



MONTHLY MORBIDITY REPORT

REPORTED MORBIDITY
DECEMBER, 1983

**PUBLIC HEALTH STATISTICS and
DIVISION OF DISEASE CONTROL**

PROBLEMS WITH PKU AND HYPOTHYROID SPECIMENS

There are a number of recurring problems with the submission of specimens for PKU and Hypothyroid. The Division of Laboratory Services feels that this is probably due, in part, to incorrect information that has been supplied in the past. We received a large number of specimens that were unsatisfactory for any one of a number of reasons (not saturated with blood from side to side, blood applied with capillary pipette, layering of several drops of

blood, etc.). These specimens were unfortunately reported as QNS (Quantity Not Sufficient) rather than unsatisfactory. Those persons receiving the QNS letters responded by completely filling the circles on the filter paper. The manner in which these circles were completely filled however, has been the major cause of the present problems with the specimens. It is imperative that only one drop of blood per circle be applied to the filter paper (4 filled circles needed).

(continued on page 2)

BULLETIN

NEW LABORATORY TEST AVAILABLE

Enzyme immunoassay for the qualitative determination of human antibodies to *E. histolytica* in serum is now performed in the Division of Laboratories Central Laboratory, New Orleans. Test results correlate with the presence or absence of antibodies at levels which are sufficient to be detected by gel diffusion and which appear to be of clinical significance. Results are reported positive, negative or equivocal. Equivocal specimens should be resubmitted. Single specimens will be

tested - 2 ml serum or 5 ml whole blood (no anticoagulant or preservative).

Positive serum will be held two weeks and may be forwarded to CDC for further testing if requested. CDC form 3.203 must be completed by you for all specimens sent to CDC.

As with many other serological tests, results serve as an aid to diagnosis and should not be interpreted as diagnostic in themselves.

The blood should be allowed to saturate the filter paper from the rear to the front. It is not absolutely necessary that the circle be completely filled. We are more interested in a uniformly saturated circle.

The problem with applying more than one drop of blood to a circle is that it will increase the concentration of phenylalanine, thyroxine and thyroid stimulating hormone in the blood spot. The assay being used is extremely sensitive; it measures microgram quantities or analyte. Therefore, when too much blood is layered on the filter paper, incorrect results are obtained. In the case of the PKU test, it will make normals appear as being elevated and they will be retested by a more refined method. The major problem occurs with the hypothyroid test. If too much blood is layered on the spot, what would have been a low test, will now appear as a normal test and will not be retested or followed up in any manner. For example, an individual with one half the normal level of thyroxine if two drops of blood

are layered on each other as opposed to using only one drop of blood per circle. Therefore, it is imperative that only one large drop of blood be applied to each circle on the filter paper.

As of January 1, 1984 we have obtained a single lot of filter paper for the LAB 10 (PKU and Hypothyroid) Form. After January 1, 1984 it will be necessary that only this form be used for the submission of PKU and Hypothyroid specimens.

Thank you for helping the Division of Laboratory Services to rectify this problem. It will allow us to provide more accurate and useful data to the physician. If you would like for one of the laboratory staff (Dr Larry J. Maturin, Mr. Emilio De Zubizarreta or Ms. Marsha Richard) to meet with your personnel please let the laboratory know and we will make the arrangements.

Henry B. Bradford, Jr., Ph.D.,
Director
Division of Laboratory Services

STATEMENT ON MANAGEMENT OF CONTACTS OF STREPTOCOCCAL INFECTIONS

In 1976, by request of the Infectious Disease Committee of the Louisiana State Medical Society, the Epidemiology Section formulated a statement on the management of contacts of streptococcal infections. A group of infectious disease consultants representing both pediatric and adult medicine assisted in developing this statement. The recommendations contained in the statement at that time are presently appropriate and represent the official policy of this Department. The following is a reprint of the original statement published in the April 1976 Louisiana Monthly Morbidity Report

I. BACKGROUND INFORMATION

The hemolytic streptococci pathogenic for man include Lancefield's groups A, B, C, D, and G; but it is group A that accounts for the vast majority of human infections. Moreover, only group A organisms are known to cause rheumatic fever.

The most common sites of group A streptococcal infection in man are the nasopharynx and the skin. Virulence of a group A streptococcal infection can vary greatly as virulence in this organism is associated with the amount of M protein and hyaluronic acid elaborated on its surface. The amount of these substances varies from type to type. Immunity is correlated with the production of antibodies to the type-specific M protein. Furthermore, type-specific immunity appears to be lifelong. Reinfection with the same type of group A streptococcus is exceedingly rare unless formation of anti-M antibody has been suppressed by prompt and adequate penicillin therapy.¹

Investigations conducted recently have clarified some basic differences between cutaneous and pharyngeal streptococcal infections: (1) Acute rheumatic fever doesn't seem to follow streptococcal impetigo but rather seems to be almost always a complication of a pharyngeal infection. On the other hand,

glomerulonephritis may follow streptococcal pharyngitis or impetigo;¹ (2) "Skin strains" of group A streptococci frequently colonize the pharynx but do not usually produce severe pharyngitis.¹

Transmission of group A streptococcal infections occurs as a result of direct contact between infected persons or healthy carriers and susceptible persons.² Significant extrahuman or animal reservoirs do not exist, except for contaminated food or milk from a cow with mastitis. Studies show that organisms recovered from clothing, bedding, or house dust, although identifiable as group A, are non-infective.¹

Children are primarily responsible for the spread of streptococcal disease. Spread throughout a household is common, with children being at highest risk of secondary infection (20-50%) and the adult male being at lowest risk (4-20%). Highest secondary attack rates are seen in large families (4 or more siblings) of low socio-economic status or in large institutions with crowded living conditions.¹⁻⁵

Exceedingly mild or completely inapparent streptococcal throat infections account for a very large proportion of the total cases.^{1,6,7} Persons with this type of "subclinical" infection can disseminate streptococci but are unlikely

to develop rheumatic fever. 1,7

The epidemiology of scarlet fever is the same as that of any other group A streptococcal infection except that strains producing the infection produce an erythrogenic toxin. The toxin production is induced by a bacteriophage. Erythrogenic toxin may be produced by a bacteriophage. Erythrogenic toxin may be produced by strains of varying degrees of virulence.¹

The incidence of rheumatic fever seems to be declining;⁸ nevertheless, one study done in Nashville, Tennessee, from 1963 to 1965 reported the incidence to be 12.6 cases per 100,000 population of all ages.⁹ Rheumatic fever and rheumatic heart disease still remain an important problem in the U.S.A., with about 190,000 new cases of acute disease recognized nationwide annually.⁸

Once rheumatic fever is acquired, the chance of reactivating it following a streptococcal infection is many times greater than the acquiring of the disease itself. In other words, the attack rate of acute rheumatic fever per streptococcal infection is many times greater in the rheumatic subject than in the general population.¹⁰ Moreover, in the opinion of many observers, in asymptomatic contacts without a history of allergy to penicillin and with positive throat cultures and a prior history of rheumatic fever, the risk of present or future reactions to penicillin is less than the risk of developing an attack of acute rheumatic fever.^{10,11} Also there seems to be a tendency, from several studies, for rheumatic fever to be familial.¹

Culturing for group A streptococcus is fairly reliable.¹² Investigators do mention a 5 to 20 percent false negative testing.^{2,13,14} Culturing is available through the state laboratory and private

laboratories.

II. RECOMMENDED MANAGEMENT OF CONTACTS OF STREPTOCOCCAL PHARYNGITIS

It should be stressed that a contact is considered someone eating and sleeping in the same household unit as the case. Contacts do not include routine school or day care associations. A case is a person who has streptococcal infection, with culture positive for beta-hemolytic streptococcus, group A.

Treatment with penicillin or an alternative antibiotic for persons with penicillin allergy is recommended for contacts who are ill or become ill with symptoms of streptococcal infections and are culture positive for group A streptococci during the two weeks following exposure to case. If culturing is not done, treatment is at the discretion of the physician. It is recommended that culturing be performed in every symptomatic contact.

Asymptomatic contacts need not be treated. Currently, there are not enough data to support completely either the culturing of asymptomatic contacts or the treatment of asymptomatic contacts.¹⁵ Therefore management of asymptomatic contacts is at the discretion of the consulted physician. It is recommended, however, that if treatment is contemplated, pharyngeal cultures be taken and only those persons with a positive culture be considered for treatment.

Usual treatment of streptococcal pharyngitis is a single intramuscular injection of benzathine penicillin G. The adult dose is 1.2 million units, and it will provide protection against reinfection for about 30 days. For young children, 600,000 to 900,000 units may be

substituted. Oral penicillin therapy may be less effective because of patient non-compliance and irregular absorption. In the patient with penicillin allergy, erythromycin can be used.¹²

III. IMPETIGO

A substantial proportion of streptococcal infection in children is associated with impetigo. Systemic treatment of impetigo, as for streptococcal pharyngitis, eradicates the infection, but may not prevent glomerulonephritis. Subclinical forms of post-streptococcal acute glomerulonephritis may be detected by signs of hematuria, proteinuria, and hypertension. If adequate systemic antibiotic therapy is provided for children with impetigo, topical antibiotic therapy is superfluous and unnecessary.¹⁶

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SELECTED REPORTABLE DISEASES
(By Place of Residence)

STATE AND PARISH TOTALS	VACCINE PREVENTABLE DISEASES														RABIES IN ANIMALS (PARISH TOTALS CUMULATIVE, 1983)				
	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	GONORRHEA	SYPHILIS, PRIMARY AND SECONDARY
TOTAL TO DATE 1982	14	1	6	22	7	138	984	315	0	5	63	110	398	2	207	6	23921	1845	32
TOTAL TO DATE 1983	26	10	1	12	4	181	752	337	5	8	52	76	399	4	248	22	23624	1657	34
TOTAL THIS MONTH	0	0	0	1	0	62	48	25	0	0	6	13	23	0	27	1	2027	142	0
ACADIA							8	2									4	1	
ALLEN																	1		
ASCENSION							3										5		
ASSUMPTION													4				4		
AVOUELLES																	5	2	
BEAUREGARD							3										11		2
BIENVILLE						1											2		5
BOSSIER						2		1			1			3			4	2	
CADDO						9					1						214	8	6
CALCASIEU																	116	4	
CALDWELL																	5		
CAMERON																	1		
CATAHOULA																			
CLAIBORNE													1				10		
CONCORDIA																	7		
DESOTO											1							3	
EAST BATON ROUGE						2		1			1	5	7				130	14	2
EAST CARROLL																	2	1	
EAST FELICIANA																			
EVANGELINE							2				1								1
FRANKLIN																	23		
GRANT																			2
IBERIA							1	1									9		
IBERVILLE																	5		
JACKSON						1													
JEFFERSON						2	1	3			1	1		2			125	8	
JEFFERSON DAVIS							8	1									16		
LAFAYETTE						2	4							1			54	3	
LAFOURCHE							2										18		
LASALLE							2												
LINCOLN																	6	1	2
LIVINGSTON																			
MADISON																			7
MOREHOUSE																	5		
NATCHITOCHES						2											7	4	
ORLEANS						36	1	10				2	7	6			781	47	
OUACHITA							1	1					2				99		
PLAQUEMINES										1							1		
POINTE COUPEE																	2		
RAPIDES							2	2					1				116	5	
RED RIVER																	1		1
RICHLAND																	13		
SABINE														1			1	1	2
ST. BERNARD							2					1					3		
ST. CHARLES										1							12		
ST. HELENA																	2		
ST. JAMES												1					6	2	
ST. JOHN												1		2			12	1	
ST. LANDRY														1			26	10	
ST. MARTIN																	6		
ST. MARY						1	1					2					6	1	
ST. TAMMANY							1	1				2	1	2			15	3	
TANGIPAHOA								1									27	4	
TENSAS																1	2		
TERREBONNE						3	2	1							6		34	5	
UNION																	7		3
VERMILION							1							1			9		
VERNON																	7	2	1
WASHINGTON																13			
WEBSTER						1								1	1		16	1	8
WEST BATON ROUGE																	3	1	
WEST CARROLL								2											
WEST FELICIANA								1									6		
WINN																	1		
OUT OF STATE																	11		

* Includes Rubella, Congenital Syndrome.

** Includes 39 cases of Hepatitis Non A Non B.

*** Acquired outside United States unless otherwise stated.

From January 1, 1983 - December 31, 1983, the following cases were also reported:

6-Amebiasis, 1-Cryptococcosis, 6-Leptospirosis, 1-Reye Syndrome, 2-Trichinosis, 7-Tularemia.

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(By Place of Residence)

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	MEASLES	RUBELLA*	MUMPS	PERTUSSIS	TETANUS	ASEPTIC MENINGITIS	HEPATITIS A AND UNSPECIFIED**	HEPATITIS B	LEGIONELLOSIS	MALARIA***	MENINGOCOCCAL INFECTIONS	SHIGELLOSIS	TUBERCULOSIS, PULMONARY	TYPHOID FEVER						
TOTAL TO DATE 1982	16	1	6	24	7	143	1096	349	0	9	67	114	398	4	226	6	24497	1845	32	
TOTAL TO DATE 1983	26	10	1	12	4	182	783	366	6	10	59	83	393	4	257	24	23624	1657	37	
NUMBER IN SUPPLEMENT	0	0	0	0	0	1	31	29	1	2	7	7	0	0	9	2	0	0	3	
ACADIA							1	3												
ALLEN																				
ASCENSION																				
ASSUMPTION																				
AVOUELLES																			1	
BEAUREGARD																			2	
BIENVILLE																			5	
BOSSIER																				
CADDO							1												7	
CALCASIEU							5	5				3			3					
CALDWELL																				
CAMERON																				
CATAHOULA																				
CLAIBORNE																				
CONCORDIA																				
DESOTO																				
EAST BATON ROUGE																			2	
EAST CARROLL																				
EAST FELICIANA																				
EVANGELINE							1													
FRANKLIN																				
GRANT																			2	
IBERIA								5												
IBERVILLE							1													
JACKSON																				
JEFFERSON						1	5	4		1	1				1					
JEFFERSON DAVIS																				
LAFAYETTE															1					
LAFOURCHE											1									
LASALLE																				
LINCOLN							1												2	
LIVINGSTON																				
MADISON																				
MOREHOUSE							1													
NATCHITOCHE																				
ORLEANS							7	7	1		1				1					
OUACHITA																				
PLAQUEMINES								1												
POINTE COUPEE																				
RAPIDES							1			1										
RED RIVER																			1	
RICHLAND																				
SABINE																			2	
ST. BERNARD							1													
ST. CHARLES								1												
ST. HELENA																				
ST. JAMES																				
ST. JOHN								1												
ST. LANDRY																				
ST. MARTIN																				
ST. MARY											2									
ST. TAMMANY							1	1			1	1								
TANGIPAHOA							4	1				1						2		
TENSAS																				
TERREBONNE											2									
UNION																			3	
VERMILION																				
VERNON							1				1								2	
WASHINGTON															2					
WEBSTER																				8
WEST BATON ROUGE																				
WEST CARROLL																				
WEST FELICIANA																				
WINN																				
OUT OF STATE															1					

* Includes Rubella, Congenital Syndrome.
 ** Includes 40 cases of Hepatitis Non A, Non B.
 *** Acquired outside United States unless otherwise stated.
 From January 1, 1983 - December 31, 1983, the following cases were also reported:
 8-Amebiasis, 1-Brucellosis, 1-Cryptococcosis, 6-Leptospirosis, 3-Reye Syndrome, 2-Rocky Mountain Spotted Fever,
 2-Trichinosis, 7-Tularemia.

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Department of Health and Human Resources
Office of Health Services and Environmental Quality
P.O. Box 60630, New Orleans, La. 70160

This public document was published at a total cost of \$1230. 5900 copies of this public document were published in this first printing at a cost of \$300. The total cost of all printings of this document, including reprints, is \$300. This document was published for the Office of Health Services and Environmental Quality by the Office of Management and Finance, Printing Operations, Baton Rouge, Louisiana to inform physicians, hospitals, and the public of current Louisiana morbidity status under authority of R.S. 40:36. This material was printed in accordance with the standards for printing by state agencies established pursuant to R.S. 43:31.