

Louisiana Morbidity Report

Louisiana Office of Public Health - Epidemiology Section
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May-June 1997

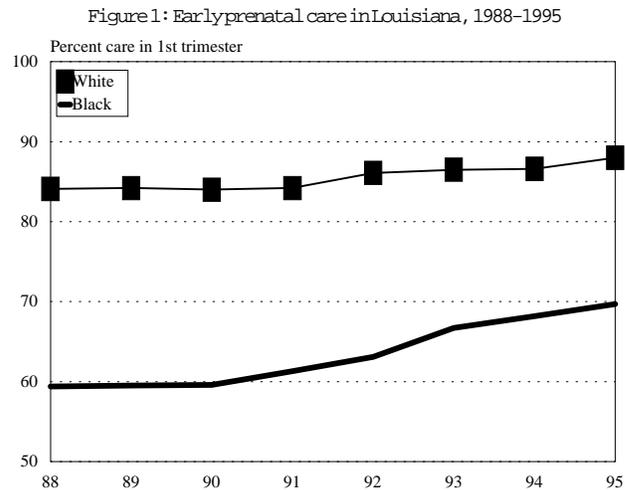
Volume 8 Number 3

Prenatal Care and Infant Mortality

Infant mortality rates in Louisiana are declining slowly. During the last five years, the percent of pregnant women receiving early prenatal care in Louisiana has risen, however, it appears that factors other than early prenatal care underlie at least part of the decline in infant mortality. These factors may be useful in further decreasing infant mortality.

Between 1990 and 1995, the percent of women receiving prenatal care in the first trimester increased from 73% to 80%. This increase was more marked among black women (from 60% to 70%) but was seen in white women as well (from 84% to 88%; Figure 1). These increases may be due to changes in Medicaid eligibility rules during pregnancy which allowed more low- and moderate-income women access to medical insurance. In addition, a statewide media campaign entitled "Partners for Healthy Babies", which began in late 1993 and emphasized early prenatal care, may have contributed to this increase.

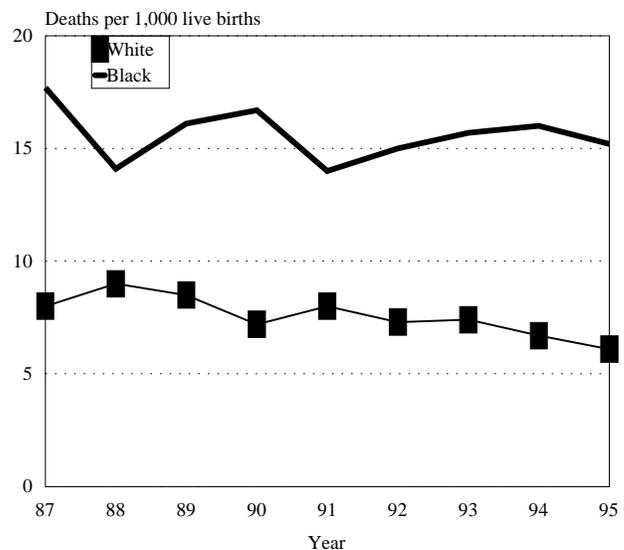
Early initiation of prenatal care is associated in retrospective studies with improved pregnancy outcomes, specifically, improvements in the incidence of low birth weight and infant mortality. Because of this, the increases in use of early prenatal care might be expected to be associated with declines in infant mortality. Between 1990 and 1995 statewide infant mortality rates did decline from 11.0 to 9.7 per 1,000 live births, however the declines were primarily among white women, and infant mortality rates among black women (who showed the greatest increases in early prena-



tal care) did not show a consistent decline (Figure 2). In these years the gap between white and black women in infant mortality rates increased: in 1995 black infants died at a rate 2 1/2 times that of white infants (15.2 versus 6.1). Infant mortality rates were highest in the northeast region of the state (Figure 3).

The two main factors influencing infant mortality are low birth weight (which is itself related to multiple factors such as maternal substance use, unintended pregnancies, *(Continued on next page)*

Figure 2: Infant mortality in Louisiana 1987-1995



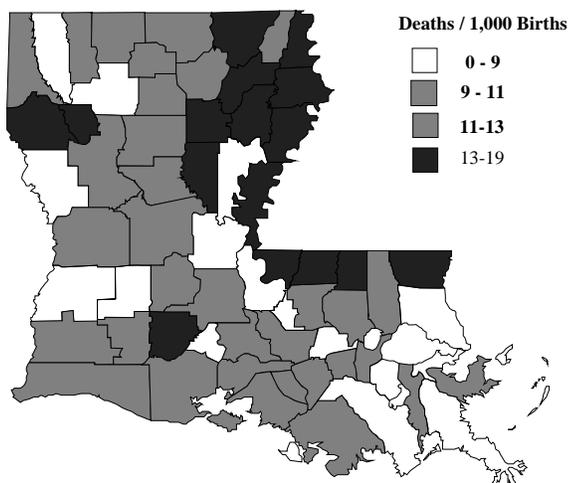
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Prenatal Care and Infant Mortality (Cont.)

genital infections, and low pre-pregnancy weight) and neonatal care of low-birth weight infants. Much of the improvements in infant mortality rates nationally in the last 20 years have been attributed to improvements in neonatal care of low-birth-weight infants. Prenatal care has many benefits, including medical interventions, promotion of healthy behaviors, and assessment of risk followed by referral for specific health problems or for the possibility of perinatal complications. If improvements in neonatal care of low-birth weight infants is a major factor in recent decreases in infant mortality, then one of the key benefits of early prenatal care is identification and referral of pregnant women at increased risk of delivering infants of low birth weight, so that these women can deliver in hospitals best equipped to manage them. With early prenatal care becoming more common in Louisiana, there is a greater opportunity to identify and refer as needed women at high risk. As health care systems deliver change in Louisiana, referral systems should be established in such a way to maximize this benefit to decrease infant mortality, especially in the areas of the state with currently high infant mortality rates.

Figure 3: Five-year average infant mortality rates by parish, 1991-95



Domestic Violence and Sexual Abuse Project

Sexual assault and physical violence can have a severe detrimental effect on women's safety and reproductive and sexual health. Physical and sexual violence undermine women's belief in their own competence and have been linked to adolescent and unintended pregnancy, sexually transmitted disease, high risk sexual behavior, coercive sexual acts, and difficulty negotiating and using contraceptive methods. In an effort to better understand the prevalence of violence and abuse among users of public family planning clinics, and the consequences on reproductive

health, The Family Violence and Sexual Abuse Project was initiated by the DHHS Region VI (Arkansas, Louisiana, New Mexico, Oklahoma, and Texas), Regional Program Advisory Committee.

Between October 1994 and May 1995, 2,226 clients from fourteen clinics in these five states participated in an anonymous needs assessment survey of their sexual experiences and service needs. Reports of sexual abuse and physical violence were common in all clinics, but somewhat less common in the two clinics in which the survey was conducted in Louisiana. Some form of sexual abuse was reported by 26% of women in Louisiana and 38% of women overall. In Louisiana and in the overall multi-state survey there were frequent reports of forced intercourse (21% and 26%, respectively), attempted rape (15% and 18%), molestation before age 12 (14% and 18%), physical abuse as a child (7% and 9%) and physical or sexual abuse in the past year (7% and 9%).

Among the women in Louisiana, 26% used birth control at least half of the time in the previous three months, 27% reported having had a sexually transmitted disease ever (6% in the last year) and 6% reported substance abuse in the last year. It was expected that victims would be less successful than non victims to practice effective contraception and avoid STDs. However, multivariate analysis showed that victim status was not one of the most powerful predictors of difficulty contracepting and avoiding STDs. Overall, recent domestic violence/sexual abuse was significantly associated with: age < 20 (odds ratio [OR] 2.2), having been raped more than a year prior to completing the assessment (OR

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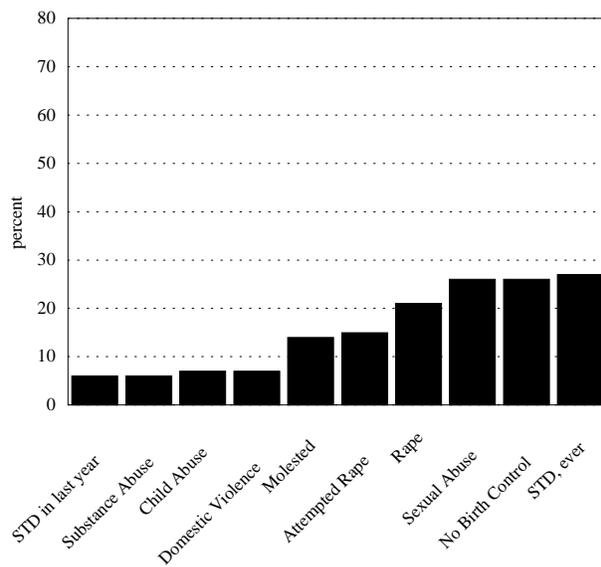
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Figure: Prevalence of domestic violence/sexual abuse and reproductive health consequences in Louisiana, October 1994-1995 (N=654)



2.11), substance abuse within the past year (OR 2.2), physical abuse as a child (OR 1.9), and having been told by a partner that she could not do things (OR 3.2) or could not use birth control (OR 2.2).

Because of the way the survey was conducted, it is possible that women who had been subject to physical or sexual abuse were more likely to respond to the survey, so the estimates of abuse may be somewhat overstated. On the other hand, there may be a tendency to under-report physical and sexual abuse. In any case, the very high frequency of these problems indicates that health care providers should be aware of them and act in ways to help patients with them. The lessons learned from this project include the following:

1. Clients genuinely appreciate the opportunity to disclose violence and abuse experiences in a supportive, knowledgeable environment and respond readily to sensitive questioning and referrals.
2. Local capacity to deliver violence/abuse related services must be assessed and ensured prior to eliciting patient information related to their experiences.
3. Clinic staff reported more comfortable relationships develop with patients who disclose information, allowing for potential improvements in reproductive services and outcomes.

Health care providers wishing to enhance their own or their clinic's ability to assess, care for, and respond to problems of victims of sexual or physical abuse, or learn more about efforts being made in Louisiana, are encouraged to call the Family Planning Program at (504) 568-5330.

Varicella Vaccine Now Available at Health Units

Vaccine against chickenpox (varicella) is now available through public health units statewide. The new vaccine, Varivax, is recommended for immunization of children in the 12-23 month age group and for adolescents 11-12 years who have no history of previous varicella disease.

Varivax is a live virus vaccine and has been shown to be very effective in providing protection against varicella. In clinical trials, 1-3% of immunized children developed breakthrough infections, and most breakthrough cases were mild. Vaccine side effects include local reactions such as pain, soreness and redness seen in 19-24% of recipients. A varicella-like rash at the injection site was reported in 3% of children. A generalized rash was reported in 4-5% of recipients. Varicella zoster (shingles) has also been reported in vaccinated children, but occurred 4-5 times less frequently than in those who had natural infection. Zoster was also noted to be milder in those who had been vaccinated, and was not associated with post-herpetic neuralgia.

Chickenpox is generally mild and self-limited in healthy children, but complications can be severe. Approximately 3 in every 1000 cases are hospitalized for complications such as secondary bacterial infections, pneumonia, and encephalitis. Each year, 50-100 deaths are reported from varicella in the U.S., most of which occur in immunologically normal children and adults. Groups with increased risk of complications include adults, immunocompromised individuals, and newborns infected shortly before or after delivery.

At this time, there are no plans for routine immunization of other childhood age groups or adults through the public health units. It is recommended, however, that adults with no history of varicella disease who are in high-exposure professions (health care workers, teachers, and day care workers, etc.) should be urged to seek vaccination through private medical sources, since varicella in adults has a high rate of complications.

Varicella was added to the list of reportable diseases as of January 20, 1997. Now that a vaccine has become available, conducting surveillance to track the incidence of varicella infections is important. It will allow the health department to monitor and compare progress toward elimination (similar to the recent success of *Haemophilus influenzae* type b infections). Because the current incidence remains high, the submission of aggregate data (i.e., total case counts) will be sufficient. As the levels of immunization against varicella increases, hopefully, causing a decrease in cases, additional data will be requested. Please call the Epidemiology Section at 504-568-5005 if you have any questions.

Methyl Parathion Environmental Assessments

In November of 1996, the Section of Environmental Epidemiology and Toxicology began working in conjunction with other state and federal agencies on a statewide program to reduce household exposure to methyl parathion. Methyl parathion is an insecticide intended solely for outdoor use on farm crops but many Louisiana residents and illegal pesticide applicators have sprayed it in homes as a means of roach control. Outdoors, it breaks down fairly quickly due to sunlight, soil microbes, and other environmental factors. However, when sprayed in homes, it remains much longer. Depending on the concentration of the application, it can remain on sprayed surfaces for years.

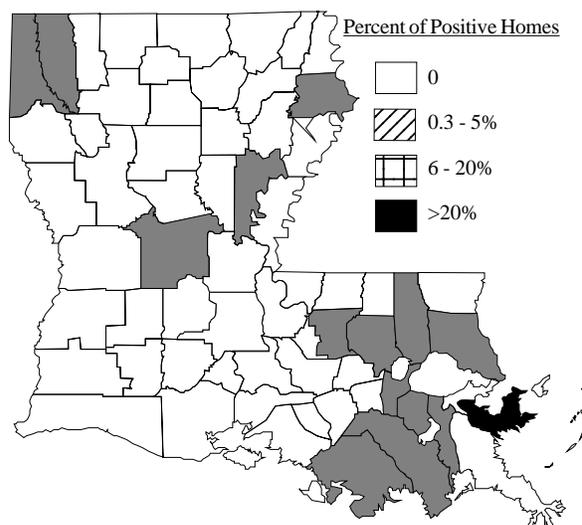
Methyl parathion enters the body primarily through dermal contact. Loss of consciousness, dizziness, and even death have been reported as a result of high level exposure to methyl parathion. There is little information available regarding health effects associated with low level, chronic exposure, however, low levels of exposure have reportedly caused symptoms such as headache, nausea, and blurred vision. Children under 15, pregnant women, adults over 65, and immunocompromised patients are most at risk to the harmful effects of methyl parathion.

To date, there have been over 1,583 residences in Louisiana sampled for methyl parathion. Homes were sampled based on reports of methyl parathion house spraying. Of these, 300 (19%) had detectable levels. There were a total of 180 (11.3%) homes with concentrations of the pesticide high enough to potentially cause adverse health effects in exposed individuals. To date, no serious health effects have been identified from any of the residents in these homes. To protect the health of the residents in these homes, they were relocated by the U.S. Army Corps of Engineers while their homes were remediated by the Environmental Protection Agency (EPA). Eighty-two percent of the houses with detectable levels of methyl parathion have been reported from four parishes: Orleans (27%), Terrebonne (19%), Jefferson (18%), and Tangipahoa (18%; Figure).

The initial governmental response to the methyl parathion problem was to base decisions on relocation on the levels of methyl parathion in the houses. However, preliminary data failed to show a correlation between methyl parathion levels in the home and urine levels of metabolite of methyl parathion in household members. In the absence of site-specific correlations, the agencies involved recommended that urine levels should become the prime determinant for decision-making regarding intervention and cleanup.

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

Figure: Percent of homes detected with methyl parathion by parish, 1997



Availability of Diphtheria Antitoxin Through an Investigational New Drug Protocol

Although diphtheria is a rare disease in the United States, access to diphtheria antitoxin (DAT) is essential to ensure effective treatment of a case. The previously available supply of U.S.-licensed DAT (Diphtheria antitoxin, Equine, Connaught Laboratories, Inc., Swiftwater, Pennsylvania) had an expiration date of January 6, 1997, and should no longer be used. No manufacturer has announced an intention to license a DAT product in the United States.

A DAT product (i.e., Diphtheria Antitoxin, Pasteur Merieux, Lyon, France), licensed in Europe and similar to the previously licensed U.S. product, is now available in the United States through an Investigational New Drug (IND) protocol through CDC. This protocol is designed to enable the emergency treatment of patients with suspected diphtheria. Decisions to dispense DAT from U.S. Public Health Service quarantine stations will be made by medical epidemiology staff of CDC's Child Vaccine Preventable Disease Branch, Epidemiology and Surveillance Division, National Immunization Program, in discussion with the treating physician. Physicians treating a case of suspected diphtheria can contact the diphtheria duty officer, telephone (404) 639-8255, 8 a.m. to 4:30 p.m. eastern time, or (404) 639-2889, all other times. All suspected diphtheria cases should also be reported to local and state health departments. (*MMWR*, May 2, 1997/Vol. 46/No. 17)

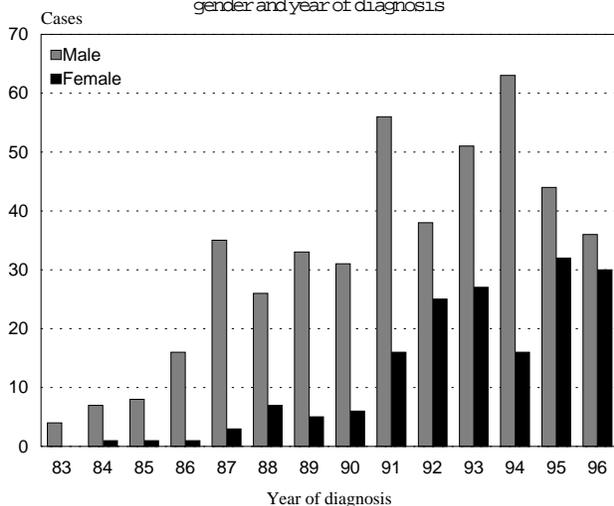
AIDS UPDATE

AIDS and HIV Infection in Young Persons

The AIDS epidemic is growing among teenagers in Louisiana, and HIV infection is increasingly involving females and minorities and being spread heterosexually.

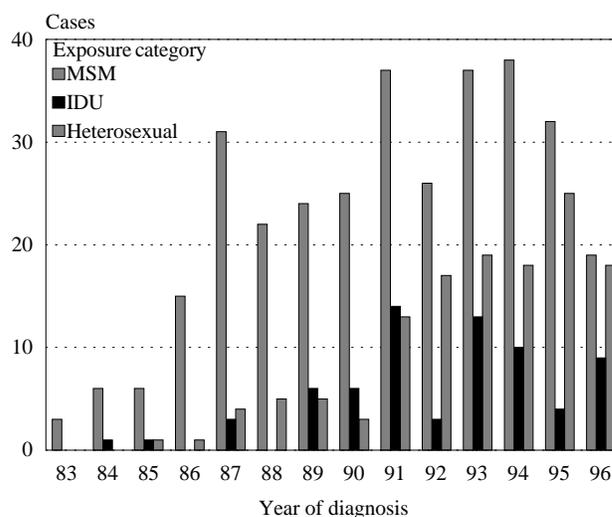
AIDS takes an average of 10 years to develop, therefore the number of persons who develop AIDS between the ages 15 and 24 is a minimum estimate of the number of persons who became infected while they were teenagers. To date, a total of 632 persons in this age group in Louisiana have been reported with AIDS to the Office of Public Health. The number of persons age 15-24 reported with AIDS is increasing steadily, and the percentage which are female is rising sharply, especially in recent years. Between 1990 and 1996, the percentage of cases which occurred in females increased from 16% to 45% (Figure 1). If current trends continue, there may be more young women diagnosed with AIDS than young men in 1997. AIDS rates are also increasingly affecting minority young persons: based on cases age 15-24 diagnosed in 1996 and reported to date the rate for blacks was 10 times that for whites (23.1 versus 2.4 per 100,000)

Figure 1: AIDS cases in persons age 15-24 by gender and year of diagnosis



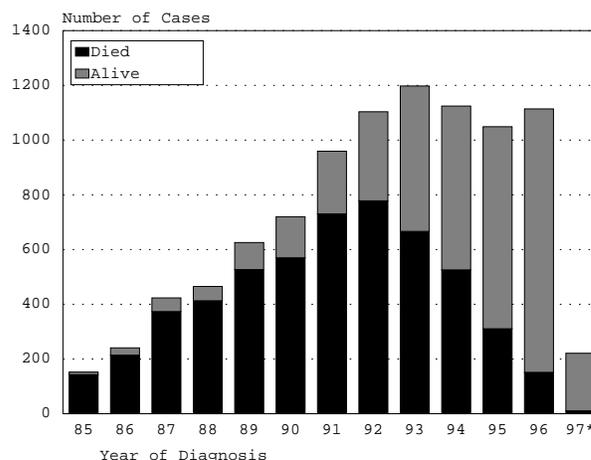
Across all age groups, HIV infection is shifting from homosexual men to intravenous drug users and heterosexuals. This shift is occurring particularly rapidly in teenagers. Among persons age 15-24 reported with AIDS for whom a mode of transmission was known, the percentage of infections which were attributable to heterosexual transmission increased from 10-20% in the late 1980s to 39% in 1996 (Figure 2). When data from 1996 are complete, it is possible that the most common mode of HIV transmission in this age group will be heterosexual spread.

Figure 2: AIDS cases in persons age 15-24 by exposure category and year of diagnosis



Teenagers are at risk for HIV infection because they are physically mature yet often not capable of making wise decisions about sexual risk-taking. HIV prevention programs need to focus on decreasing risk of HIV spread through sexual transmission by encouraging teens to remain abstinent and by encouraging those who are sexually active to use condoms.

AIDS CASE TRENDS



* Incomplete data

LOUISIANA COMMUNICABLE DISEASE SURVEILLANCE
May - June , 1997
PROVISIONAL DATA

Table 1. Disease Incidence by Region and Time Period

DISEASE	HEALTH REGION									TIME PERIOD					
	1	2	3	4	5	6	7	8	9	May-June 1997	May-June 1996	Cum 1997	Cum 1996	% Chg	
Vaccine-preventable															
Measles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Mumps	0	0	0	0	1	0	0	0	0	1	1	11	11	0	
Rubella	0	0	0	0	0	0	0	0	0	0	0	0	1	-	
Pertussis	2	0	0	0	1	1	0	0	0	4	2	12	5	+140	
Sexually-transmitted															
AIDS Cases Rate ¹	23 2.1	11 2.0	2 0.5	2 0.4	3 1.1	1 0.3	6 1.2	3 0.9	4 1.1	55 1.3	190 4.4	347 8.1	636 14.8	-45	
Gonorrhea Cases Rate ¹	631 60.7	184 32.4	157 41.6	176 34.1	61 22.8	103 33.8	291 57.5	117 33.3	73 19.0	1793 42.5	1464 34.7	4372 103.6	4713 111.7	-7	
Syphilis(P&S) Cases Rate ¹	23 2.2	9 1.6	9 2.4	5 1.0	1 0.4	1 0.3	4 0.8	3 0.9	7 1.8	62 1.5	102 2.4	197 4.7	331 7.8	-40	
Enteric															
<i>Campylobacter</i>	6	13	4	3	1	1	3	5	2	38	28	71	63	+13	
Hepatitis A Cases Rate ¹	10 1.0	2 0.4	0 -	0 -	0 -	0 -	5 1.0	13 3.7	1 0.3	31 0.7	35 0.8	117 2.7	86 2.0	+36	
<i>Salmonella</i> Cases Rate ¹	21 2.0	12 2.1	3 0.8	9 1.7	4 1.5	3 1.0	3 0.6	4 1.1	11 2.9	70 1.6	116 2.8	146 3.4	172 4.1	-15	
<i>Shigella</i> Cases Rate ¹	6 0.6	5 0.9	0 -	1 0.2	0 -	0 -	2 0.4	1 0.3	1 0.3	16 0.4	208 4.9	61 1.4	361 8.6	-83	
Vibrio cholera	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
Vibrio, other	1	1	0	1	0	0	0	0	0	3	12	3	14	-79	
Other															
Hepatitis B Cases Rate ¹	3 0.3	1 0.2	1 0.3	3 0.6	2 0.7	2 0.7	4 0.8	4 1.1	5 1.3	25 0.6	20 0.5	79 1.8	63 1.5	+25	
Meningitis/Bacteremia															
<i>H. influenzae</i>	0	0	0	1	0	0	0	0	1	2	1	7	2	+250	
<i>N. meningitidis</i>	3	1	2	2	0	0	0	0	2	10	6	40	39	+3	
Tuberculosis Cases Rate ¹	N/A	0 -	8 2.1	0 -	6 2.2	5 2.0	0 -	4 1.1	4 0.9	27 0.6	75 1.7	97 2.2	197 4.5	-51	

¹ = Cases per 100,000

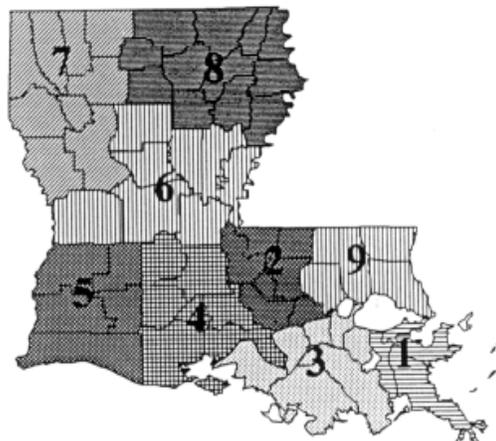
Table 2. Diseases of Low Frequency

Disease	Total to Date
Blastomycosis	1
Brucellosis	0
Histoplasmosis	1
Lead Toxicity	19
Typhoid	0
Rocky Mountain Spotted Fever	0
Legionellosis	2
Lyme Disease	1
Malaria	5
Tetanus	0

Table 3. Animal Rabies (May- June , 1997)

Parish	No. Cases	Species
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No Report for May-June, 1997



Annual Summary

Vibrio Infections - 1996

Forty two cases of vibrio infections were reported to the Epidemiology Section for 1996. The overall case rate is 1.0 per 100,000. One case of toxigenic *V. cholera*-01 was reported from Acadia Parish (Figure 1). Sex-specific rates were almost twice as high for males than females (1.3 vs 0.7 per 100,000, respectively). Rates by age increased proportionately with increasing age in which cases over 65 years had the highest rates [2.3 per 100,000, Figure 2]. *Vibrio* infections were most common in the summer and early fall than at any other times of the year (Figure 3). Over half of the reported cases (63%) had underlying medical conditions prior to illness. Ten cases developed wound infections as a result of percutaneous contact with saltwater either through occupational, recreational or seafood contact. Twenty-three vibrio illnesses resulted from consumption of seafood of which 9 cases had consumed raw oysters prior to onset of illness. Of 42 serotypes identified, *V. Vulnificus* accounted for 30% (13/42) of the cases followed by *V. Non-01* 26% (11/42). Four deaths were reported in which *V. Vulnificus* was identified. Of these cases, three had a history of raw oyster consumption. Parishes with the highest case rates per 100,000 include: Plaquemines (8), E. Feliciana (5) and Terrebonne (4).

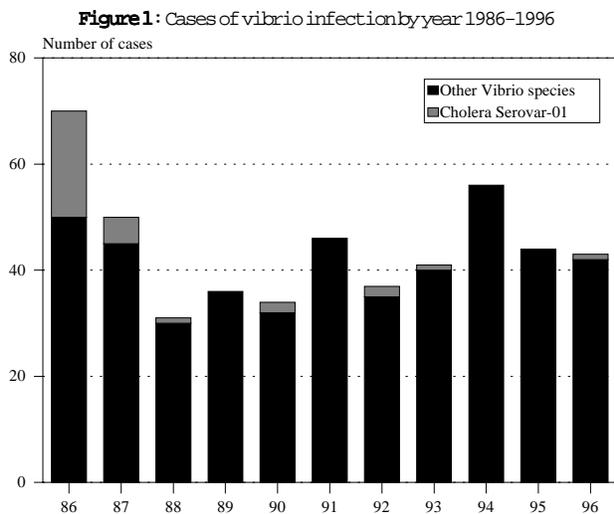


Figure 2: Cases of vibrio infection by age group, 1996

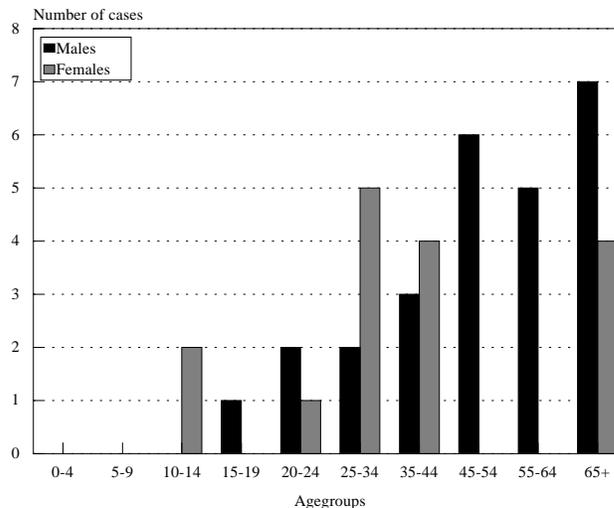
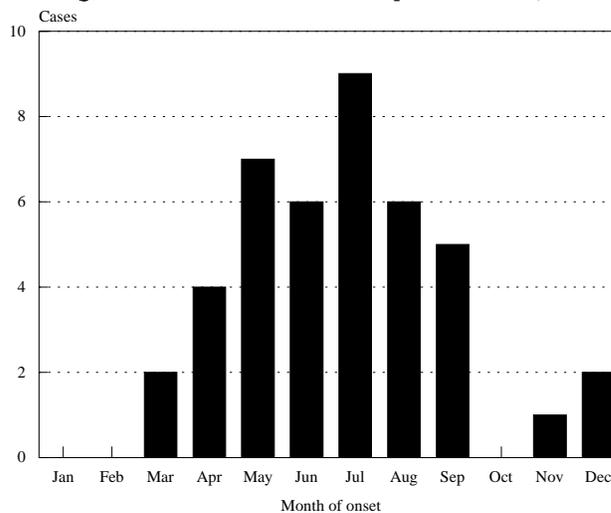


Figure 3: Cases of vibrio infection by month of onset, 1996



Louisiana Fact

Among the many sanitation issues faced by the early Board of Health was the problem of unpaved streets. The sanitary inspector, Dr. Juluis Clark in 1872 states:

“One of the most fertile sources of pernicious and infectious exhalations areises from the soil of unpaved streets.

Originally, perhaps, the street was graded with the offal of kitchens, the sweepings of paved streets or the refuse of stables; certainly, the stupid street cleaner dips from the gutters the accumulated filth, rendered quite innocuous by its mantel of water, and butters the strret with this, to become virulent under a perpendicular sun. Even now it is not allowed to desiccate, and become less harmful for a season; but the unpytifying housewife, in pacifying the dust, supplies the remaining condition—moisture—and the festering process continues.

Lay sermons on this and kindred spirits shuld be disseminated through the colporterage of the press.”

LIST OF REPORTABLE DISEASES/CONDITIONS

REPORTABLE DISEASES	OTHER REPORTABLE CONDITIONS
Acquired Immune Deficiency Syndrome (AIDS)	Cancer
Amebiasis	Complications of abortion
Arthropod-borne encephalitis (Specify type)	Congenital hypothyroidism*
Blastomycosis	Galactosemia*
Botulism ¹	Hemophilia*
Campylobacteriosis	Lead Poisoning
Chancroid ²	Phenylketonuria*
Chlamydial infection ²	Reye ' Syndrome
Cholera ¹	Severe traumatic head injury**
Cryptosporidiosis	Severe undernutrition (severe anemia, failure to thrive)
Diphtheria	Sickle cell disease (newborns)*
Enterococcus (infection; resistant to vancomycin)	Spinal cord injury**
Escherichia coli 0157:H7 infection	Sudden infant death syndrome (SIDS)
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	

¹Report suspected cases immediately by telephone. In addition, all cases of rare or exotic communicable diseases and all outbreaks shall be reported.

²Report on STD-43 form. Report cases of syphilis with active lesions by telephone.

³Report on EPI-2430 card. Name and street address are optional but city and ZIP code must be recorded.

⁴Report 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 on DDP-3 form

Numbers for reporting communicable diseases

1-800-256-2748

Local # 568-5005

FAX # 504-568-5006

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