4	1.1
Overall FIMR	11.3	8.5	15.1	6.2

**Excess rate was calculated by subtracting the corresponding reference group cell from the study group.*

Maternal health/prematurity deaths include all fetal deaths and infant death weighing between 500-1500 grams. It is strongly impacted by a large number of deaths (birth weight – specific mortality) or a large number of VLBW births (birth weight distribution).

Conclusion

Prevention efforts should be directed to the maternal health/maturity group and targeted to those problems known to make an impact on the prevalence of VLBW. In Blacks especially, more than three-fourths of the excess fetal-infant mortality rate was accounted to VLBW births. VLBW births are generally associated to behavioral, social, health and economic disparities of the mothers. Efforts should be made to incorporate appropriate medical and non-medical interventions into prenatal care regimen to minimize adverse pregnancy outcomes.

Alternative Disease Names from Previous Centuries

African Sleeping Sickness – African Trypanosomiasis
Black Vomit – Yellow Fever
Bloody Flux – Dysentery
Breakbone Fever - Dengue
Bronze John – Yellow Fever
Camp Fever - Typhus
Chagas Disease - American Trypanosomiasis
Consumption - Tuberculosis (TB)
Croup – Laryngotracheobronchitis
Dropsy – Chronic Heart Disease (CHF)
Intermittent Fever– Malaria
King's Illness, King's Evil - Scrofula (TB of the lymph nodes)
Phthisis - Tuberculosis (TB)
Saffron Scourge – Yellow Fever
Ship Fever- Typhus
Stranger's Disease – Yellow Fever
Swamp Fever - Malaria
Whooping cough – Pertussis
Yellow Jack – Yellow Fever

Unexplained Deaths Surveillance Louisiana, 2002-2004

Nathan Weed, MPH

Every year there are a small but evocative number of deaths in Louisiana that are not easily explained by the medical community. Furthermore, since the attacks on September 11, 2001 and the subsequent anthrax attacks a month later, increased pressure has been placed on the public health infrastructure to rapidly identify and appropriately respond to unexplained deaths. Perhaps the most common way that the Infectious Disease Epidemiology Section (IDES) of the Office of Public Health is alerted to unusual deaths is through telephone reports from citizens, health care providers and public safety officials. In fact, responding to telephone reports of diseases and questions regarding diseases comprises a significant portion of the IDES total workload.

In order to track and maintain communications with all of the regional and other state level stakeholders, it is the policy of the IDES to enter a report of each case into a web-based application called Epistories. These reports (also called Epistories after the application), typically detail all of the information that could be gathered during initial contact as well as information that could be gathered from follow-up with other sources of information (e.g. coroners, hospitals, the Office of Public Health Laboratory, Regional Epidemiologists, Disease Surveillance Specialists (DSS) and federal agencies such as the Centers for Disease Control and Prevention (CDC)). Each Epistory also includes a description of any interventions recommended by the IDES.

Predetermined codes are used within the Epistory database to reflect the type of issue or disease that is discussed. This database is regularly queried for a number of reasons, one of them being to provide data useful for quality assurance of the IDES. The database of Epistories is also used to generate lists of the health issues most commonly cited in dealings with public, regional public health staff, or other state and federal agencies. The regular monitoring of Epistories by IDES staff and appropriate regional staff is useful for the early identification of unusual occurrences of both human and animal diseases. Since Epistories are entered into the system regularly they provide a timely source of information. Additionally, the information generated in many Epistories synthesizes data from multiple sources using multiple methods of data collection making each Epistory a rich description of an event. This information can then be used to enhance data collection in relation to the issue, increase training of IDES staff regarding the identified issues, or to develop educational materials that can be distributed to healthcare providers or to the citizenry of Louisiana. Finally, Epistories can be qualitatively analyzed to provide information on the distribution of diseases or health determinants in Louisiana. The qualitative information in Epistories allows for improved responses to the disease situations that we face, allowing us to better serve the citizens of Louisiana in the future.

In order to better describe unexplained deaths over the last several years, the Epistories database was analyzed using the following methods. 1) All Epistories involving unexplained deaths were identified by selecting the appropriate code. 2) All entries designated as an unexplained death were reviewed for content to ensure that each story had appropriate descriptions. 3) Each of the chosen Epistories were summarized and assigned to predetermined subcodes. (In this step of the analysis there was some overlapping of the sub-codes. For example, the story may involve animals and simultaneously represent an unusual cluster of deaths.) Since the data set for unexplained deaths is very small, (a total of eight cases), with the privacy of those affected being important to the IDES, some details are not included in the following results.

Two of the eight cases were highlighted by the short duration of the illness. In one of these two cases, the agent responsible was later identified as *Neisseria meningitis,* an agent well known to cause rapidly developing neuroinvasive disease. One case involved an unusual cluster of two human deaths that were later determined to be the result of chronic disease processes. Two cases were attributed to rare bacterial infections that involved toxin producing agents. One of these two cases was identified as *Clostridium botulinum* intoxication. The other case was later determined to be the result of *Clostridium sordellii*. Poisons or exposure to toxins were suspected in three of the eight cases. Of these three cases only one appeared to be confirmed, one was highly suspect and one was probable. Two of the eight cases involved the death of an animal. Only one of the cases involving animals had a possible human exposure. Overall, only three of the eight cases identified in Epistories were the result of infectious diseases.

LOUISIANA COMMUNICABLE DISEASE SURVEILLANCE

November-December, 2005

Table 1. Disease Incidence by Region and Time Period

DISEASE		HEALTH REGION 1	2	3	4	5	6	7	8	9	TIME PERIOD Sep-Oct 2005	Sep-Oct 2004	Jan-Oct Cum 2005	Jan-Oct Cum 2004	% Chg
Vaccine-preventable															
Hepatitis B	Cases	0	0	0	1	0	0	0	0	4	5	10	76	69	+10.1
	Rate[1]	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.9	0.1	0.2	1.8	1.6	NA
Measles		0	0	0	0	0	0	0	0	0	0	0	0	0	NA*
Mumps		0	1	0	0	0	0	0	0	0	1	2	8	9	-11.1
Rubella		0	0	0	0	0	0	0	0	0	0	0	1	0	NA*
Pertussis		0	1	0	1	0	0	0	0	0	2	9	41	23	78.3
Sexually-transmitted															
HIV/AIDS	Cases[2]	7	32	1	6	2	5	0	9	7	69	193	820	1054	-0.2
	Rate[1]	0.7	5.5	0.3	1.1	0.7	1.7	0.0	2.6	1.6	1.6	4.4	18.8	24.1	NA
Gonorrhea	Cases	104	162	64	189	52	88	528	180	64	1431	1804	9053	10659	-15.1
	Rate[1]	10.1	26.8	16.7	34.5	18.3	29.2	101.0	50.9	14.6	32.0	40.4	202.6	238.5	NA
Syphilis (P&S)	Cases	5	16	0	8	0	0	2	0	16	47	64	250	332	-24.7
	Rate[1]	0.5	2.7	0.0	1.5	0.0	0.0	0.4	0.0	3.7	1.1	1.4	5.6	7.4	NA
Enteric															
Campylobacter		1	2	0	2	0	2	0	0	3	10	17	113	143	-21.0
Hepatitis A	Cases	0	0	0	3	0	0	2	0	0	5	6	72	50	44.0
	Rate[1]	0.0	0.0	0.0	0.5	0.0	0.0	0.4	0.0	0.0	0.1	0.1	1.7	1.2	NA
Salmonella	Cases	8	12	10	13	3	8	1	5	25	85	180	899	990	-9.2
	Rate[1]	0.8	2.0	2.6	2.4	1.1	2.7	0.2	1.4	5.7	2.0	4.2	20.8	22.9	NA
Shigella	Cases	0	2	2	2	0	0	2	0	4	12	62	138	322	-57.1
	Rate[1]	0.0	0.3	0.5	0.4	0.0	0.0	0.4	0.0	0.9	0.3	1.4	3.2	7.5	NA
Vibrio cholera		0	0	0	0	0	0	0	0	0	0	0	2	0	NA*
Vibrio, other		0	0	0	1	1	0	0	0	0	2	4	36	42	-14.3
Other															
H. influenzae (other)		0	2	0	0	0	0	1	0	1	4	6	35	19	84.2
N. Meningitidis		0	0	0	0	0	0	1	0	0	1	2	31	37	-16.2

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.

* Percentages not calculated for numbers less than 10

Table 2. Diseases of Low Frequency (January-December, 2005)

Disease	Total to Date
Legionellosis	3
Lyme Disease	8
Malaria	3
Rabies, animal	14
Varicella	130

Table 3. Animal rabies (November-December, 2005)

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.]

- Anthrax
- Botulism
- Brucellosis
- Cholera
- Diphtheria
- Haemophilus influenzae (invasive disease)
- Measles (rubeola)
- Neisseria meningitidis (invasive disease)
- Plague
- Poliomyelitis, paralytic
- Q Fever
- Rabies (animal & man)
- Rubella (German measles)
- Rubella (congenital syndrome)
- Smallpox
- Staphylococcus Aureus, Vancomycin Resistant
- 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.

- Aseptic meningitis
- Chancroid[1]
- E. Coli 0157:H7
- E. Coli Enterohemorrhagic (other)
- Encephalitis, Arthropod borne
- Hantavirus Pulmonary Syndrome
- Hemolytic-Uremic Syndrome
- Hepatitis A (acute disease)
- Hepatitis B (carriage)
- 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)
- Blastomycosis
- Campylobacteriosis
- Chlamydial infection[1]
- Coccidioidomycosis
- Cryptosporidiosis
- Cyclosporiasis
- Dengue
- Ehrlichiosis
- Enterococcus, Vancomycin Resistant (VRE) (invasive disease)
- Giardia
- Gonorrhea[1]
- Hansen's Disease (leprosy)
- Hepatitis B (acute)
- Hepatitis C (acute and infection)
- Human Immunodeficiency Virus (HIV infection)
- Listeria
- Lyme Disease
- Lymphogranuloma Venereum[1]
- Psittacosis
- Rocky Mountain Spotted Fever (RMSF)
- Staphylococcus Aureus, Methicillin/ Oxacillin Resistant (MRSA) (invasive disease)
- Staphylococcal Toxic Shock Syndrome
- Streptococcal disease, Group A (Invasive disease)
- Streptococcal disease, Group B (invasive disease)
- Streptococcal Toxic Shock Syndrome
- Streptococcus Pneumoniae (invasive infection, penicillin resistant (DRSP))
- Streptococcus Pneumoniae (invasive infection in children < 5 years of age)
- Trichinosis
- Varicella (chickenpox)
- Vibrio Infections (other than cholera
- West Nile Fever
- West Nile Infection (past or present)

Other Reportable Conditions

- Cancer
- Complications of Abortion
- Congenital Hypothyroidism[3]
- Galactosemia[3]
- Hemophilia[3]
- Lead Poisoning
- Phenylketonuria[3]
- Reye's Syndrome
- Severe Traumatic Head Injury
- Severe Undernutrition (severe anemia, failure to thrive)
- Sickle Cell Disease (newborns)[3]
- 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 (EPI-2430), facsimile (504-219-4522), phone reports (504-219-4563 or 1-800-256-2748), or web base 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 (504) 219-4413 or FAX (504) 219-4452.

This public health document was published at a total cost of $1,350.00. Seven thousand six hundred (7,600) copies of this public document were published in this first printing at a cost of $1,350.00. The total cost of all printings of this document, including reprints is $1,350.00. 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.

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