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GOVERNOR

Louisiana Morbidity Report

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LOUISIANA
Department of HEALTH and HOSPITALS
J. Christopher Pilley
SECRETARY

May-June 1993 Volume 4 Number 3

Shigella Outbreak in Calcasieu Parish

On April 6, 1993 the OPH Central Laboratory noted an increase in Shigella isolates received from the Lake Charles Region. Further investigation identified 37 confirmed cases of Shigellosis from February 1 to April 30. Thirty of the cases were children from ages 2 months to 15 years old and six cases were adults. Most cases were reported in mid March (Figure). Cases were not clustered in any one neighborhood, school, or day care center.

A case-control study was done of 29 cases to identify risk factors for infection. Of the 29 cases in the study, 5 (17%) were black and 24 (83%) were white. There were 21 (70%) females and 9 (30%) males.

Risk factors examined included source of water supply, pet ownership, school/day care attendance, attending festivals/events, number of rooms in household, number of people residing in household and sibling attendance in a day care center. The relationship between risk factors and illness is shown in the table.

No risk factors were found to be strongly associated with illness. In particular, cases were not significantly more likely than controls to attend day care or to have a family member who attend day care. Surprisingly, cases were significantly less likely than controls to live in crowded households (as indicated by more than one person per room.)

At the time of this writing, the source of this outbreak is unknown. OPH will continue to monitor shigellosis cases in the area. In the meantime, physicians should consider shigellosis as a diagnosis for patients with acute diarrhea, should perform stool cultures when the diagnosis is suspected and should recommend careful handwashing to family members of suspected cases. Antibiotics shorten the duration of excretion of shigella organisms, and therefore may help prevent household spread, but physicians should be aware of antibiotic sensitivity patterns in their area to make sure that the organism is susceptible to the prescribed antibiotic.

Figure: Shigellosis Cases, Calcasieu Parish, 1993

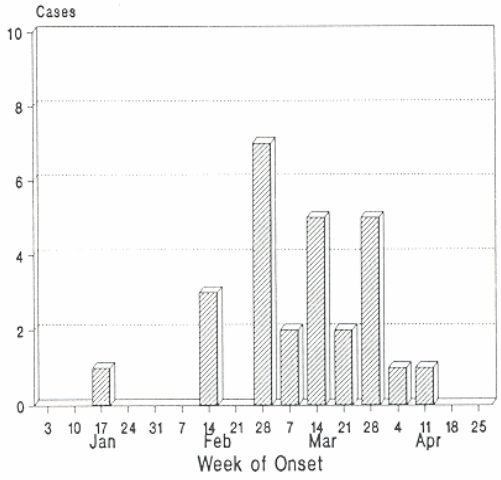

Table: Risk factors associated with illness

Risk Factor	Cases N	Cases %	Control N	Control %	O.R.	P
Race (Black)	8	27	5	17	1.8	0.3
Municipal water	23	82	26	90	0.5	0.41
Pets	16	57	14	47	1.5	0.42
Attend day care	7	23	4	13	2.0	0.31
1-2 people in household	9	32	5	17	2.4	0.17
$\geq$1 person per room	1	4	12	42	0.05	$<.001$

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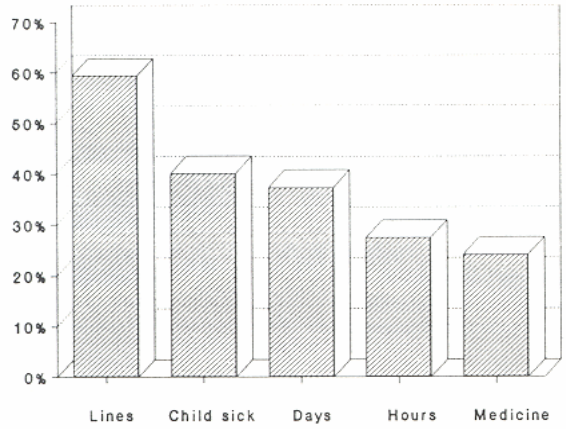
Parent Immunization Survey

In October 1992, the Office of Public Health (OPH) began a statewide opinion survey of parents of children who had received immunizations at public health clinics. The purpose of the study was to assess parental attitudes on the safety and efficacy of vaccinations and to determine what kind of obstacles were preventing parents from getting their children immunized.

There were 212 children included in the survey. Most of their mothers had graduated from high school (80%) and had either no other children or one other child (62%). Approximately half of the participants were white (53%) and a third were black (36%). Urban respondents numbered almost as many as rural ones (44% and 56%, respectively). Roughly two-thirds of persons interviewed reported their child having been on the WIC assistance program at some point in the past (64%).

Nearly all parents considered measles, mumps and whooping cough to be either "very serious" or "serious" illnesses (97%). Parents also felt that vaccinations are either "very safe" or "safe" (97%) and effective (98%). Parents thought that their children are likely to get a disease if they are not immunized (86%). Most participants felt that it is "very easy" or "easy" to get their child to the clinic for his or her vaccinations (88%).

Figure: Percent of surveyed parents reporting barriers to immunization of children (See text for clarification of labels.)



The study revealed that 33% of children were not up to date on their immunizations at the time of their second birthday. Of the barriers to receiving immunizations, the five items most often mentioned as being a problem for the respondents were: 1) waiting in line at the clinic, 2) being told that their child could not be immunized because he or she was sick, 3) clinics only open on certain days of the week, 4) inconvenient hours of the clinic, and 5) child was taking medicine at the time he or she was supposed to be immunized (See Figure). Further analysis showed that children of mothers who mentioned having trouble finding childcare for their other children while taking a child to be vaccinated were more than twice as likely to have incomplete immunizations. It was also found that children of mothers who said it took too long to get to the clinic were twice as likely to be not up to date. Children of mothers who said waiting in line at the clinic was a problem were nearly two times as likely to be not up to date.

In summary, the survey indicated that the primary barriers to improved immunization rates were not fears about vaccine safety or lack of concern about vaccine preventable diseases, but rather were issues related to the convenience of obtaining immunizations.

OPH and other state health departments will be receiving funds from the federal government as part of President Clinton's infant immunization initiative to improve immunization coverage. A portion of these monies will be used to address the convenience issues identified by this survey.

Unexplained ARDS Cluster

New Mexico health officials have identified a cluster of persons with Adult Respiratory Distress Syndrome (ARDS) of unknown etiology. As of May 26, ten cases were under investigation, and six had died. Laboratory tests did not identify any bacterial or viral cause. The working case definition is a person with bilateral pulmonary infiltrates and oxygen saturation of $<90\%$ on room air with no identifiable cause. Physicians who care for patients who fit this definition should contact the Epidemiology Section at (504) 568-5005.

Louisiana Morbidity Report
Volume 4 Number 3 May-June 1993

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.

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Tuberculosis in an Elementary School

In April, a worker at an elementary school in Hammond was found to have communicable tuberculosis. Because this worker had exposure to nearly all of the students and staff at the school, the Office of Public Health, working closely with the school administration, carried out tuberculin skin testing of everyone at the school. Of 1005 children tested, 122 (12%) had positive tests. Among adults, 146 were tested and 27 (18%) had positive tests. The expected baseline infection rate in elementary school children is only 1-2%, and the expected infection rate in adults is 6%. Three children were placed on 3-drug treatment regimens because of chest x-ray or physical findings suggestive of tuberculous disease. All other children and appropriate adults were started on INH alone to prevent the development of tuberculous disease.

The CDC currently recommends preventive treatment for all individuals less than 35 years old with a positive skin test and for individuals over age 35 who are in certain high risk categories. Testing and evaluations were done by personnel from the school district, Lallie Kemp Hospital, North Oaks Hospital, the Hammond Health Unit, and the Tuberculosis Control Program of the Office of Public Health. This group effort made it possible for all of the children to be evaluated and started on treatment quickly. The participants are to be commended for their concern and for giving their time and resources to help the children.

1992-93 Influenza Season

In November, influenza B virus was isolated in a nine month old black female infant from New Orleans. The illness occurred on November 10, 1992. Subsequently, influenza A and B viruses were isolated from various age groups residing in the surrounding parishes in Louisiana. The tracking of influenza activity throughout the state is monitored through laboratory identification of influenza cultures and by semi-quantitative reports of influenza-like illness from more than 20 physicians, 9 hospitals, and 17 schools across the state. From these reports, influenza activity is classified as "sporadic", "regional", or "widespread". Assessment of the influenza morbidity showed "regional" influenza activity during the week of February 1st through February 15; however, for most of the influenza season, activity was "sporadic". As of March 30, 1993 a total of 88 positive ioslations were made of which 42 influenza type A/Beijing isolates and 46 influenza type B/Panama have been identified.

During this influenza season the Office of Public Health provided a total of 71,000 doses of influenza vaccine to its medically high risk and elderly population.

Sanitation Issues - Then and Now

A major focus of health departments throughout the U.S. centers on proper sanitation. Public health sanitarians are still singing the age old "blues" about pollution. Even though it's the same song, it's a new verse.

In the 1930's and early 40's, public health sanitarians were teaching people to construct pit privies to avoid polluting the environment with human waste. Now as we are about to begin the 21st Century, public health sanitarians are still teaching the public not to pollute the environment but instead of advocating pit privies, they are suggesting septic tanks and absorption fields, oxidation ponds, deep sand filters, or individual mechanical treatment plants. In Louisiana, 42 (62%) of the parishes have ordinances that require approval from OPH for individual wastewater treatment systems. The other 22 parishes have no such ordinance and in many situations, ineffective systems are being used.

Unlike the 1930's, when people were unaware of the need to treat their waste, sanitarians now must get the message across to everyone what an approved system consists of and since not all systems are appropriate for all pieces of property, further recommendations must be made on those systems that will achieve the desired degree of treatment.

The next goal is to develop systems that will not only treat the sewage, but also reduce the amount of effluent entering our streams and waterways.

Years ago, everyone thought the solution to pollution with human waste was dilution. This was fine when our nearest neighbor was miles away. Now, even in rural settings with many houses spaced every 100 feet, provisions are necessary for further treatment and reducing effluent.

Emergency Public Health Surveillance System

The Office of Public Health has been awarded a grant from the Centers for Disease Control to establish an emergency public health information surveillance system in Louisiana in cooperation with a number of hospital emergency rooms and coroners' offices. These facilities will report emergency-related injuries and illnesses. The information obtained will provide public health officials and others in charge of emergency operations with information for action. Disease trends related to the emergency (e.g., diarrheal illnesses due to contaminated water supplies) can be tracked and public health intervention efforts directed to meet these identified needs. During non-emergency times, surveillance will be maintained on other public health conditions. The availability of this information will provide OPH with data needed to identify other areas that should be targeted for intervention strategies. For more information, contact the Disabilities Prevention Program at 504-568-2509.

Active Surveillance of Enteric Diseases

On February 1st, 1992 an active surveillance system for campylobacter, salmonella and vibrio infections was implemented in southeast Louisiana. All eligible cases were asked to participate in a case-control study, with controls matched to the cases by sex, age and neighborhood.

In twelve months of data collection (April 1992 to March 1993), a total of 212 cases of campylobacter infection, 330 cases of salmonella infection and 29 cases of vibrio infection were ascertained. Yearly incidence rates were 10.0 per 100,000 for campylobacter infection, 16 per 100,000 for salmonella infection, and 1.4 per 100,000 for vibrio infection. Yearly incidence rates by parish are given on Table 1. Terrebonne parish ranked first or second in disease incidence for each infection.

Table 1: Number of cases and incidence rates per 100,000 by parish, 1992-93

Parish	Campy		Salm		Vibrio	
	#	Rate	#	Rate	#	Rate
Acadia	0	-	8	14.2	0	-
Assumption	2	8.7	4	17.4	0	-
Evangeline	4	11.9	6	17.9	0	-
Iberia	3	4.3	9	12.9	0	-
Jefferson	41	8.6	50	10.5	11	2.3
Lafayette	15	9.0	38	22.7	0	-
Lafourche	5	5.7	16	17.2	0	-
Orleans	60	11.7	87	16.9	8	1.6
Plaquemines	5	19.1	3	11.5	0	-
St. Bernard	6	8.5	3	4.2	1	1.4
St. Charles	7	16.1	5	11.7	0	-
St. James	1	4.8	0	-	1	4.8
St. John	3	7.3	5	12.2	0	-
St. Landry	2	2.5	17	21.0	1	1.2
St. Martin	5	11.2	1	2.3	0	-
St. Mary	3	5.1	4	6.8	0	-
St. Tammany	21	14.2	40	27.1	2	1.4
Terrebonne	19	19.3	23	23.4	4	4.1
Vermilion	9	17.8	10	19.7	1	2.0

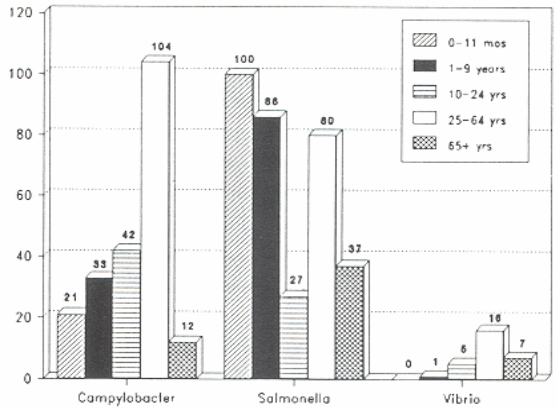
All infections were more common in males than in females (Table 2). Salmonella infections were more common in blacks while campylobacter and vibrio infections were more common in whites.

Table 2: Case rates of bacterial infections by race and sex

	Campy		Salm		Vibrio	
	Crude	RR	Crude	RR	Crude	RR
Female	9.3	1.0	14.3	1.0	0.73	1.0
Male	10.9	1.2	17.1	1.2	2.08	2.9
Black	6.2	1.0	15.4	1.0	0.64	1.0
White	11.4	1.8	13.8	0.9	1.54	2.4

Cases of campylobacteriosis and vibriosis were primarily adults, while salmonellosis was much more frequent among children (Figure).

Figure: Age distribution of cases



The economic impact of these infections can be inferred from the number of work days missed due to the illness, both by the subject as well as by a caregiver (Table 3).

Table 3: Percentage of cases and caregivers experiencing missed work days and the mean number of missed days of work

Missed work	Campy	Salm	Vibrio
Subject	44%	17%	41%
Caregiver	21%	22%	77%
Mean days of missed work by	Campy	Salm	Vibrio
Subject	4.5	4.5	2.2
Caregiver	2.2	3.1	1.0

A multivariate analysis was conducted to identify risk factors for each infection. For campylobacteriosis, taking antacids in the week before illness onset and having an underlying medical disorder each increased the risk of campylobacteriosis about two-fold.

For salmonellosis, taking antibiotics during the month before illness onset increased the risk of salmonellosis nearly eight-fold; having an underlying medical disorder increased the risk four-fold; contact with daycare and eating undercooked eggs each increased the risk of salmonellosis two-fold.

For vibrio infections, having an underlying medical disorder increased the risk of vibriosis nearly ten-fold; and eating raw oysters increased the risk more than 14 times.

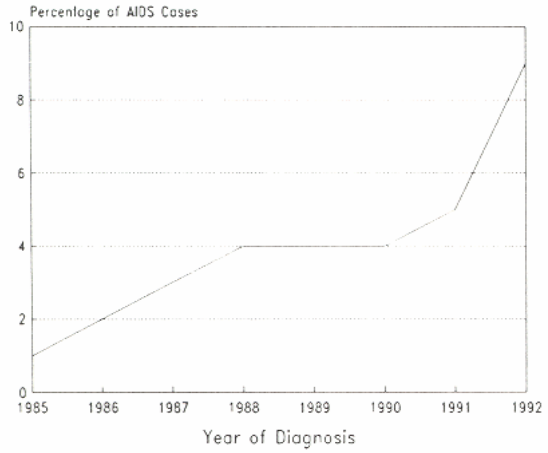
The attributable risk of undercooked eggs in salmonellosis (i.e. the portion of cases of salmonellosis attributable to consumption of undercooked eggs) was calculated to be 1.7%. This figure is quite small because very few people in the study reported eating undercooked eggs; therefore undercooked egg consumption can only be linked to a small minority of cases. The attributable risk of raw oyster consumption in vibriosis was 30%.

Most epidemiologic studies look at outbreaks of disease, but most cases of infection occur sporadically (not part of any recognized outbreak). The risk factor information from this study can be used to estimate the decrease in morbidity that could be achieved by changing the environment or specific behaviors.

AIDS Update
Increase in Heterosexual Transmission

Thus far in the AIDS epidemic, heterosexual transmission has accounted for 5% of the cases. However, significant increases have been noted in recent years with 60% of all heterosexual cases diagnosed since 1991. In 1992, heterosexual transmission was related to 9% of the total AIDS cases, equating to an 80% increase in one year (Figure 1). In a disease that incubates for possibly 5 - 10 years, these cases may be representing the increased heterosexual spread of HIV in 1985. Future AIDS data will show the current trend of heterosexual HIV transmission.

Figure 1: Trend in Heterosexual Transmission

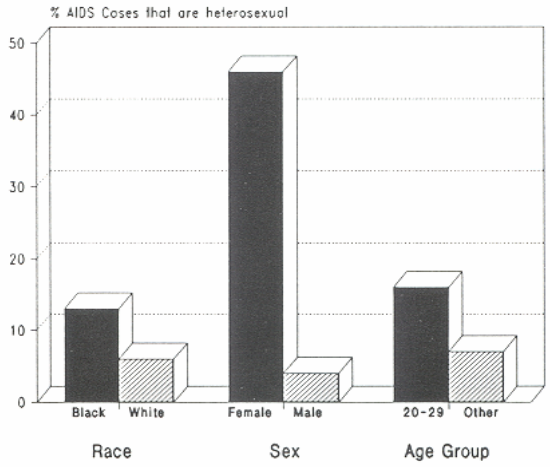


In 1992, the characteristics of AIDS cases related to heterosexual transmission vary greatly from total AIDS cases (Figure 2). Younger cases and women are more likely to be heterosexual. A higher percentage are Black, although there is a steady increase in cases for all races. A higher percentage of heterosexual cases are found in the northern part of the state. In the New Orleans and Baton Rouge areas approximately 7% are related to heterosexual transmission, whereas the Shreveport and Monroe areas are 19% and 16% respectively.

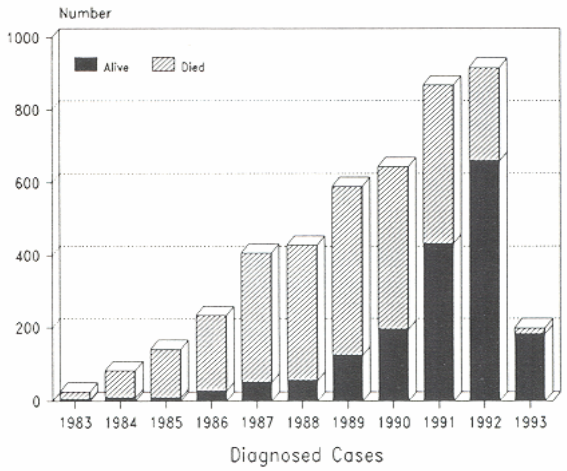
This data may be an under-representation of the true problem that exists because the case definition of heterosexual transmission is very strict. Some heterosexual cases may be categorized as "undetermined" transmission because the HIV status of the sexual partner is not known.

The rise in heterosexual AIDS cases is very concerning because more women will become infected and more infected children will follow. The heterosexual spread of HIV threatens a very large population that does not yet perceive themselves to be at risk for infection.

Figure 2: Percentage of AIDS cases that are classified as heterosexual transmission by race, sex, and age



AIDS Case Trends



LOUISIANA COMMUNICABLE DISEASE SURVEILLANCE,
MARCH - APRIL, 1993
PROVISIONAL DATA

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

DISEASE	HEALTH REGION 1	2	3	4	5	6	7	8	9	TIME PERIOD Mar-Apr 1993	Mar Apr 1992	Cum 1993	Cum 1992	% Chg
Vaccine-preventable														
Measles	0	0	0	0	0	0	0	0	0	0	0	1	0	--
Mumps	0	0	0	1	0	0	0	0	0	1	5	6	12	-50
Rubella	0	0	0	0	0	0	0	0	0	0	0	0	0	--
Pertussis	0	1	1	0	0	0	2	0	0	4	0	4	0	--
Sexually-transmitted														
AIDS Cases	73	45	2	13	7	14	13	3	15	185	156	389	332	
Rate[1]	10	6	07	2.3	3	4.4	2.3	1.0	3.3	4.4	3.7	9.2	7.9	+17
Gonorrhea Cases	789	276	78	157	75	133	321	127	138	2094	2047	4303	4094	
Rate[2]	10.8	3.7	2.6	2.8	2.9	4.3	5.9	4.2	3.1	4.9	4.9	10.2	9.7	+5.2
Syphilis(P&S) Cases	61	115	31	43	12	16	75	35	27	415	408	883	880	
Rate[2]	0.8	1.5	1.0	0.8	0.5	0.5	1.4	1.1	0.6	1.0	1.0	2.1	2.1	0
Enteric														
Campylobacter	15	0	2	2	0	0	1	0	5	25	20	47	43	+9
Hepatitis A Cases	7	0	0	2	0	0	3	0	2	14	12	29	31	
Rate[1]	1.0	--	--	0.4	--	--	0.5	--	0.4	0.3	0.3	0.7	0.7	-6
Salmonella Cases	22	3	2	9	1	0	1	0	3	42	37	81	64	
Rate[1]	3.0	0.4	0.7	1.6	0.4	--	0.2	--	0.7	1.0	0.8	1.9	1.5	+2
Shigella Cases	7	1	8	0	14	0	4	0	0	34	13	49	19	
Rate[1]	1.0	0.1	2.6	--	5.4	--	0.7	--	--	0.8	0.3	1.2	0.4	+1.
Vibrio cholera	0	0	0	0	0	0	0	0	0	0	0	0	0	--
Vibrio, other	0	0	0	2	0	0	0	0	2	4	5	4	5	-20
Other														
Hepatitis B Cases	24	4	2	6	1	1	0	2	3	43	30	61	53	
Rate[1]	3.3	0.5	0.7	1.1	0.4	0.3	--	0.4	0.7	1.0	0.7	1.4	1.2	+15
Meningitis/Bacteremia														
H. influenzae	1	0	0	0	0	0	0	0	0	1	0	3	0	--
N. meningitidis	3	3	1	2	1	0	0	0	1	11	7	18	11	+64
Tuberculosis Cases	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Rate[1]	--	--	--	--	--	--	--	--	--	--	--	--	--	--

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

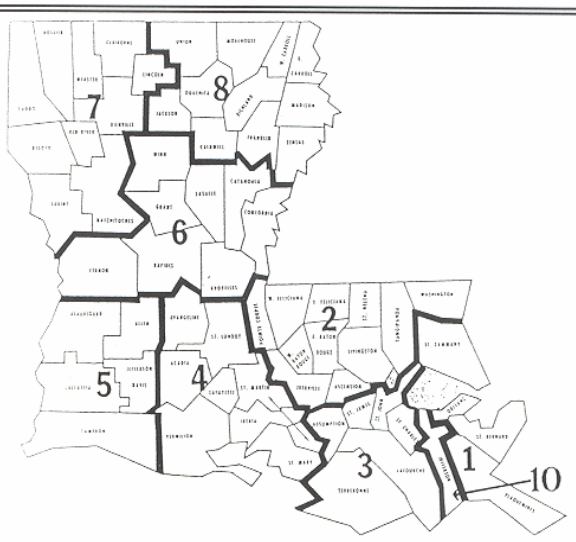


Table 2. *Diseases of Low Frequency*

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

Table 3. *Animal Rabies (Mar-Apr, 1993)*

Parish	No. Cases	Species
No Cases Reported		

Annual Summary
Meningococcal Disease 1992

Case reports of Neisseria meningitidis invasive disease reported to the Epidemiology Section in 1992 showed a similar incidence when compared to 1991 (0.9 vs 0.8 per 100,000). The case rate was higher for males than females (1.1 vs 0.7 per 100,000). Incidence decreased with increasing age, stabilizing at low level between the ages of 20 and 64, and then increasing at older ages (Figure 1). Seventy-four percent of the cases occurred in children less than 14 years of age. Race-specific rates were over three times higher in blacks than whites at 1.7 vs 0.5 per 100,000, respectively. Thirty seven percent of the reported cases were from Orleans parish (14, Figure 2). Twenty-five of 38 (66%) isolates were serotyped; they included group B (6 cases), group C (3 cases), group Y (11 cases) and group W135(3cases). The seasonal trend of N. meningitidis disease is comparable nationally, with the greatest number of cases occurring between December and April. No outbreaks or clusters of cases were reported in 1992.

Figure 1: Invasive meningococcal disease cases by agegroup, 1992

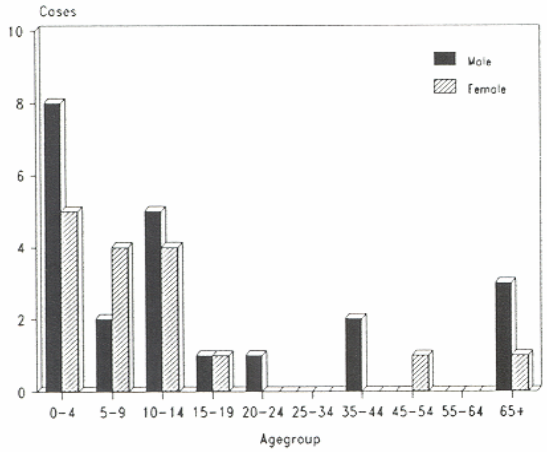
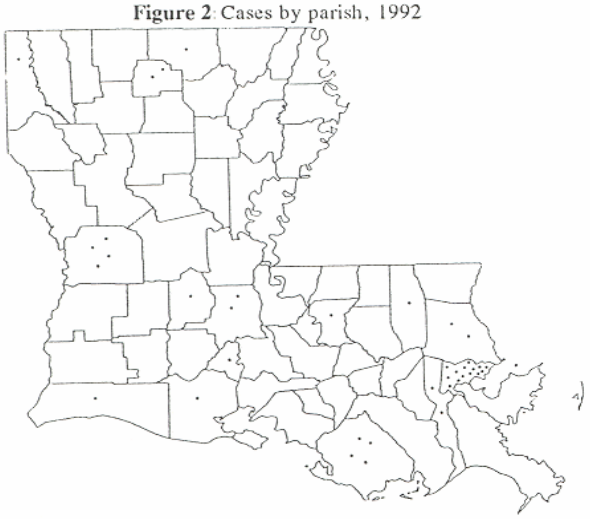


Figure 2: Cases by parish, 1992



Comment:

Meningococcal disease occurs most commonly in children and young adults. Meningococcal infections may be asymptomatic, be restricted to the nasopharynx, may cause upper respiratory tract symptoms, or may be invasive causing acute meningitis with or without septicemia. Only invasive meningococcal infections are reportable in Louisiana. The diagnosis is confirmed by isolating the organism from the blood or cerebrospinal fluid. All children and non-pregnant adults with intimate, prolonged contact with cases, such as occurs in a household or day care center, should receive prophylaxis with Rifampin. Prophylaxis for meningococcal disease is not recommended for health care personnel treating cases, unless extremely close contact such as mouth-to-mouth resuscitation has occurred. Likewise, school classroom contacts of a single case usually do not require prophylaxis.

LOUISIANA FACTS

Quarantine Notice, 1883

QUARANTINE.

OFFICE BOARD OF HEALTH,
New Orleans, April 18, 1883.

Captains and Masters of vessels, shippers and ship agents, and all parties concerned, are hereby notified that, in Accordance with official action of the Board of Health of the State of Louisiana, the Quarantine Station has been removed from Fort Pike to Rabbit Island, East Rigolets. After the 1st, of May, 1883, vessels entering East and West Pearl River and Rigolets will report at Louisiana Quarantine Station on Rabbit Island, East Rigolets.

[Signed] JOSEPH JONES, M., D.,
President Board of Health
State of Louisiana.

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

LIST OF REPORTABLE DISEASES/CONDITIONS

REPORTABLE DISEASES

Acquired Immune Deficiency Syndrome (AIDS)
Amebiasis
Anthrax
Aseptic meningitis
Blastomycosis
Botulism*
Brucellosis
Campylobacteriosis
Chancroid**
Cholera*
Chlamydial infection**
Diphtheria*
Encephalitis (Specify primary or post-infectious)
Erythema infectiosum (Fifth Disease)
Foodborne illness*
Genital warts**
Gonorrhea**
Granuloma Inguinale**
Hepatitis (Specify type)
Herpes (genitalis/ neonatal)**
Human Immuno-deficiency Virus (HIV)
Legionellosis
Leprosy
Leptospirosis
LymeDisease
Lymphogranuloma venereum**
Malaria
Measles (rubeola)*
Meningitis, Haemophilus
Meningococcal Infection (including meningitis)*
Mumps
Mycobacteriosis, atypical***
Ophthalmia neonatorum*
Pertussis (whooping cough)
Plague*
Poliomyelitis
Psittacosis
Rabies (animal & man)
Rocky Mountain Spotted Fever
Rubella (German measles)*
Rubella (Congenital syndrome)
Salmonellosis
Shigellosis
Syphilis**
Tetanus
Trichinosis
Tuberculosis***
Tularemia
Typhoid fever
Typhus fever, murine (fleaborne endemic)
Vibrio infections (excluding cholera)
Yellow fever

OTHER REPORTABLE CONDITIONS

Cancer
Complications of abortion
Congenital hypothyroidism
Lead poisoning
Phenylketonuria
Reye Syndrome
Severe Traumatic Head Injuries+
Severe undernutrition severe anemia, failure to thrive
Sickle cell disease (newborns)
Spinal cord injury+
Sudden infant death syndrome (SIDS)

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 $1,388.09. Seven thousand copies of this public document were published in this first printing at a cost of $1,388.09. The total cost of all printings of this document including reprints is $1,388.09. This document was published by Moran Printing, Inc., 5425 Florida Blvd., Baton Rouge, LA 70806, to inform Physicians, hospitals, and the public of current Louisiana morbidity status under authority of R.S. 40:36. This material is printed in accordance with the 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.