



# MONTHLY MORBIDITY REPORT

## EPIDEMIOLOGY

### PUBLIC HEALTH STATISTICS

DEPARTMENT OF HEALTH AND HUMAN RESOURCES  
OFFICE OF PREVENTIVE AND PUBLIC HEALTH SERVICES  
DIVISION OF RECORDS AND STATISTICS  
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## CHOLERA IN LOUISIANA

On August 19 we were notified by our state lab that Vibrio cholerae O1, was isolated from a stool specimen from a patient hospitalized in New Orleans. The isolate was confirmed in Atlanta as being toxigenic, of the El Tor biotype and Inaba serotype. Although phage typing is pending, this appears to be the same organism that caused 11 cases in Louisiana in 1978.

After beginning an investigation of the first case, we were notified in rapid succession of three other cases occurring in Raceland, Thibodaux, and Franklin. After conferring with the Enteric Disease Branch of the Centers for Disease Control, we were joined by Dr. Andrew Pavia and Joanne Quan who came to assist in the investigation on September 3 and 4.

To date we have identified a total of four cases with classical clinical symptoms and stool isolates yielding toxigenic Vibrio cholerae O1. The earliest case became ill on August 8 and the latest became ill on September 9. All cases were seriously ill on admission to the hospital but responded well to intravenous hydration.

All four cases had a history of recent seafood consumption. Three of these four cases had eaten pre-cooked boiled crabs

within 48 hours of their illness. The fourth case ate a fried mixture of shrimp and okra the day before his illness. The seafood was caught at different sites for each case but all came from southern Louisiana near the Gulf coast in the general vicinity of where the cases lived.

As several cases in 1978 had no clinical symptoms and were detected by the presence of vibriocidal antibody alone, we felt it was important to mount a surveillance system which would identify both clinical and subclinical cases. To this end several strategies have been employed.

First, we conducted a food history and serum survey on 250 persons living in the neighborhood of the case in New Orleans. Among 95 persons willing to submit blood specimens, two had borderline elevated vibriocidal titer elevations which will need to be repeated. Neither of these individuals had a recent diarrheal illness.

Secondly, we have traced family members and other acquaintances of cases who ate the same seafood. Stool and blood specimens have been obtained from these cases where possible. To date, one family member eating the same seafood had an elevated vibriocidal antibody level. He had no clinical symptoms.

Third, we are reviewing emergency room records and hospital inpatient records for all patients treated for a diarrheal illness since August 1. To date, we have reviewed the records of 14 hospitals in New Orleans and southern Louisiana. We plan on obtaining food histories, stool, and serum from those selected patients likely to have had an undiagnosed illness which could be cholera.

Fourth, we have begun routine culturing of sewage systems in New Orleans and towns of significant size across southern Louisiana. To date, sewage swabs have yielded toxigenic Vibrio cholerae O1 from five sites in metropolitan New Orleans. A sewage swab from a town approximately 150 miles away from New Orleans was recently positive as well.

In order to identify the likely environmental sources of the organism we plan on doing extensive culturing of seafood specimens and water in the proximity of the cases as well as other areas along the Gulf coast. Environmental conditions in terms of temperature and rainfall are unofficially said to be similar to those in 1978 when the last outbreak occurred. We hope to explore any environmental similarities between the two years in more detail.

In summary, we have identified to date 4 cases of clinical cholera in Louisiana arising since August 8 and are currently working to identify further clinical and subclinical cases. As a final note, we were notified September 15 that a California resident visiting Florida developed a severe diarrheal illness 2 days after eating raw oysters. Toxigenic Vibrio cholerae O1 was isolated from her stool. The source of the raw oysters has not been determined as yet. We feel this case underscores the possibility that cholera may not be confined to Louisiana and hope that our colleagues along the Gulf coast join us in heightening their surveillance of diarrheal illness.

We remind all physicians in Louisiana to consider the diagnosis of cholera in any patient with diarrhea, particularly during the warm months of the year. Medium used to screen for V. cholerae O1 (TCRS) should now be available in all hospital laboratories across the state. The state laboratory will also run any stool specimen free of charge; any questions should be directed to the Epidemiology Office at (504)-568-5005. We would appreciate the cooperation of all health care personnel in controlling this potential public health problem.

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## INFLUENZA HIGH RISK IMMUNIZATION PROGRAM 1986-87

It is again time to plan and implement an influenza immunization program. Health Department Clinics will provide influenza immunizations to individuals who are at high risk of serious illness or death from influenza infection. Vaccine will be available starting October 6, 1986 and will be offered to individuals 65 years of age and older and to all persons with chronic disorders of the cardiovascular, pulmonary and/or renal systems, metabolic disorders, severe anemia and/or compromised

immune function.

This year's influenza vaccine contains A/Chile/1/83 (H<sub>1</sub>N<sub>1</sub>), A/Mississippi/1/85 (H<sub>3</sub>N<sub>2</sub>), and B Ann Arbor/1/86. The World Health Organization (WHO) Collaborating Centres has conducted antigenic analysis of recent influenza A(H<sub>1</sub>N<sub>1</sub>) viruses which have demonstrated an antigenic drift from the previously prevalent strain related to A/Chile/1/83 (H<sub>1</sub>N<sub>1</sub>). According to the Centers for Disease Control, studies of

antibody response in recipients of last year's vaccine containing A/Chile/1/83 antigen demonstrate the difference of the new variants. Approximately 80% of adult vaccinees developed titers to A/Chile/1/83 of 160 or higher and had a post-vaccination geometric mean titer (GMT) of 320. In contrast, only 15%-30% of the vaccinees developed the same titers to the new variants, and the postvaccination GMT was about six-fold lower. However, since postvaccination titers of 40 or greater have been associated with reduced influenza infection and illness, it is possible that the A/Chile/1/83 antigen in the 1986-87 trivalent vaccine will provide at least partial protection against the new variants. Based on this additional information, WHO has suggested the use of a supplemental monovalent vaccine, A/Taiwan/1/86 (H<sub>1</sub>N<sub>1</sub>). Individuals under 35 years of age for whom influenza vaccination has been specifically recommended should receive both the standard trivalent vaccine and the supplemental monovalent vaccine.

It is anticipated that the supplemental vaccine will not be available before November-December. Due to the questionable availability of this vaccine and possible budget constraints, it is not known at this time whether the health department will institute a supplemental program. Further information will be forthcoming.

Children aged 12 years or younger who have never received any influenza vaccine containing type A(H<sub>1</sub>N<sub>1</sub>) antigen (i.e., any influenza vaccine since 1978-79) are considered unprimed and require two doses of the standard trivalent vaccine with an interval of at least 4 weeks between doses. The timing and number of monovalent A(H<sub>1</sub>N<sub>1</sub>) vaccine doses required will vary depending on whether the recipient has been primed by prior vaccination or infection and on the timing of doses administered for the current

season.

The 1986-87 supplemental monovalent vaccine contains 15ug of A/Taiwan/1/86 antigen in each 0.5ml dose. As with the standard trivalent vaccine, the recommended dosage of the monovalent vaccine should be reduced to 0.25ml for children 6-35 months of age. Only split-virus vaccine, suitable for use in children or adults, will be manufactured. When administered simultaneously with the 1986-87 trivalent vaccine, the vaccine should be given in separate sites.

Health Department vaccine will be limited to the above broadly defined high risk groups; however, the United States Public Health Service Immunization Advisory Committee (ACIP) has further classified these groups on the basis of priority and has added additional categories. Highest priority is given to adults and children with chronic disorders of the cardiovascular and pulmonary systems that are severe enough to have required regular medical follow-up or hospitalization during the preceding year, and to residents of nursing homes and other chronic care facilities (e.g. institutions having patients of any age with chronic medical conditions).

Because of the potential for introducing influenza to high risk groups such as patients with severely compromised cardiopulmonary or immune systems or infants in neonatal intensive care units, physicians, nurses and other personnel who have extensive contact with such patients should be vaccinated annually. The Health Department does not have vaccine supplies sufficient to immunize this group of otherwise healthy individuals. Health care institutions are encouraged to develop their own immunization programs.

After considering the needs for the above target groups, the ACIP gives the next priority to persons at moderately increased risk of serious illness compared with the

general population. This includes otherwise healthy individuals over 65 years of age and adults and children with chronic metabolic diseases (including diabetes mellitus), renal dysfunction, anemia, immunosuppression, or asthma that are severe enough to have required regular medical follow-up or hospitalization during the preceding year. This group also includes children receiving long-term aspirin therapy, who may be at risk of developing Reye syndrome following influenza infection.

Physicians are encouraged to administer vaccine to any person who wishes to reduce their chances of acquiring influenza infection. Also, vaccination programs for persons who provide essential community services are recommended.

Amantadine hydrochloride (Symmetrel) is the only drug currently available for the specific prophylaxis and therapy of

influenza virus infections. Amantadine is 70%-90% effective in preventing illnesses caused by circulating strains of type A influenza viruses (it is not effective against type B influenza). When administered within 24-48 hours after onset of illness, amantadine has been shown to reduce the duration of fever and other systemic symptoms with a more rapid return to routine daily activities and improvement in peripheral airway function. Since it may not prevent actual infection, persons who take the drug may still develop immune responses that will protect them when exposed to antigenically related viruses. The drug also reduces virus shedding.

Questions concerning the influenza immunization program may be directed to the respective parish health units or to the Immunization Section at (504) 568-5005.

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## ENVIRONMENTAL EPIDEMIOLOGY

Louisiana is a step ahead of many states with the development of a state health department Environmental Epidemiology Section whose task is to address the problem of environmentally related diseases.

A major challenge for public health workers in the future will be the control of chronic diseases such as cardiovascular diseases and cancer. Although exposure due to lifestyle factors such as cigarette smoking and food consumption seem to play a major part in the determination of these diseases, environmental exposure should not be ignored. Air, food and drinking water constitute this immediate environment so important to protect from any polluting substances. In Louisiana several governmental agencies are responsible for monitoring the quality of

the environment.

The Department of Health and Human Resources (DHHR), Office of Preventive and Public Health Services (OPPHS) has the responsibility for quality control of drinking water and food, and for municipal and private waste water management. The general sanitation program addresses the environmental complaints of the citizens, providing referral to appropriate agencies when necessary.

The Department of Environmental Quality monitors air quality, surface water pollution, hazardous waste management, radioactive emission and solid waste disposal. The Office of Conservation has responsibilities in oil drilling and chemical waste disposal in injection wells. The Department of Agriculture monitors the

application of pesticides in the environment.

All of these entities are responsible for enforcing rules and regulations. Whenever health effects are suspected or reported the regulatory bodies refer the problem to an "investigative entity" which is the epidemiology component of the health department.

In November 1980 the state health officer in Louisiana took the initiative of expanding the epidemiologic activities in the environmental health field by creating an Environmental Epidemiology and Toxic Disease Control Section. This section is staffed by a team of epidemiologists with technical support in the specialized areas of toxicology, industrial hygiene, environmental chemistry, radiological health and engineering provided by consultants or staff personnel from various agencies. Health personnel (engineers, public health nurses, sanitarians and disease investigators) located throughout the state in the local parish health units, provide support in the extensive investigations.

This program is aimed at identifying and evaluating public health risks associated with hazards caused by environmental agents (chemical, physical, or biological). We would also be responsible for making recommendations for the prevention and/or correction of these public health risks.

The main activities of the Environmental Epidemiology Section may be described as follows:

1. Response to environmental emergencies dealing with toxic chemicals and/or radiation.

2. Request for information - to provide basic information regarding toxic substances.
3. Epidemiologic evaluations of disease clusters - field investigation of geographic clusters of disease such as cancer, birth defects, upper respiratory irritation, etc.
4. Toxic substance exposure investigations and Risk Assessment - review of information and/or field investigation of the presence of toxic substances in the environment or indoor air and the potential exposure of a given population. We would provide interpretation of the possible human health risks and provide recommendations for their correction, accordingly. This would include exposure to pesticides, formaldehyde, asbestos, hazardous waste, etc.

Epidemiology has been a major tool used for the successful control of infectious diseases in the early days of public health. Today, it remains a unique asset of the health department that can be used by all agencies for the control of environmental exposures.

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Office of Preventive  
and Public Health Services  
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# SELECTED REPORTABLE DISEASES

(By Place of Residence)

STATE AND PARISH TOTALS	VACCINE PREVENTABLE DISEASES															GONORRHEA	SYPHILIS, PRIMARY AND SECONDARY	RABIES IN ANIMALS (PARISH TOTALS CUMULATIVE 1986)		
	MEASLES	RUBELLA	MUMPS	PERTUSSIS	TETANUS	ASEPTIC MENINGITIS	HEPATITIS A AND UNSPECIFIED	HEPATITIS B	LEGIONELLOSIS	MALARIA	MENINGOCOCCAL INFECTIONS	SHIGELLOSIS	TUBERCULOSIS, PULMONARY	TYPHOID FEVER	OTHER SALMONELLOSIS				UNDERNUTRITION SEVERE	
REPORTED MORBIDITY JULY, 1986																				
TOTAL TO DATE 1985	42	0	2	8	0	41	94	117	2	1	24	20	170	0	93	3	12587	621	12	
TOTAL TO DATE 1986	4	0	2	7	1	37	67	136	2	8	18	40	239	1	146	3	10704	515	14	
TOTAL THIS MONTH	2	0	0	1	0	12	9	37	1	4	4	25	37	1	75	0	1720	86	1	
ACADIA						1											5			
ALLEN				1													4			
ASCENSION						1											6			
ASSUMPTION																	1	1		
AVOYELLES																	4			
BEAUREGARD																	6		3	
BIENVILLE																		1	2	
BOSSIER							1					1			2		19		4	
CADDO						3	1			2		18	7		14		162	3		
CALCASIEU								2			1	1			2		55	3		
CALDWELL																				
CAMERON																				
CATAHOULA																	6			
CLAIBORNE																	1			
CONCORDIA																	14	1		
DESOTO																	4	1		
EAST BATON ROUGE	2					1		1				1	3		10		125	11		
EAST CARROLL																	15			
EAST FELICIANA																	6	3		
EVANGELINE															2		2	3		
FRANKLIN																	9			
GRANT																	1			
IBERIA							1	5							3		37	3		
IBERVILLE						1											7	1		
JACKSON																	5			
JEFFERSON						1	3	10					4	1	9		95	14		
JEFFERSON DAVIS							1						1		2		6			
LAFAYETTE										2			1		7		53	3		
LAFOURCHE						2									1		19	1		
LASALLE																	1			
LINCOLN						1		1									4			
LIVINGSTON								2					1					1		
MADISON																	14			
MOREHOUSE																	17			
NATCHITOCHES																	5	1	1	
ORLEANS							1	11	1			2	7		14		565	24		
OUACHITA								1					3				108	1		
PLAQUEMINES											1									
POINTE COUPEE																		1		
RAPIDES							1						3				130	2	4	
RED RIVER																				
RICHLAND																	10			
SABINE																			1	
ST. BERNARD													1				5			
ST. CHARLES								1									2			
ST. HELENA																				
ST. JAMES								1									6			
ST. JOHN																	6			
ST. LANDRY												2	1		1		25	1		
ST. MARTIN																	19			
ST. MARY																	19	1		
ST. TAMMANY						1									3		4			
TANGIPAOHA								1									6	1		
TENSAS																				
TERREBONNE												1			3		40	3		
UNION																		3		
VERMILION												1	1				5			
VERNON																	32	1		
WASHINGTON								1					2				10			
WEBSTER													1		1		15			
WEST BATON ROUGE																				
WEST CARROLL																				
WEST FELICIANA																				
WINN																				
OUT OF STATE																		1		

From January 1, 1986 - June 31, 1986 the following cases were also reported:

1-Amebiasis, 1-Cholera, 1-Psittacosis, 1-Reye Syndrome, 1-Tularemia, 1-Typhus Fever, Endemic

\* Includes Rubella, Congenital Syndrome.

\*\* Includes 14 cases of Hepatitis Non A, Non B.

\*\*\* Acquired outside United States unless otherwise stated.

# SELECTED REPORTABLE DISEASES

(By Place of Residence)

STATE AND PARISH TOTALS	VACCINE PREVENTABLE DISEASES					ASEPTIC MENINGITIS	HEPATITIS A AND UNSPECIFIED	HEPATITIS B	LEGIONELLOSIS	MALARIA	MENINGOCOCCAL INFECTIONS	SHIGELLOSIS	TUBERCULOSIS, PULMONARY	TYPHOID FEVER	OTHER SALMONELLOSIS	UNDERNUTRITION SEVERE	GONORRHEA	SYPHILIS, PRIMARY AND SECONDARY	RABIES IN ANIMALS (PARISH TOTALS CUMULATIVE 1986)	
	MEASLES	RUBELLA	MUMPS	PERTUSSIS	TETANUS															
REPORTED MORBIDITY AUGUST, 1986																				
TOTAL TO DATE 1985	42	0	2	10	0	46	122	145	3	1	24	23	236	0	121	3	14715	714	12	
TOTAL TO DATE 1986	4	0	2	11	2	58	92	174	2	14	19	68	287	1	216	3	12639	597	15	
TOTAL THIS MONTH	0	0	0	4	1	21	25	38	0	6	1	28	48	0	70	0	1935	82	1	
ACADIA								1							1		17			
ALLEN																	9	1		
ASCENSION																	4			
ASSUMPTION																	5			
AVOUELLES				1								1					2		4	
BRAUREGARD																	7			
BIENVILLE												2					6	2	2	
BOSSIER												2					10		4	
CADDO						4	2	1		6		2	1		5		222	4		
CALCASIEU								1				1	3		6		56			
CALDWELL																	9			
CAMERON																	1			
CATAHOULA																				
CLAIBORNE																	2			
CONCORDIA																	5	2		
DESOTO						1											1			
EAST BATON ROUGE						3	1	2				3	1		13		137	9		
EAST CARROLL																				
EAST FELICIANA																	2	2		
EVANGELINE																	5	2		
FRANKLIN																	5			
GRANT																	1			
IBERIA								2							1		18	1		
IBERVILLE																	2	1		
JACKSON													1				3	1		
JEFFERSON						2	15	7				1	4		6		110	7		
JEFFERSON DAVIS													1				17			
LAFAYETTE							1	3				1	1		3		56	4		
LAFOURCHE							2					1	1		2		17			
LASALLE																				
LINCOLN																	10			
LIVINGSTON															1		1	1		
MADISON								1										2		
MOREHOUSE								2									5			
NATCHITOCHE													2		1		2		1	
ORLEANS				1		3	3	11			1	2	17		8		737	23		
OUACHITA						2						1	7		1		116	4		
PLAQUEMINES																				
POINTE COUPEE																	6			
RAPIDES													1				76	3	4	
RED RIVER																				
RICHLAND																	10			
SABINE																	1			
ST. BERNARD							1	1							2		2			
ST. CHARLES																	4			
ST. HELENA																				
ST. JAMES															2		13			
ST. JOHN								1									2			
ST. LANDRY																	24	1		
ST. MARTIN																	10			
ST. MARY																	4	1		
ST. TAMMANY						1		2				2	1		2		15			
TANGIPAHOA													1				20	3		
TENSAS																	1			
TERREBONNE				2		4		1				12	1		11		31	2		
UNION																	5	1		
VERMILION					1										2		6			
VERNON						1											37			
WASHINGTON								2					2		2		10			
WEBSTER															1		19	5		
WEST BATON ROUGE																	3			
WEST CARROLL																	2			
WEST FELICIANA																	31			
WINN																				
OUT OF STATE																	3			

From January 1, 1986 - August 30, 1986, the following cases were also reported:

1-Amebiasis, 1-Cholera, 1-Psittacosis, 1-Reye Syndrome, 1-Tularemia, 1-Typhus Fever, Endemic.

\* Includes Rubella, Congenital Syndrome.

\*\* Includes 18 cases of Hepatitis Non A, Non B.

\*\*\* Acquired outside United States unless otherwise stated.

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Office of Preventive and Public Health Services  
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## LOUISIANA AIDS UPDATE

	CASES	DEATHS	PERCENT
JAN - AUGUST, 1986	84	34	40
TOTAL, ALL YEARS (as of 8/31/86)	293	197	67

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