

Louisiana

DEPARTMENT OF HEALTH AND HUMAN RESOURCES
OFFICE OF HEALTH SERVICES AND ENVIRONMENTAL QUALITY
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MONTHLY MORBIDITY REPORT

Provisional Statistics

REPORTED MORBIDITY
SEPTEMBER, 1980

from
EPIDEMIOLOGY UNIT AND PUBLIC HEALTH STATISTICS

WHOO WHOO WHOO

Not a tropical bird call, rather the increasingly common cry of our young children. We are in the midst of an upsurge of reported cases of *Bordetella pertussis* (Whooping Cough). Through September of 1980 there have been 32 reported clinical cases compared with 18 cases in 1979 and only 4 cases in 1978. Although generally thought to have a seasonal peak in late winter and early spring, 14 (45%) of this year's cases had onset dates after August 1. Among the sporadically distributed cases, most of which were in

residents of southern Louisiana, there was one cluster of 5 cases involving a hospital nursery. This small outbreak highlights the contagious nature of the disease as well as the previously recognized lack of persisting immunity afforded by the killed *B. pertussis* vaccine. Three infants under 2 months of age were involved; the index case died. Additionally, 2 adults (a mother and nursery R.N.) developed pertussis approximately one incubation period (10-16 days) following exposure to these children.

(continued on page 2)

ALERT

DENGUE DIAGNOSED IN TEXAS

Dengue (Type 1 virus) is thought to have entered Mexico from Guatemala and Belize in November 1978. During 1979 there were approximately 3,000 cases reported in Mexico, with Tampico being the northernmost city affected. Field studies in Tampico and Merida (Yucatan Peninsula) documented the presence of dengue in February 1980. Type 1 virus was isolated from a resident in Merida on February 22, the first dengue virus isolated in Mexico this year. In June reports of dengue-like illness in Nuevo Leon, Mexico, prompted an investigation in Montemorelos, an agricultural community 85 kilometers southeast of Monterrey. Of 57 recently ill persons from whom blood specimens were obtained, all complained of severe myalgia, especially in the lower back and thighs. Fifty-one (89%) complained of arthralgia, 44 (77%) complained of retro-ocular pain, 44 (77%) complained of nausea and, of 26 acutely ill persons, 8 (31%) had a maculopapular rash. No one was hospitalized. Eight of 8 paired serum specimens obtained demonstrated a rise in hemagglutination — inhibition antibody titer four-fold or greater. Twenty-one of 23 other convalescent samples showed titers > 1:10. Additionally, flavivirus

was isolated from 6 of 23 sera collected from patients with acute dengue-like illness.

In late August 1980 dengue virus type 1 was isolated from a 5 year old girl in Brownsville, Texas. This is the first report of dengue transmission within the continental United States since 1945. During the past month there have been 6 laboratory documented cases of dengue in Louisiana patients who had recently traveled to Mexico. Because of the proximity of dengue activity in northeastern Mexico and transmission in Texas, areas of the Gulf Coast and the southeast Atlantic states that are heavily infested with *A. aegypti* (the mosquito vector of dengue) are at risk of dengue introduction and transmission during the remaining warm months. Measures for reduction of the vector populations include elimination of water-holding containers and organized cleanup drives. Exposure to mosquitos should be avoided as outlined in last month's alert on St. Louis Encephalitis. Suspicious cases should be reported to parish health units or directly to the Epidemiology Section and paired sera should be sent (2-week interval) to the Division of Laboratories.

UPDATE

SAINT LOUIS ENCEPHALITIS IN NEW ORLEANS

In the last issue of the Louisiana Monthly Morbidity Report (August 1980) the appearance of St. Louis Encephalitis in our state was described. Juvenile bird serologies continue to show evidence of recent SLE infection in Orleans Parish and are mostly limited to the area of the Ninth Ward where the positivity rate is approximately 30%. In addition, chicken seropositivity has been detected in St. Tammany Parish during the past month. There have been 11 laboratory documented human cases of SLE in New Orleans (including 9 patients from the Ninth Ward) and one in Evangeline Parish (thought to be imported from Texas). Nine of these 12 cases are "confirmed" (four-fold rise or fall in HI or CF titer) and 3 are "presumptive" (HI titer \geq 1:40 or CF titer \geq 1:16 and compatible clinical symptoms). The mean age is 54 years and there have been 7 males and 3 females. The dates of onset of illness ranges from July 16 to August 22, 1980, with the majority occurring in early August. All patients have had clinical encephalitis with fever (mean = $103.8^{\circ} \pm 1.3^{\circ}$ F), headache

and confusion or disorientation. Additionally, 56% have been comatose during the early part of their illness. Other symptoms have included tremor (56%), nausea and vomiting (44%), lethargy (33%), dizziness (33%), paralysis (11%) and dysuria (11%). One SLE patient succumbed to an unrelated disease. CSF examinations on 9 of the 12 cases have been fairly typical of encephalitis with pleocytosis (mean WBC = 171 cells/mm³, range 0-500) of a mononuclear nature (mean % mononuclear cells = 74%), elevated protein (mean = 90 mg/100 ml), normal glucose and negative gram stains and cultures.

SLE may also be manifested by a clinical syndrome of meningitis or febrile headache; all the Louisiana cases have been characterized by encephalitis because our human surveillance system is hospital based. We urge clinic physicians in the state to consider the diagnosis of SLE and send case reports with acute and convalescent serum to our Division of Laboratories. Mosquito control efforts continue.

WHOO WHOO WHOO (continued from page 1)

In an attempt to delineate the reasons for the 1980 upsurge, age data were analyzed and compared with the previous year's cases (Table I). As can readily be seen, cases in 1980 are significantly younger than in 1979 with 81% under one year of age this year compared to only 56% in 1979 and 50% in 1978. Interestingly, nearly one quarter of the 1980 patients were infants 2 months of age or under, whereas there was only 1 patient in this age group in 1979. In addition to underscoring the absence of protective antipertussis IgG in maternal serum, this age distribution raises the question of transmission of the disease from adults to children. Physicians, particularly internists, are unlikely to suspect the diagnosis of pertussis in their adult patients with paroxysmal coughs.

Table I

B. PERTUSSIS CASES BY AGE GROUPS

AGE OF CASE	1980 n=32	1979 n=18
\leq 1 year	26 (81%)	10 (56%)
\leq 12 weeks	9 (28%)	3 (17%)
\leq 2 months	7 (22%)	1 (6%)

This change in the epidemiology of pertussis may relate to the increasingly effective immunization of children. A random sample of 600 Louisiana 2-year old children has shown that 92% have received at least 3 doses of DTP vaccine; this level of immunization has steadily increased from 88.5% in 1975 and 91.7% in 1978.¹ Pertussis immunity in school age children is even more complete with 93.7% having received 3 or more doses of DTP in

1980. It is possible that adults with waning immunity themselves constitute a major reservoir for transmission to preimmunization age infants; a study in Dallas supports this concept.² In addition to milder illness in young adults, asymptomatic culture - positive individuals have been documented.³

Confirmation of the clinical diagnosis of pertussis is important and generally rests on the fluorescent antibody method. The FA test is highly specific with few false positive smears (< 5%) but unfortunately is not sensitive (61%).⁴ This information coupled with both underdiagnosis and underreporting of the disease may indicate that the increase in cases this year is only the tip of the iceberg. Physicians are urged to continue providing appropriate DTP immunizations to infants, to consider the possibility of pertussis in both children and young adults with persistent paroxysmal coughs, and to document the diagnosis with appropriate laboratory tests (FA or culture). In addition to the standard Confidential Case Report physicians are asked to provide additional information regarding immunization status, sources of exposure, method of diagnosis, hospitalization and treatment when the report is submitted to the local health department.

REFERENCES:

- 1 Immunization Section, Division of Disease Control, DHHR. Unpublished data. 1980.
- 2 Nelson, J.D.: The Changing Epidemiology of Pertussis in Young Infants. *Am. J. Dis. Child.* 132: 371-373. 1978.
- 3 Field, L.H. and Parker, C.D.: Pertussis Outbreak in Austin and Travis County, Texas. 1975. *J. Clin. Microbiol.* 6:2. 154-160. 1977.
- 4 Broom, C.V. et. al.: CDC. Unpublished data. 1978.

SELECTED REPORTABLE DISEASES (By Place of Residence)

STATE AND PARISH TOTALS	VACCINE PREVENTABLE DISEASES					ASEPTIC MENINGITIS	HEPATITIS A AND UNSPECIFIED	HEPATITIS B	LEGIONNAIRES DISEASE	MALARIA**	MENINGOCOCCAL INFECTIONS	SHIGELLOSIS	TUBERCULOSIS, PULMONARY	TYPHOID FEVER	OTHER SALMONELLOSIS	UNDERNUTRITION SEVERE	GONORRHEA	SYPHILIS, PRIMARY AND SECONDARY	RABIES IN ANIMALS (PARISH TOTALS CUMULATIVE, 1980)
	MEASLES	RUBELLA*	MUMPS	PERTUSSIS	TETANUS														
TOTAL TO DATE 19 79	253	29	31	16	2	90	546	195	3	4	117	88	414	5	134	9	17205	820	23
TOTAL TO DATE 19 80	11	10	68	33	5	62	658	227	5	42	70	190	367	1	120	7	17369	995	13
TOTAL THIS MONTH	0	0	3	10	3	7	103	33	4	0	5	7	44	1	34	1	2087	124	6
ACADIA							1	1									9		
ALLEN																	3		
ASCENSION																1	4	2	
ASSUMPTION							1										5		
AVOYELLES												1					4	2	1
BEAUREGARD								1									1		
BIENVILLE																	6		2
BOSSIER							1				1	1					33	2	
CADDO						2	6	1				5			10		192	4	4
CALCASIEU				1	1		2	3				2			1		95	4	
CALDWELL												1					2		
CAMERON																	1		
CATAHOULA																	5		
CLAIBORNE								2				1					4		
CONCORDIA																	8		
DESOTO								1					3				2		
EAST BATON ROUGE									2				2				190	24	
EAST CARROLL																	7		
EAST FELICIANA																	3		1
EVANGELINE							1												
FRANKLIN																	9		
GRANT				1								1					5		
IBERIA							5	1			1	1					11	5	
IBERVILLE								1									7	1	
JACKSON							1										3	1	
JEFFERSON				4	1		31	4				1		1	1		99	2	
JEFFERSON DAVIS																	12		
LAFAYETTE						1	2	5				1	3		3		37	1	
LAFOURCHE																	19		
LASALLE													1				2		
LINCOLN					1	1	4									2	18	1	
LIVINGSTON																	2	1	
MADISON											1						17		
MOREHOUSE						1					1						8		
NATCHITOCHE																	2	1	
ORLEANS				1			14	7	1			3	12		8		883	43	
OUACHITA				1			9	1					1				94	4	
PLAQUEMINES																	1		
POINTE COUPEE																	2		
RAPIDES						1	1								1		65	2	
RED RIVER																			1
RICHLAND													1				24	4	
SABINE																	3	8	
ST. BERNARD							4	1	1				2				3		
ST. CHARLES																	13		
ST. HELENA				1															
ST. JAMES																			
ST. JOHN							1	1					2				3		
ST. JOHN																	2	1	
ST. LANDRY							1										7	1	
ST. MARTIN							1								1		5	2	
ST. MARY					1						1						3	1	
ST. TAMMANY							5	1							2		25		
TANGIPAHOA							8						2				23	2	
TENSAS																	8		
TERREBONNE					2	1	3				1						19		
UNION																	9		
VERMILION															2		5		
VERNON							1	1									7	1	
WASHINGTON																	11	1	
WEBSTER								1					2				13		4
WEST BATON ROUGE																	11	2	
WEST CARROLL															1		1		
WEST FELICIANA																			1
WINN																	9		
OUT OF STATE																	13		

* Includes Rubella, Congenital Syndrome.

** Acquired outside United States unless otherwise stated.

From January 1, 1980, through September 30, 1980, the following cases were also reported:

3 - Leptospirosis; 4 - Brucellosis; 1 - Blastomycosis; 1 - Cryptococcosis; 27 - Trichinosis;
1 - Poliomyelitis, non-paralytic; 2 - Rocky Mountain Spotted Fever.



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