

LOUISIANA MONTHLY MORBIDITY

DISEASES REPORTED DURING MONTH OF NOVEMBER, 1972 BY PARISH OF RESIDENCE

SHIGELLOSIS: A National and Local Problem

In May of 1972, clinicians at Charity Hospital began to note a disturbing increase in the number of isolates of *Shigella sonnei* from patients in Orleans Parish presenting in their emergency room with complaints of diarrhea, vomiting, and fever. This increase of *S. sonnei* has continued to perplex Louisiana clinicians and epidemiologists.

The outbreak has been confined primarily to Orleans Parish (see Graph, page 4). The largest clusters of shigellosis cases within this parish have occurred within the lower socio-economic regions of New Orleans. Approximately 78% of the isolates have been obtained from children below the age of six years with a slightly higher incidence among the young males. In May of 1972, 32 isolates were sent to the Center for Disease Control in Atlanta, Georgia, for typing. Of these, 75% were untypable and probably represented a single strain.

DIVISION OF PUBLIC HEALTH STATISTICS - - LOUISIANA STATE DEPARTMENT OF HEALTH

RELEASED DECEMBER 7, 1972	ASEPTIC MENINGITIS	DIPHThERIA	ENCEPHALITIS	ENCEPHALITIS, POST INFECTIONOUS	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 1971	184	23	15	9	733	666	66	71	0	47	7	292	34	6	143	3	1701	13069	700
TOTAL TO DATE 1972	88	5	13	9	680	553	46	43	0	47	13	101	288	7	207	6	105	16046	805
TOTAL THIS MONTH	6	0	0	0	54	44	4	2	0	6	2	5	132	0	24	1	6	1494	62
ACADIA						1												2	
ALLEN																			
ASCENSION													1						
ASSUMPTION																		4	
AVOUELLES																		1	2
BEAUREGARD																			
BIENVILLE							1											1	
BOSSIER																		22	
CADDO					2	1				3								185	2
CALCASIEU					1	1									1			61	1
CALDWELL													112					4	
CAMERON																			
CATAHOULA																			1
CLAIBORNE																		1	2
CONCORDIA																			
DESOTO																		6	
EAST BATON ROUGE					2	7	1						1			1	5	87	3
EAST CARROLL																		15	
EAST FELICIANA						1													
EVANGELINE																		2	
FRANKLIN					1													2	2
GRANT																		2	
IBERIA						3												5	4
IBERVILLE					1	1												23	1

* Includes Rubella, Congenital Syndrome.

Louisiana Department of Health

As noted further in the Graph, there has been an additional increase in *S. sonnei* isolates outside of Orleans Parish during the months of October and November. This increase can largely be attributed to cases occurring in two training schools for retarded children in Caldwell Parish, where there have been recent outbreaks of *Shigella sonnei* gastroenteritis.

In 1969, Reller, et al, published their findings of a five year review of shigellosis surveillance in the United States. These findings may provide some insight into the current New Orleans outbreak. Reviewing 45,263 shigella reports forwarded to the Center for Disease Control during this period 1964-68, they found two-thirds of the isolates to have been obtained from children less than ten years of age; a predominance of cases were infant males and women of childbearing age; and there appeared to be a seasonal distribution of cases with a tendency to peak in the autumn months. Over this five year period they noted *S. sonnei* had replaced *S. flexneri* serotypes as the most frequently isolated shigella type with *S. sonnei* accounting for 62% of the shigella isolated in 1968. They further noted mental institutions, Indian reservations, and urban low socio-economic communities as high risk areas for shigellosis. *S. dysenteriae* and *S. boydii* subgroups constituted less than 1% of the shigella isolates reviewed, and in a large number of cases signified disease acquired abroad.

Shigellosis (or bacillary dysentery) has been a problem of major proportion for urbanized man since the early days of civilization. Zinser, in *Rats Lice and History*, emphasized the major role this disease played in the great plagues of Europe and thus its ultimate influence on the course of western history. Though, today, shigellosis rarely achieves the pandemic proportions of these earlier years, it continues to be a source of very high morbidity throughout the world. In the highly urbanized countries such as Western Europe, Great Britain, and Japan, where increasing industrialization, and relatively high standards of living prevail, *S. sonnei* has been the most prevalent serotype isolated. In more rural countries such as those of Africa and Southeast Asia, where economic development is lagging, *S. flexneri* continues to predominate.

Relatively little progress has been made in controlling either epidemic or endemic shigellosis. Isolation techniques and extensive use of antibiotics in custodial institutions have generally failed to check shigellosis in these isolated communities. On the metropolitan and national level, shigellosis (except for the few rare cases of common source outbreaks) works its way through urban areas at will. In 1971, the Center for Disease Control investigated an outbreak of *Shigella sonnei* gastroenteritis in Atlanta, Georgia, with characteristics almost identical to those of the present outbreak in New Orleans. In their report on this outbreak they indicated the need for a detailed prospective study to better define this "increasing problem," because of the tendency for endemic shigellosis to persist at high levels in urban areas in the absence of district outbreaks or known common sources. To date, this study has not been undertaken.

The clinical studies currently being conducted by the University of Maryland, using oral attenuated shigella vaccines in institutionalized children offers some hope of progress in controlling shigella outbreaks in small isolated high risk populations. In the individual case of shigella dysentery, ampicillin, the tetracyclines, and selected sulfa preparations continue to be the main-stays of medical management, because of their ability to reduce the number of days of diarrhea and fever as well as the duration of shedding of the shigella bacillus by the host. In the absence of a known common source, the control of shigella, within a community such as New Orleans, is difficult. At the present time, careful attention to good personal hygiene within the community is the only available control measure for endemic shigellosis.

REFERENCES

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 Reller, L. B., et al. : Shigellosis in United States *A m. J. Epi*, Vol 91, No. 2, 1970 pp. 161-9.

NOVEMBER, 1972

DIVISION OF PUBLIC HEALTH STATISTICS -															- LOUISIANA STATE DEPARTMENT OF HEALTH				
RELEASED	ASEPTIC MENINGITIS	DIPHTHERIA	ENCEPHALITIS	ENCEPHALITIS, POST INFECTIOUS	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
JACKSON						1					1							5	
JEFFERSON	1				10	5	2				1				13			48	3
JEFFERSON DAVIS					1	1												5	
LAFAYETTE					2													16	
LAFOURCHE					3													14	1
LASALLE																			
LINCOLN					1				2									54	1
LIVINGSTON					1													2	
MADISON					1													24	1
MOREHOUSE																		6	
NATCHITOCHE																		7	
ORLEANS	4				16	17		1				1	18		7			551	21
OUACHITA					4	1		1	1									106	7
PLAQUEMINES					2														
POINTE COUPEE																		1	
RAPIDES																	1	19	
RED RIVER																			1
RICHLAND																		5	
SABINE																		7	
ST. BERNARD																		5	2
ST. CHARLES					1										1			1	
ST. HELENA																			
ST. JAMES																		1	
ST. JOHN															1			2	2
ST. LANDRY																		35	
ST. MARTIN					1													2	
ST. MARY																			2
ST. TAMMANY												2						21	1
TANGIPAHOA												2			1			18	1
TENSAS																			
TERREBONNE	1				1													22	1
UNION					1													4	
VERMILION						2												3	
VERNON					1													53	
WASHINGTON						2												16	
WEBSTER																		4	
WEST BATON ROUGE																		5	
WEST CARROLL					1													1	
WEST FELICIANA																		5	
WINN																		3	
OUT OF STATE																			

From January 1 through November 30, the following cases were also reported: 1 - Actinomycosis; 3 - Brucellosis; 7 - Malaria (contracted outside the U. S. A.)

**SHIGELLA SONNEI ISOLATES IN LOUISIANA
OBTAINED BY THE LOUISIANA STATE HEALTH DEPARTMENT
OCTOBER, 1970 TO NOVEMBER, 1972**

