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GOVERNOR

# Louisiana Morbidity Report

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SECRETARY

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## An Outbreak of Gastroenteritis due to Oysters

Between February 8 - 23, 1996 the Office of Public Health was notified of eight clusters of persons from four states with gastroenteritis associated with consumption of Louisiana oysters. OPH investigated the problem, and on February 23, 1996 mandated an emergency closure of the suspected waterways of Black Bay, Lake Fortuna and Lake Machias.

Of 233 persons in eight clusters, 174 (75%) were contacted and interviewed. Seventy-five (43%) persons became ill. The most common symptoms were vomiting (87%), cramps (68%), diarrhea (67%), headache (61%) and fever (49%). The mean duration of illness was 32 hours (range 2 - 96 hours).

The epidemic curve (Figure 1) illustrates two clusters of illness involving 75 persons with onsets between February 5 and February 21, 1996. Of 79 persons who ate oysters, 72 (91%) persons became ill compared to 3/95 (3%) persons who did not eat oysters (RR 30; 95% CI 10-91). The average incubation period from the time of oyster consumption to the onset of disease was 40 hours (range 9 - 112 hours).

By reviewing the tags on sacks of oysters, OPH was able to determine that in the eight outbreaks, seven retailers, four wholesalers, and eight oyster harvesters were involved (Figure 2). All eight harvesters had harvested at least some of their oysters from Black Bay. Of the eight, five (63%)

were known to have harvested around Stone Island, and all were known to have been working in the south Black Bay area during January and February.

Black Bay is a large waterway measuring 10 miles by 10 miles. The closest inhabited community is 15 miles away. The only possible sources of human fecal contamination were fishermen and oil rigs. Five oil rigs were located in Black Bay (continued on page two)

Figure 1: Epidemic curve from eight clusters of gastroenteritis associated with oysters (n = 75) and from ill employees from an oil rig in Black Bay (n = 8). Harvest dates are also shown

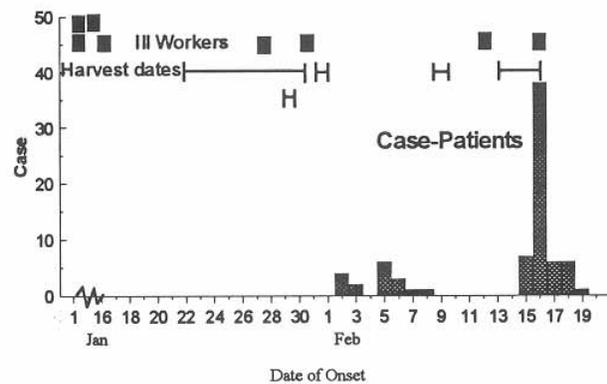
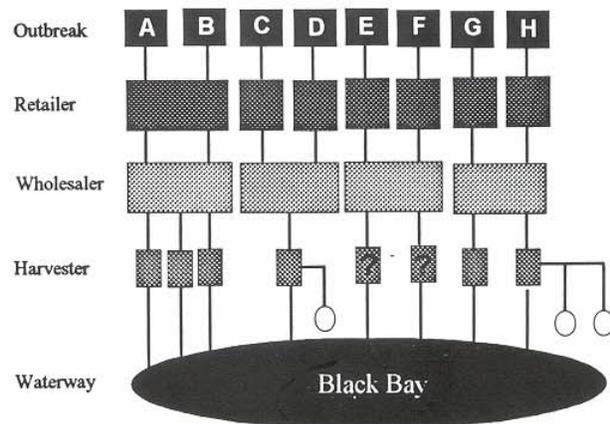


Figure 2: Results of traceback investigation of oysters from outbreak to site of harvest



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*A Multi-State Outbreak of Gastroenteritis (Cont.)*

and Lake Fortuna. Four of five were unoccupied facilities. One oil rig located on Stone Island in South Black Bay employed 76 persons who worked in two divided shifts. On this oil rig eight of 70 employees reported having diarrhea or vomiting between January 1 and March 1, 1996. A water sample taken from the sewage treatment system during a site visit showed the discharge effluent to be underchlorinated and contaminated with fecal coliforms.

Three stool samples from ill individuals from three different outbreaks showed viruses similar to Norwalk virus. Elevated serum titers or a four-fold rise in titers for Norwalk-like viruses were seen in five persons. Single serum titers obtained from five oil rig employees who had a gastrointestinal illness showed elevated titers for a Norwalk-like virus in four.

Figure 1 shows the timing of illness among oil rig workers compared to harvest dates of contaminated oysters and illness onset of persons in outbreaks. Four oil rig employees became ill in early January prior to the first series of harvest dates and ill case-patients. Two additional oil rig employees became ill around the time of the second cluster of outbreaks.

In conclusion, this was a multi-state outbreak of Norwalk-like gastroenteritis due to consumption of Louisiana oysters. The investigation indicated that the source of oyster contamination may have been sewage effluent from an oil rig in which there were ill employees.

This is the fourth recognized outbreak since the 1970's in which Louisiana waterways have been closed because of oyster contamination. In 1973 oyster contamination with hepatitis A was attributed to contamination of Mississippi River waters following a flood. In 1982 over 400 persons developed a Norwalk-like illness after eating oysters harvested from waterways in Terrebonne and Jefferson/Plaquemines parishes. More recently in 1993 oyster contamination in Cabbage Reef contributed to illness in 130 persons in five states. Fishermen dumping waste directly into the water was thought to be the source of Norwalk virus in that outbreak. This is the first outbreak to suggest that an oil rig may have contributed to oyster contamination.

Oyster harvesting is currently prohibited within one-half mile around the implicated oil rig with plans to extend zones of prohibition around all rigs. In addition, regular inspections of toilet facilities on oyster harvest boats are needed. Black Bay and surrounding waterways were reopened April 1 - May 1, 1996 with no additional cases of illness reported.

## Louisiana Unintentional Fatal Child Injuries, 1994

The potential cost savings of injury prevention are tremendous. According to the Children's Safety Network, the annual lifetime cost of all injuries to children under age 15 is \$165 billion. This includes \$8 million in medical costs, \$14 billion in future earnings and \$143 billion in quality of life. One dollar spent on helmet saves society \$30. One dollar spent on a child safety seat saves society \$32. One dollar spent on a smoke detector saves society \$55-70. The costs are in economic terms, but the traumatic effects on the lives of the children and families involved is immeasurable.

In 1994, 182 children in Louisiana died from unintentional injuries. Louisiana's unintentional injury rate in children (0-14) is significantly higher than the national average (17.6/100,000 vs 11.9/100,000). The 182 deaths are the tip of the iceberg. It is estimated that there were over 8,000 injuries resulting in hospitalization and over 236,000 injuries treated in the emergency rooms (Figure 1). The highest percent of injury fatalities was due to motor vehicle incidents (40.3%), followed by drowning (16%), and suffocation/choking/fire (13.3% each: Figure 2). Children aged 0-4 have the highest unintentional injury death rates nationally and in Louisiana (16.8 and 25.7 per 100,000, respectively). Ten to fourteen year olds are next with a rate of 9.7 (US) vs 15.2 (LA)

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per 100,000 (Figure 3). African-American males have a higher unintentional injury mortality rate than Caucasian males (28.7 vs 17.9 per 100,000). The rate for African-American females is more than double that of Caucasian females (20.5 vs 9.3 per 100,000).

There is a need for statewide data on nonfatal injuries. Lack of an organized and coordinated surveillance system means we can only estimate the full impact of injuries. Using data from vital records, we can only extract injury fatalities, which represents only a fraction of those impacted by injuries.

Figure 1: 1994 Louisiana child injury pyramid

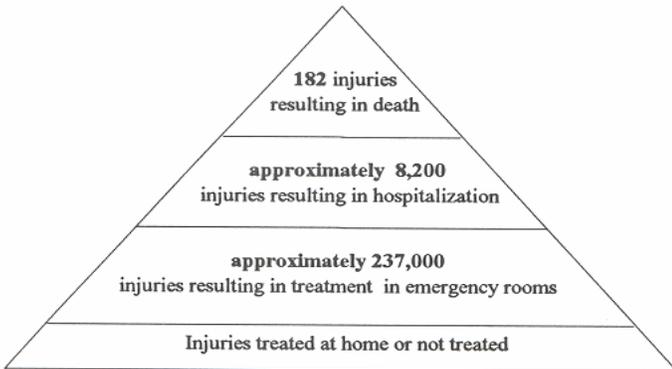


Figure 2: Unintentional fatal child injuries, Louisiana, 1994

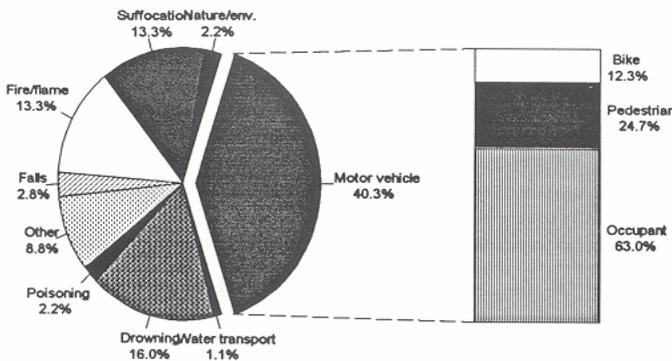
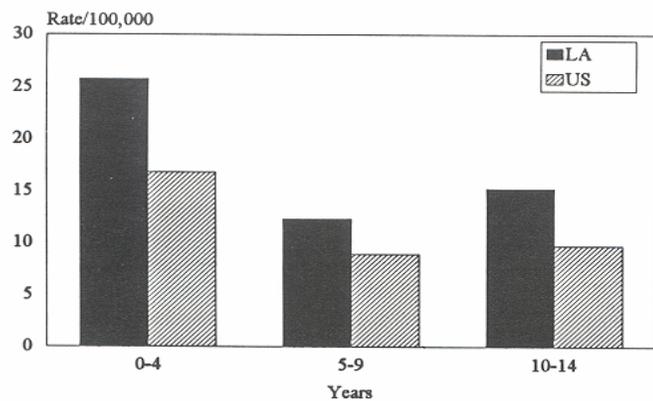


Figure 3: Rate of unintentional injury deaths in children, 1994



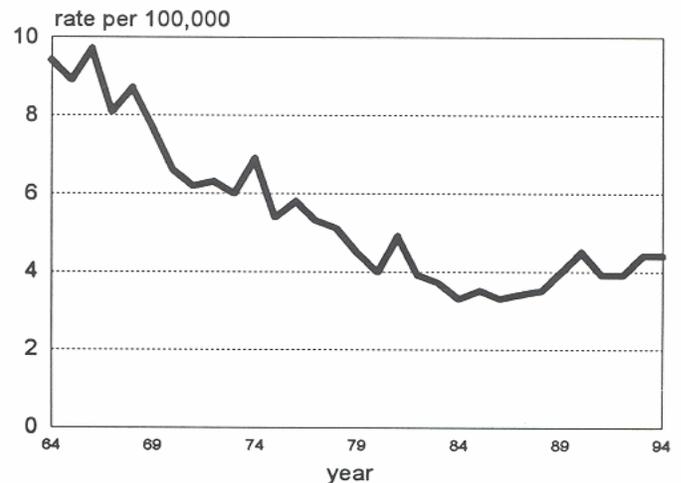
## Fatal Falls - Louisiana, 1994

Falls are the second most frequent cause of unintentional injury death in Louisiana for all groups (following motor vehicle accidents). The 188 fall deaths in 1994 (rate = 4.5 per 100,000) represent 10 percent of all deaths due to injuries. Fatal falls were more likely to occur at home (30.9%) than in a public place (16.0%) or at work (8.5%). Males are more likely than females to die from falls (5.1 vs 3.8 per 100,000, RR = 1.3).

Overall, the rate of death from falls has declined markedly since the mid-1960's. Elders are over-represented among those who die from falls (Figure). The population 75 years of age and older represents about 5 percent of Louisiana's population, yet 64 percent of all fall deaths occurred within these age group.

The ability to develop and implement prevention strategies to reduce fall morbidity and mortality is constrained by lack of information about the circumstances of fatal falls. In 84.8% of the cases, the circumstances of the fall was not specified as an immediate or underlying cause on the death certificate. The International Classification of Diseases, 9th Revision, lists several standard categories for falls: 1) Fall on or from stairs, steps, or sidewalk curb; 2) Fall on or from ladder or scaffolding; 3) Fall from or out of building or other structure; 4) Fall into hole, pit, swimming pool, tank, or other opening in surface; 5) Fall from one level to another, such as from cliff, chair, commode, or bed; 6) Fall on same level from slipping, tripping, or stumbling; and 7) Fall on same level from collision, pushing, or shoving, by other person, such as tackles in sports. Improvements in the amount and quality of information available on the death record (details concerning the deceased's specific activity and location when the fatal injury occurred) that would enable target prevention projects to be planned, implemented, and evaluated are recommended.

Figure: Falls mortality, Louisiana, 1964-1994



## Childhood Anemia in Health Units

Childhood anemia prevalence in Louisiana has varied according to report, but has historically been high when compared to national rates. Suggested explanations have included lack of a representative sample (sample population consisting mainly of low income and racial minority children, particularly Blacks), measurement and/or data base errors, inconsistent anemia cutoff definitions, and a tendency to lower patients' hemoglobin values to make them eligible for special programs. Multiple studies have documented the findings that Blacks of all age groups have lower mean hemoglobin, although reasons for this have not been identified. Traditionally, children are considered anemic if they have hemoglobin less than 11.0 mg/dl. Due to the lower hemoglobin levels among Blacks, newer recommendations for anemia surveillance encourage using a hemoglobin 0.3 mg/dl (10.7 mg/dl) lower for Black children five years of age and younger. To date, no studies have described characteristics of Black children with hemoglobin between 10.7 mg/dl and 11.0 mg/dl ["race specific non-anemic" (RSNA)].

To assess the prevalence of anemia in children in parish health units (PHU), laboratory log sheets of May 1995 from 91 Louisiana Parish Health Units were reviewed. Hemoglobin values were available from 2,373 child health clinic recipients who were also part of the Women, Infants, and Children's supplemental food program (WIC). Mean hemoglobin for the group was 11.98 mg/dl + 1.23 (range 6.0 to 18.5), while mean age was 26 months + 13.56 (range 5 to 69 months) and 59% were Black.

Figure 1 and 2 describe anemia prevalence by age and region of the state. Regional differences occurred, but are not discussed since confounders were not controlled for. There was a 20.2% children anemia prevalence using the traditional anemia definition. When race-specific guidelines were used, the prevalence dropped to 15.7%. There was a higher prevalence of anemia among the children less than 2 years of age (19% vs. < 13.4% for those 2 years and older,  $p=0.002$ ). Anthropometrically, the anemic and RSNA groups when compared to the non-anemic groups had a greater percentage of stunting (8%, 9.8%, 6.8%,  $p=0.017$ ) but did not differ statistically in underweight (5.5%, 5.0%, 0.7%,  $p=0.895$ ) or overweight (5.0%, 5.0%, 7.5%,  $p=0.365$ ) status. Percentages of low birthweight children were similar in all groups (14.2%, 18.5%, 11.8%,  $p=0.204$ ).

This data suggest that even when race specific anemia guidelines are used, a high prevalence of childhood anemia is present in the child health population using the PHU. Causes for this and preventive measures are presently under investigations. In addition, the new RSNA group in this study did not appear to have characteristics distinguishing them from anemic and non-anemic children.

Figure 1: Prevalence of anemia by region, 1995

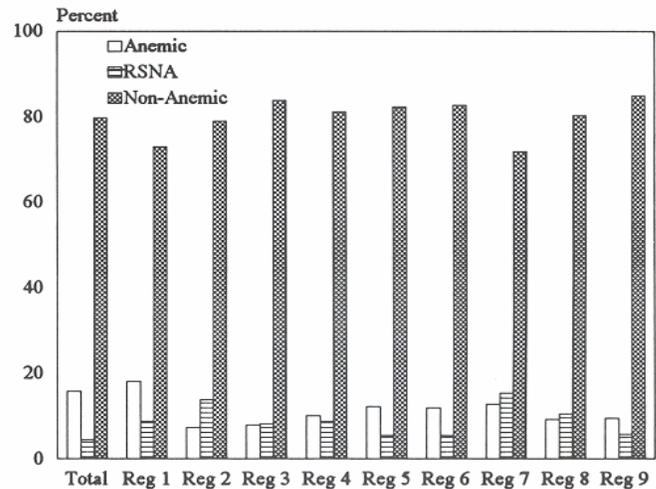
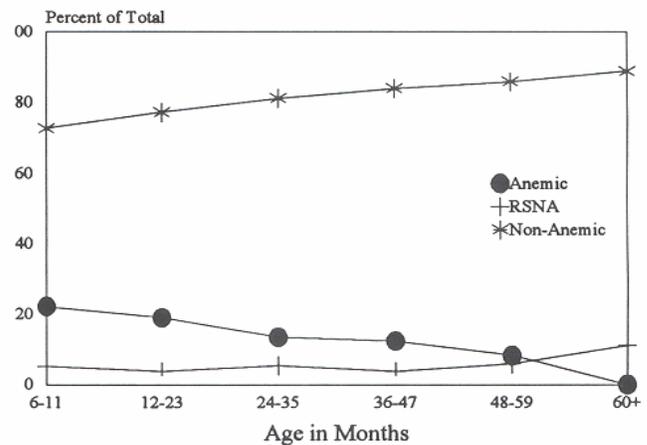


Figure 2: Prevalence of anemia by age group, 1995



### Quote of the Month...

"If John Snow wanted to remove the pump handle today, he would need to network with community leaders, interface with government agencies, write an environmental impact statement, and obtain human investigation committee approval."

Michael Bracken, as quoted by Ward Cates in his SER presidential address, Miami, June 1994

## AIDS UPDATE

### HIV-Related Risk Behavior in the General Population

The AIDS epidemic has imposed an increased need for the surveillance of sexual risk behaviors in all populations. To assess the degree of risk for HIV in the general population in Louisiana, OPH included sexual risk behavior questions in the Behavioral Risk Factor Surveillance System (BRFSS) Survey. The BRFSS, a randomized telephone survey of adults 18 and older, is used to assess the demographics and behavioral risk factors for several diseases. In 1995, 987 individuals age 18-49 responded to these sexual risk behavior questions.

The majority of the respondents (72%) were White, 25% African-American and 58% female. Persons ages 18-29, 30-39 and 40-49 represented 35%, 35% and 30% of the respondents respectively. Fifty-three percent were presently married and 27% had never married.

The key questions to assess sexual risk behavior were: (1) How many different sex partners have you had in the last 12 months? (2) Did you and your partner use a condom the last time you had sex? Twelve percent reported having multiple partners in the last year. Among those who reported having multiple partners, 52% said they used a condom during the last sexual encounter.

Table I shows these risk behaviors by demographic groups. Males were twice as likely to report having multiple partners as females. Furthermore, males who have multiple partners were significantly more likely to report using a condom than females with multiple partners. African Americans were more likely than Whites to report having had multiple partners. Persons between the ages 18 and 29 were more prone to have multiple partners when compared to older age groups. Persons who were never married or divorced had the highest prevalence for multiple sex partners but less than half of the divorced individuals reported using a condom at the last sexual encounter. Educational status (college graduate vs. non college graduate), and employment status (employed vs. non-employed) were not related to risk behavior.

Compared to similar national surveys, the Louisiana survey is consistent overall and with gender, ethnicity, and age categories in the percentages of respondents who have had more than one sex partner in the last year. The results of this survey are also similar to those for Louisiana in 1994. In the future, this survey will serve as a useful tool in tracking the trends of sexual risk behavior thus determining our progress towards the Healthy People 2000 goals.

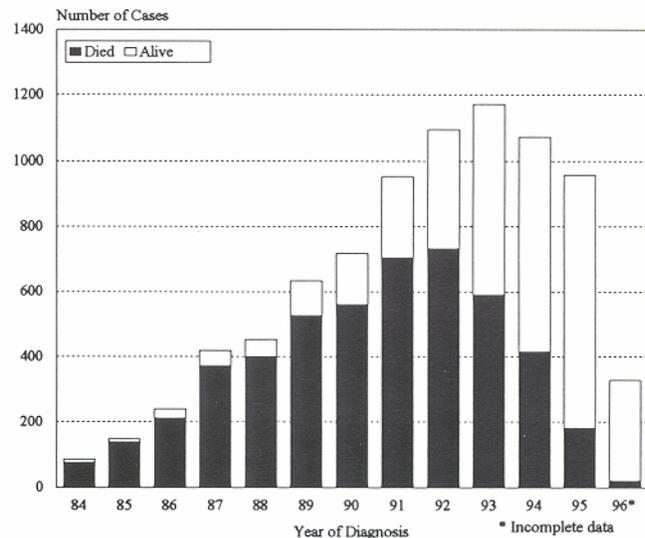
Table: Percentages of Persons Reporting Multiple Sexual Partners<sup>a</sup> and Persons Who Used a Condom at Last Sexual Encounter<sup>b</sup> by Sociodemographic Characteristics

	% Having Multiple Sexual Partners <sup>a</sup>	% Using a Condom at Last Sexual Encounter <sup>b</sup>
<b>Gender</b>		
Male	16%	60%
Female	8%	39%
<b>Ethnicity</b>		
White	10%	46%
African -Am	15%	61%
<b>Age Category</b>		
18-29	19%	56%
30-39	9%	52%
40-49	6%	35%
<b>Marital Status</b>		
Married	3%	7%
Separated/ widowed	15%	63%
Divorced	23%	48%
Never Married	23%	63%
<b>Total</b>	12%	52%

<sup>a</sup>Respondents were classified as having multiple sexual partners if they had two or more partners in the past 12 months.

<sup>b</sup>Condom Use reported for the last sexual encounter among those with multiple sexual partners in the past 12 months.

## AIDS Case Trends



LOUISIANA COMMUNICABLE DISEASE SURVEILLANCE

March - April, 1996  
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	Mar-Apr 1996	Mar-Apr 1995	Cum 1996	Cum 1995	% Chg	
<b>Vaccine-preventable</b>															
Measles	0	0	0	0	0	0	0	0	0	0	0	0	0	-	
Mumps	0	0	0	1	0	0	0	1	0	2	5	9	6	+50	
Rubella	1	0	0	0	0	0	0	0	0	1	0	1	0	-	
Pertussis	0	0	0	0	0	1	0	0	0	1	1	3	1	+200	
<b>Sexually-transmitted</b>															
AIDS	Cases Rate <sup>1</sup>	5.4 4.9	11 2.0	3 0.8	1 0.1	2 0.7	7 2.2	5 0.9	1 0.2	4 1.1	84 1.9	140 3.2	291 6.7	289 6.7	+0.7
Gonorrhea	Cases Rate <sup>2</sup>	760 6.5	128 2.4	138 3.8	104 2.1	34 1.3	77 2.5	155 3.4	38 1.1	45 1.3	1389 3.3	1729 4.18	3258 7.7	3673 8.78	-11
Syphilis(P&S)	Cases Rate <sup>2</sup>	40 0.39	21 0.39	2 0.05	8 0.16	0 0.0	2 0.06	18 0.36	16 0.46	10 0.28	117 0.28	202 0.48	228 0.54	376 0.89	-39
<b>Enteric</b>															
<i>Campylobacter</i>		3	2	1	0	0	1	0	1	0	12	23	31	38	-18
Hepatitis A	Cases Rate <sup>1</sup>	7 0.7	6 1.1	1 0.3	0 -	0 -	1 0.3	6 1.2	5 1.4	2 0.5	30 0.7	22 0.5	51 1.2	35 0.8	+46
<i>Salmonella</i>	Cases Rate <sup>1</sup>	5 0.5	4 0.7	2 0.5	4 0.8	2 0.7	0 -	3 0.6	3 0.9	3 0.8	32 0.7	22 0.5	54 1.3	28 1.0	+28
<i>Shigella</i>	Cases Rate <sup>1</sup>	27 2.6	15 2.6	2 0.5	1 0.2	1 0.4	0 -	7 1.4	1 0.3	8 2.1	69 1.6	51 1.2	154 3.6	76 1.8	+103
Vibrio cholera		0	0	0	0	0	0	0	0	0	0	0	0	0	-
Vibrio, other		1	0	0	0	0	0	0	0	1	2	0	2	1	+100
<b>Other</b>															
Hepatitis B	Cases Rate <sup>1</sup>	4 0.4	5 0.9	1 0.3	2 0.4	0 -	0 -	5 1.0	3 0.9	4 1.0	29 0.7	40 0.9	44 1.0	69 1.6	-36
Meningitis/Bacteremia <i>H. influenzae</i>		0	0	0	0	0	0	0	0	0	0	1	1	1	0
<i>N. meningitidis</i>		7	2	0	0	3	1	2	0	0	15	12	33	24	+38
Tuberculosis	Cases Rate <sup>1</sup>	9 0.9	- -	5 1.3	1 0.2	9 3.3	3 1.0	- -	3 0.8	- -	30 0.7	64 1.5	64 1.5	108 2.5	-41

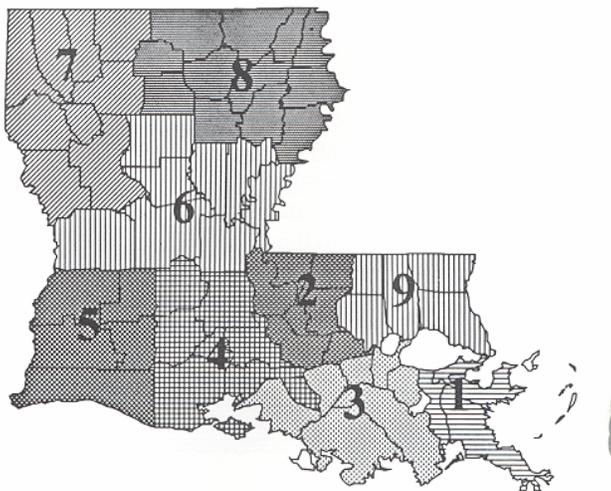
1 = Cases per 100,000  
2 = Cases per 10,000

Table 2. Diseases of Low Frequency

Disease	Total to Date
Blastomycosis	1
Histoplasmosis	1
Lead Toxicity	10
Typhoid	1
Rocky Mountain Spotted Fever	0

Table 3. Animal Rabies (Mar-Apr 1996)

Parish	No. Cases	Species
Lafayette	2	Skunks
Evangeline	1	Skunk
East Baton Rouge	1	Bat



## ANNUAL SUMMARY Hepatitis A - 1995

One hundred ninety six cases of Hepatitis A were reported to the Epidemiology Section, a 15% increase from the previous year (Figure 1). The overall state case rate was 4.5 per 100,000. Sex-specific rates were highest among white males (4.8 per 100,000) followed by white females (3.8), black males (3.5) and black females (1.8). The age groups with the highest rates ranged from 20 to 44 years of age (Figure 2), which has changed from the usual bimodal distribution age pattern seen in previous years, whereby a significant number of cases were seen in young children. Seventy four HAV cases (38%) were reported from the Monroe area in which person-to-person transmission occurred in several high risk settings such as day care centers and/or contact with a HAV case living in the household. Parishes with the highest case rate per 100,000 include: Ouachita (51), Morehouse (22), E. Carroll (21) and Madison [16, Figure 3].

Hepatitis A is an enterically transmitted viral disease which may occur by direct person-to-person contact, from sewage-contaminated water, or foods which are eaten uncooked or contaminated during handling. Hepatitis A vaccine has recently become available in adult and pediatric formulations in which adults should be given a two dose series and a three dose series for children age 2 to 18 years. It is not licensed for use in children aged < 2 years. The vaccine is recommended for all susceptible individuals including day care workers, foodhandlers, and foreign travel to endemic countries.

Figure 1: Hepatitis A cases by year 1986-1995

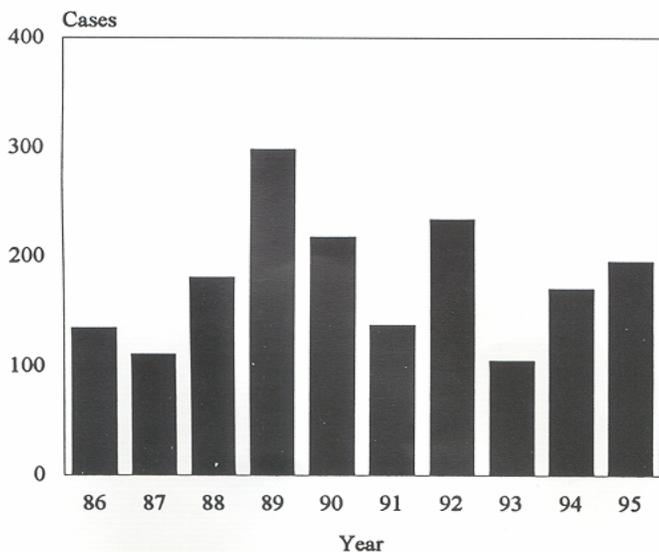


Figure 2: Cases of Hepatitis A by age and sex, 1995

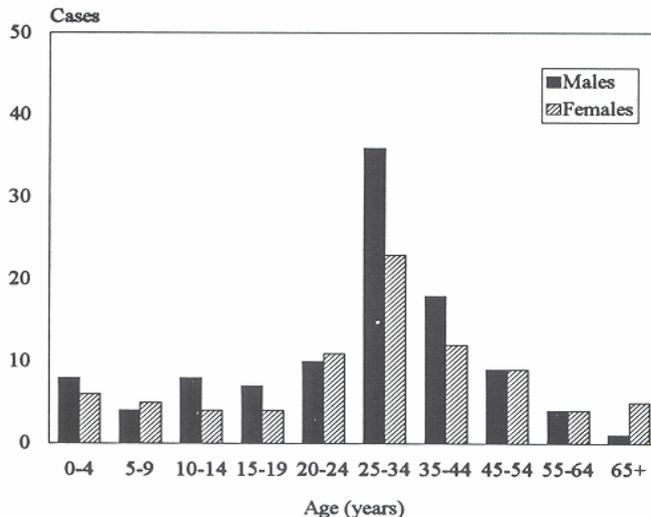
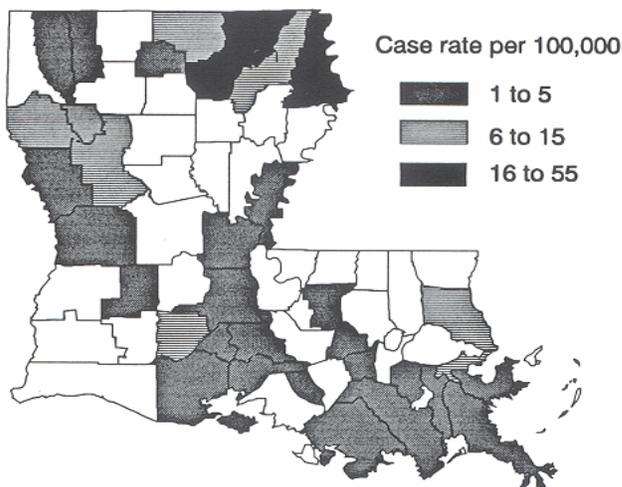


Figure 3: Rates of Hepatitis A by parish, 1995



### LOUISIANA FACTS

*A Shrimp Ordinance was past by the Board of Health, State of Louisiana in 1880 which stated: "Be it resolved by the Council of the city of New Orleans, That from and after the first day of May to the first day of October all stalls or stands where fresh crabs or shrimps are sold in the various markets of this city be required to be closed by 10:00 A.M. each and every day. Be it further resolved, That the selling of fresh shrimps and crabs by peddlers upon the streets be forbidden under all circumstances during the months above stated." (Rules and Regulations of the Board of Health of the State of Louisiana)*

# LIST OF REPORTABLE DISEASES/CONDITIONS

	REPORTABLE DISEASES		OTHER REPORTABLE CONDITIONS
Acquired Immune Deficiency Syndrome (AIDS)	Hemolytic-Uremic Syndrome	Poliomyelitis	Cancer
Amebiasis	Hepatitis, Acute (A, B, C, Other)	Psittacosis	Complications of abortion
Anthrax	Hepatitis B in pregnancy	Rabies (animal & man)	Congenital hypothyroidism
Aseptic meningitis	Herpes (genitalis/neonatal)**	Rocky Mountain Spotted Fever (RMSF)	Galactosemia
Blastomycosis	Human Immunodeficiency Virus (HIV) infection****	Rubella (German measles)	Hemophilia
Botulism*	Legionellosis	Rubella (congenital syndrome)	Lead poisoning
Brucellosis	Leprosy	Salmonellosis	Phenylketonuria
Campylobacteriosis	Leptospirosis	Shigellosis	Reye Syndrome
Chancroid**	Lyme disease	Syphilis**	Severe Traumatic Head Injuries+
Cholera*	Lymphogranuloma venereum**	Tetanus	Severe undernutrition
Chlamydial infection**	Malaria	Trichinosis	severe anemia,
Diphtheria*	Measles (rubeola)*	Tuberculosis***	failure to thrive
Encephalitis (specify primary or post-infectious)	Meningitis, (Haemophilus)*	Tularemia	Sickle cell
Erythema infectiosum (Fifth Disease)	Meningococcal infection (including meningitis)*	Typhoid fever	disease (newborns)
Escherichia coli 0157:H7	Mumps	Typhus fever, murine (fleaborne, endemic)	Spinal cord injury+
Foodborne illness*	Mycobacteriosis, atypical***	Vibrio infections (excluding cholera)	Sudden infant death syndrome (SIDS)
Genital warts**	Ophthalmia neonatorum**	Yellow fever*	
Gonorrhea**	Pertussis		
Granuloma Inguinale**	Plague*		

Report cases on green EPI-2430 card unless indicated otherwise below.

\*Report suspected cases immediately by telephone. In addition, report all cases of rare or exotic communicable diseases and all outbreaks.

\*\*Report on STD-43 form. Report syphilis cases with active lesions by telephone.

\*\*\*Report on CDC 72.5 (f 5.2431) card

\*\*\*\* Report on Lab 94 form (Retrovirus). Name and street address are optional but city and ZIP code must be recorded.

+ Report on DDP-3 form; preliminary phone report from ER encouraged (568-2509).

**The toll free number for reporting communicable diseases is  
1-800-256-2748                      FAX # 504-568-5006**

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