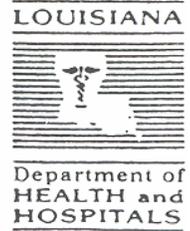




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Louisiana Morbidity Report

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SECRETARY

July-August 1992

Volume 3 Number 4

Genital Chlamydia Infections in Louisiana

The use of a new DNA-probe test for the diagnosis of genital chlamydia infection has now begun to provide statewide information on the disease burden of chlamydia infections in Louisiana.

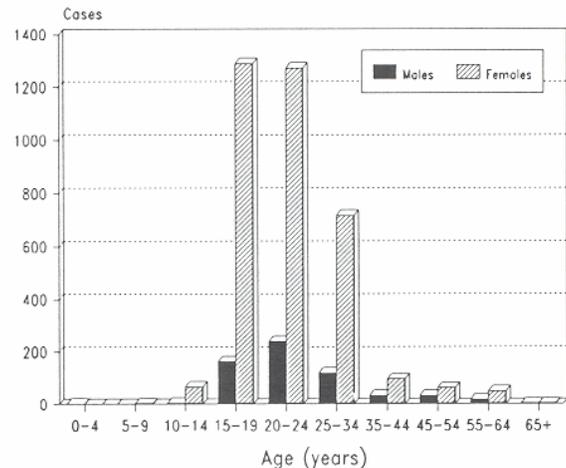
For many years it has been recognized that *Chlamydia trachomatis* is a very common - perhaps the most common - sexually transmitted infection in the United States. However, the infection can be asymptomatic or cause only mild symptoms, and the organism is difficult to identify with laboratory tests, so many infections go unrecognized by patients or doctors. *Chlamydia trachomatis* may cause serious complications such as pelvic inflammatory disease, and in pregnant women it may cause prematurity or pneumonia in the infant.

In the early months of 1992, OPH clinics began using a new DNA-probe test (GenProbe PACE II) to identify chlamydia infections in persons seen in clinics for family planning, maternity care and sexually transmitted diseases (STD). Tests are performed in the OPH regional laboratories, and positive tests results are reported to the STD section. The data compiled from these reports is biased by the way in which the tests are done - they are tilted toward women of lower socioeconomic status, for example - nonetheless they provide a picture of chlamydia infection in the state that we have not had in the past.

For the first six months of 1992, 4193 cases of genital chlamydia infections were reported, for an annual case rate of 20 per 10,000. For comparison, 6844 cases of gonorrhea were reported during this time period. Gonorrhea is reported from many sources (as compared to chlamydia, which is reported almost entirely from public clinics), and the new chlamydia test was phased in gradually during this six-month period, so these data suggest that chlamydia infection is probably more common than gonorrhea in the state.

Of the 4193 cases reported, 3559 (85%) were in women. Among women, annual case rates were six times higher in blacks (75 per 100,000) than whites (12 per 100,000). Chlamydia appears to be a particular problem among teenagers: the age group among women with the highest number of cases and the highest case rate was 15-19 (Figure 1). Among males, the disease peaked in the 20-24 year age group.

Figure 1: Cases of chlamydia infection by age and sex, January-June 1992



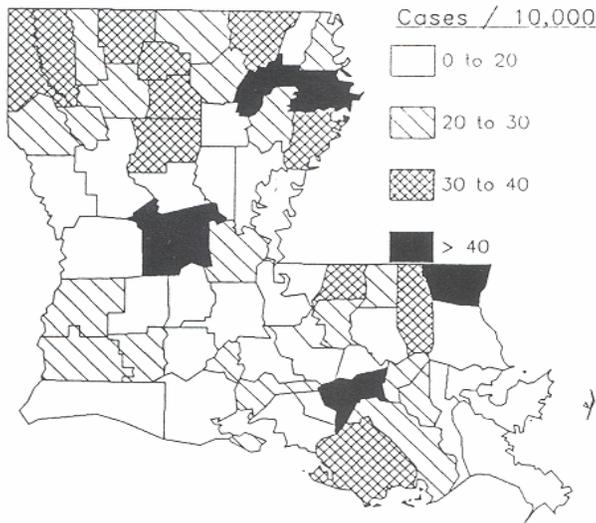
Chlamydia infections were reported from every area of the state. Case rates in Orleans and East Baton Rouge parishes cannot be directly compared to those in these other parishes because many clinics in these parishes are not using this new DNA probe test. Among those parishes in which the test has been performed, case rates were highest in the north (Figure 2). This pattern is consistent with the current case rates for syphilis and gonorrhea.

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Genital Chlamydia Infections in Louisiana (Cont.)

Figure 2: Annualized rates of genital chlamydia infection, by parish for the first six months of 1992



Chlamydia infection can be treated with tetracycline or erythromycin. It is important to treat sex partners of infected persons to prevent recurrence of infection. The data from the test results make it clear that chlamydia infection is an important public health problem in the state. Physicians and public health programs will have to develop efficient means of identifying and treating the large number of persons - and their sex partners - who are infected with this organism.



On July 27th, OPH released its "Shots for Tots" plan to improve immunization coverage for infants. For copies of the plan contact the Immunization Section at (504) 568-5007.

BULLETINS:

Universal Hepatitis B Vaccination Begins August 1st

Routine vaccination of infants against hepatitis B began in parish health units on August 1, 1992. Infants of HBsAg-negative mothers will be vaccinated with 0.25 ml of Recombivax (Merck) at ages two and six months if they are given the first dose of hepatitis B vaccine at the time of birth (as recommended). Infants who do not receive the first dose of vaccine at birth will be vaccinated as closely as possible to the 0, 2, and 6 month schedule. The two available hepatitis B vaccines (Recombivax and Engerix by SmithKline) can be combined in a series. Hepatitis B testing of pregnant women is still required, because infants of HBsAg-positive mothers require hepatitis B immune globulin (HBIG) at birth and a larger dose of Recombivax (0.5 ml). For more information, contact the Immunization Section at (504) 568-5007.

New AIDS Case Definition Postponed Indefinitely

The proposed revision of the AIDS surveillance case definition (to include HIV-infected persons with CD4 lymphocyte counts of <200/ul) has been shelved by federal health officials, apparently a victim of controversy more political than scientific. We will keep you posted on any additional information as it becomes available.

Louisiana Morbidity Report
Volume 3, Number 4 July-August 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.

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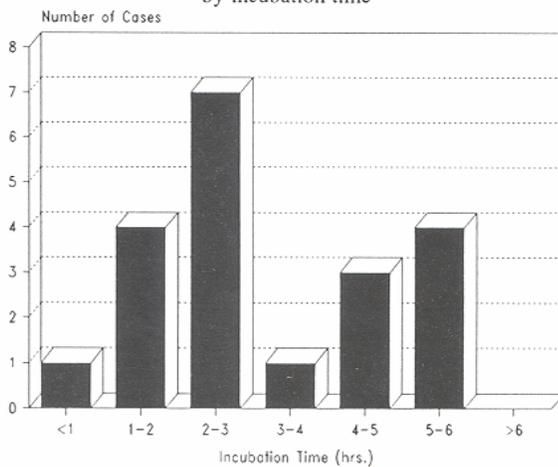
Gastroenteritis Among Hotel Employees

In February, the Epidemiology Section investigated an outbreak of food poisoning caused by what appeared to be a bacterial toxin.

The Epidemiology Section was notified that eight employees from a hotel had been seen over the previous two days in a local emergency room for vomiting and abdominal cramps with a sudden onset. The hotel was staffed by 400 employees, who were served meals in a separate employees cafeteria. Twenty employees were ultimately found to have had gastroenteritis during February 15-17. All cases reported eating at the cafeteria on February 15. On that day, this cafeteria served approximately 140 employees between 10:30 AM and 3:00 PM.

The most common symptoms among cases were diarrhea (90%), nausea (90%), abdominal cramps (80%), and vomiting (50%). Only 35% of ill employees reported fever. The median incubation period for illness was two and one half hours (Figure). Ten of the twenty ill employees sought medical help; none were hospitalized.

Figure: Cases of gastroenteritis among hotel employees, by incubation time



Employees who ate meatloaf for lunch were nearly ten times as likely to become ill as employees who did not (56% vs 6%, relative risk=9.4). No other food items served at this meal were strongly associated with illness (Table).

Five ill employees (including three cafeteria workers) had stool cultures done and all were found negative for bacterial pathogens. A sample of remaining meatloaf did not grow *Salmonella sp.*, *Shigella sp.*, *Clostridium perfringens* or *Bacillus cereus*, and was not found to contain *Staphylococcus enterotoxin*. The meatloaf was purchased pre-cooked and frozen, and was heated in an oven for 60 minutes on the

morning that it was served. After heating, the meatloaf was left in a warming cabinet until serving. The heating element in the warming cabinet was not working, and the cabinet was warmed by two cans of "sterno" placed in the bottom.

Table: Association between illness and consumption of selected food items.

	Ate Food			Did not eat Food			Relative Risk
	Ill	Not Ill	Attack Rate	Ill	Not Ill	Attack Rate	
Meatloaf	20	16	.56	2	32	.06	9.4*
Butter	6	3	.66	15	44	.25	2.6
Potatoes	13	15	.46	9	33	.21	2.2
Rice	7	6	.54	15	42	.26	2.1
Broccoli	3	3	.50	18	45	.28	1.8
Peaches	10	15	.40	11	32	.25	1.6
Pickles	7	9	.44	15	37	.28	1.5
Lemons	4	6	.40	18	40	.31	1.3
Dressing	3	5	.37	17	40	.29	1.3
Cucumbers	5	10	.33	16	37	.33	1.1
Cauliflower	1	2	.33	20	45	.31	1.1
Lettuce	11	24	.31	10	24	.29	1.1
Egg Salad	4	10	.28	18	38	.32	0.9
Tomatoes	2	13	.13	18	33	.35	0.4

* p < .0002

In this outbreak, the sudden onset, and short incubation period strongly suggest a pre-formed toxic as the cause, rather than a bacterial pathogen. Toxins that cause food poisoning are usually produced by *Clostridium perfringens*, *Bacillus cereus*, or *Staphylococcus aureus*. Of these, *Staphylococcus aureus* enterotoxin has a short incubation period (three hours) such as found in this outbreak, but usually causes predominantly vomiting. *C. perfringens* toxin causes diarrhea but usually has a longer incubation time (12 hours). *Bacillus cereus* can produce two toxins, one of which (often found in fried rice) produces a picture similar to that of *S. aureus* toxin, and the other of which (often found in meat) produces a picture similar to that of *C. perfringens* toxin. Therefore any of these three organisms could have been responsible for the outbreak. The sample of meatloaf available for testing did not contain these toxins, but there were many trays of meatloaf, and not all may have been contaminated.

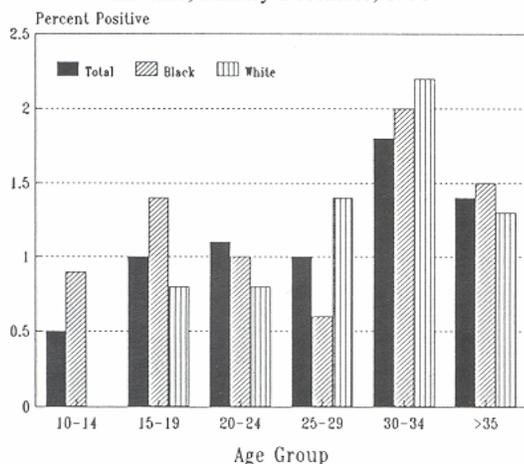
All of these bacterial toxins are produced when food is left at a warm temperature. It is likely that the production of toxin occurred in the malfunctioning warming cabinet, although we cannot rule out mishandling of the meatloaf before it arrived at the hotel. We recommended that the hotel pay stricter attention to temperature control of food during cooking and storage.

Hepatitis B Carriage in Pregnant Women

Since late 1990, the Office of Public Health has been testing pregnant women seen in its health units for carriage of hepatitis B surface antigen (HBsAg) as part of the perinatal hepatitis B program. Data from these laboratory tests provide a picture of chronic hepatitis B infection in young adults in the state.

Results are now available on 10,016 women tested from January through December 1991. Of these, 122 (1.2%) were positive for HBsAg. Information about race was available for 5944 (59%) of women tested. The positivity rate was similar for black (1.2%) and white (1.0%) women. Data was not complete for enough Asian women to calculate a positivity rate for them. For all races, positivity rates gradually increased with age, suggesting that women were becoming infected during their young adult years (Figure 1).

Figure 1: Positivity rates for hepatitis B surface antigen among pregnant women in public clinics, by age and race, January-December, 1991



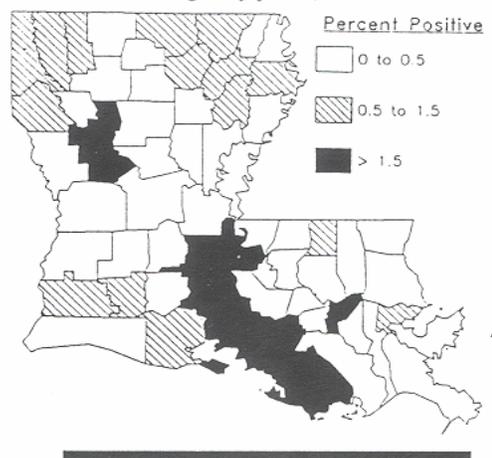
Positivity rates by parish are shown in Figure 2. The major urban areas were not well represented in these results, because pregnant women receiving public-clinic prenatal care in New Orleans and Baton Rouge attend Charity hospitals, rather than OPH clinics. Among other parishes, there was a surprising clustering of hepatitis B infection in the south central region of the state. The parishes with the highest positivity rates were St. John, Pointe Coupee, Iberia, St. Martin, Natchitoches, St. Landry, and St. Mary. Although the numbers of infected women in these parishes were small, the clustering of these parishes suggests an endemic focus for hepatitis B in this area.

Hepatitis B is transmitted sexually, through needle sharing associated with intravenous drug use, from mother to child during delivery, and to a small extent from person to

person during prolonged close household contact. It is unknown the extent to which each of these modes of transmission contributes to the overall number of persons infected with hepatitis B in the state or in south central Louisiana.

Persons infected with hepatitis B are at risk for chronic liver disease or liver cancer, and should be tested annually for liver function and any signs of liver cancer. Sex contacts, needle sharing partners, and household members of persons chronically infected with hepatitis B should be vaccinated with one of the two available hepatitis B vaccines (Recombivax or Engerix). Currently, OPH clinics offer hepatitis B vaccines to all infants (see bulletin in this issue).

Figure 2: Positivity rates for hepatitis B surface antigen by parish, 1991



Wolf Hybrids and Rabies

In recent years people have been cross-breeding domestic dogs with wolves and keeping the resulting hybrids as pets. This practice has raised questions about rabies prophylaxis when a human is bitten by a wolf hybrid.

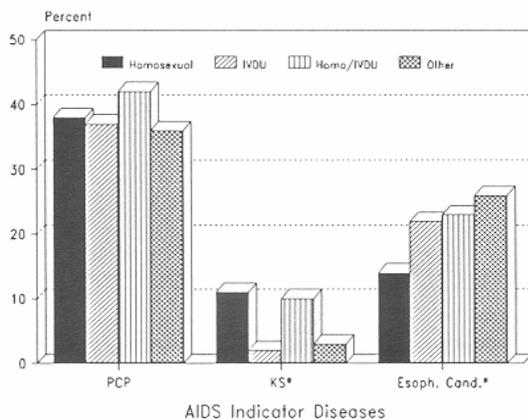
The Office of Public Health and the National Association of State Public Health Veterinarians recommend against owning hybrid animals and in particular dogs that have been cross-bred to wolves. If a person is bitten by such a hybrid animal the incident must be managed as a bite by a wild animal. If the bitten animal is available it must be euthanized and the brain examined for the presence of rabies virus. If the animal cannot be found, the person who was bitten must receive the rabies vaccine treatment. The period of time between rabies virus shedding in the saliva and the onset of clinical signs has not been established for wild animals, neither has the incubation period. There is no rabies vaccine approved by the United State Department of Agriculture for use in hybrids. If a veterinarian vaccinates a hybrid for rabies and provides a certificate, it should be clearly stated that the animal is a hybrid, not a dog.

AIDS Update

HIV Infection: Differences in Clinical Manifestations by Mode of Transmission

Data analysis from the Adult Spectrum of Disease Study shows differences in clinical manifestation by mode of transmission when controlling for T-cell ranges. Analyzing the ten most frequently occurring AIDS indicator diseases by mode and stratified CD4 counts shows that the majority of AIDS indicator diseases occur in patients with CD4 cell counts <200. In this group the total number of patients is 376 with the distribution being 60% homosexual, 13% IVDU, 11% homosexual/IVDU, and 16% other. Among these patients, differences by mode for esophageal candidiasis and Kaposi sarcoma (KS) were statistically significant. Twenty-two percent of the IVDUs had esophageal candidiasis compared to 14% of the homosexuals. Eleven percent of the homosexuals and 10% of the homosexual/IVDUs had KS compared to only 2% of the IVDUs. (Figure 1)

Figure 1: Frequency of AIDS-defining conditions among persons with <200 CD4 cells, by mode of transmission



Differences in non-AIDS defining infections were most significant by mode in the group of patients with CD4 cell counts between 200 and 500. Of the 339 patients in this range, the mode distribution was 50% homosexual, 14% IVDU, 16% homosexual/IVDU, and 20% Other. Homosexuals and homosexual/IVDUs had a higher incidence of thrush and oral hairy leukoplakia than IVDUs. Thirty-one percent of the IVDUs had genital infections compared to 6% of the homosexuals and 43% of others. (Figure 2) Heterosexual transmission constitutes the majority of the other group.

Among other HIV-related conditions, differences between modes were also most significant in the 200-500 CD4 cell group. Homosexual/IVDUs were more likely to experience depression, non-infectious diarrhea, fatigue, headache, seborrhea and drug abuse (not IV) than persons in other transmission groups. (Figure 3)

Figure 2: Frequency of other infections in persons with 200-500 CD4 cells, by mode of transmission
* = statistically significant difference

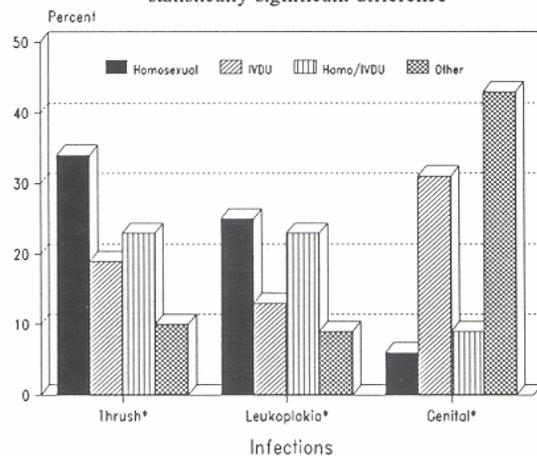
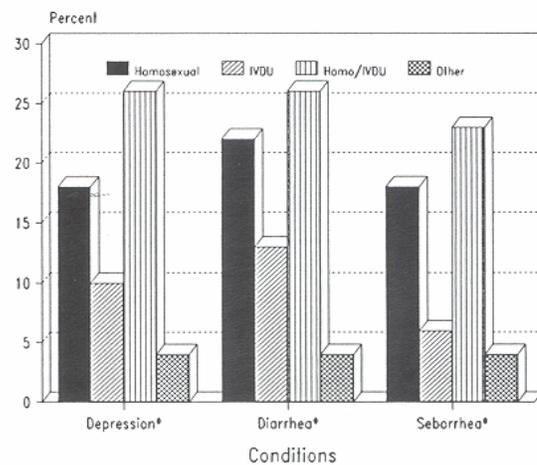
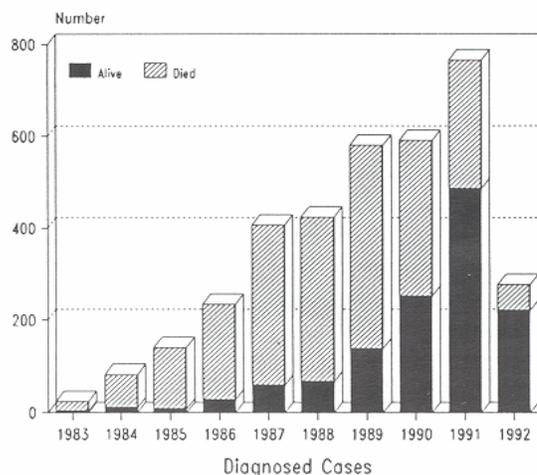


Figure 3: Frequency of other conditions in persons with 200-500 CD4 cells, by mode of transmission
* = statistically significant difference



AIDS Case Trends



COMMUNICABLE DISEASE SURVEILLANCE, May - June, 1992
PROVISIONAL DATA

Table 1. Selected diseases by region

DISEASE	HEALTH DEPARTMENT REGION									May-Jun 1992	May-Jun 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	-	
Mumps	Cases	1	1	0	1	0	0	0	1	0	4	6	15	17	-12
Rubella	Cases	0	0	0	0	0	0	0	0	0	0	0	0	-	
Pertussis	Cases	0	0	0	0	0	0	0	0	0	0	0	4	-	
Sexually-transmitted															
AIDS	Cases	51	18	3	9	3	6	16	4	13	123	122	422	734	-43
	Rate*	7.0	2.4	1.0	1.6	1.2	1.9	2.9	1.3	2.9	2.9	2.9	10.0	17.4	
Gonorrhea	Cases	749	572	131	271	120	161	381	194	166	2745	2825	6844	7627	-10
	Rate**	10.2	7.6	4.4	4.9	4.6	5.1	7.0	6.4	3.7	6.5	6.5	16.2	17.4	
Syphilis (P&S)	Cases	117	109	37	32	7	16	84	27	33	462	500	1336	1396	-4
	Rate**	1.6	1.4	1.2	0.6	0.3	0.5	1.5	0.9	0.7	1.1	1.1	3.2	3.2	
Enteric															
Campylobacter	Cases	18	3	6	16	0	0	1	0	8	52	20	103	34	+203
Hepatitis A	Cases	11	0	5	4	2	2	2	11	3	40	20	76	69	+10
	Rate*	1.4	-	1.6	0.7	0.8	0.6	0.3	3.5	0.6	0.9	0.5	1.7	1.6	
Salmonella	Cases	36	6	13	21	0	9	6	1	9	103	71	175	216	-19
	Rate*	4.6	0.8	4.2	3.7	-	2.8	1.0	0.3	1.9	2.3	1.6	4.0	4.9	
Shigella	Cases	3	3	0	2	0	5	5	1	1	20	32	44	71	-38
	Rate*	0.4	0.4	-	0.4	-	1.6	0.9	0.3	0.2	0.4	0.7	1.0	1.6	
Vibrio Cholera	Cases	0	0	0	0	0	0	0	0	0	0	0	0	1	-
Vibrio, other	Cases	4	0	1	0	0	0	0	0	2	7	13	15	25	-40
Other															
Hepatitis B	Cases	1	3	1	7	2	1	2	0	3	20	48	79	127	-38
	Rate*	0.1	0.4	0.3	1.2	0.8	0.3	0.3	-	0.6	0.4	1.1	1.8	2.9	
Meningitis/Bacteremia	Cases	0	0	0	0	0	0	0	0	0	0	4	0	14	-
H. Influenza	Cases	0	0	0	0	0	0	0	0	0	0	4	0	14	-
N. Mening.	Cases	2	1	2	0	0	0	0	0	0	5	5	21	17	+24
Tuberculosis	Cases	35	3	3	7	5	3	6	11	4	77	47	109	109	-0
	Rate*	4.5	0.4	1.0	1.2	1.9	0.9	1.0	3.4	1.8	1.8	1.1	2.5	2.5	

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

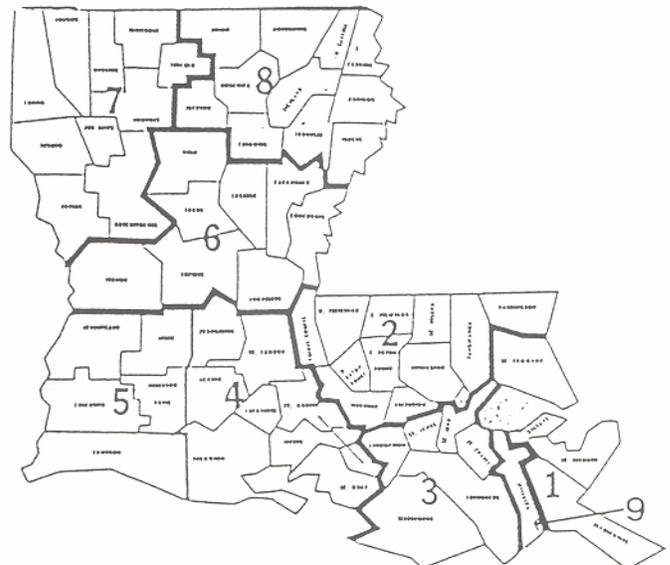
Table 2. Diseases of low frequency, 1992

Disease	Total to date
Blastomycosis	3
Brucellosis	1
Histoplasmosis	0
Lead Toxicity	2
Legionellosis	1
Leprosy	0
Leptospirosis	0
Lyme Disease	2
Malaria	1
Rocky Mountain Spotted Fever	0
Tetanus	0
Typhoid	0

Table 3. Animal rabies - May - June, 1992

Parish	Species	No. Cases
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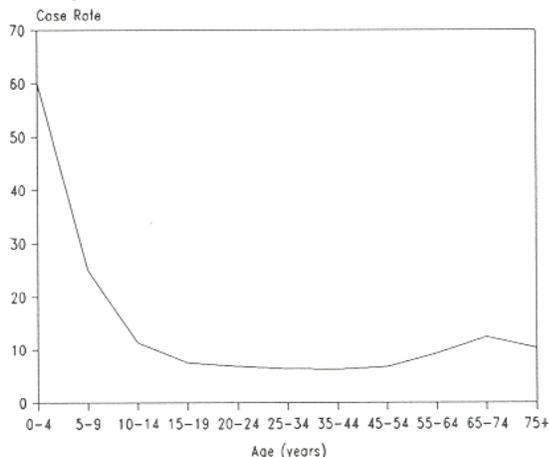
No Rabies report for this quarter



Annual Summary Salmonellosis 1991

In 1991, there were 769 cases of salmonellosis reported to the Epidemiology Section, a decrease of 6.6% from 1990. The 1991 case rate was 18.2 per 100,000. Case rates by race and sex were slightly higher in blacks than whites (8.5 vs 7.2 per 100,000) and in males than females (20 vs 16 per 100,000). Age-specific rates remained similar to previous years with the 0-4 and 5-9 year old age groups being the highest (Figure 1). Six parishes reported case rates in excess of 30 per 100,000: Assumption (52), Evangeline (51), Caddo (39), Lafayette (38), Bossier (35), and Terrebonne (31; Figure 2). Of the 32 serotypes identified in 1991, *S. enteritidis* and *S. typhimurium* were the most frequently reported followed by *S. newport*, *S. mississippi* and *S. javiana*.

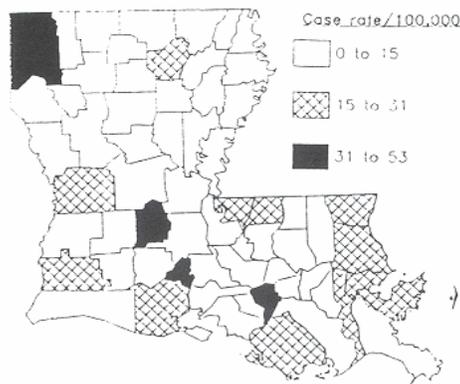
Figure 1: Salmonella cases by age groups, 1991



Comment:

Epidemics of Salmonella infections are usually traced to foods such as commercially processed meat products, inadequately cooked poultry and poultry products, raw sausages, uncooked or lightly cooked foods containing eggs and egg products, unpasteurized milk and dairy products, including dried milk, and foods contaminated by infected foodhandlers. *Salmonella enteritidis* was the most frequently reported serotype in the United States and has accounted for 66 outbreaks in 1991. In Louisiana, *S. enteritidis* has recently moved up in ranking over other serotypes within the past few years and was the cause of a large outbreak in the fall of 1991 (see Louisiana Morbidity Report, Jan-Feb 1992).

Figure 2: Rates of Salmonella by parish, 1991



LOUISIANA FACTS

Between 1916 and 1928 the State Board of Health published 13 almanacs containing pages of advice on public health matters as well as jokes, Sunday religious messages and information on planets, stars and legal holidays.



Cover of the first State Board of Health Almanac

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, DIH-OPH-Epidemiology Section, P.O. Box 60630, New Orleans, LA 70160.

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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
Brucellosis	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

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