

LOUISIANA MONTHLY MORBIDITY LHSASA

DISEASES REPORTED DURING THE MONTH OF

July, 1973

BY PARISH OF RESIDENCE

HEPATITIS IN SLIDELL, LOUISIANA

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During the first week in April of this year, a 6 year old girl living in the Village North Housing Project in Slidell, Louisiana, developed clinical signs of hepatitis. On the day these signs first became apparent, the child accompanied her mother to a wake which was being held in this same housing project. At this affair she circulated freely among the guests and ate the food which was being served, at times eating directly from serving dishes.

During a 3 month period following the wake, 12 people, either residing in or having intimate contact with this housing project, developed clinical hepatitis. The time sequence of these cases as they became

BUREAU OF VITAL STATISTICS

DIVISION OF HEALTH MAINTENANCE AND AMBULATORY PATIENT SERVICES

Prepared by:

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	ASEPTIC MENINGITIS	DIPHTHERIA	ENCEPHALITIS	ENCEPHALITIS, POST INFECTION	INFECTIOUS AND SERUM HEPATITIS	TUBERCULOSIS, PULMONARY	MENINGOCOCCAL INFECTIONS	PERTUSSIS	POLIOMYELITIS, PARALYTIC	RABIES IN ANIMALS	RHEUMATIC FEVER	RUBELLA *	SHIGELLOSIS	TYPHOID FEVER	OTHER SALMONELLOSIS	TETANUS	MEASLES	GONORRHEA	SYPHILIS, PRIMARY AND SECONDARY
TOTAL TO DATE 1972	36	4	9	9	431	339	33	27	0	27	8	85	77	4	90	4	82	9580	512
TOTAL TO DATE 1973	71	0	12	4	500	350	30	10	0	32	14	99	156	6	106	3	84	13639	498
TOTAL THIS MONTH	15	0	1	0	82	48	4	1	0	7	1	0	13	1	27	0	0	2570	75
ACADIA																		11	
ALLEN																		1	
ASCENSION					2													14	
ASSUMPTION																		6	
AVOUELLES					1													6	
BEAUREGARD																		2	
BIENVILLE																		14	
BOSSIER																		211	4
CADDO					5	2												84	
CALCASIEU					2	3							1					1	
CALDWELL																			
CAMERON						1													
CATAHOULA																		9	
CLAIBORNE																		2	
CONCORDIA																		13	1
DESOTO					1														
EAST BATON ROUGE					1	5	1						1		9			132	6
EAST CARROLL																		20	2
EAST FELICIANA																		5	
EVANGELINE	1																	9	
FRANKLIN																			2
GRANT																		7	
IBERIA																		4	1
IBERVILLE						1												6	

*Includes Rubella, Congenital Syndrome.

Aug 27 1973

Baton Rouge, Louisiana

apparent is depicted in the accompanying graph. Six of these cases had attended the wake noted above. (See Graph) Food histories obtained from these individuals in addition to 16 other people who had attended the wake, but had not become ill, did not incriminate a particular food item as a vehicle for infection among these cases. The additional 6 cases of hepatitis which developed in this community could not be related to the April wake; however, in each there had been obvious premorbid contact with the family of a previously reported case in the housing project (see Table #1).

CASES OF HEPATITIS, VILLAGE NORTH HOUSING PROJECT SLIDELL, LOUISIANA, APRIL-JULY, 1973

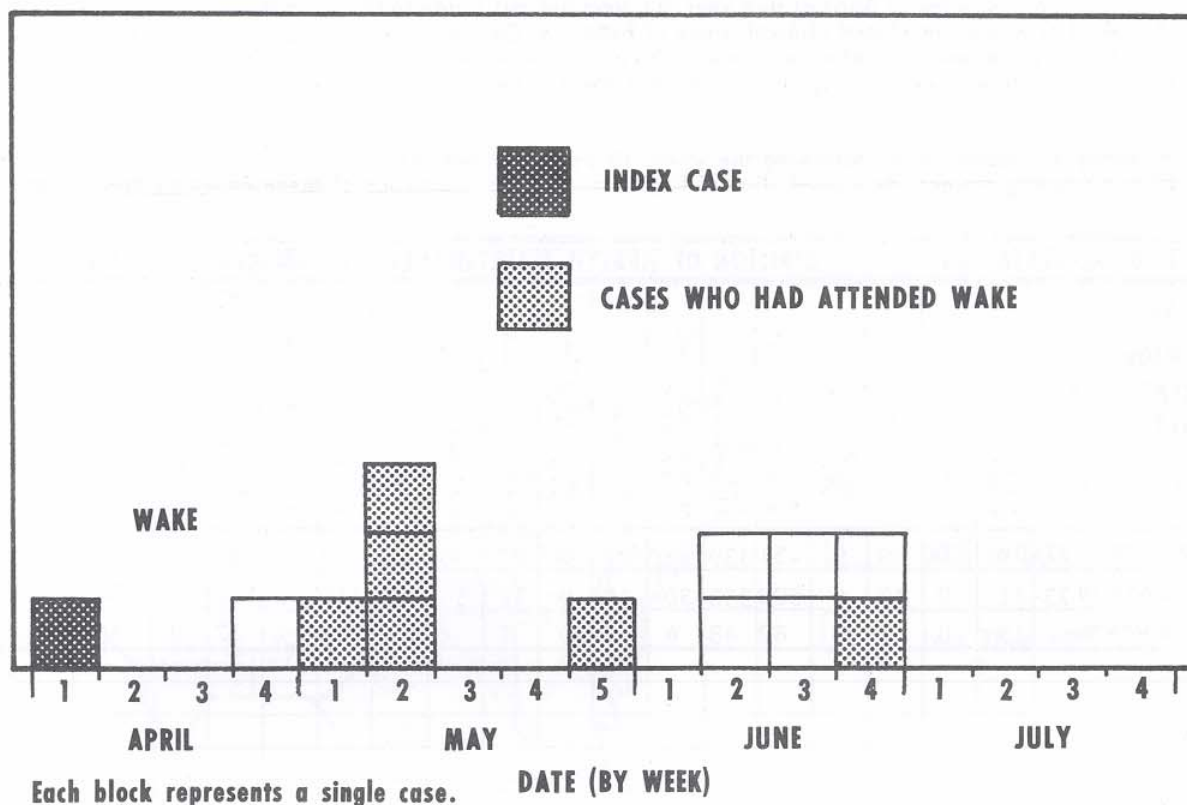


Table #1

HEPATITIS CASES OCCURRING IN THE VILLAGE NORTH HOUSING PROJECT APRIL THROUGH JULY, 1973

CASE NUMBER	AGE	SEX	AUSTRALIA ANTIGEN	CONTACT
1	6	F	*	Index case
2	29	F	*	Mother of case #1
3	7	M	*	Brother of case #1
4	12	F	*	Neighbor of case #1
5	4	M	*	Brother of case #4
6	6	F	*	Sister of case #4
7	40	F	*	Mother of case #4
8	8 Mos.	M	*	Brother of case #4
9	4	F	Neg.	Slept with case #4
10	13	F	Neg.	Babysat case #8
11	12	F	Neg.	Sister of case #9
12	32	M	Neg.	Uncle of case #9-10
13	21	M	Neg.	Neighbor of case #4

* Not obtained

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JACKSON										1								6		
JEFFERSON	3				15	4	1						2		5			151	4	
JEFFERSON DAVIS																		6		
LAFAYETTE	2				6	3												14		
LAFOURCHE	1				1													22		
LASALLE																				
LINCOLN																		31		
LIVINGSTON																		7	1	
MADISON					1													14	1	
MOREHOUSE																		17		
NATCHITOCHE																		35	1	
ORLEANS	5				24	17	1	1			1		7	1	8			1076	35	
OUACHITA					6	6				2			1		2			106	3	
PLAQUEMINES					1					2								3		
POINTE COUPEE																		2		
RAPIDES					1													122		
RED RIVER																		2	2	
RICHLAND					1													14	1	
SABINE															2			6		
ST. BERNARD					3	2												9		
ST. CHARLES																		7		
ST. HELENA																		7		
ST. JAMES	1				1													7		
ST. JOHN																		5		
ST. LANDRY					1	3												21		
ST. MARTIN																				
ST. MARY					1													17	3	
ST. TAMMANY			1		5													45		
TANGIPAHOA															1			57	2	
TENSAS																			2	
TERREBONNE	2																	43		
UNION						1												5		
VERMILION							1											4		
VERNON																		37	1	
WASHINGTON													1					45	1	
WEBSTER					1					1								17	1	
WEST BATON ROUGE																		4		
WEST CARROLL																		4		
WEST FELICIANA																		39		
WINN					2					1								6	1	
OUT OF STATE																				

From January 1 through July 31, the following cases were reported : 3-Actinomycosis;
4-Brucellosis; 2-Malaria.

As each of these cases of hepatitis came to the attention of the Slidell Health Unit staff, concerted efforts were made to encourage appropriate household contacts to receive prophylactic gamma globulin injections. Two families for unexplained reasons did not avail themselves of the injections offered by their local health unit, whereas the remaining 4 families did. The subsequent experience of each of these families with respect to 2° cases of hepatitis are depicted in Table #2.

Table #2
SECONDARY CASES OF HEPATITIS IN FAMILIES
ACCORDING TO WHETHER OR NOT THEY RECEIVED
PROPHYLACTIC GAMMA GLOBULIN

CASE NUMBER	NUMBER ADDITIONAL FAMILY MEMBERS	NUMBER RECEIVING I.S.G.	NUMBER 2° CASES IN FAMILY
1	4	0	2
2	5	0	4
3	2	2	0
4	3	3	1*
5	4	4	0
6	4	4	0
TOTAL	22	13	7

* This child received gamma globulin two days prior to the onset of his illness.

2° attack rate among those families not receiving gamma globulin = 67%

2° attack rate among those families receiving gamma globulin = 8%

This outbreak, like every outbreak, or individual clinical problem has its lessons. These lessons are often obvious to some, ignored by others or misinterpreted by still others. The manner in which the physician deals with epidemiologic data of this kind depends largely on his particular bias as dictated by his areas of interest. The outbreak of hepatitis which took place in Slidell, I think, had relevance for physicians and public health workers of a wide range of personal biases since it deals with a disease that has relentlessly worked its will on any and all segments of our society.

Any discussion of "hepatitis" must, from its outset, recognize the tremendous amount of confusion surrounding this term; for "hepatitis" like so many other clinical labels is a term which begs the question of etiology. It is a descriptive label denoting an inflammation of the liver without offering any additional insight into the source of inflammation. Thus, the same term may be applied to conditions with etiologies as diversified as Q fever, alcohol toxicity, cytomegalovirus infection or Australia antigen associated hepatitis. Perhaps the greatest source of confusion relating to this term originates from efforts by investigators to separate those cases of hepatitis without obvious etiology into distinct classes.

These are the cases that have previously fallen into the category of "viral hepatitis" because of want of more specific terminology. The term "viral hepatitis" is itself confusing when applied to these diseases since inflammatory diseases of the liver with an established viral etiology (e.g. CMV infection) are not included in this category. Rather they represent 2 separate diseases which are clinically similar, but etiologically, immunologically and epidemiologically distinct. In past years these were referred to as "serum hepatitis" and "infectious hepatitis" because of apparent distinctive modes of transmission. However, with the work of Dr. Saul Krugman and others it became apparent that the short incubation type (infectious hepatitis) and the long incubation type (serum hepatitis) could each be transmitted by either oral or parenteral routes. Thus, these earlier descriptive terms lost their initial apparent relevance. Nonetheless, with the advent of the Australia antigen determination, a reliable method has been devised for differentiating these two diseases. Dr. A. M. Prince and others working with him in New York City have demonstrated quite conclusively the firm association of the Australia antigen with the long incubation type hepatitis.

In view of this the Virus Diseases Committee of the Association of State and Territorial Epidemiologists have recommended that viral hepatitis case reports be classified as hepatitis-A (or Australia antigen negative hepatitis), hepatitis-B (Australia antigen associated hepatitis), and viral hepatitis, type unspecified. This will require practicing physicians in the state to obtain Australia antigen determinations on each of their cases of hepatitis. This test is important not only in assisting in the characterization of the epidemiology of the disease (test results should be included with each hepatitis report submitted to the local health unit) but also it is important because it provides the clinician with a reliable means of determining whether or not to recommend immune serum globulin (ISG) protection for appropriate family contacts. I.S.G. is only effective in protecting against the clinical manifestations of hepatitis-A.

Although the early cases of hepatitis involved in the Village North outbreak were not tested for Australia antigen, an apparent oral/fecal mode of transmission, an incubation period of 4-5 weeks (See Graph) and a relatively mild clinical course in each case (average duration of illness one week) favored a diagnosis of short incubation hepatitis-A. The 5 Australia antigen negative determinations obtained from later cases confirmed this diagnosis. Many investigators have demonstrated the efficacy of I.S.G. in protecting contacts of hepatitis-A against the clinical manifestations of this disease. In 1967, R.D. Wood and J.J. Clinton showed that Peace Corps volunteers who received 0.05 ml ISG per pound of body weight every four months had considerably lower rates of hepatitis-A than those rates reported from volunteers not receiving ISG. The experience of the six families involved in the Village North outbreak corroborate these findings since the secondary attack rate among those two families that did not receive prophylactic I.S.G. was 8 times that in those families that did receive I.S.G.

In 1963, Dr. Kenneth W. Newell, the William Watkins Professor of Epidemiology at the Tulane University of Medicine, discussed "The Puzzle of Infectious Hepatitis" at the 83rd Annual Meeting of the Louisiana State Medical Society. His words echo today as a hollow reminder of the tremendous amount of work yet to be completed before man brings this disease into proper control:

"The monotonous recurring annual morbidity cannot be even indirectly blamed upon either the practicing physician or the public health worker in the local health authority. There is no evidence to show that insufficient or inadequate medical care, or the omission of reasonable accepted environmental control is related in any important way with this continuing plague.

This is not just a problem in Louisiana or in this country. It is a world problem which we are becoming used to living with, and which we are doing little or nothing about. To allow this to continue for the twenty years that we have been aware of it, must mean that there is something here which is understood. Infectious hepatitis is a puzzle which is not solved."

Despite intensive investigation by many laboratories, the viral agents of hepatitis-A and hepatitis-B have defied isolation. In spite of concerted efforts by clinicians and public health organizations throughout this state and throughout the country, cases of "viral hepatitis" have increased year after year. Nonetheless, the pessimistic picture which Dr. Newell eloquently summarized may soon improve. Numerous investigators in our own state and in other areas of the country appear to be within reach of isolating the agents responsible for these types of hepatitis. Hopefully, once this long awaited goal has been attained, effective vaccines against these diseases will not be far behind. Dr. Saul Krugman at the Willowbrook School in New York in the absence of a pure culture of the hepatitis-B virus, has already successfully utilized heat inactivated hepatitis-B serum to protect children against Australia antigen associated hepatitis. Although these advances may seem modest when compared with those that have been made in other areas of medicine, they are significant and hopefully herald imminent discoveries that will enable man to rid himself of these diseases in the near future.

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