



Edwin W. Edwards
GOVERNOR

Louisiana Morbidity Report

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



J. Christopher Pilley
SECRETARY

March-April 1992

Volume 3 Number 2

Universal Vaccination of Infants Against Hepatitis B

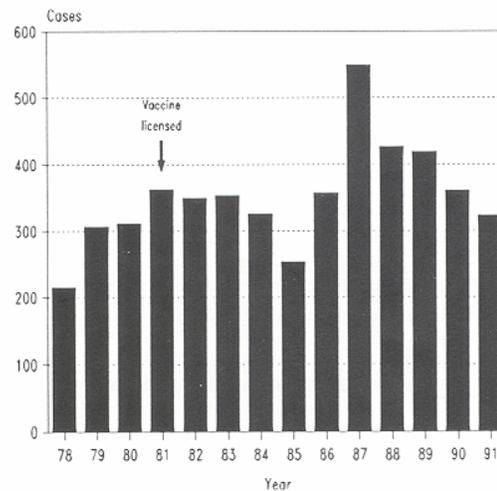
A state panel of experts and the country's two main advisory groups on immunizations have recommended that all infants be vaccinated against hepatitis B. The vaccine is to be administered in a three dose series, with the first dose given shortly after birth, the second dose at 1-2 months of age, and the third dose at 6-18 months of age. OPH is currently seeking funding from the federal and state governments to buy this vaccine for use in parish health units; vaccination may begin in these clinics this summer or fall.

Hepatitis B is spread sexually, through needle sharing associated with intravenous drug use, through needle sticks to health care workers, from mother to child during delivery, and to a small extent by person-to-person contact within households. Since the licensure of the hepatitis B vaccine in 1981, national groups have recommended it be used only for persons in high risk groups, such as health care workers, intravenous drug users, persons with many sex partners, and household contacts of chronic carriers. In spite of these recommendations, during the past ten years the incidence of acute hepatitis B appears to have increased (Figure), and there is no reason to believe the number of chronic carriers of the virus (approximately 0.5-1% of the population) has changed. The failure of the vaccine to limit this disease is probably due to a combination of inadequate funding,

difficulties in reaching high-risk groups, and infection in persons before their risk behavior is identified. Because of this, the Advisory Committee on Immunization Practices (ACIP) of the Centers for Disease Control and the American Academy of Pediatrics (AAP) have decided to change strategy and recommend universal vaccination of children.

In public health clinics in Louisiana, hepatitis B vaccination is currently provided to three groups of persons: children of hepatitis B surface antigen (HBsAg) positive mothers,

Figure: Cases of acute hepatitis B reported in Louisiana by year, 1978-1991



household contacts of these mothers, and infants of mothers born in highly endemic areas (particularly Southeast Asia). In response to the national recommendations, OPH convened an advisory committee on immunizations on February 10, 1992. This committee recommended that universal vaccinations begin in Louisiana, and that the schedule follow that of Option 1 of the ACIP recommendations: birth, 1-2 months, and 6-18 months of age. In practice, this means that OPH will encourage hospitals to provide the first dose of hepatitis B vaccine immediately after birth and OPH clinics will provide the second and third doses of vaccine at two and six months of age, respectively. The second and third doses will be given simultaneously with DTP, OPV, and Hib vaccines. In light of the recommendations of the AAP, OPH expects most private physicians seeing children to also offer hepatitis B immunizations to their patients in their offices.

(Continued on page 2)

Contents

Unusual Influenza Season.....	2
Bulletins.....	2
LA Spinal Cord Injuries-Motor Vehicle Crashes.....	3
Influenza & Pneumococcal Vaccines in Nursing Homes.....	3
Mycobacterium bovis Tuberculosis at the Zoo.....	4
AIDS Update.....	5
Annual Summary: Shigellosis 1991.....	7

Vaccination Against Hepatitis B (Cont.)

The volume of vaccine to be given for each dose depends on the brand of vaccine used (Table). Infants of uninfected mothers should receive either 0.25 ml of Recombivax (Merck, Sharp, and Dohme) or 0.5 ml of Engerix (SmithKline). The two vaccines can be combined in a series without loss of efficacy, so infants begun on Engerix in hospitals can continue the series in public clinics using Recombivax (the brand currently under government contract). Screening of pregnant women for HBsAg must continue in spite of universal infant vaccination because infants of mothers who are chronic carriers still need to be given hepatitis B immune globulin and a higher dose of hepatitis B vaccine (if Recombivax is used).

Table: Doses of hepatitis B immune globulin and hepatitis B vaccines given at birth, two and six months of age (in milliliters). At birth, infants of HBsAg-positive mothers should receive HBIG and one of the two hepatitis B vaccines. At two and six months of age, children should receive one of the two hepatitis B vaccines.

Mother's status	Birth		2 and 6 months of age	
	HBIG	Hepatitis B Vaccine Recombivax OR Engerix	Hepatitis B Vaccine Recombivax OR Engerix	Hepatitis B Vaccine Recombivax OR Engerix
HBsAg-positive	0.5	0.5	0.5	0.5
HBsAg-negative	-	0.25	0.5	0.25

Questions regarding this vaccination program should be directed to the Immunization Section at (504) 568-5007.

Unusual Influenza Season

An early surprise attack of influenza caught most of Louisiana off-guard this past flu season. Historically, influenza activity begins in late December or early January. Louisiana led the nation with the first case identified in a one month old black male from Orleans Parish with an onset date of September 22, 1991. Subsequent influenza cases occurred in all parts of the state with widespread activity being reported as early as November 5. By the end of January, 1992, influenza had decreased to sporadic activity across the state.

Laboratory analysis identified only one strain of influenza virus circulating in Louisiana this season. Of the 500 specimens sent in for testing, 133 (27%) were laboratory confirmed as Influenza A/Beijing/353/89 (H3N2), a strain that was included in the 1991 vaccine. A total of 69,096 doses of influenza vaccine were administered by the Office of Public Health this season.

BULLETINS

New Vaccine Information Pamphlet

As of April 1, 1992, the Office of Public Health, Immunization Section will be mailing all licensed physicians camera ready copies of the new vaccine information pamphlet on DTP, Polio, and MMR. We have been informed by the American Academy of Pediatrics that physicians (members as well as non-members) may also purchase printed copies through the Academy. For information call 1-800-433-9016 and ask for the Publications Department, FAX: 1-708-228-5097.

New Orleans Qualifies for Ryan White Title I Funding

As of March 1992, the Greater New Orleans area has reported a total of 2,000 AIDS cases. With this number of cases the New Orleans area qualifies for emergency funding under Ryan White Title I. This means as much as \$1,000,000 and possibly more will be available for services for HIV infected persons. We appreciate the efforts of physicians and other medical personnel who assisted in the timely reporting of these AIDS cases.

Louisiana Morbidity Report

Volume 3, Number 2

March-April 1992

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, P.O. Box 60630, New Orleans, LA 70160.

Assistant Secretary, OPH

Larry Hebert, MD

State Epidemiologist

Louise McFarland, DrPH

Editors

Thomas Farley, MD MPH
Karen Kelso, RNC MS

Production Manager

Ethel Davis, CST

Contributors

Susan Wilson, BSN
Susan Troxler, RN MPH
Edgar Monterroso, MD MPH
David Lawrence, RN MPH

Louisiana Spinal Cord Injuries-Motor Vehicle Crashes

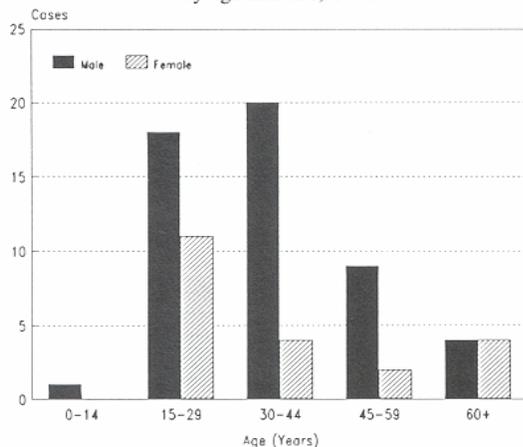
The extremely high cost of spinal cord injury in Louisiana is primarily due to motor vehicle crashes, according to surveillance information collected by the Disability Prevention Program.

Of the 159 spinal cord injuries (SCI) reported to the Disability Prevention Program in 1990, 73 (45.9%) were caused by motor vehicle crashes. Men were 2 1/2 times more likely to get SCI than women regardless of race (Figure). The SCI injury rate due to motor vehicle crashes was 1.7 per 100,000. The rate of these injuries in predominantly rural parishes exceeded the rates in urban parishes.

Sixty-one percent of motor vehicle spinal cord injuries were to vehicle drivers. Of those who had their protection reported, 22.2% were using seat belts. Less than half (41%) of individuals involved in motor vehicle related injuries were tested for blood alcohol levels. Eighty-seven percent of those tested had alcohol in their bloodstream, and 69.6% were legally drunk.

The first year direct medical cost of the 73 SCI from motor vehicle crashes is estimated to exceed \$6.25 million. The cost of these injuries were mainly paid by government-supported payment and indigent care (50.7%). The propor-

Figure: Motor vehicle spinal cord injuries, cases by age and sex, 1990



tion paid by private insurance, workers comprehensive coverage and self-payment was 47.9%. Of all injuries reported to the Disability Prevention Program, the cause most likely to result in quadriplegia was motor vehicle crashes (56%). Among those injuries in motor vehicle crashes, 47% result in quadriplegia/quadriplegia and 33% in paraplegia/paraparesis. Only 20% experienced minimal long term deficit or made a complete recovery. This data clearly shows the importance of prevention programs such as increased public awareness about drinking and driving and wearing a protective device while driving.

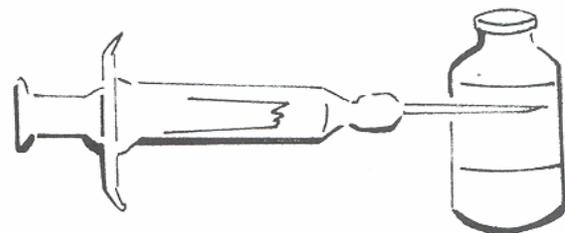
Use of Influenza and Pneumococcal Vaccines in Nursing Homes

According to a recent survey of nursing homes carried out by the Immunization Section, a high percentage of nursing home residents in Louisiana receive influenza vaccine, but, very few receive pneumococcal vaccine.

Elderly persons are at high risk of developing severe complications from influenza, and also are at high risk for pneumococcal infection. Nursing home residents are particularly important to vaccinate because they also may have chronic medical conditions or may transmit infection to other residents who have such conditions. The Centers for Disease Control (CDC) has also included nursing home staff among the groups recommended to receive influenza vaccine because of the risk of transmission to chronically ill persons. Because of the public health importance of vaccinating persons in nursing homes, each fall the Immunization Section supplies free influenza vaccine to nursing homes for them to immunize all of their residents. In December 1991, a survey was carried out to assess the use of influenza vaccine and pneumococcal vaccine in nursing homes. Forty randomly-selected nursing homes with 4,506 residents and 3,142 staff persons were surveyed. All 40 offered influenza vaccine to their residents in 1991, and 3515 (78%) residents received the vaccine. By contrast, only 15 (38%) nursing homes offered influenza vaccine to staff, and only 305 (10%) of staff received the vaccine. Pneumococcal vaccine was offered to all residents in only three (8%) nursing homes, in spite of national recommendations that pneumococcal vaccine be given to all persons over age 65.

Comment:

The coverage rate for influenza vaccine in this survey is higher than that reported in the Medicare Influenza Demonstration Project - a pilot program providing influenza vaccine to persons receiving Medicare. This Demonstration Project, which is not specifically focused on persons in nursing homes, has raised influenza vaccination in beneficiaries from 20% to 48% over two years. The conclusions of the Louisiana survey are consistent with the Medicare findings: that provision of free influenza vaccine can successfully achieve high immunization coverage rates in high-risk adults.



Transmission of *Mycobacterium bovis* Tuberculosis at the Zoo

In June 1991, a white rhinoceros that had been ill since the spring of that year died at the local zoo. At necropsy, he was found to have pulmonary tuberculosis caused by *M. bovis*. The zoo authorities became concerned over exposure of humans to the infected animal and took immediate action. Tuberculin skin testing of personnel involved in the care and necropsy of the rhinoceros identified conversion in a number of employees. Soon after, a monkey in an adjacent cage became ill with pericarditis due to *M. bovis*. Due to concern over possible infection across pens to other animals and to more humans, the Office of Public Health assisted in the investigation.

Tuberculin skin tests were administered to zoo employees who had exposure to ill animals and those who had concerns about infection. Testing was done first on all rhinoceros handlers, and other persons with animal contact, such as horticulture and maintenance employees. Similarly, all animals in the immediate area to the rhino were tested for tuberculin reactivity. The testing included other hooved animals in the rhino area, the monkeys in the adjacent breeding cages, the Colobus monkeys, the Howler monkeys and the other primates in the collection.

Table 1 shows that the rhinoceros handlers were the group of employees with highest skin test conversion rates, five (62%) of eight.

Table 1: Attack rates by job activity

	Skin Test Results				A.R. %
	Converts	Single +	Previous +	Neg	
Rhino handlers	5	0	1	3	62%
Necropsy	2	0	0	7	22%
Monkey handlers	0	0	0	5	0%
Other animal handlers	0	1	3	64	0%
Other animal contact	0	1	0	13	0%
Non-animal contact	0	0	0	8	0%

The employees who participated in the necropsy, but did not routinely handle the rhinoceros, had a lower conversion rate (2/9, 22%). No other employees had documented skin test conversions.

Two (14%) of five monkeys in the adjacent breeding cage had either clinical disease or skin test conversion (table 2).

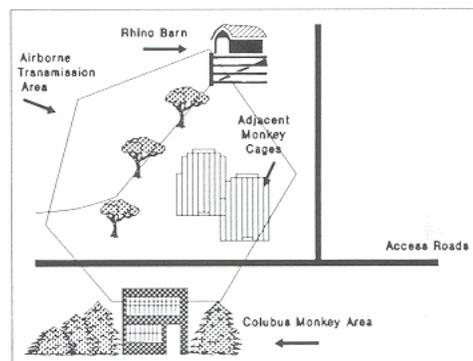
Table 2: Attack rates for animals

	Infected/		A.R. %
	Convert	Neg	
Rhinoceros	0	3	0%
Adjacent cage monkeys	2	3	40%
Colobus monkeys	1	7	12%
Howler monkeys	0	4	0%
Other primates	0	24	0%

One (12%) of eight Colobus monkeys in a more distant exhibit cage became infected. Other primates did not have positive results. All three infected monkeys died.

The conclusion of the investigation was that the disease was spread directly from the rhinoceros to humans and monkeys by the airborne route (figure). The only humans that apparently became infected were those that had very close contact with the rhinoceros. Nonhuman primates are exquisitely susceptible to tuberculosis, which probably explains the illness in monkeys in spite of their lower level exposure. To our knowledge, this is the first documented occurrence in a zoo of *M. bovis* transmission across pens to other species with a fatal outcome. The rapid thorough response of zoo authorities helped to define the limits of the outbreak and prevent spread.

Figure: Schematic diagram area of spread of *M. bovis* at the zoo



WARNING

Spring is here! Outdoor activities are increasing and so will the mosquito population very soon. With the possibility of mosquito-borne viral encephalitis, the Office of Public Health is recommending that physicians encourage their patients to reduce mosquito contact as much as possible (i.e., avoid exposure during dusk and early evening, remove any containers that can hold standing water, use insect repellent, and be sure doors and windows are appropriately screened.

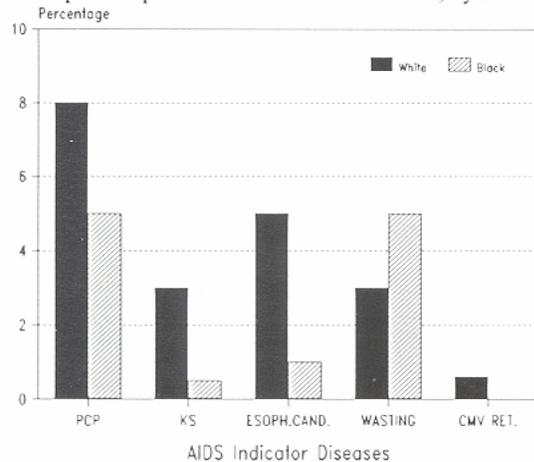
AIDS Update

HIV Infection: Difference in Clinical Manifestations by Race in Patients with 200-500 CD4 Cells

The Spectrum of Disease Study (on the full spectrum of HIV disease) shows differences in clinical manifestations by race. Of the 339 patients with CD4 cell counts between 200-500, the racial distribution is 45% white, 52% black, and 3% other minorities.

The 10 most frequently occurring AIDS indicator diseases were analyzed by race stratified by CD4 cell count. For all races, the majority of these diseases occurred in patients with under a 200 CD4 cell count. However, AIDS indicator diseases do occur in patients with CD4 cell counts greater than 200. Among persons with CD4 cell counts between 200 and 500, whites were more likely than blacks to have KS, PCP, and EC, but less likely to have wasting (Figure 1). In addition to the diseases presented in Figure 1, whites also had a higher occurrence of disseminated mycobacterial disease. Cryptococcal meningitis occurred equally in both races.

Figure 1: Frequency of AIDS-defining indicator diseases among HIV-positive persons with 200-500 CD4 cells, by race



Differences between races in non-AIDS defining infections are shown in Figure 2, all of which were found to be statistically significant. (The category of genital includes infections such as Herpes, vaginal candidiasis, chlamydia, and trichomonas.) Whites had a higher incidence of bronchitis, upper respiratory infections, and folliculitis. Blacks had a higher incidence of syphilis. Hepatitis B and skin infections occurred equally in both races.

The higher prevalence of diarrhea and seborrhea among whites is statistically significant (Figure 3). Weight loss occurred equally in both races. Constitutional symptoms of fever, night sweats, headache, and fatigue are common to both groups, but occur more frequently in whites. Lymphadenopathy is more common among blacks.

Figure 2: Frequency of other infections among HIV-positive persons with 200-500 CD4 cells, by race. * = statistically significant difference

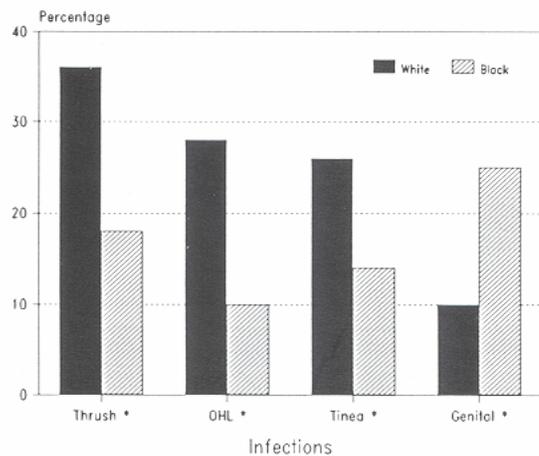
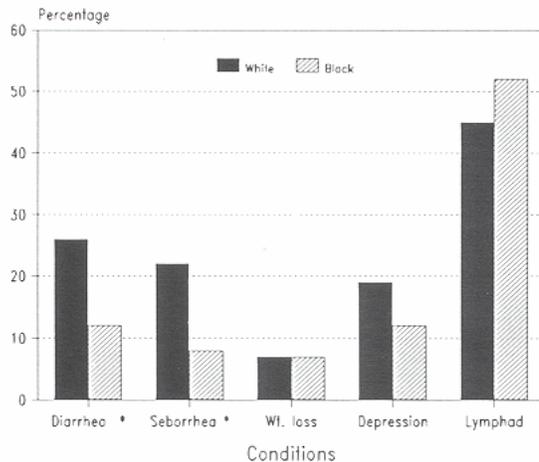
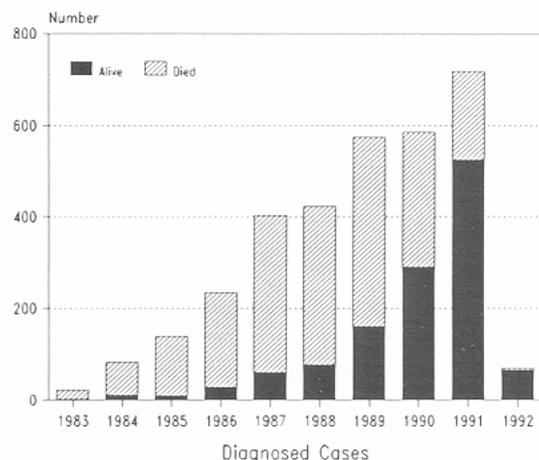


Figure 3: Frequency of other conditions among HIV-positive persons with 200-500 CD4 cells, by race. * = statistically significant difference



AIDS Case Trends



COMMUNICABLE DISEASE SURVEILLANCE, January-February 1992
PROVISIONAL DATA

Table 1. Selected diseases by region

DISEASE		HEALTH DEPARTMENT REGION									Jan-Feb 1992	Jan-Feb 1991	Cum 1992	Cum 1991	%Change
		1	2	3	4	5	6	7	8	9					
Vaccine-preventable															
Measles	Cases	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Mumps	Cases	3	0	0	0	0	1	0	0	0	4	7	4	7	-43
Rubella	Cases	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Pertussis	Cases	0	0	0	0	0	0	0	0	0	0	2	0	2	-
Sexually-transmitted															
AIDS	Cases	89	11	3	6	0	8	13	8	7	147	108	147	108	+36
	Rate*	12.1	1.5	1.0	1.1	-	2.6	2.4	2.6	1.6	3.5	2.6	3.5	2.6	
Gonorrhea	Cases	776	287	116	244	88	85	248	75	133	2052	2210	2052	2210	- 7
	Rate**	10.6	3.8	3.8	4.4	3.4	2.7	7.9	1.4	3.0	4.9	5.0	4.9	5.0	
Syphilis (P&S)	Cases	125	107	43	42	6	12	65	45	32	478	334	478	334	+43
	Rate**	1.7	1.4	1.4	0.8	0.2	0.4	1.2	1.5	0.7	1.1	0.8	1.1	0.8	
Enteric															
Campylobacter	Cases	4	2	2	7	0	0	0	0	4	19	1	19	1	+1800
Hepatitis A	Cases	9	1	0	1	7	0	1	0	0	19	20	19	20	- 5
	Rate*	1.2	0.1	-	0.2	2.6	-	0.2	-	-	0.4	0.5	0.4	0.5	
Salmonella	Cases	6	0	2	2	1	0	1	0	2	14	27	14	27	-48
	Rate*	0.8	-	0.6	0.4	0.4	-	0.2	-	0.4	0.3	0.6	0.3	0.6	
Shigella	Cases	1	0	0	0	0	0	1	0	0	2	15	2	15	-87
	Rate*	0.1	-	-	-	-	-	0.2	-	-	0.04	0.3	0.04	0.3	
Vibrio Cholera	Cases	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Vibrio, other	Cases	0	0	0	0	0	0	0	0	0	0	2	0	2	-
Other															
Hepatitis B	Cases	4	0	0	4	0	0	0	2	2	12	20	12	20	-40
	Rate*	0.5	-	-	0.7	-	-	-	0.6	0.4	0.3	0.5	0.3	0.5	
Meningitis/Bacteremia	Cases	0	0	0	0	0	0	0	0	0	0	6	0	6	-
H. Influenza	Cases	0	0	0	0	0	0	0	0	0	0	6	0	6	-
N. Mening.	Cases	1	0	0	0	0	0	0	0	0	1	4	1	4	-75
Tuberculosis	Cases	0	0	0	0	0	0	0	0	0	0	20	0	20	-
	Rate*	-	-	-	-	-	-	-	-	-	-	0.5	-	0.5	

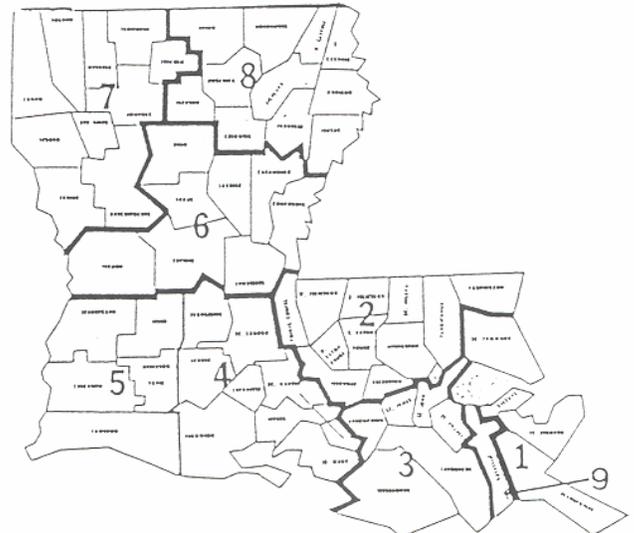
* Cases per 100,000 population
** Cases per 10,000 population

Table 2. Diseases of low frequency, 1992

Disease	Total to date
Blastomycosis	0
Brucellosis	0
Histoplasmosis	0
Lead Toxicity	0
Legionellosis	0
Leprosy	0
Leptospirosis	0
Lyme Disease	0
Malaria	0
Rocky Mountain Spotted Fever	0
Tetanus	0
Typhoid	0

Table 3. Animal rabies - January - February, 1992

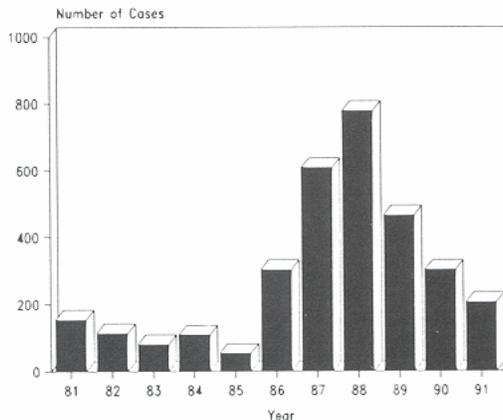
Parish	Species	No. Cases
Bossier	Horse	1



Annual Summary Shigellosis 1991

Two hundred six cases of shigellosis were reported to the Epidemiology Section in 1991, an overall case rate of 4.9 per 100,000. This represents a 32% decrease in cases from 1990 (Figure 1) and has gradually declined since 1988.

Figure 1: Cases of shigellosis by year, 1981-1991



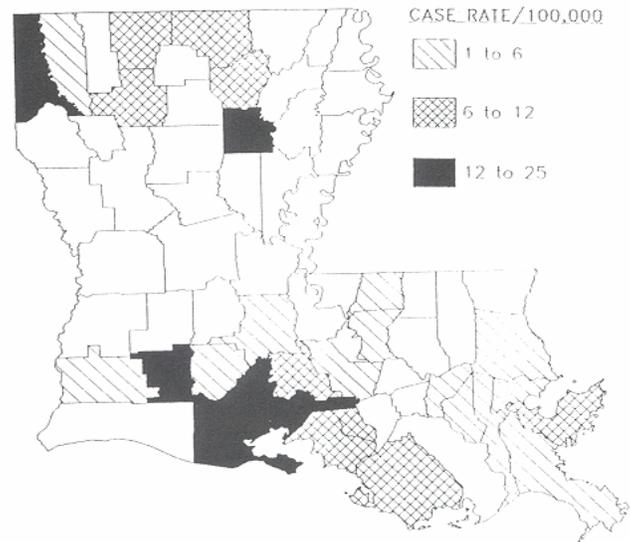
The overall incidence rates in males (4.4/100,000) and females (4.1/100,000) were comparable. One hundred ten cases (54%) with known race showed higher race specific rates among blacks than for whites (3.8 vs 2.2 per 100,000). As in previous years, age specific rates continue to be highest among children 0-4 years of age (22/100,000) than any other age group. Of 156 known serotypes (76%), *S. sonnei* (144 isolates, 92%) and *S. flexneri* (11 isolates, 7%) were the most frequently reported.

Parishes with case rates that nearly tripled the overall state rate per 100,000 are: Lafayette(24), Caldwell(20), Vermilion(16) and Iberville(15) (Figure 2). No outbreaks for 1991 have been identified.

Comment:

Shigellosis is an acute bacterial disease which involves the large and small intestines. Symptoms include diarrhea, fever, nausea, vomiting and cramps and is spread via fecal-oral route. Patients must be advised of the importance of handwashing after defecation as a means of curtailing transmission of *Shigella* to contacts. Infection may occur after ingestion of very few (10-100) organisms. The most difficult epidemics to control are those involving young children (not yet toilet trained) and the mentally disabled. Treatment with antibiotics will shorten the duration and severity of illness and the duration of pathogen excretion, however they should be used only if warranted to protect contacts or lessening the severity of illness when epidemiologically indicated. Multi-resistance to antibiotics is common, so the choice of specific agents may depend on the antimicrobial susceptibility pattern.

Figure 2: Rates of shigellosis by parish, 1991



LOUISIANA FACTS

Cover of first issue of the Louisiana Monthly Bulletin.

BULLETIN WILL BE SENT, FREE OF CHARGE, ON RECEIPT OF REQUEST

Monthly Bulletin

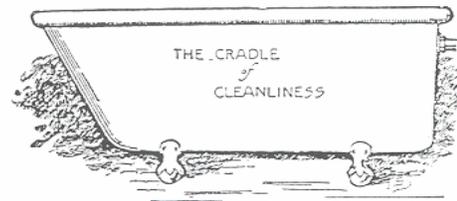
LOUISIANA STATE BOARD OF HEALTH.

Devoted to the dissemination of the principles
of Hygiene and Sanitation.

Application for entry as second-class matter at the Post Office of New Orleans,
La., pending.

Published monthly at New Orleans, La., by the Louisiana State Board of Health.

Vol. 1. New Orleans, October 1, 1911 No. 1.

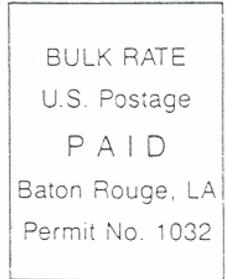


For your health's sake and for your neighbor's sake
keep your person clean.

"Sanitary instruction is even more important than Sanitary Legislation."

Cover of first issue of the Monthly Bulletin.

Do you have an interesting fact 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.



LIST OF REPORTABLE DISEASES/CONDITIONS

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

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

The toll free number for reporting communicable diseases is
 1-800-256-2748

This public document was published at a total cost of \$925.00. Six thousand five hundred copies of this public document were published in this first printing at a cost of \$925.00. The total cost of all printing of this document including reprints is \$925.00. This document was published by Bourque Printing, Inc., 13112 South Choctaw Drive, Baton Rouge, LA 70815, to provide selected physicians, public health officials, other states, and federal agencies with statistical summary information on the status of Louisiana's reportable diseases/conditions by exception from Division of Administration. This material was printed in accordance with standards for printing by state agencies established pursuant to R.S. 43:31. Printing of this material was purchased in accordance with the provisions of Title 43 of the Louisiana Revised Statutes.