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Louisiana Morbidity Report

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Babies with Syphilis Louisiana, 2006

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Early in the twentieth century it was recognized that in the United States about twenty percent to forty percent of all still births were caused by maternal syphilis and that about one-fifth of all infant deaths were due to congenital syphilis. By 1910, it was documented that about three-fourths of babies born to mothers infected with syphilis developed the disease.

Congenital syphilis is an entirely preventable disease. The key to this prevention is adequate prenatal care. Many past studies have shown a direct correlation between the *lack* of prenatal care in a pregnant woman and subsequent congenital syphilis in her baby.

In Louisiana, the law requires (Revised Statutes 40:1091) a physician attending a pregnant woman to offer her a blood test for syphilis. State law also requires (Revised Statutes 40:1064) that any person who has a venereal disease (e.g. syphilis) must be treated. The treatment of all stages of syphilis is, based on using penicillin, to which the causative organism *Treponema pallidum*, has remained sensitive. Penicillin remains the only tried and true curative treatment modality for syphilis. The treatment regimens can be found in any standard textbook of pediatrics or medicine or the recommendations of the United States Centers for Disease Control and Prevention (CDC). Desensitization is required for persons with known allergy to penicillin, as penicillin must be used.

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Histoplasmosis Louisiana, 2007

Joanna Eavey, MPH; Pamela Kreyling, RN BSN MPH

Note: Although Histoplasmosis is not a reportable disease in Louisiana, unusual cases and outbreaks should be reported to the Office of Public Health.

Histoplasmosis is caused by infection with the dimorphic fungus *Histoplasma capsulatum*. *H. capsulatum* is a common soil fungus primarily found in the Mississippi and Ohio River valleys. The fungus is often associated with bird and bat guano. In the environment, the fungus exists in a mycelial phase; at temperatures over 37° C, it morphs into a yeast phase. Infection results when mycelial fragments and microconidia are inhaled into the alveoli. These mycelial fragments are phagocytosed and transit to yeasts in macrophages and neutrophils.

Only five percent of infections are symptomatic. In the southeastern United States, positivity of skin tests (indicative of past or present infections) can reach ninety percent. Symptomatic infections are mostly self-limiting but can become lethal in patients with pre-existing conditions. An estimated one in 2,000 histoplasmosis infections result in disseminated disease. Risk factors for development of disseminated histoplasmosis include being less than two years old, elderly or immunocompromised.

On June 15, 2007, an eighty-six year-old African-American male presented to a Louisiana hospital. He had a history of chronic obstructive pulmonary disorder, congestive heart failure, hypertension, diabetes and an artificial valve replacement. The chief complaint was lethargy over the last six months with a worsening in the last twenty-four hours. For the last three weeks, the patient had a low grade fever, chills and night sweats with some recent loose stools. There was no hematuria, influenza-like illness or chronic sinus infection noted. The man was HIV negative and had no exposure to farm animals, pigeons, or feral dogs and cats.

His initial CT scan showed a small hypodense intracranial lesion. Subsequent scans revealed multiple, well defined, intracranial lesions ranging in size from eight to nine millimeters. There was no organomegaly. The initial differential diagnosis was metastasis from a primary lymphoma versus an infectious process.

A colonoscopy revealed a mass-like lesion. He had an abnormal chest x-ray with pulmonary nodules in his right middle lobe. He

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Retinopathy of Prematurity Louisiana, 1999-2003

Christopher O'Brien, MD MPH

Objectives:

This study was conducted to describe the burden and distribution of disease from 'retinopathy of prematurity' (ROP) in infants (formerly known as retrolental fibroplasia), in the state of Louisiana and to emphasize current concepts of ROP.

Source of Data:

A review of hospital discharge data from the years 1999 through 2003 was conducted. The current literature was searched using both Pubmed and OVID (database search engines), using the following keywords: retinopathy of prematurity, retrolental fibroplasia and ophthalmology descriptive study. Relevant articles are reviewed, relevant references of these articles are also reviewed

Summary of Findings:

ROP is a common, preventable cause of irreversible impaired vision in children. Although ROP risk factors are known, consensus is weak concerning when to screen for disease or how to define a study case. In Louisiana, there is no trend for the overall incidence of ROP throughout the study period. However, the condition is more common in African-American infants than in Caucasian infants. There is no difference in incidence between female and male infants.

Conclusions:

The ability to further describe ROP is limited by the case-data available. ROP risk factors include low birth weight and premature birth. For this reason, the study recommends screening of all infants of birth weight less than 1,500 grams and/or all infants of gestational age greater than thirty-two weeks.

ROP is a disorder of retinal vascularization and is common in premature and/or low birth weight infants. ROP is one of the most common causes of irreversible childhood blindness, and can also lead to myopia, loss of visual field and strabismus.

Retinal vascularization begins at the posterior eye during the eighth gestational week. Progressing anteriorly, vascularization is complete by the thirty-seventh week. Premature birth can disrupt the normal vascularization process, resulting in the growth of irregular blood vessels, scarring and retinal traction. Treatment for ROP depends upon disease severity and can range from observation to laser surgery.

A review of current literature reveals that there is consensus concerning the pathogenesis of ROP, its major risk factors and thresholds for treatment. However, there are divergent ideas concerning ROP incidence and thresholds for screening.

Clearly identified risk factors for ROP include the following: birth weight less than 1,500 grams (3.3 lbs), gestation less than thirty-one to thirty-two weeks and the prolonged administration of supplemental oxygen.

Methods:

The incidence of ROP was estimated using identifier-removed human hospital discharge data, provided by the Louisiana Department of Health and Hospitals (LA DHH). Study patient population includes all live births recorded by the LA DHH Vital statistics department for the years 1999 through 2003. Cases are identified by ICD-9 (International Classification of Diseases, version 9) code 362.21 (retrolental fibroplasia).

This study is concerned with the incidence of ROP in newborns. The relevant data concerning race, gender and birth weight are compiled and summarized in Table 1.

Table 1: Summary of births in data population, by race, gender and birth weight - Louisiana, 1999-2003

| Birth Year | 1999 | 2000 | 2001 | 2002 | 2003 | Average |
|----------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Total Live Births | 67034 | 67843 | 65193 | 64755 | 64689 | 65903 |
| Caucasian | 38350 (57.2%) | 37946 (55.9%) | 36740 (56.4%) | 36605 (56.5%) | 37066 (57.3%) | 37341 (56.7%) |
| African-American | 27234 (40.6%) | 28335 (41.8%) | 26988 (41.4%) | 26608 (41.1%) | 25024 (38.7%) | 26838 (40.7%) |
| Other Race | 1450 (2.2%) | 1562 (2.3%) | 1465 (2.2%) | 1542 (2.4%) | 2599 (4.0%) | 1724 (2.6%) |
| Male | 34297 (51.2%) | 34451 (50.8%) | 33533 (51.4%) | 33181 (51.2%) | 33072 (51.1%) | 33707 (51.1%) |
| Female | 32737 (48.8%) | 33392 (49.2%) | 31660 (48.6%) | 31574 (48.8%) | 31617 (48.9%) | 32196 (48.9%) |
| Total ROP Incidence | 316 (0.47%) | 392 (0.58%) | 426 (0.65%) | 410 (0.63%) | 207 (0.32%) | 350 (0.51%) |
| Total Birth Weight | | | | | | |
| < 1500g (3.3 lbs) | 1407 (2.1%) | 1628 (2.4%) | 1502 (2.3%) | 1295 (2.0%) | 1423 (2.2%) | 1451 (2.6%) |
| < 999g (2.2 lbs) | 761 (1.1%) | 972 (1.4%) | 798 (1.2%) | 692 (1.1%) | 752 (1.2%) | 795 (1.2%) |

Results:

From 1999 to 2003, there were 1,752 cases of ROP in the study population. These cases represent 0.51% of all births in the study population.

The data show that there is a statistically significant difference between the incidence in the Caucasian and African-American populations, $\chi^2 = 42.73$, p -value = 0.000 (Table 2).

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Table 2: χ^2 test for difference in incidence by race - Louisiana, 1999-2003

| Race | ROP (%) | No ROP (%) |
|------------------|-------------|------------------|
| Caucasian | 196 (0.105) | 186,511 (99.895) |
| African-American | 259 (0.193) | 133,930 (99.807) |

The data show neither an increasing nor a decreasing trend in ROP incidence for both the Caucasian and African American populations, $\chi^2 = 0.899$ and 0.01 , p -values = 0.34 and 0.91 , respectively (Table 3).

Table 3: χ^2 test for trend in incidence by race - Louisiana, 1999-2003

| Race | Expected Annual Incidence (%) | χ^2 For Trend | p-value |
|------------------|-------------------------------|--------------------|---------|
| Caucasian | 39 (0.105) | 0.899 | 0.34 |
| African-American | 52 (0.193) | 0.01 | 0.91 |

Analysis of incidence in males infants versus female infants shows no significant difference in incidence between the sexes, $\chi^2 = 1.62$, p -value = 0.2 (Table 4).

Table 4: χ^2 test for difference in incidence by infant gender Louisiana, 1999-2003

| Gender | Birth Year | | | | | | Summary Incidence | |
|---------------------|------------|-----------|-----------|-----------|-----------|-----------|-------------------|--------|
| | | 1999 | 2000 | 2001 | 2002 | 2003 | Expected | Actual |
| Total Affected | | 121 | 122 | 126 | 135 | 93 | | |
| Male (% of total) | | 53 (43.8) | 66 (54.1) | 57 (45.2) | 64 (47.4) | 43 (46.2) | 283 | 305 |
| Female (% of total) | | 68 (56.2) | 56 (45.9) | 69 (54.8) | 71 (52.6) | 50 (53.8) | 314 | 292 |

Discussion and Conclusions:

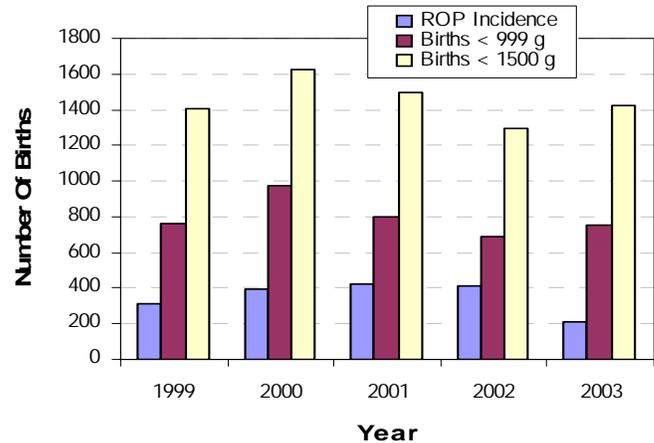
The incidence of ROP in Louisiana is stable throughout the study period. This means that any improvement survival of low birth weight and/or very premature infants may offset by a improved neonatal management.

There is no clear explanation for the difference in ROP incidence between races. The difference may be the result of location, pre and post-natal care, or many other factors.

There are no data in this study to support changes in accepted treatment and threshold for treatment protocols. Although the literature has not reached consensus, it is widely accepted that ROP risk factors include low birth weight and premature birth. For this reason, the study recommends screening of all infants of birth weight less than 1,500 grams and/or all infants of gestational age less than thirty-two weeks.

Limitations to this study are numerous. Foremost, the data are not well suited to evaluate ROP. The data are not sufficient to link at-risk newborns (birth weight < 1,500 g and/or < 999 g) with cases of ROP. Therefore, it is not possible to compare the incidence of ROP amongst Louisiana's at-risk newborns with the incidence in other locations in a statistically significant manner. However, if one postulates that all observed ROP cases occur at-risk newborns, then the incidence would be roughly fifteen percent. This is within the ranged suggested by the literature. Figure 1 shows that there is likely a relationship between the number of at-risk births in Louisiana and the incidence of ROP within that population.

Figure 1: At-risk births and ROP - Louisiana, 1999-2003



This study is also limited because it can not identify one of the two major ROP risk-factors, gestational age. A future description of ROP should discover or collect data linking ROP with gestational age, exact birth weight, race and prolonged administration of supplemental oxygen.

Only more severe (stage 3 of 5 and higher) ROP is of significant health concern. However, all severities (stages 1-5 plus) of ROP share the same ICD-9 code. Therefore, any future attempt to retrospectively characterize ROP in Louisiana cannot rely solely on hospital discharge data alone and will likely require chart review.

It is difficult to compare ROP incidence between centers. The few studies available are not consistent in their screening criteria, selection and exclusion criteria. Some authors report increasing trends, but others report flat, or decreasing trends in incidence. Perhaps the most powerful reviews available aim to establish clear screening rules.

The results imply that policy should focus upon improved data collection as a norm. Much of the information needed for improved analysis is already collected as a matter of everyday business; however, data are compiled in manner that nullifies the relationships amongst birth weight, ROP disease, gestational age and administration of supplemental oxygen.

The entire article is posted at <http://www.dhh.louisiana.gov/offices/miscdocs/docs-253/special%20studies/retinopathy1.pdf>.

Announcements

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

ANNUAL REPORT/INFECTIOUS DISEASES SURVEILLANCE REPORTS: Hepatitis A, Hepatitis C

EPIDEMIOLOGY MANUAL: Case Definitions for Diseases 2007; Hepatitis A; Q Fever; Rabies

LOUISIANA MORBIDITY REPORT: 1970, 1971, 1972

SPECIAL STUDIES: Publications added, 2001-2007

VETERINARY INFORMATION: Veterinary Antibiotic Resistance and Sensitivity Information, AVMA Judicious Use Guidelines, Louisiana Animal Disease Diagnostic Laboratory Information -Canine/Feline

WEST NILE: Summary 2007

Babies with Syphilis continued from page 1

Prior to 1989 the case definition used by public health authorities for congenital syphilis was based on clinically apparent disease or laboratory findings suggestive of congenital syphilis (Kaufman Criteria). The numbers of cases reported each year in Louisiana were small. (Table 1)

Table 1: Congenital syphilis by race – Louisiana, 1983-2006

Change of Definition

| YEAR | RACE | | | | TOTAL |
|------|-------|-------|-----------------------|---------------|-------|
| | Black | White | Asia/Pacific Islander | Other/Unknown | |
| 1983 | 1 | 0 | 0 | 0 | 1 |
| 1987 | 0 | 4 | 0 | 1 | 5 |
| 1988 | 3 | 0 | 0 | 0 | 3 |
| 1989 | 31 | 1 | 0 | 0 | 32 |
| 1990 | 102 | 3 | 0 | 2 | 107 |
| 1991 | 69 | 8 | 0 | 3 | 80 |
| 1992 | 36 | 0 | 0 | 1 | 37 |
| 1993 | 160 | 7 | 0 | 4 | 171 |
| 1994 | 86 | 2 | 1 | 4 | 93 |
| 1995 | 25 | 0 | 0 | 0 | 25 |
| 1996 | 2 | 0 | 0 | 0 | 2 |
| 1997 | 30 | 1 | 0 | 0 | 31 |
| 1998 | 6 | 1 | 0 | 0 | 7 |
| 1999 | 11 | 0 | 0 | 0 | 11 |
| 2000 | 9 | 0 | 0 | 0 | 9 |
| 2002 | 1 | 0 | 0 | 0 | 1 |
| 2003 | 3 | 0 | 0 | 2 | 5 |
| 2004 | 10 | 2 | 0 | 1 | 13 |
| 2005 | 16 | 1 | 0 | 0 | 17 |
| 2006 | 12 | 2 | 0 | 0 | 14 |

In 1989 the case definition adopted nationally included not only infants with clinically apparent disease (as above), but also normal appearing babies (and stillbirths) delivered to women with untreated or inadequately treated syphilis (the U.S. CDC Criteria).

The latter is generally defined as also including women whose treatment was not completed within four weeks of delivery.

With the expanded case definition, the numbers of reported cases of congenital syphilis in Louisiana increased greatly. Use of the new definition, however, was felt to be beneficial to all as it increased the sensitivity (the proportion of babies who are truly infected) of reported cases, by including at-risk as well as infected babies.

The highest percentages of cases of congenital syphilis in Louisiana each year are reported among African-Americans. Among the many hypotheses as to this disparity of cases: the widespread use of spectinomycin to treat penicillin-resistant *Neisseria gonorrhoeae* towards the end of the last century, but which was not curative of incubating syphilis extant in the patient; the use in the 1990's of crack cocaine among young women leading to the exchange of sex for drugs and subsequent pregnancy; the delayed or lack of prenatal care to disadvantaged pregnant women. The numbers of reported cases in the state were on a downward trend from the last decade, but since 2004 the trend began increasing. In 2005, Louisiana ranked second among all the states in the country for its rate of congenital syphilis cases.

At least some of the decrease in the past decade can be attributed to community-based outreach on the part of local public health workers to facilitate identification and serologic testing of persons at high risk for syphilis. To counter the increases now once again being seen, it is highly recommended that these community-based outreach efforts be re-emphasized. Additionally, physicians are encouraged to offer blood tests for syphilis to pregnant women, when the women may be seen in a setting other than a traditional prenatal visit, for example, in an emergency room.

For references or more information, please contact Ms. Longfellow at (504) 219-4428 or llongfe@dhh.la.gov.

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Histoplasmosis continued from page 1

had a 2.5 centimeter ulcer on his left inguinal area and a small penile ulcer. He also showed some lymphadenopathy. A colon biopsy revealed histoplasmosis. The inguinal lesion was also due to histoplasmosis with a bacterial superinfection.

The final diagnosis was disseminated histoplasmosis with evidence of characteristic cutaneous lesions, colonic lesions, pulmo-

nary nodules and brain lesions (probably due to chronic meningeal involvement) and anemia. Treatment was amphotericin 0.7-1.0 mg/kg/d for a total of 30- 35 mg/kg with monitoring of CT scans of the colon and head. The patient was discharged with antifungals to an extended care facility after a two-week hospital stay.

For more information, please contact Ms. Eavey at (504) 219-4546 or jeavey@dhh.la.gov.

Relationship Between Medicaid Status and Infant Mortality Louisiana, 2000-2004

Folorunso Akintan, MD MPH; Tri Tran, MD MPH

Introduction:

Medicaid is a federally funded, state run program that provides health care funding for eligible individuals with limited income and resources. Services offered include (but are not limited to): prenatal care and obstetrical services; family nurse practitioner services; well-child services including vaccinations and screenings; diagnostic and treatment services for children under twenty-one years. Preferences are however given to pregnant women and women with children, in the hope of reducing adverse outcomes among those participating. It is therefore important to determine whether there is a difference in Louisiana, in infant mortality (IM) among those who use Medicaid services and those who do not.

Method:

Birth/Medicaid/Infant death data, 2000-2004 were linked using mother’s social security number, name, race, infant date of birth and birth/death identification numbers. If a mother’s delivery was paid for by Medicaid, the child was assumed to have become a Medicaid recipient, as these infants are automatically enrolled in the program. Infant mortality rate (IMR) was defined as the number of deaths under one year of age per 1000 live births. (Estimates were reported with a 95% Confidence Interval (CI). SAS 9.0 was used for all analysis and statistical significance was set at an Alpha of .05.)

Results:

There were a total of 3,004 infant deaths out of 400,443 live births from 2000 to 2004. Over half of the infant deaths were among Medicaid recipients. The overall IMR for 2000 to 2004 was 7.6 (CI: 7.3, 7.9). IMR for Medicaid recipients was 8.8 (CI: 8.4, 9.2) for all races, 6.8 (CI: 6.3, 7.3) for Whites and 10.3 (CI: 9.7, 10.8) for African-Americans. IMR for those not receiving Medicaid was 6.1 (CI: 5.8, 6.5) for all races, 4.2 (CI: 3.9, 4.6) for Whites and 13.5 (CI: 12.3, 14.7) for African-Americans. (Figure 1 and Tables 1a, 1b and 1c)

Figure 1: Distribution of live births, infant mortality rate and numbers among Medicaid and non-Medicaid deliveries - Louisiana, 2000-2004

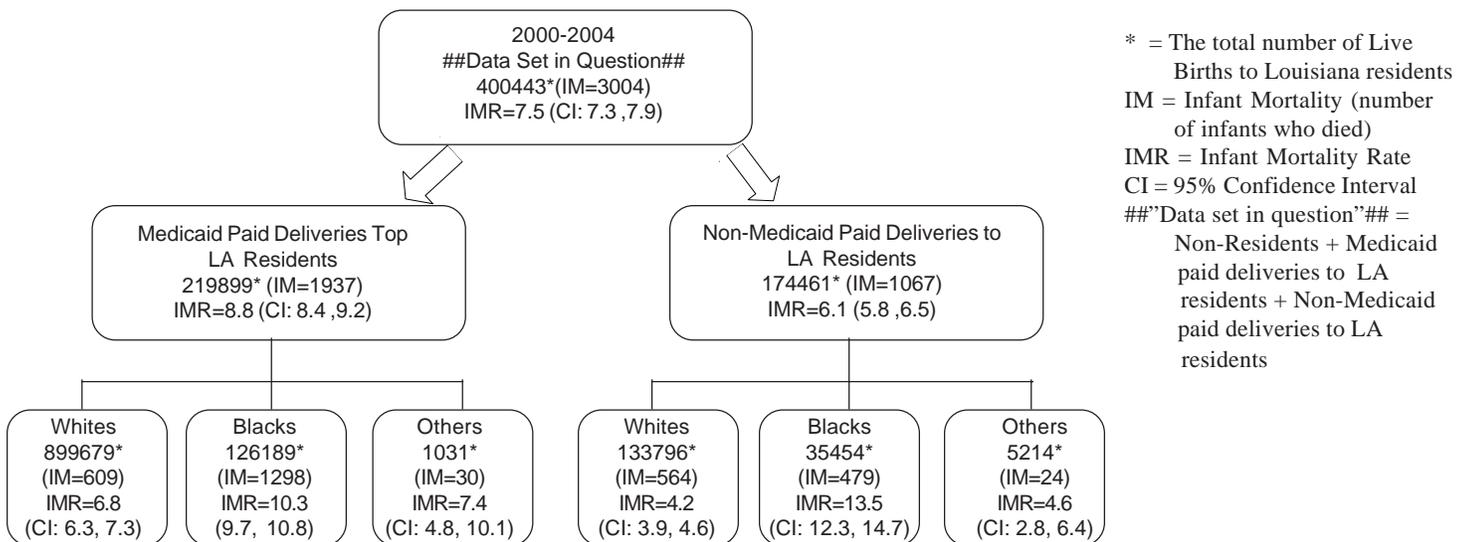


Table 1a: Demographics-number, percentage and infant mortality rate of risk factors associated with infant mortality, Louisiana 2000-2004

| Variable Name & Reference | All Races Numbers | Percent All Races | Whites Numbers | Percent Whites | Blacks Numbers | Percent Black | Number of Deaths | Live Births | IMR (95% CI)* |
|---------------------------|-------------------|-------------------|----------------|----------------|----------------|---------------|------------------|-------------|-------------------|
| Maternal Education | | | | | | | | | |
| <12th | 91200 | 22.8 | 38387 | 16.8 | 50642 | 31.2 | 987 | 90494 | 10.9 (10.2, 11.6) |
| 12th | 147198 | 36.8 | 79011 | 34.6 | 65214 | 40.1 | 1142 | 145250 | 7.9 (7.4, 8.3) |
| >12th Grade | 161430 | 40.4 | 110687 | 48.5 | 46669 | 28.7 | 855 | 158208 | 5.4 (5.0, 5.8) |
| Marital Status | | | | | | | | | |
| Unmarried | 185460 | 46.4 | 61153 | 26.8 | 121780 | 74.9 | 1824 | 184093 | 9.9 (9.5, 10.4) |
| Married | 214515 | 53.6 | 166979 | 73.2 | 40840 | 25.1 | 1176 | 209991 | 5.6 (5.3, 5.9) |

Table 1b: Prenatal care-number, percentage and infant mortality rate of risk factors associated with infant mortality - Louisiana, 2000-2004

| Variable Name & Reference | All Races Numbers | Percent All Races | Whites Numbers | Percent Whites | Blacks Numbers | Percent Black | Number of Deaths | Live Births | IMR (95% CI)* |
|--|-------------------|-------------------|----------------|----------------|----------------|---------------|------------------|-------------|-------------------|
| Maternal Smoking | | | | | | | | | |
| Smoking | 39408 | 9.9 | 30276 | 13.3 | 8613 | 5.3 | 393 | 38805 | 10.1 (9.1, 11.1) |
| Non-Smoking | 360164 | 90.1 | 197616 | 86.7 | 153850 | 94.7 | 2597 | 354897 | 7.3 (7.0, 7.6) |
| Maternal Medical Risk | | | | | | | | | |
| Medical Risk | 96667 | 24.18 | 47500 | 20.8 | 47277 | 29.1 | 1102 | 94898 | 11.6 (10.9, 12.3) |
| No Medical Risk | 303057 | 75.82 | 180480 | 79.2 | 115248 | 70.9 | 1896 | 298956 | 6.3 (6.1, 6.6) |
| Adequacy of Prenatal Care (PNC) | | | | | | | | | |
| No PNC Record | 2145 | 0.54 | 1126 | 0.5 | 934 | 0.6 | 44 | 1873 | 23.5 (16.6, 30.4) |
| Adequate PNC | 151297 | 37.78 | 94428 | 41.3 | 53393 | 32.8 | 621 | 149149 | 4.2 (3.8, 4.5) |
| Inadequate PNC | 42651 | 10.65 | 13165 | 5.8 | 28597 | 17.6 | 454 | 42218 | 10.8 (9.8, 11.7) |
| Intermediate PNC | 32184 | 8.04 | 17700 | 7.8 | 13566 | 8.3 | 181 | 31731 | 5.7 (4.9, 6.5) |
| Adequate Plus PNC | 172166 | 42.99 | 102014 | 44.7 | 66142 | 40.7 | 1704 | 169389 | 10.1 (9.6, 10.5) |

Table 1c: Perinatal care-number, percentage and infant mortality rate of risk factors associated with infant mortality - Louisiana, 2000-2004

| Variable Name & Reference | All Races Numbers | Percent All Races | Whites Numbers | Percent Whites | Blacks Numbers | Percent Black | Number of Deaths | Live Births | IMR (95% CI)* |
|---------------------------------|-------------------|-------------------|----------------|----------------|----------------|---------------|------------------|-------------|-------------------|
| Hospital Level | | | | | | | | | |
| Out Of Hospital | 1028 | 0.3 | 462 | 0.2 | 540 | 0.3 | 24 | 942 | 25.5 (15.4, 35.5) |
| Unknown/Nursing Home | 2577 | 0.6 | 1374 | 0.6 | 1181 | 0.7 | 14 | 2565 | 5.5 (2.6, 8.3) |
| < Level 3 | 158753 | 39.6 | 90939 | 39.8 | 64122 | 39.4 | 1445 | 156350 | 9.2 (8.8, 9.7) |
| Level 3 | 187033 | 46.7 | 107380 | 47.0 | 75211 | 46.2 | 480 | 184210 | 2.6 (2.4, 2.8) |
| Level 3R | 51052 | 12.8 | 28332 | 12.4 | 21636 | 13.3 | 1041 | 50293 | 20.7 (19.5, 21.9) |
| Birth Attendant | | | | | | | | | |
| Medical Doctor | 389828 | 97.4 | 224248 | 98.1 | 156526 | 96.2 | 2914 | 383834 | 7.6 (7.3, 7.9) |
| Midwife | 8925 | 2.2 | 3630 | 1.6 | 5147 | 3.2 | 46 | 8872 | 5.2 (3.7, 6.7) |
| Other | 1690 | 0.4 | 609 | 0.3 | 1017 | 0.6 | 44 | 1654 | 26.6 (18.8, 34.4) |
| Risky Method of Delivery | | | | | | | | | |
| Risky | 53437 | 13.38 | 30665 | 13.5 | 21795 | 13.4 | 321 | 52578 | 6.1 (5.4, 6.8) |
| Non-risky | 346040 | 86.62 | 197159 | 86.5 | 140641 | 86.6 | 2678 | 341057 | 7.9 (7.6, 8.1) |
| Preterm | | | | | | | | | |
| Preterm | 50445 | 12.63 | 23314 | 10.2 | 26241 | 16.2 | 2021 | 49047 | 41.2 (39.4, 43.0) |
| Term | 348934 | 87.37 | 204563 | 89.8 | 136044 | 83.8 | 971 | 344492 | 2.8 (2.6, 3.0) |

*Adjusting for maternal education, smoking, marital status, medical risk factors, preterm delivery, type of attendant at birth, method of delivery, prenatal care, hospital level of delivery and region.

Crude estimates suggest that infants whose delivery was paid for by Medicaid are fifty percent more likely to die before their first birthday compared to infants whose delivery was not paid for by Medicaid. After adjusting for risk factors that are associated with infant mortality including: maternal education, smoking, marital status, medical risk factors, preterm delivery, type of attendant at birth, method of delivery, prenatal care, hospital level of delivery and region, infants whose deliveries were paid for by Medicaid were actually eighty-seven percent more likely to survive the first year of life when compared to infants whose delivery was not paid for by Medicaid (OR 0.87, 95% CI 0.79, 0.95). Analyzing the data stratified by race, Medicaid-paid delivery was found to be seventy percent protective against IM among African-Americans (OR 0.70 95% CI 0.62, 0.78) but among Whites, there was a twenty-two percent higher risk of IM (OR 1.22 95% CI 1.06, 1.39). (Table2)

Table 2: Crude and adjusted odds ratio by race - Louisiana, 2000-2004

| Variable Name & Reference | Crude OR (95% CI) | Adjusted* OR (95% CI) |
|---------------------------|-------------------|-----------------------|
| All Races | 1.5 (1.4, 1.61) | 0.87 (0.79, 0.95) |
| Whites | 1.68 (1.50, 1.89) | 1.22 (1.06, 1.39) |
| Blacks | 0.78 (0.70, 0.87) | 0.70 (0.62, 0.78) |

Conclusions:

Medicaid payment for delivery is protective against infant mortality overall and among African-Americans; however among Whites, there is a higher risk of IM with Medicaid paid delivery.

Public Health Implications:

1) The protective role of Medicaid status was masked by risk factors for infant mortality such as maternal smoking, preterm and medical risk factors. These issues are still pressing and will only be solved if more attention is given to the preconception physical and emotional health of women of reproductive age in Louisiana.

2) White infants whose deliveries are paid for by Medicaid are at a higher risk of IM than their African-American counterparts and should be targeted with more appropriate program interventions.

For reference or more information, please contact Dr. Akintan at Fakintan@dhh.la.gov or (504) 219-4574.

Definitions:

Preterm - Births at a gestational age less than 37 completed Weeks
Term - Birth at a gestational age of 37 completed weeks
Maternal medical risk -This includes preconception, prenatal and perinatal maternal medical diseases
Risky method of delivery-
 • Low risk = Vaginal delivery or first instrumentation or first caesarian section (C/S).
 • High risk = Repeat C/S; Repeat instrumentation; Instrumentation or Vaginal delivery after C/S
Grandmultip- A woman who has had five previous births (live or stillbirth) and is pregnant for or just had the sixth one.
Adequacy of preterm birth - Calculated using Kotelchuck index
Hospital Levels-
 There are four obstetrical levels-of-care units established: Obstetrical level I, II, III, and III regional units. Obstetrical level III and III regional units are able to provide comprehensive care for critically ill mothers and newborns both admitted and transferred from obstetrical level I and II units. Conditions which would result in the delivery of an infant weighing less than 1,259 grams or less than 30 weeks gestation shall be referred to a level III or III regional obstetrical unit unless the patients is too unstable to transport safely. The level III hospital in these profiles includes combined level III and III obstetrical units.

LOUISIANA COMMUNICABLE DISEASE SURVEILLANCE

July - August, 2007

Table 1. Disease Incidence by Region and Time Period

| DISEASE | HEALTH REGION | | | | | | | | | TIME PERIOD | | | | | |
|------------------------------|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|------------------|------------------|------------------------|------------------------|--------------|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | July-Aug 2007 | July-Aug 2006 | Jan-Dec Cum 2007 | Jan-Dec Cum 2006 | Jan-Dec % | |
| | | | | | | | | | | | | | | Chg* | |
| Vaccine-preventable | | | | | | | | | | | | | | | |
| Hepatitis B | Cases | 1 | 1 | 1 | 3 | 1 | 0 | 2 | 0 | 1 | 10 | 15 | 58 | 45 | 28.9 |
| | Rate ¹ | 0.1 | 0.2 | 0.3 | 0.6 | 0.4 | 0.0 | 0.4 | 0.0 | 0.3 | 0.2 | 0.3 | 1.3 | 1.0 | NA |
| Measles | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NA* |
| Mumps | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 2 | 2 | NA* |
| Rubella | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NA* |
| Pertussis | | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 5 | 14 | 21 | -33.3 |
| Sexually-transmitted | | | | | | | | | | | | | | | |
| HIV/AIDS | Cases ² | 14 | 7 | 4 | 5 | 3 | 1 | 1 | 6 | 1 | 42 | 198 | 559 | 708 | 21.0 |
| | Rate ¹ | 1.4 | 1.2 | 1.0 | 0.9 | 1.1 | 0.3 | 0.2 | 1.7 | 0.2 | 1.0 | 4.5 | 12.8 | 16.2 | NA |
| Gonorrhea | Cases | 481 | 335 | 172 | 356 | 83 | 120 | 393 | 216 | 128 | 2284 | 2089 | 7699 | 7268 | 5.93 |
| | Rate ¹ | 46.51 | 55.50 | 44.83 | 64.95 | 29.28 | 39.82 | 75.21 | 61.04 | 29.22 | 51.11 | 46.74 | 172.2766 | 162.63 | NA |
| Syphilis (P&S) | Cases | 31 | 8 | 3 | 14 | 0 | 2 | 10 | 2 | 7 | 77 | 63 | 290 | 163 | 77.9 |
| | Rate ¹ | 3.00 | 1.33 | 0.78 | 2.55 | 0.00 | 0.66 | 1.91 | 0.57 | 1.60 | 1.72 | 1.41 | 6.49 | 3.65 | NA |
| Enteric | | | | | | | | | | | | | | | |
| Campylobacter | | 2 | 1 | 3 | 1 | 3 | 2 | 1 | 0 | 6 | 19 | 23 | 69 | 78 | -11.5 |
| Hepatitis A | Cases | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 3 | 4 | 22 | 16 | 37.5 |
| | Rate ¹ | 0.0 | 0.0 | 0.0 | 0.4 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | 0.1 | 0.1 | 0.5 | 0.4 | NA |
| Salmonella | Cases | 31 | 17 | 26 | 43 | 9 | 3 | 7 | 7 | 44 | 187 | 195 | 499 | 631 | -20.9 |
| | Rate ¹ | 3.0 | 3.0 | 6.9 | 8.3 | 3.4 | 1.0 | 1.4 | 2.0 | 11.4 | 4.3 | 4.5 | 11.6 | 14.6 | NA |
| Shigella | Cases | 23 | 3 | 4 | 2 | 1 | 4 | 0 | 3 | 32 | 72 | 15 | 340 | 110 | 209.1 |
| | Rate ¹ | 2.2 | 0.5 | 1.1 | 0.4 | 0.4 | 1.3 | 0.0 | 0.9 | 8.3 | 1.7 | 0.3 | 7.9 | 2.5 | NA |
| Vibrio cholera | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 4 | NA* |
| Vibrio, other | | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 6 | 9 | 17 | 24 | -29.2 |
| Other | | | | | | | | | | | | | | | |
| <i>H. influenzae (other)</i> | | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 5 | 13 | -61.5 |
| <i>N. Meningitidis</i> | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 25 | 31 | -19.4 |

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.

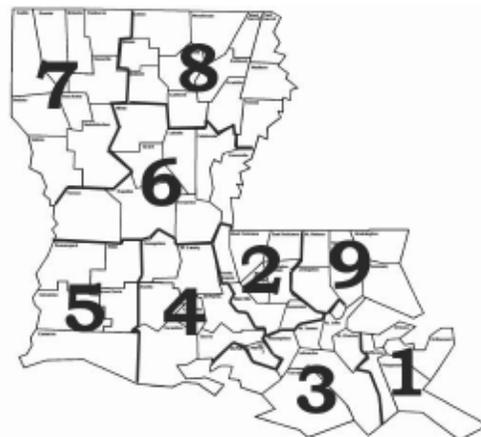
* Percent Change not calculated for rates or count differences less than 5

Table 2. Diseases of Low Frequency (January-August, 2007)

| Disease | Total to Date |
|----------------|---------------|
| Legionellosis | 3 |
| Lyme Disease | 2 |
| Malaria | 13 |
| Rabies, animal | 4 |
| Varicella | 96 |

Table 3. Animal rabies (July-August, 2007)

| Parish | No. Cases | Species |
|--------|-----------|---------|
| DeSoto | 1 | Bat |



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

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) | Hemolytic-Uremic Syndrome | Pertussis |
| Aseptic meningitis | Hepatitis A (acute disease) | Salmonellosis |
| Chancroid ¹ | Hepatitis B (acute illness & carriage in pregnancy) | Shigellosis |
| Escherichia coli, Shig-toxin producing (STEC), including E. coli O157:H7 | Hepatitis B (perinatal infection) | Syphilis ¹ |
| Hantavirus Pulmonary Syndrome | Hepatitis E | Tetanus |
| | Herpes (neonatal) | Tuberculosis ² |
| | Legionellosis (acute disease) | Typhoid Fever |
| | Malaria | |
| | Mumps | |

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) | Gonorrhea ¹ | Staphylococcal Toxic Shock Syndrome |
| Blastomycosis | Hansen Disease (leprosy) | Streptococcal disease, Group A (invasive disease) |
| Campylobacteriosis | Hepatitis B (carriage, other than in pregnancy) | Streptococcal disease, Group B (invasive disease) |
| Chlamydial infection ¹ | Hepatitis C (acute illness) | Streptococcal Toxic Shock Syndrome |
| Coccidioidomycosis | Hepatitis C (past or present infection) | Streptococcus pneumoniae, penicillin resistant [DRSP], invasive infection] |
| Cryptococcosis | Human Immunodeficiency Virus (HIV Syndrome infection) | Streptococcus pneumoniae (invasive infection in children < 5 years of age) |
| Cryptosporidiosis | Listeria | Transmissible Spongiform Encephalopathies |
| Cyclosporiasis | Lyme Disease | Trichinosis |
| Dengue | Lymphogranuloma Venereum ¹ | Varicella (chickenpox) |
| Ehrlichiosis | Psittacosis | Vibrio Infections (other than cholera) |
| Enterococcus, Vancomycin Resistant [(VRE), invasive disease] | Rocky Mountain Spotted Fever (RMSF) | |
| Giardia | Staphylococcus Aureus, Methicillin/Oxacillin Resistant [(MRSA), invasive infection] | |

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

| | | |
|--|--|--|
| Cancer | Heavy Metal (Arsenic, Cadmium, Mercury) Exposure and/or Poisoning (All ages) | Severe Traumatic Head Injury |
| Complications of Abortion | Lead Exposure and/or Poisoning (All ages) | Severe Undernutrition (severe anemia, failure to thrive) |
| Congenital Hypothyroidism ³ | Pesticide-Related Illness or Injury (All ages) | Sickle Cell Disease (newborns) ³ |
| Galactosemia ³ | Phenylketonuria ³ | Spinal Cord Injury |
| Hemophilia ³ | Reye's Syndrome | 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 web base at <https://ophrdd.dhh.state.la.us>.

¹Report on STD-43 form. Report cases of syphilis with active lesions by telephone.

²Report on CDC72.5 (f.5.2431) card.

³Report to the Louisiana Genetic Diseases Program Office by telephone at (504) 219-4413 or facsimile at (504) 219-4452.

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