

LOUISIANA MONTHLY MORBIDITY

DISEASES REPORTED DURING MONTH OF JANUARY, 1973

BY PARISH OF RESIDENCE

"ONE DEAD, FAMILY HOSPITALIZED, CAUSE OF TRAGEDY A MYSTERY"

This headline appeared in the "Houma Courier", on Monday, December 18. The article that followed described a mysterious illness involving a family residing in Chauvin, Louisiana. This illness took the life of the father of this family and crippled his oldest daughter with permanent brain damage. To date, the etiology of their disorder has not been identified. The following account of the clinical and epidemiologic investigations of this outbreak is offered to the readers of the Louisiana Monthly Morbidity Report for their own interpretation. An investigation of this perplexing outbreak is continuing. When a definite etiology for this family's illness has been identified, this information will also be forwarded to our readers.

Sunday, December 17, a Charity Hospital pediatrician notified the State Department of Health of an unusual outbreak on which she had just consulted. This outbreak involved a family of six in Chauvin, Louisiana. The family had been healthy (except for a history of epilepsy involving the mother and oldest

DIVISION OF PUBLIC HEALTH STATISTICS -

- LOUISIANA STATE DEPARTMENT OF HEALTH

RELEASED February 8, 1973	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	0	1	0	0	43	45	6	3	0	4	1	2	2	0	9	1	4	1041	68
TOTAL TO DATE 1973	9	0	2	1	77	49	1	1	0	2	2	0	16	0	20	0	0	1471	59
TOTAL THIS MONTH	9	0	2	1	77	49	1	1	0	2	2	0	16	0	20	0	0	1471	59
ACADIA					2	1												1	1
ALLEN						1												1	
ASCENSION															1				
ASSUMPTION																		1	
AVOUELLES																		1	
BEAUREGARD																		2	
BIENVILLE																			
BOSSIER						2												16	
CADDO					2	2												167	2
CALCASIEU					4	1									4			77	
CALDWELL																			
CAMERON																			
CATAHOULA																			
CLAIBORNE																			
CONCORDIA					1														
DESOTO						1				1			1					16	
EAST BATON ROUGE					3	1									4			73	1
EAST CARROLL																		3	
EAST FELICIANA																		1	
EVANGELINE						1													
FRANKLIN																		3	2
GRANT																		2	
IBERIA			1		1	1												5	
IBERVILLE					1	1												1	

* Includes Rubella, Congenital Syndrome.

Louisiana Department
of Health

daughter) until December 15. At this time they were first seen in a local emergency room after the four children in the family began to have simultaneous grand mal seizures. The mother stated that all had been well until the evening meal of this same day. At that time the entire family consumed a meal consisting of smoked sausage and eggs. Later that evening the children began to complain of malaise and mild headaches, but were otherwise well. At approximately 2 A. M. the mother awoke to find all four children experiencing grand mal seizures. She and her husband brought the children to the community emergency room where they were examined by the physician on duty and found to be in "good health." The husband was also noted to be in apparent good health. The physician prescribed Emisert #1 suppositories for the children and sent them home, instructing the mother to restrict the intake of the entire family to fluids for the remainder of the day.

The children and husband seemed to do well on the day of December 16. The mother fed them only soup prepared by the maternal grandmother, and noted no new abnormalities among her family. When she retired in the evening, her husband and one child were watching television in the living room and her other three children were apparently resting comfortably in their rooms.

At approximately 10 A.M., December 17, the grandmother came to the house and found the husband lying in a pool of brownish vomit on the living room floor. He was dead. She found the four children in a comatose state, and found the mother confused, though conscious, rocking in a chair with her youngest child in her arms.

This was the history, available to the pediatrician who subsequently cared for the four comatose children. Three of these children recovered in 48 hours with supportive therapy and are now healthy. The fourth child, one with a past history of a seizure disorder, remains comatose. To date, clinical, laboratory and epidemiologic investigations have not revealed the etiology of this illness.

At the time of their second visit to the hospital, the children were, as previously described, all comatose. Their physical examination was also remarkable in that they demonstrated normal skin color, marked tachycardia, $S_3 + S_4$ gallops, mydriasis, marked irritability with frequent high pitched crying and a tendency to assume a rigid hyper-extended "opisthotonic" posture when stimulated. The children were also noted to exhibit intermittent atypical seizure-like activity.

Laboratory studies were obtained. These included normal electrolytes, BUN and glucose; elevated WBC in two children (14,300 & 16,000 with normal differentials); EKG revealed an "upright 'T' wave in V_2 " and a rate of 160/min. The EKG was otherwise unremarkable. Blood gases obtained from the oldest child were as follows: $PO_2 - 350$, $PCO_2 - 38$, $pH - 7.39$ (the child was receiving nasal O_2 at this time). This same child had a lumbar puncture shortly after admission with normal CSF dynamics, cell count and chemistries. Her SMA 12 chemistries have been essentially normal throughout her hospitalization except for a mild elevation of SGOT, LDH and alk. phos. during the first week of her illness.

Shortly after these children had been admitted to the hospital, representatives from the state and local health offices visited their home. Multiple food specimens were obtained and examined for heavy metals, strychnine, cyanides, pesticides and *Cl. botulinum*. These were all negative. The house had a gas heating unit. This was examined briefly and appeared to be in reasonable working order.

Postmortem examination of the father was performed and was remarkable only in that his lungs were "heavy," giving a picture consistent with aspiration. No additional pathology was noted. Gas chromatographic studies of the father's blood are pending as is a thorough evaluation of the heating unit in the home of this unfortunate family.

SALMONELLA

(continued from December Monthly Morbidity Report)

From a public health standpoint, the outbreak of salmonellosis discussed in our last Monthly Morbidity Report is a subject of almost unequalled importance; for salmonellosis probably affects more people and animals each year than any other single disease. A review of some of the recognized aspects of the epidemiology of this all too ubiquitous disease may provide some insight into the question of where man fits into the salmonella picture and hopefully, how he might exercise some control over this problem.

To date, 800 antigenically distinct types of Salmonellae have been identified. These probably inhabit (and in many cases cause disease in) most if not all species of warm blooded as well as many cold blooded vertebrates. The major reservoirs of human salmonellosis are the livestock and domestic animals of man. In order of decreasing importance these include: chickens, ducks, pigs, rodents, cattle, sheep, horses, dogs, cats and occasional wild animals. Pet turtles have recently been recognized as a major source of human salmonellosis and according to some estimates may be responsible for as many as 25% of salmonellosis cases in children.

JANUARY, 1973

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	JACKSON																			
JEFFERSON	1				2	8							4		7			26	4	
JEFFERSON DAVIS						3												3		
LAFAYETTE					8	1	1											18		
LAFOURCHE					1	4												27		
LASALLE																				
LINCOLN					1	1												47		
LIVINGSTON																				
MADISON					1													7		
MOREHOUSE																		3		
NATCHITOCHE																		7		
ORLEANS	5			1	28	3		1				11		3				557	32	
OUACHITA					3	1												88	8	
PLAQUEMINES	1				2	4														
POINTE COUPEE																		81	2	
RAPIDES																				
RED RIVER																				
RICHLAND						1												5		
SABINE			1															1		
ST. BERNARD					3	2												6	1	
ST. CHARLES	1				1															
ST. HELENA																		2		
ST. JAMES											1							2		
ST. JOHN					1													1	1	
ST. LANDRY						2												23		
ST. MARTIN					1													5		
ST. MARY	1					2												5	1	
ST. TAMMANY					4													20		
TANGIPAHOA					1													31	3	
TENSAS																				
TERREBONNE					2													17	1	
UNION					2													8		
VERMILION					1													3		
VERNON					1													57		
WASHINGTON						5					1							22		
WEBSTER															1			15		
WEST BATON ROUGE					1													1		
WEST CARROLL																				
WEST FELICIANA																		8		
WINN						1				1								5		
OUT OF STATE																				

From January 1 through January 31, the following cases were also reported:
2 - Brucellosis

Paths of transmission of Salmonellae from animals to man are protean and may involve avenues as diverse as the fondling of an infected pet turtle by an unwitting child, to the contamination of the family's fresh custard pie by a peripatetic fly, just recently departed from the droppings of the neighbor's dog. In the case of the salmonellosis outbreak discussed in our last Report, transmission to man took place via a contaminated meat product, that had been improperly handled.

The importance of improperly handled foodstuff in the transmission of salmonellosis to man can not be exaggerated. Salmonellae are rapidly killed by autoclaving at 15lbs. of pressure. Most Salmonellae are killed by exposure to a temperature of 55°C for 1 hour or of 60°C for 15-20 minutes. All are killed by the time-temperature effect of pasteurization. To ensure destruction of Salmonellae in food, however, the temperature must be raised throughout the food to the thermal death point of the organism. This was not the case in the outbreak discussed previously. Furthermore, it must be remembered that refrigeration does not destroy Salmonellae; it merely inhibits multiplication of these organisms. Thus, referring again to the outbreak reported in our last Monthly Morbidity Report, one must be wary of a false sense of security when working with frozen meat, even if this meat has been frozen for a considerable period of time.

The evidence suggesting that animals are the main reservoir of Salmonellae is great. The organisms are transmitted to man either directly from these animals or through contaminated products of animal origin. Hence, transmission to man may be regarded as secondary to the continuing cycle in animals, and can only be prevented where constant vigilance is exercised.

References:

- Bowmer, E.J., et al, The Challenge of Salmonellosis Major Health Problem, Am J.M.S., Vol.274, No. 4, 1964, pp 467 - 501.
 Ewing, W.H., An Evaluation of the Salmonella Problem, Publication 1683, Committee on Salmonella, National Academy of Sciences - National Research Council, Washington, D.C., 1969.
 Steele, J.H., Salmonellosis, Arch. of Env. Health., Vol. 19, Dec. 1969, pp 871 - 75.

INFLUENZA IN LOUISIANA

On January 6, 1973 a 25 year old male arrived at Charity Hospital in New Orleans D.O.A. Subsequent postmortem examination by the coroner revealed "acute bilateral bronchopneumonia, septic splenitis and possible myocarditis." Material aspirated from this patient's lungs was cultured by the Virology Laboratory at Charity Hospital and yielded A₂ influenza virus.

To the best of our knowledge, this represents the 1st isolation of influenza virus in Louisiana this year. The isolate has been sent to the Center for Disease Control in Atlanta for antigenic typing. Until these studies have been completed, it will not be possible to state whether this isolate represents the A₂/England/42/72 strain responsible for outbreaks of influenza in other areas of the country. Additional cases of A₂ influenza have been diagnosed serologically by the Charity Hospital staff as well as by the State Laboratory.

Current trends in school absenteeism and emergency room visits throughout the state indicate scattered influenza activity, however, respiratory illness prevalent at this time is also likely to include infections caused by viruses other than influenza. The emergency rooms at Charity Hospital of New Orleans and Conway Memorial in Monroe have reported increases of 20% and 40%, respectively, in their patient visits since early January. Many of these visits have been for non-specific complaints compatible with the influenza syndrome. School absentee records indicate notable levels of influenza in most areas of the state. Nonetheless, absenteeism secondary to influenza reported during the 1st three weeks of January does not exceed absenteeism reported during the same period in 1972.