Louisiana Morbidity Report

Louisiana Office of Public Health - Epidemiology Section
P.O. Box 60630, New Orleans, LA 70160 (504) 568-5005

May-June 1998 **Volume 9 Number 3**

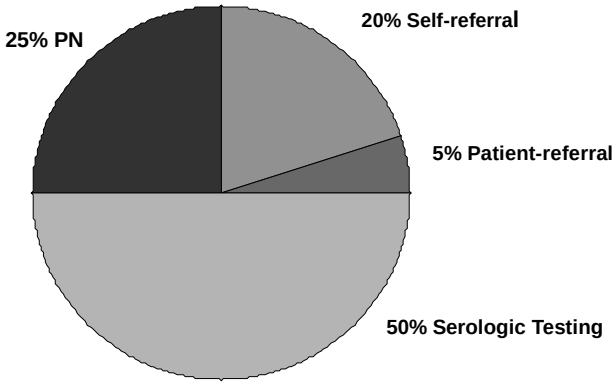
Usefulness of Partner Notification for Syphilis Prevention in Louisiana

Rates of syphilis are now at historic lows, and a national effort to eliminate syphilis is being considered. A major component of syphilis prevention is notification of sex partners of infected persons about their need for examination and preventive treatment. Syphilis is particularly well-suited for partner notification because its long incubation period allows time for contacts of cases to be located and treated before becoming infectious. At the time of diagnosis, patients are assigned to Disease Intervention Specialists (DIS), who then educate the patient about the disease and elicit information about contacts during the following interview process. The DIS then attempt to locate, examine and provide curative or preventive treatment for these contacts.

In order to evaluate the partner notification process and its usefulness as syphilis rates have declined in recent years, the STD control program analyzed patient interview records collected during 1993-1996. During these years, DIS interviewed 12,927 persons with syphilis. Twenty-five percent of these persons were themselves detected through partner notification (Figure 1). The 12,927 cases named a total of 29,248 contacts (mean of 2.3 contacts per case). Most of the named contacts were sex partners (1.9 per case), but a smaller group were other contacts, who were not sex partners, but were felt to be at risk (0.34 per case). Logically, every adult case with syphilis must have had at least one infected partner (his/her source of infection). Thus, the completeness of partner notification efforts can partly be measured by the proportion of cases who named at least one infected contact. The data analyzed showed that only 55% of all cases named at least one infected contact, indicating that there must be many unnamed contacts.

DIS were able to locate and examine 78% or 22,825 of these contacts (Figure 2). Fifty-nine percent of the examined contacts tested negative for syphilis. Preventive treatment was provided to 74% of those who tested negative. Forty-one percent of the located and examined contacts had syphilis, including 23% who had previously been treated for this infection and 18% who were newly identified as infected through the partner notification process.

Figure 1: Means of syphilis case identification in Louisiana, 1993-1996



PN = Partner notification

The timeliness of partner notification is of particular importance with regard to the potential of aborting incubating syphilis. During the 4 years analyzed, 51% of all contacts were examined within 21 days after the original case was assigned to a DIS; that is within the mean incubation period for syphilis.

In conclusion, partner notification in Louisiana is effective in identifying and treating many persons with syphilis. It is also likely that many infected contacts are treated with antibiotics before they become contagious, thus possibly interrupting transmission. Clearly, partner notification will continue to play an important role in syphilis control.
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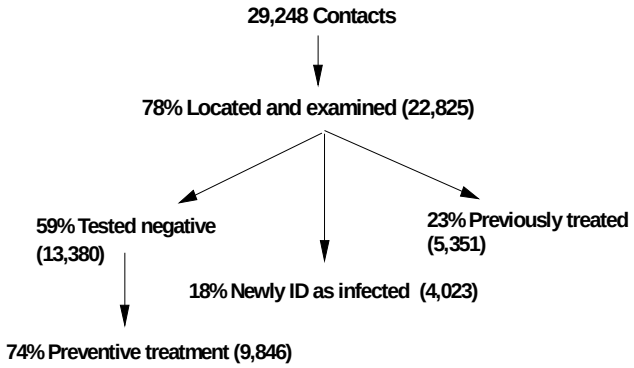
Usefulness of Partner Notification...(Cont.)

However, partner notification has inherent limitations, particularly regarding the problem of unnamed partners. Further strategies will be needed to complement this strategy in order for syphilis to be eliminated as a public health problem.

Figure 2: Outcome of syphilis contact investigations in Louisiana, 1993-1996



ID = Identified

Methyl Parathion in Louisiana Houses

Since November of 1996, the Section of Environmental Epidemiology and Toxicology has been working with the Environmental Protection Agency, the Agency for Toxic Substances and Disease Registry, and the CDC in a statewide effort to protect public health from indoor exposure to methyl parathion. Methyl parathion is an insecticide intended solely for use by licensed applicators on outdoor crops. However, in Louisiana and other states, methyl parathion has been misapplied indoors by residents and unlicensed applicators in an effort to kill cockroaches and other pests. Children under the age of sixteen, pregnant women, and immunocompromised individuals are most at risk for developing side effects from exposure to methyl parathion. Health effects from low levels of exposure include nausea, dizziness, and headaches. Loss of consciousness and even death have been reported as a result of high level exposure to methyl parathion.

In Louisiana, more than 1500 homes, including several businesses and a daycare center, were sampled for methyl parathion by the Louisiana Department of Agriculture and Forestry from November of 1996 to December of 1997. Most of the homes sampled were located in Tangipahoa and Orleans Parish. Of the residences sampled statewide, 434 had levels of methyl parathion detected high enough (> 15 µg/100 cm³) to warrant further public health action (Table). One hundred seventy-eight of these homes with high levels of the insecticide were renovated.

Overall, more than 1100 residents, including 513 children and 16 pregnant women, have been screened for methyl parathion exposure around the state. Based on results from environmental sampling and urine testing, 73 residents from 25 homes have been included in a year-long urine monitoring program. No persons to date have shown any adverse health effects that can be clearly linked to the methyl parathion.

For additional information on the Methyl Parathion Program, please contact the Section of Environmental Epidemiology and Toxicology at 504-568-8537.

Table: Number of sampled residences with >15µg/100 cm³ of methyl parathion, by parish, November, 1996 - December, 1997

Parish	No. of Residents
Caddo	13
Catahoula	3
E. Eaton Rouge	3
Jefferson	62
Lafourche	5
Livingston	4
Madison	1
Orleans	91
Ouachita	1
Rapides	57
St. Charles	10
St. John	1
St. Tammany	1
Tangipahoa	124
Terrebonne	58
Total	434

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Surveillance for Influenza A, Subtype H5N1, in Louisiana

The Hong Kong Department of Health, in collaboration with CDC and the World Health Organization, is continuing the investigation of an outbreak of avian influenza A subtype H5N1. This avian strain of influenza has not previously been known to infect humans. Surveillance among poultry indicates that since March, 1997, outbreaks of influenza A (H5N1) have occurred in poultry farms in Hong Kong and among chickens imported into Hong Kong from southern China. As of January 15, 1998, nineteen cases of influenza A (H5N1) have been identified in Hong Kong. Six of 18 laboratory-confirmed cases have died (33%) and two laboratory-confirmed case patients remain critically ill. With the exception of one case diagnosed in May, 1997, all cases have occurred in November and December, 1997. No human case of H5N1 influenza has been identified outside of Hong Kong.

The Centers for Disease Control has recommended that OPH institute surveillance for importation of influenza A subtype H5N1 in Louisiana. The Epidemiology Section is requesting that the medical community remain vigilant for patients who are hospitalized with severe influenza illnesses after traveling to either Hong Kong or southern China. Since the influenza season in Hong Kong peaks in both March and July, the following surveillance protocol should be continued until at least August, 1998:

A. Viral cultures should be obtained from patients who meet ALL of the following criteria:

1. Age ≥1 year and ≤60 years,
2. Initial presentation of an influenza-like illness (temperature greater than 100 degrees F and symptoms of cough or sore throat),
3. Hospitalization with unexplained viral or interstitial pneumonia or Adult Respiratory Distress Syndrome (ARDS), and
4. Symptom onset within 10 days of having been in Hong Kong or southern China.

B. Immediately contact the Immunization Program at (504) 483-1900 to report any suspect case that meets the criteria listed above.

C. Obtain a nasopharyngeal or throat swab for viral culture. A rapid antigen test for influenza A should not be obtained in place of a viral culture since the rapid antigen test has a low sensitivity and culture is required for subtyping to identify H5N1 viruses.

Dacron swabs with a plastic or wire shaft should be used to collect specimens, which must be immediately placed in viral transport media. All specimens must be kept refrigerated (but not frozen), after collection and during transport to a virology laboratory.

Please contact the virology laboratory to establish a procedure for prompt transport and processing of the specimen. Same-day delivery of specimens is urged; if this is not possible, then overnight storage and next-day shipment at 4 degrees C (39.2 degrees F) is acceptable. Longer delay may result in loss of the virus, which could reduce the chance of viral detection.

Please mark the requisition slip as follows: **"INFLUENZA-LIKE ILLNESS WITH RECENT TRAVEL TO HONG KONG OR SOUTHERN CHINA".**

If the culture is positive for influenza A, the Office of Public Health will assist in arranging for transport to a laboratory with the capacity for influenza subtyping.

Please share this information with clinical staff in Emergency Medicine, Family Practice, Internal Medicine, Laboratory Medicine, Pediatrics, and Obstetrics/Gynecology.

If you have any questions, please call the Immunization Program at (504) 483-1900.

Reminder

In the fall of 1998 a complete series of hepatitis B vaccination will be required for school and day care center registration. For additional information/assistance please call the Immunization Program at 504-483-1900.

Emerging Pathogens Surveillance

Emerging Pathogens Surveillance Program aggregate laboratory data from selected hospitals in Louisiana, July-December, 1997

State	Penicillin resistant *Streptococcus pneumoniae*	Methicillin resistant *Staphylococcus aureus*	Vancomycin resistant *Enterococcus* species
# Resistant isolates	103	1400	106
Total isolates	524	5095	4012
% Resistant	20%	27%	3%

Hepatitis C Virus Infection - A National Plan

Recommendations by the Public Health Service Advisory Committee on Blood Safety and Availability have led to the design of a national plan to identify persons who may have become infected with hepatitis C virus (HCV) through transfusion of HCV-contaminated blood and blood products. Such identification provides these people with the opportunity to be evaluated for chronic liver disease and possible treatment, to be counseled on avoiding potential hepatotoxins, such as alcohol, and to be counseled on how to reduce their risk of transmitting HCV to others.

The national plan is aimed at identification of the broader population of persons at highest risk for HCV infection and at reducing transmission in groups at high risk of infection. Those at highest risk for whom routine screening will be recommended are persons who 1) received a transfusion of blood or blood products or had a solid organ transplant prior to 1992; 2) received clotting factor concentrates before 1987; 3) ever injected illicit drugs (even those who indulged in infrequent recreational use many years ago); or 4) have ever been on chronic hemodialysis (Table).

Recommendations call for the direct notification (targeted lookback) of prior blood recipients of donors testing positive for antibody to HCV (anti-HCV) by second generation screening and supplemental tests. In addition, they call for a public and provider education effort directed at recipients of blood transfused prior to full implementation of second generation testing (about June 1992), as well as for other persons at risk of HCV infection. Both the direct and public notification will include messages about the need for testing, counseling, and medical evaluation of infected persons.

CDC will work with State Health Departments to develop approaches and identify resources to support the implementation of these recommendations in the public sector. Initial activities will focus on the targeted lookback activities. Until programs to support these activities are established, persons seeking testing for hepatitis C should be referred to their usual provider of medical care.

Public Service Announcements for the targeted lookback are scheduled to begin in July, 1998. CDC broadcasts by teleconference targeting physicians and public health professionals with updated information on screening, diagnosis, clinical management, and prevention of hepatitis C will begin in November, 1998.

If you have questions or need additional information, please contact the CDC Hepatitis Branch by telephone at 404-639-2709, or by fax at 404-639-1538.

Table: Screening Recommendations for HCV Infection

Screening Recommended		**Routine Screening Not Necessary**	
Lifetime Risk History	**Average Prevalence**	**Lifetime Risk History**	**Average Prevalence**
Routine		• Persons with multiple sex partners	4%
• Injection drug users (even one time)	50%-90%	• Men who have sex with men	
• Recipient of clotting factor concentrates before 1987, such as hemophiliacs	90%	• Health-care workers	3%
		• Pregnant women	≤1%
		• Household contacts of infected persons	≤1%
• Blood and solid organ transplant recipients before June 1992	6%	• Persons who were tattooed or had pierced body parts	0%-4%
• Chronic hemodialysis patients	10%-20%		No data
Exposure Management			
• Sex partner of infected person	<1%-5%		
• Infants ≥ 12 months of age born to infected women	Unknown (5% incidence)		
• Health care worker after percutaneous or permucosal exposure to anti-HCV positive blood	(2% incidence)		

Centers for Disease Control and Prevention (January 1998)

AIDS UPDATE
The Impact of Protease Inhibitors on Selected Opportunistic Infections

Protease inhibitors have been reported to be effective in slowing disease progression among HIV-infected individuals. To determine the effectiveness of these drugs in actual use in Louisiana, the HIV Outpatient Clinic (HOP) research division conducted a retrospective cohort study of HIV-infected persons with CD4+ counts below 200 cells/ mm^3 attending the HOP in New Orleans. In this study, the incidence of selected opportunistic processes and mortality were compared for the 24 months before and the 24 months after the availability of protease inhibitors.

The majority of the individuals in both the pre- and post-group were male, between the ages of 22 and 35 years at time of entry into the clinic, and African-American. Although only an estimated 56% of individuals in the post-group were being treated with protease inhibitors, there were significant decreases in the incidence densities of several opportunistic processes and mortality (Table). Mortality decreased by nearly 40% and the incidence of PCP declined by 17%. The introduction of protease inhibitors to a clinic can have a dramatic effect on the overall morbidity and mortality of the population. Protease inhibitors are likely to have an overall cost-benefit.

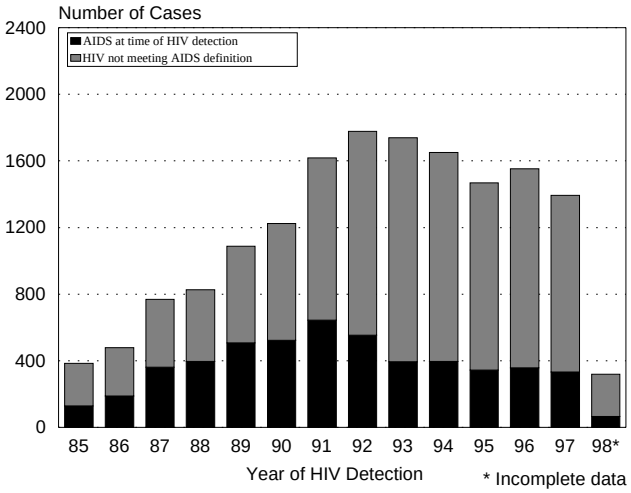
Table : Incidence densities of pre- and post-groups with regard to mortality and selected opportunistic processes

	Incidence* (per 1000 persons)			
	Pre-Protease Inhibitors	Post- Protease Inhibitors	Rate Ratio	p-value
Mortality	15.0	9.08	0.61	p<0.01
Pneumoncystis Carinii Pneumonia**	8.73	6.38	0.73	p<0.01
Kaposi Sarcoma	2.13	1.13	0.53	p<0.01
Wasting Syndrome	3.97	2.72	0.69	p<0.01
Mycobacterium Avium Complex	3.99	2.76	0.69	p<0.01
Cytomegalovirus Retinitis	2.13	1.44	0.68	p<0.05
Dementia	2.02	1.42	0.70	p<0.10
Candida Esophagitis**	4.89	3.93	0.80	p<0.10
Cryptosporidiosis	1.99	1.44	0.72	p<0.10
Toxoplasmosis	1.45	1.05	0.72	p<0.20
Cryptococcal Meningitis	1.41	1.23	0.87	p<0.55

* Calculated as the number of individuals diagnosed with opportunistic process during the 24-month interval divided by the person-months of those at risk during the 24-month interval.

**Treated as an episodic opportunistic process.

HIV/AIDS CASE TRENDS



Comment:

Consistent with the changing HIV/AIDS epidemic, the monitoring of HIV/AIDS data has moved toward the surveillance of HIV. In this and future editions of the Louisiana Morbidity Report, the graph on the left will reflect all HIV and AIDS cases by year of HIV detection rather than only persons with full-blown AIDS. These cases are stratified by those who did and did not meet an AIDS defining criteria at the initial time of HIV detection.

AIDS case counts will continue to be represented in the Provisional Data provided on the following page.

LOUISIANA COMMUNICABLE DISEASE SURVEILLANCE
May -June, 1998
PROVISIONAL DATA

Table 1. *Disease Incidence by Region and Time Period*

DISEASE	HEALTH REGION 1	2	3	4	5	6	7	8	9	TIME PERIOD May June 1998	May June 1997	Cum 1998	Cum 1997	% Chg
Vaccine-preventable														
H. influenzae	1	1	0	0	0	0	1	0	0	3	2	17	7	+143
Hepatitis B Cases	7	1	1	1	0	1	1	0	5	17	25	54	79	-32
Rate[1]	0.7	0.2	0.3	0.2	-	0.3	0.2	-	1.3	0.4	0.6	1.3	1.8	
Measles	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Mumps	0	1	0	0	0	0	0	0	0	1	1	5	11	-55
Rubella	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Pertussis	1	0	0	0	1	0	0	1	0	3	4	3	12	-75
Sexually-transmitted														
AIDS Cases	61	27	8	9	8	3	7	5	5	133	154	461	573	-20
Rate[1]	5.6	4.9	2.1	1.8	3.0	0.9	1.4	1.4	1.4	3.1	3.6	10.7	13.3	
Gonorrhea Cases	568	272	107	184	84	73	416	147	82	1933	1786	5588	4364	+28
Rate[1]	54.7	47.9	28.4	35.7	31.3	23.9	82.2	41.9	21.3	45.8	42.3	132.4	103.4	
Syphilis(P&S) Cases	28	6	18	1	1	1	2	2	6	66	62	170	197	-14
Rate[1]	2.7	1.1	4.8	0.2	0.4	0.3	0.4	0.6	1.6	1.6	1.5	4.0	4.7	
Enteric														
Campylobacter	0	2	4	1	0	0	0	0	3	10	38	43	71	-39
Hepatitis A Cases	3	1	1	0	1	0	2	10	0	18	31	47	117	-60
Rate[1]	0.3	0.2	0.3	-	0.4	-	0.4	2.8	-	0.4	0.7	1.1	2.7	
Salmonella Cases	22	16	19	3	8	4	13	9	22	120	70	181	146	+24
Rate[1]	2.1	2.8	5.0	0.6	3.0	1.3	2.6	2.6	5.7	2.8	1.6	4.2	3.4	
Shigella Cases	16	1	0	1	2	0	3	0	2	26	16	98	61	+61
Rate[1]	1.5	0.2	-	0.2	0.7	-	0.6	-	0.5	0.6	0.4	2.3	1.4	
Vibrio cholera	0	0	0	0	0	1	0	0	0	1	0	1	0	-
Vibrio, other	3	0	6	0	0	0	0	0	1	10	3	14	3	+367
Other														
N. Meningitidis	0	1	1	0	2	0	0	0	1	5	10	37	40	-8
Tuberculosis Cases	24	3	3	6	8	2	4	1	4	55	37	170	85	+100
Rate[1]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.9	2.0	

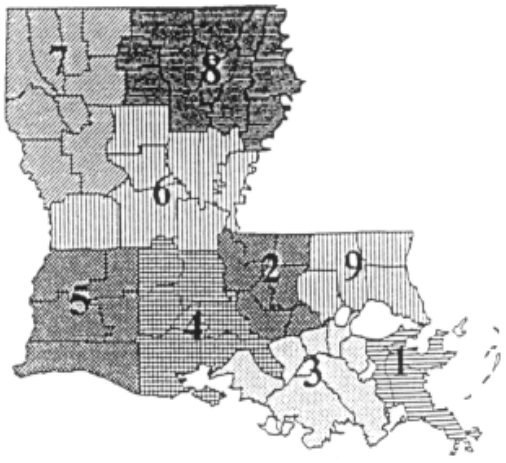
1 = Cases per 100,000

Table 2. *Diseases of Low Frequency*

Disease	Total to Date
Blastomycosis	1
E. coli 0157:H7	3
Histoplasmosis	1
Lead Toxicity	17
Varicella	126
Rocky Mountain Spotted Fever	0
Legionellosis	2
Lyme Disease	0
Malaria	4
Tetanus	1

Table 3. *Animal Rabies (May - June, 1998)*

Parish	No. Cases	Species
Caddo	1	Bat



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Annual Summary Early Syphilis 1997

In 1997, the number of early syphilis cases reported in Louisiana was 911, a 39% decrease from 1996, a 65% decrease from 1995, and a 77% decrease from 1994 (Figure 1). Louisiana's case rate for early syphilis in 1997 was 22 per 100,000, and the case rate for primary and secondary (P&S) syphilis was 8.6 per 100,000, compared to a rate of 4.3 per 100,000 in the U.S. in 1996. Sex-race specific rates were higher among African-American females (68 per 100,000) and African-American males (61) when compared to White males and White females (2). Cases of early syphilis by age and gender continued to cluster in the 20-34 year age groups (51%), which has been a consistent trend in previous years (Figure 2). Parishes reporting the highest case rates per 100,000 included: Morehouse (59), Franklin (58), Orleans (50), Tangipahoa (47), Iberville (45), St Charles (42), and West Baton Rouge (41; Figure 3).

Comment:

Syphilis rates continue to drop rapidly in Louisiana and in the U.S. as a whole. The cause for the decrease is not entirely clear, but may be related to improved health care access by persons at risk, increased attention to STDs by public health programs, or decreases in risk behavior in response to the HIV epidemic. The rates in Louisiana and the U.S. are now at historic lows, prompting a national discussion of a plan for elimination of syphilis in the U.S. The long-term benefits of syphilis elimination, measured in both decreases in the complications of syphilis and decreases in HIV transmission through removal of this "cofactor", make elimination a worthwhile goal, even if it becomes increasingly costly to find and treat the increasingly uncommon cases of syphilis. Louisiana will be participating in syphilis elimination activities as this national program is developed.

Figure 1: Cases of early syphilis by year, 1988-1997

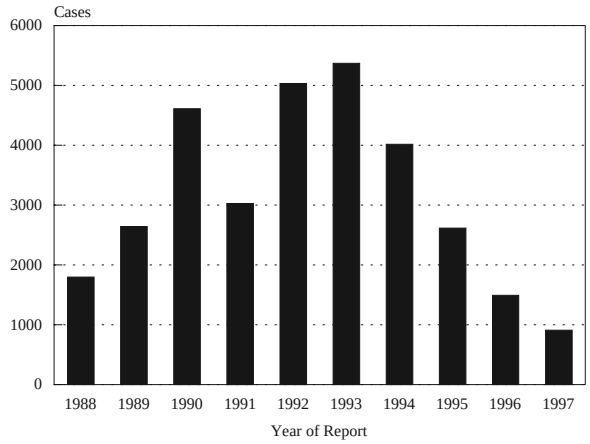


Figure 2: Cases of early syphilis by sex and age groups, Louisiana 1997

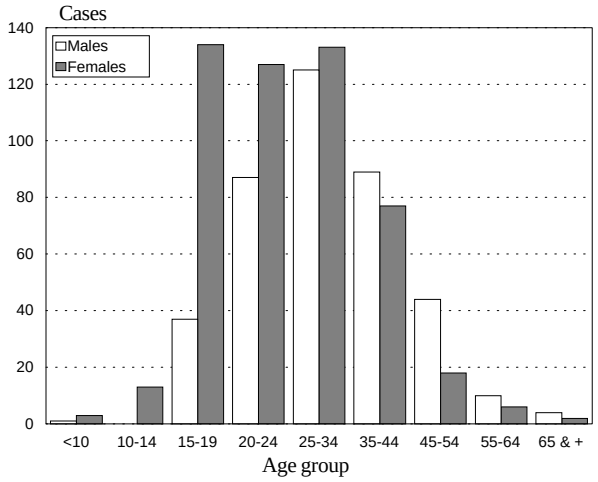
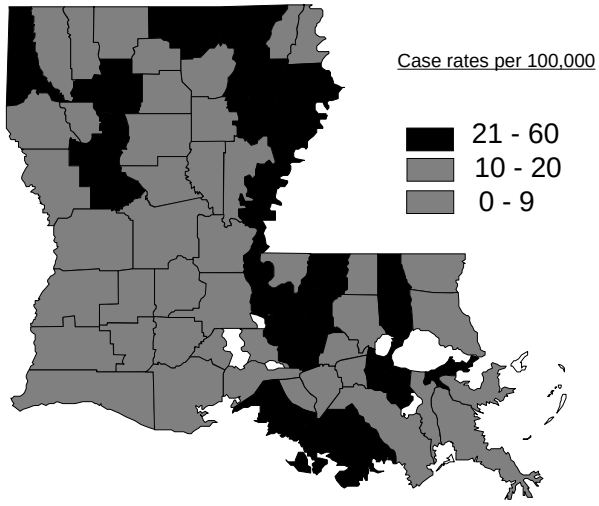


Figure 3: Early syphilis by parish, 1997



Louisiana Fact

Because of violations to the 1900 law requiring all physicians and midwives to make quarterly reports of births and deaths, changes were made to the Sanitary Code in 1911. A central bureau of vital statistics was placed under the State Registrar appointed by the State Board of Health. The Registrar, who received a four year appointment, was required to be a member of the medical profession and a competent vital statistician. The State Board was assigned responsibility for providing the new bureau with clerical and other assistants as well as office with a fireproof vault and filing cabinets. The state was divided into registration districts. Only when a state reported 90% of births and deaths would the United States Census Bureau include the state in its Registration Area. After extensive efforts at enlisting support from newspaper editors, police juries, parish health officers, and commercial organizations, Louisiana succeeded in gaining national registration status in 1915.

LIST OF REPORTABLE DISEASES/CONDITIONS

REPORTABLE DISEASES

Acquired Immune Deficiency Syndrome (AIDS)
Amebiasis
Arthropod-borne encephalitis (Specify type)
Blastomycosis
Botulism[1]
Campylobacteriosis
Chancroid[2]
Chlamydial infection[2]
Cholera[1]
Cryptosporidiosis
Diphtheria
Enterococcus (infection; resistant to vancomycin)
Escherichia coli 0157:H7 infection
Gonorrhea[2]
Haemophilus influenzae infection[1]
Hemolytic-Uremic Syndrome
Hepatitis, Acute (A, B, C, Other)
Hepatitis B carriage in pregnancy
Herpes (neonatal)
Human Immunodeficiency Virus (HIV) infection[3]
Legionellosis
Lyme Disease
Lymphogranuloma venereum[2]
Malaria
Measles (rubeola)[1]
Meningitis, other bacterial or fungal
Mumps
Mycobacteriosis, atypical[4]
Neisseria meningitidis infection[1]
Pertussis
Rabies (animal & man)
Rocky Mountain Spotted Fever (RMSF)
Rubella (German measles)
Rubella (congenital syndrome)
Salmonellosis
Shigellosis
Staphylococcus aureus (infection; resistant to methicillin/ oxacillin or vancomycin)
Streptococcus pneumoniae (infection; resistant to penicillin)
Syphilis[2]
Tetanus
Tuberculosis[4]
Typhoid fever
Varicella (chickenpox)
Vibrio infections (excluding cholera)[1]

OTHER REPORTABLE CONDITIONS

Cancer
Complications of abortion
Congenital hypothyroidism*
Galactosemia*
Hemophilia*
Lead Poisoning
Phenylketonuria*
Reye' Syndrome
Severe traumatic head injury**
Severe under nutrition (severe anemia, failure to thrive)
Sickle cell disease (newborns)*
Spinal cord injury**
Sudden infant death syndrome (SIDS)

[1] Report suspected cases immediately by telephone. In addition, all cases of rare or exotic communicable diseases and all outbreaks shall be reported.
[2] Report on STD-43 form. Report cases of syphilis with active lesions by telephone.
[3] Report on EPI-2430 card. Name and street address are optional but city and ZIP code must be recorded.
[4] Report on CDC 72.5 (f. 5.2431) card.

*Report to the Louisiana Genetic Diseases Program Office by telephone (504) 568-5070 or FAX (504) 568-7722.
** Report to Injury Research & Prevention Section (504-568-2509).

Numbers for reporting communicable diseases

1-800-256-2748 Local # 568-5005 FAX # 504-568-5006

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