



DAVID L. RAMSEY
SECRETARY
(504) 342-6711

DEPARTMENT OF HEALTH AND HOSPITALS
OFFICE OF PUBLIC HEALTH
DIVISION OF DISEASE CONTROL
P. O. BOX 60630
NEW ORLEANS, LOUISIANA 70160

LOUISIANA MORBIDITY REPORT

EPIDEMIOLOGY

- 02 Statewide Perinatal Hepatitis B Program Underway
- 03 Parasites on the Bayou
- 04 Louisiana Ranks 37th in Smoking Cessation Progress
- 05 Annual Summary - N. Meningitidis Disease 1989
- 05 Dioxins Found in Fish
- 06 AIDS Update Trends in Risk Groups
- 08 Annual Summary - H. Influenza Disease 1989

Happy Holidays

November/December 1990

Volume 1, Number 6

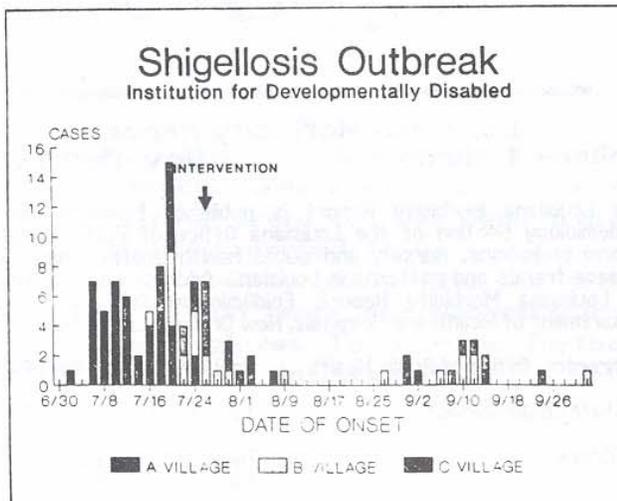
Shigellosis Outbreak At Institution

In July the Office of Public Health was notified of an outbreak of *Shigella sonnei* gastroenteritis which was ongoing in an institution for the developmentally disabled. The institution had not reported any culture-confirmed cases of shigellosis for several years. On July 2, a client returned to the institution after a weekend home visit. He subsequently developed fever, vomiting, and diarrhea. Within three days seven additional persons with whom this client lived had gastroenteritis. Soon clients who lived in other units within the same "village" had diarrhea, and the outbreak eventually spread from this village to other villages within the institution (figure).

clients, handwashing, and treatment with antibiotics. Despite these recommendations new cases continued to occur. The institution and OPH subsequently developed a more stringent set of recommendations including: 1) strict isolation of all clients with diarrhea until 48 hours after recovery, 2) supervised handwashing of all clients and staff six times daily, 3) prompt treatment of all clients with new onset of diarrhea with trimethoprim/sulfamethoxazole.

The outbreak stopped abruptly after implementation of this program. A few cases occurred in early September but there have been no new cases identified since September 30 despite intensive surveillance.

Once shigella is introduced into a setting such as an institution for the developmentally disabled, it can be difficult to eradicate. The number of shigella organisms required to cause illness is extremely small, and the bacteria can be easily transmitted person-to-person in settings where hygiene is poor. Aggressive control measures are needed to prevent transmission. Handwashing and isolation of ill clients remain the best methods of containment of outbreaks such as this. Treatment of ill persons with antibiotics decreases the length of time the shigella organisms are shed in the stool and therefore can be useful to control institutional outbreaks. However, widespread use of antibiotics carries the risk of promoting the emergence of a resistant strain, so antibiotics should be used judiciously.



The Office of Public Health made recommendations regarding isolation of ill clients,

Statewide Perinatal Hepatitis B Program Underway

In the fall of 1990 the Immunization Section began a program aimed at preventing hepatitis B infection in infants. The program is designed to identify pregnant women who are carriers of the hepatitis B virus during prenatal care and to vaccinate their babies after delivery. The program is to be phased in across the state and should be operating statewide by early 1991.

Hepatitis B can be transmitted sexually, through blood and needlestick exposure, and from mother to child during delivery. Persons who become infected with the virus can develop immunity (indicated by Hepatitis B surface antibody in blood) or can become chronic carriers (indicated by hepatitis B surface antigen [HBsAg] in blood). Approximately 0.5%-1% of pregnant women in Louisiana are carriers of HBsAg. If these women are not identified, some 25% will transmit the infection to their infants at the time of delivery. About 90% of infected infants will become chronic carriers themselves, and will be a high risk for chronic liver disease and liver cancer in later life.

Infection of newborns can be prevented by early vaccination against hepatitis B. Infants born to mothers who are HBsAg-positive should receive hepatitis B immune globulin (HBIG) and the first dose of hepatitis B vaccine immediately after birth. The two additional doses of hepatitis B vaccine should be given within the next six months. The program established by the Immunizations Section will offer the second and third doses at ages two and six months in order to coincide with the schedule for DPT and OPV vaccines.

The Centers for Disease Control and the American College of Obstetrics and Gynecology have recommend that all pregnant women - regardless of the presence or absence of risk factors - be tested for HBsAg. The program that is underway will test all pregnant women receiving prenatal care in public clinics throughout Louisiana. Women who are found to be HBsAg-positive will be tracked, and their infants will be given the HBIG and initial vaccine doses in the hospitals and

follow-up doses in parish health units.

Women receiving prenatal care with private physicians should also be screened for HBsAg as part of routine care. The Immunizations Section is maintaining a registry of pregnant women who are hepatitis B carriers. These women should be reported to the Immunizations Section or the Epidemiology Section with a green EPI-243 case report card (obtained from local parish health units) or with a specific prenatal HBsAg carrier form. Private physicians who wish to have infants of HBsAg-positive mothers vaccinated as part of this program should send the report on the mother to the Epidemiology Section and refer the children to the local parish health unit. Questions about this program can be answered at (504) 568-5007.



Louisiana Morbidity Report Volume 1, Number 6 Nov.-Dec. 1990

The Louisiana Morbidity Report is published bimonthly by the Epidemiology Section of the Louisiana Office of Public Health to inform physicians, nurses, and public health professionals about disease trends and patterns in Louisiana. Address correspondence to Louisiana Morbidity Report, Epidemiology Section, Louisiana Department of Health and Hospitals, New Orleans, LA 70160.

Director, Office of Public Health	Joel Nitzkin, MD MPH DPA
State Epidemiologist	Louise McFarland DrPH
Editors	Thomas Farley, MD Karen Kelso, RNC MS
Production Manager	Ethel Davis
Contributors	Frank Mahoney, MD Susan Wilson, RN Raoult Ratard, MD MPH Shirley Kirkconnell, MSW Sue Troxler, RN

Parasites on the Bayou

During one month we were called about two different types of parasitic worm infections that originate from household pets. These problems reminded us that improved sanitation for humans has not gotten rid of the problem or parasites.

The worms crawl in...

The first report was of three construction workers from central Louisiana who developed pruritic rashes after doing renovation work under a building. Much of the workers' time was spent in direct contact with the soil, which contained cat feces. The rashes that they developed were serpiginous and progressive, and two dermatologists made clinical diagnoses of cutaneous larva migrans.

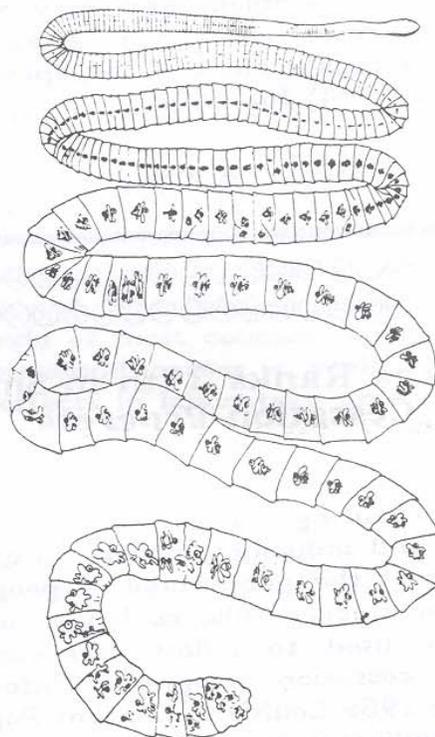
Cutaneous larva migrans ("creeping eruption") is a skin infection with the larval stage of the cat and dog hookworm *Ancylostoma braziliense*. The adult hookworms live in the intestines of pets, and the eggs are excreted with the feces, in which they later develop into larval worms. These larvae then penetrate the skin of humans who come in contact with the soil. Since humans are not definitive hosts, the larvae do not progress to adult hookworms but rather travel within the skin, causing intensely pruritic serpiginous lesions. The skin lesions are so characteristic in appearance that the diagnosis can be made without laboratory tests.

This type of hookworm is endemic to the southeastern region of the U.S. The hookworm larvae are particularly happy living in moist soil under houses (areas which are also popular night spots for cats). No satisfactory chemical treatment to eradicate hookworm larvae from soil has been found. In the situation reported to us, we recommended that workers cover the soil with plastic sheeting and wear long-sleeved shirts, long pants, and gloves. To date no further cases of this skin infestation have been reported.

...the worms crawl out.

The second report was of an 8-month-old asymptomatic infant from northern Louisiana who was found to have proglottids

present repeatedly in his diapers. Proglottids are motile sections of adult tapeworms that carry eggs from the intestine to the outside of the body. The infant of course had not eaten any undercooked meat (the source of human tapeworm), but he did have extensive contact with the family's many dogs, which had fleas. His pediatrician, Dr. Michael Pistorius of Minden, was interested enough to pursue this by sending some of the proglottids in for microscopic examination, and for his trouble was able to verify that this was an infection with *Dipylidium caninum*, the dog tapeworm (below).



The adult *D. caninum* tapeworm is about 4-20 inches long and lives in the intestines of dogs. Proglottids drop off the adult and migrate out the anus to reach the soil where the eggs are ingested by larval fleas. As the fleas mature into adults, the *D. caninum* eggs mature into larvae. Dogs then swallow the fleas when licking themselves, and the larvae mature into adults in the intestine. Humans (especially small children) become incidental hosts when they swallow fleas either directly or with the help of licks from overly friendly dogs. Infection with the adult tapeworms in general cause no symptoms but are identified by the regular passage of proglottids from the anus. The

infection is treated with niclosamide. Infected cats and dogs can be treated to prevent transmission to children, and insecticide control of fleas in areas where animals sleep can also help.

Very few instances of *D. caninum* infection in humans have been reported, but our textbook tells us "it is generally agreed that human infections are far more frequent than the reports indicate". A quick scan of the articles we found seems to show that many of the cases that have been reported come from Louisiana and Texas. We would be curious to hear about other cases of this problem and may want to assemble a case series. If you see any person with this tapeworm, call the Epidemiology Section at (504) 568-5005.

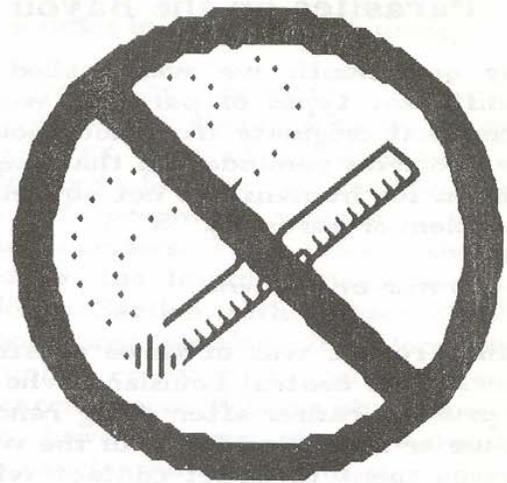


Louisiana Ranks 37th in Smoking Cessation Progress

Reduction of cigarette smoking depends on both preventing people from initiating smoking and inducing smokers to quit. The "quit ratio" (the percentage of people who have ever smoked who no longer smoke) is an index used to follow the success of smoking cessation programs. Information from the 1989 Louisiana Current Population Survey indicates that the state has a quit ratio of 45.5, less than the national average of 47.8. In the last five years Louisiana has had a 13.5% change in quit ratio, which places the state 37th from the most successful state in quit ratio improvement.

Factors which affect smoking cessation include the percentage of heavy smokers and the societal norms and attitudes about smoking. Legal restrictions on smoking are also likely to play a role in the state-to-state variation in quit ratios.

The survey also indicates that there exist substantial differences in quit ratios based on sex, race and age. These differences require different approaches to smoking cessation in different groups.



On September 25, 1990, the Surgeon General's Report on the Health Benefits of Smoking Cessation was released. This report details the substantial scientific argument for quitting smoking. Copies of the executive summary of this report and materials on choosing a method to stop smoking are available from the Adult Health Program, Office of Public Health, P.O. Box 60630, New Orleans, LA 70160.

New Head of the Immunization Section

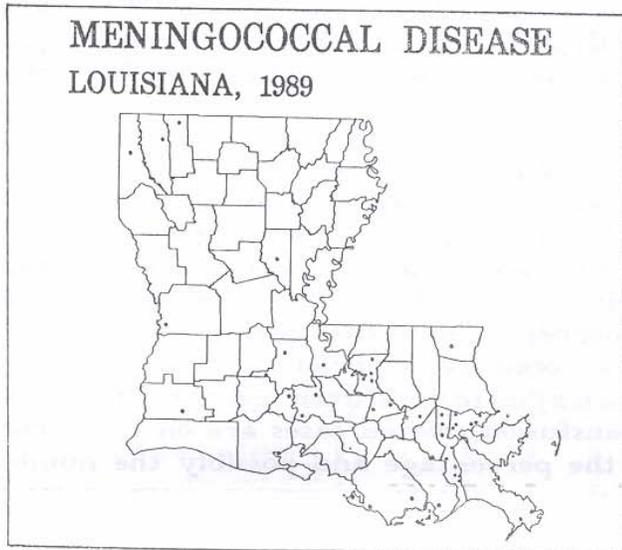
Herbert Loy is the new chief of the Immunization Section of the Office of Public Health. Mr. Loy is an 18 year veteran of the U.S. Public Health Services. His most recent assignment was with the state of West Virginia. He can be reached at 504-568-5007 or Linc 621-5007. With all of the recent changes in the vaccine preventable disease recommendations, there is certainly much for him to do.

DISEASE REPORTING BY FAX

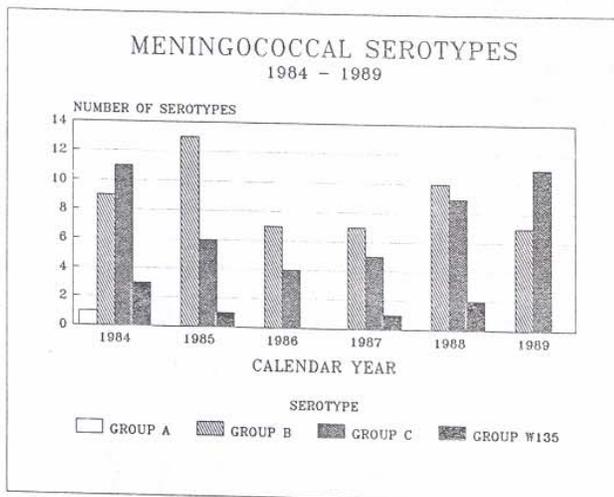
In addition to our new toll free case reporting number (1-800-256-2748), cases or reportable diseases may also be sent to us by fax. The fax machine is located in the AIDS Section and the confidentiality of incoming reports is protected. Reports should be sent using the EPI-2430 report form to fax number: 504-568-5507.

Annual Summary N. Meningitidis Disease 1989

In 1989, there were 49 cases of meningitis or sepsis caused by *Neisseria meningitidis*, a decrease from 62 cases in 1988. The case rate was 11 per 100,000. There were no important differences in rates by race or sex. The highest age-specific rates were in the 0-4 year age group (74 per 100,000). Cases occurred throughout the state and generally followed the population distribution (map).



Ten (20%) of the reported cases died. Seven (14%) of cases occurred in children who attended daycare. Of the *N. meningitidis* isolates typed (N=20), 11 (55%) were identified as group C and 7 (35%) were group B (figure).



Prevention of meningococcal disease in the United States rests on early identification of

cases and antibiotic prophylaxis of close contacts. Rifampin has been shown to be 90% effective in eradicating nasopharyngeal carriage of the organism. There exists a quadrivalent meningococcal vaccine (for types A,C,Y, and W-135) which can be used in outbreaks or in closed high-risk settings such as military barracks. Use of the vaccine in the general population is not recommended.

Dioxins Found in Fish

The Environmental Protection Agency (EPA) has found low levels of dioxins in fish sampled from sites downstream from paper and pulp mills in Louisiana. Samples of fish taken represented popular game fish consumed by sports fisherpersons.

Dioxins are a group of organic compounds that are formed in low concentrations as by-products of chemical manufacturing processes such as the production of pesticides and chlorine bleaching of paper products. The dioxin of most concern is called TCDD. This compound causes a wide variety of health effects in laboratory animals including liver disease and cancer. In humans, high doses of TCDD causes chloracne, a severe skin lesion that usually occurs in the head and upper body. Other health effects of TCDD observed in animals have not been seen in humans. However, because of the potential toxic effects, human exposure to all dioxins should be restricted to a minimum.

Prior to this study, EPA had found discharge of dioxins downstream from papermills. This study was an attempt to measure the extent that the dioxins accumulated in fish in these waters. Popular game fish were sampled, and fillets from these fish were analyzed for the presence of dioxins. The location of the sampling sites in Louisiana were Wham Brake at Swartz, La; Bayou Lafourche below Wham Brake, (Richland and Ouachita parishes); Bayou Anacoco at DeRidder, La; the Ouachita River north of Sterlington, La; the Mississippi River at Port Allen, La; the Mississippi River at West Baton, La; and the Mississippi River at St. Francisville.

The concentrations of dioxins found were measured in parts per trillion. Although these levels are considered extremely low,

they were thought to be of sufficient concern to issue advisories for limited consumption or no consumption of the fish caught in some of these areas.

An advisory against fish consumption was already issued for Wham Brake in 1987. The advisory recommends: individuals should limit consumption of fish; pregnant women and children should avoid or limit fish from these areas; individuals are advised to purchase fish from various sources and to consume different varieties of fish. At the time of this writing the Office of Public Health is considering similar advisories for some of the other areas tested.

AIDS Update Trends in Risk Groups

From the beginning of the AIDS epidemic and through much of the '80s, the percentage of cases in the major AIDS risk groups has been relatively constant. However, for the cases diagnosed in 1990, some changes in the risk group distribution have been noted. In general, the findings show a shift away from homosexual transmission toward drug-associated and heterosexual transmission. The figure below compares the risk group distribution for 1990 cases with that of all cases diagnosed prior to 1990 ("pre-1990").

Intravenous drug users (IVDU): Most striking is the increase in IVDUs from 6% in previous years to 13% in 1990. Along with this increase, there is an increase in the number of women, babies, and heterosexual cases.

Homosexual/bisexual men (HB): The percentage of cases in homosexual-bisexual men decreased from 70% pre-1990 to 61% in 1990. However, the epidemic in the population is not yet on the decline as the number of cases in this group are continuing to increase every year. At best, there may be a slowing of the increase in cases.

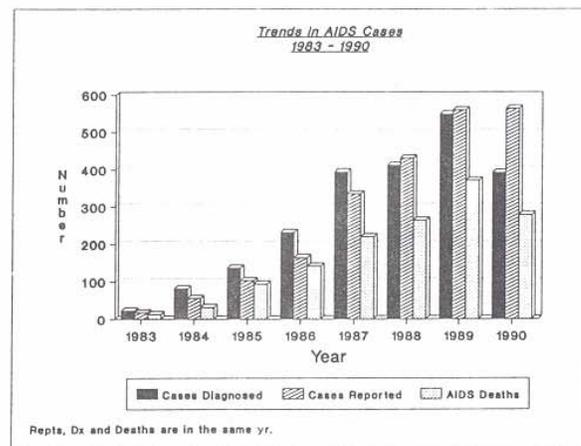
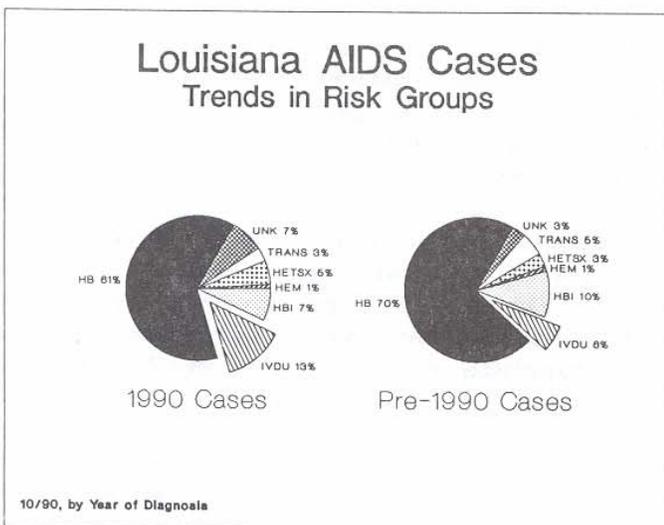
Homosexual/bisexual and IVDU (HBI): There has been a corresponding decrease in the percentage of HBI cases from 10% to 7%.

Heterosexual transmission (HETSX): The cases in this group have increased from 3% in previous years to 5% so far in 1990. The criteria for considering a case heterosexually transmitted is very strict. Therefore, this category may underrepresent the number of true heterosexually-acquired cases.

Transfusion-related cases (TRANS): Transfusion related cases are on the decline in the percentage and possibly the number of cases. This is consistent with national data trends which shows a leveling in the number of these cases.

Hemophilia cases (HEM): Louisiana data shows the hemophilia group with a consistent 1% of all cases for both time periods. However, national data trends document a true decline in the epidemic in this group. It is expected that this decline will be seen in Louisiana as well.

The percentage of cases in which the risk group is unknown is higher for 1990 because follow-up investigation has not yet been completed.



COMMUNICABLE DISEASE SURVEILLANCE, September-October 1990
PROVISIONAL DATA

Table 1. Selected diseases by region

DISEASE	HEALTH DEPARTMENT REGION										Sep-Oct 1990	Sep-Oct 1989	Cum 1990	Cum 1989	%Change
	1	2	3	4	5	6	7	8	9						
Vaccine-preventable															
Measles	Cases	0	0	0	0	0	0	0	0	0	0	40	10	57	-80
Mumps	Cases	1	3	1	2	0	0	1	0	0	8	91	101	654	-85
Rubella	Cases	0	0	0	0	0	0	0	0	0	0	0	0	5	-
Pertussis	Cases	2	1	0	0	0	0	2	0	2	7	14	30	30	0
Sexually-transmitted															
Gonorrhea	Cases	940	193	80	189	89	80	300	184	162	2217	2702	11443	12967	-12
	Rate**	12.1	2.5	2.6	3.3	3.3	2.5	5.2	5.8	3.5	5.1	6.2	26.1	29.6	
Syphilis	Cases	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	631	362	2272	1261	+80
	Rate**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.4	0.8	5.2	2.9	
Enteric															
Campylobacter	Cases	6	5	8	1	0	0	0	1	5	26	26	113	88	+28
Hepatitis A	Cases	4	19	6	0	3	2	4	2	1	41	50	171	238	-28
	Rate*	0.5	2.5	1.9	0	1.1	0.6	0.7	0.6	0.2	0.9	1.1	3.9	5.4	
Salmonella	Cases	19	16	18	17	10	23	25	12	15	155	140	536	565	-5
	Rate*	2.4	2.1	5.8	3.0	3.8	7.1	4.3	3.8	3.2	3.5	3.2	12.2	12.9	
Shigella	Cases	13	4	2	9	2	3	7	3	9	52	85	247	388	-36
	Rate	1.7	0.5	0.6	1.6	0.8	0.9	1.2	0.9	1.9	1.2	1.9	5.6	8.9	
Vibrio Cholera	Cases	0	1	0	0	0	0	0	0	0	1	0	3	0	+
Vibrio, other	Cases	1	0	0	0	0	1	0	0	2	4	3	25	31	-19
Other															
Hepatitis B	Cases	16	13	2	6	1	2	12	1	3	56	66	267	333	-20
	Rate*	2.1	1.7	0.6	1.1	0.4	0.6	2.1	0.3	0.6	1.3	1.5	6.1	7.6	
Meningitis															
H. Influenza	Cases	0	2	0	2	0	0	1	0	0	5	19	57	80	-29
N. Mening.	Cases	0	3	0	0	0	1	0	0	0	4	2	31	36	-14
Tuberculosis	Cases	2	5	1	1	0	1	9	9	2	30	80	228	292	-22
	Rate*	0.3	0.6	0.3	0.2	0	0.3	0.2	2.8	0.4	0.7	1.8	5.2	6.7	

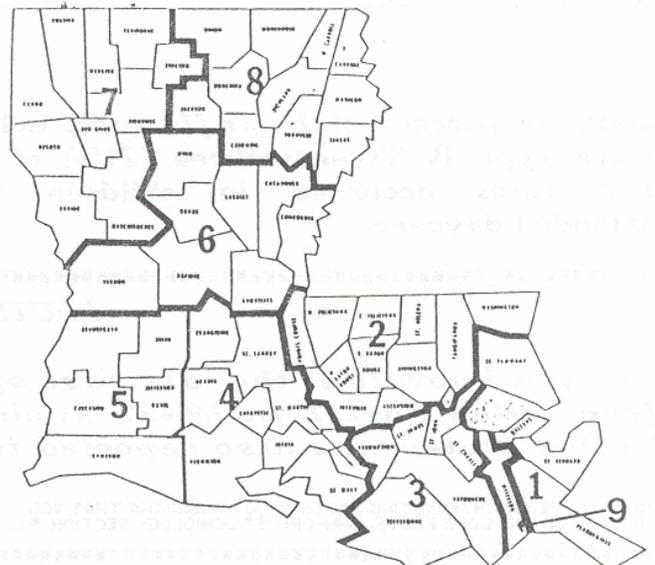
* Cases per 100,000 population
** Cases per 10,000 population

Table 2. Diseases of low frequency, 1990

Disease	Total to date
Blastomycosis	5
Brucellosis	2
Histoplasmosis	3
Lead Toxicity	25
Legionellosis	13
Leprosy	1
Leptospirosis	1
Lyme Disease	2
Malaria	6
Rocky Mountain Spotted Fever	2
Tetanus	2
Typhoid	4

Table 3. Animal rabies - September - October 1990

Parish	Species	No. Cases
Bossier	Skunk	1
Rapides	Skunk	1



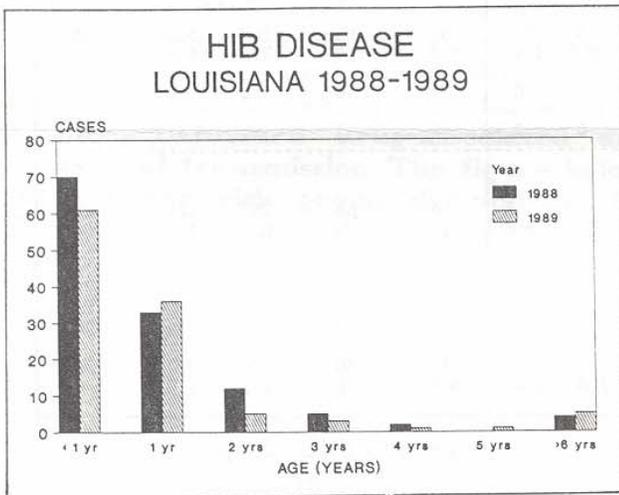
Annual Summary H. Influenza Disease 1989

In 1989, there were 112 reported cases of invasive disease caused by *Hemophilus influenzae*, a decrease from 131 cases reported in 1988. The case rate was 26 per 100,000. Ninety-seven (87%) of the cases were meningitis, and the remainder were bacteremia, pneumonia, cellulitis, or other invasive disease.

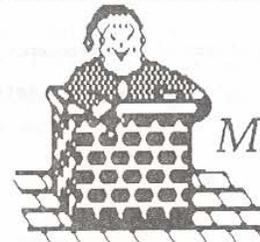
The case rate was approximately equal for males and females but was about three times as high for blacks as for whites (46 vs 15 per 100,000). Ninety-seven cases (87%) occurred in children under age 2, and 54% of cases occurred in children below 12 months of age. From 1988 to 1989 the number of cases in children under age 2 decreased only 6% (from 103 to 97) while the number of cases in children age 2 to 5 decreased 40% (from 25 to 15; figure).

In the United States, *H. influenzae* is the major cause of meningitis in children under age 5; the peak incidence is in children under one year of age. The primary strategy for preventing illness is universal vaccination. *H. influenzae B* conjugate vaccine has been used for 18-month-old children and is now recommended age 15 months. It is possible that the use of this vaccine is responsible for the decrease in cases in the 2-4-year-old age group. At the time of this writing a new four-dose schedule (2,4,6 and 15 months) has been approved by the FDA and is being considered for use in OPH clinics. This new regimen should for the first time protect those children at greatest risk. If so, we should soon see large decreases in the overall case rates of this disease in the state.

HIB DISEASE LOUISIANA, 1989



Sixty-six percent of *H. influenzae* isolates were type B. Twenty-three (21%) of the 112 cases occurred in children who attended daycare.



*Ho! Ho! Ho!
Merry Christmas!*

LOUISIANA FACTS

Did you know that the last case of smallpox in Louisiana was reported from Allen Parish in 1949? Incidentally, the last case of smallpox in the United States was also reported in 1949.

DO YOU HAVE ANY INTERESTING FACTS ABOUT LOUISIANA THAT YOU WOULD LIKE TO SEE PUBLISHED IN THE LOUISIANA MORBIDITY REPORT: SEND FACTS AND SOURCE TO: LOUISIANA FACTS, DHH-OPH-EPIDEMIOLOGY SECTION, P.O. BOX 60630, NEW ORLEANS, LA 70160.

DEPARTMENT OF HEALTH AND HOSPITALS
OFFICE OF PUBLIC HEALTH
P.O. BOX 60630 NEW ORLEANS LA. 70160

BULK RATE
U.S. POSTAGE
PAID
NEW ORLEANS, LA
PERMIT No. 471

RAOULT C RATARD MD
4109 CLEVELAND PL
METAIRIE LA 70003-1343

04591R

This public document was published at a total cost of \$705.00. Seven thousand five hundred copies of this public document were published in this first printing at a cost of \$705.00. The total cost of all printings of this document including reprints is \$705.00. This document was published by Department of Social Services Printing Facility, 2636 Daisy Street, Baton Rouge, Louisiana 70805, to inform Physicians, hospitals, and the public of current Louisiana morbidity status under authority of R.S. 40:36. This material was printed in accordance with standards for printing by State Agencies established pursuant to R.S. 43:31.