Louisiana

MONTHLY MORBIDITY REPORT

Provisional Statistics

LOUISIANA HEALTH AND HUMAN RESOURCES ADMINISTRATION
DIVISION OF HEALTH

FROM THE
OFFICE OF
PUBLIC HEALTH STATISTICS

SELECTED REPORTABLE DISEASES

(By Place of Residence)

STATE AND PARISH TOTALS REPORTED MORBIDITY MAY, 1975	ASEPTIC MENINGITIS	DIPHTHERIA	ENCEPHALITIS	ENCEPHALITIS, POST INFECTIOUS	HEPATITIS A AND UNSPECIFIED	HEPATITIS B	TUBERCULOSIS, PULMONARY	MENINGOCOCCAL INFECTIONS	PERTUSSIS	RABIES IN ANIMALS	RUBELLA*	SEVERE UNDERNUTRITION	SHIGELLOSIS	TYPHOID FEVER	OTHER SALMONELLOSIS	TETANUS	MEASLES	GONORRHEA	SYPHILIS, PRIMARY AND SECONDARY
TOTAL TO DATE 1974	30	0	10	0	247	97	228	21	5	9	58	17	51	2	55	1	11	10453	283
TOTAL TO DATE 1975	45	0	10	8	222	83	227	22	14	2	245	9	63	1	54	3	0	9191	215
TOTAL THIS MONTH	17	0	2	2	47	19	48	4	2	0	71	1	16	1	7	0	0	1911	35
ACADIA					2	1												9	
ALLEN							2											4	
ASCENSION																		5	
ASSUMPTION																		11	
AVOYELLES																		2	
BEAUREGARD																		2	
BIENVILLE																		9	
BOSSIER							1								1			25	4
CADDO					1	1	6						5		1			157	3
CALCASIEU					1	1	4				3		1		1			63	
CALDWELL						1													
CAMERON																			
CATAHOULA											8								
CLAIBORNE					4													3	
CONCORDIA																		4	
DESOTO															1			4	
EAST BATON ROUGE					4	1	4								2			58	3
EAST CARROLL																		9	
EAST FELICIANA																		3	
EVANGELINE																		4	
FRANKLIN																		10	
GRANT																			
IBERIA							2											13	
IBERVILLE							1											1	
JACKSON																		1	
JEFFERSON	4		1	1	4	1	1		1		31							108	3
JEFFERSON DAVIS																		2	
LAFAYETTE	1		1				3				5							44	
LAFOURCHE																		28	1
LASALLE					1														
LINCOLN					2								1					36	
LIVINGSTON																		3	
MADISON																		6	
MOREHOUSE																		15	
NATCHITOCHES							1											11	
ORLEANS	9			1	7	10	17	1			15		8		1			740	9
OUACHITA																		88	3
PLAQUEMINES	1				1		1											2	1
POINTE COUPEE																			
RAPIDES					3		1	1										99	1
RED RIVER																		1	
RICHLAND																		15	
SABINE																		4	
ST. BERNARD					4								1					3	2
ST. CHARLES																		7	1
ST. HELENA																		4	
ST. JAMES																		9	
ST. JOHN	1																	11	
ST. LANDRY						1	2											19	
ST. MARTIN																		12	
ST. MARY					1	1	1				1							10	
ST. TAMMANY					8			2										36	
TANGIPAHOA					1							1						28	
TENSAS																		2	
TERREBONNE	1						1							1				8	1
UNION					1													12	
VERMILION					1	1			1									5	
VERNON											8							80	2
WASHINGTON					1													12	1
WEBSTER																		12	
WEST BATON ROUGE																			
WEST CARROLL																		7	
WEST FELICIANA																		29	
WINN																		5	
OUT OF STATE																		1	

* Includes Rubella, Congenital Syndrome

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Tuberculin Testing of Children

Phyllis Q. Edwards, M.D.

During the last decade, pediatricians were taught that routine tuberculin testing of all children was a key element in control of tuberculosis in the community, and the best way of identifying and preventing clinical tuberculosis in the individual child. The Red Book Committee and the Committee on Standards of the American Academy of Pediatrics recommended routine tuberculin testing of all children, either yearly[1] or at 9 to 12 months, 3 to 4 years and 10 to 12 years of age.[2] During the past three years, the American Lung Association and the Center for Disease Control have pointed out that the routine tuberculin testing of children is an inefficient and ineffective strategy for the detection of tuberculosis in the United States. This position is at variance with previous recommendations.[3]

THE CHANGING EPIDEMIOLOGY OF TUBERCULOSIS

When routine tuberculin testing of children was first recommended, it made good sense. At that time, a large proportion of adults, particularly in urban areas, was infected with *Mycobacterium tuberculosis*. The probability today of being infected with tubercle bacilli is less than one third what it was a decade ago. In the last few years, the reported prevalence of tuberculin sensitivity among school enterers has been 0.2% (Table 1). This prevalence indicates an incidence of new reactors of less than three per 10,000 children per year.

The apparent plateau of 0.2% reactivity may represent an even lower rate of infection with *M. tuberculosis*. It is possible that this is an irreducible rate of tuberculin sensitivity resulting from cross sensitivity with atypical mycobacterial infections and probable inherent variability in the tuberculin testing procedure itself. Even with complete elimination of tuberculosis infection, this rate of tuberculin sensitivity may persist.

In the total population of adults and children the annual rate of new infections (new tuberculin reactors) has also dropped to an estimated 1/5,000 or even 1/10,000 in some areas. The incidence of new clinical cases of active tuberculosis has similarly dropped from 28.7 per 100,000 population to 15.8 per 100,000 population (53,315 new cases to 32,882 new cases) from 1962 to 1972. Most of these new clinical cases occur in special population groups with characteristics which make them particularly susceptible. New immigrants from parts of the world with a high prevalence of infection may develop clinical tuberculosis and spread tuberculosis organisms. "Skid-row" inhabitants may reactivate old infections and become contagious, but their potential for infecting children or others in the general population is limited by their social isolation. Certain American Indian and migrant worker families live in circumstances in which new open cases in adults may be expected to produce new infection in children. A few other groups may have similar patterns, but there are not many.

Today, at least 80% of new clinical cases of tuberculosis are found either in persons seeking medical advice because of symptoms or in known contacts of such persons. Neither chest x-ray surveys nor tracing the associates of tuberculin-positive children has contributed substantially to new case detection. This phenomenon is partially explained by the fact that in most cases, tuberculosis progresses from a minimal state (usually described as old healed primary tuberculosis) to a frank symptomatic clinical state with cavitation in only a very few months' time. This short lead time, as

TABLE I

TUBERCULIN TESTING: SCHOOL CHILDREN*

School Year	School Enterers†	Reaction Rates (%)	
		Under First Grade	First Grade
1965-66	196,478	0.4	0.5
1966-67	510,567	0.2	0.5
1967-68	1,027,395	0.3	0.4
1968-69	720,544‡	0.2	0.3
1969-70	1,011,742	0.2	0.2
1970-71	761,958	...	0.2

*Based on reports submitted to CDC by areas participating in child-centered tuberculosis program.

†Under first grade and first grade.

‡Based on two thirds of total records for year.

ADDRESS FOR REPRINTS: Department of Health, Education and Welfare, Public Health Service, Center for Disease Control, Atlanta, Georgia 30333.

Dr. Frankenberg's paper points out (see page 612), makes even frequent screening quite ineffective in case detection.

THE EFFECT OF CHANGING EPIDEMIOLOGY ON SCREENING PROGRAMS

The very low prevalence of tuberculin sensitivity in children has made routine periodic screening of all children an expensive and largely ineffective approach to tuberculosis control in most communities. Large numbers of tests must be performed to discover a very small number of children with positive tests. Even these children with positive tests may have infections with atypical mycobacteria (for which treatment is indicated only if disease is present) rather than with *M. tuberculosis*. The yield of adult "open" cases found through testing of the associates of tuberculin positive children is low. Only when the prevalence of tuberculin sensitivity exceeds approximately 1%, or 10 per 1,000, in the school age population do the benefits of routine periodic testing appear to outweigh its costs.

ALTERNATIVES TO ROUTINE PERIODIC SCREENING

Fortunately, the current epidemiology of tuberculosis makes possible equally effective but much less costly approaches to prevention. High risk communities can be identified both by the prevalence of new clinical cases arising from them, and also through periodic epidemiologic surveys of older school-age children. By testing all of the 8th or 9th grade children at intervals of two or three years, a community can determine whether there are groups which have the 1% or greater prevalence of tuberculin sensitivity that would justify the periodic testing of all children.

Even in low risk communities, certain children deserve routine periodic testing: (1) children with contact with a known case of tuberculosis or living in families with a history of tuberculosis, (2) children living in specific neighborhoods, housing projects or other subcommunities in which the prevalence of tuberculosis is known or suspected of being higher than in the general community; (3) children with symptoms or signs consistent with tuberculosis.

In the absence of careful community surveys, the pediatrician's review of his own past experience can indicate to him whether he has experienced the 1% incidence of sensitivity that would justify continuing routine testing.

METHODS OF TUBERCULIN TESTING

When testing is performed in a physician's office or clinic, one of the multiple puncture tests (Tine, Monovac or Heaf) may be substituted for the more precise Mantoux test. Such testing units have the advantages of convenience of storage and easy, rapid application requiring only simple skills.

The Mantoux test is more specific and sensitive, but it requires skillful intradermal injection of the antigen. All children with doubtful or positive reactions to a multiple puncture test should be retested using the Mantoux technique. They should be medically evaluated by a physician or clinician skilled in the management of childhood tuberculosis. Such evaluation should include a careful investigation of possible sources of exposure to tuberculosis as well as medical history, physical examination, chest x-ray, and urinalysis. All children with positive Mantoux reactions should receive a prophylactic course of antituberculosis medication. Those with clinical or radiological signs of tuberculosis may require treatment with more than one drug.

When the Tine test or any other test using old tuberculin or unknown intradermal doses is used, great care must be used in interpreting results. All children with positive tests must be retested using the Mantoux test and all interpretation made only for Mantoux-positive children. In areas with a high prevalance of atypical mycobacteria as many as 5% to 10% of children may give positive reactions to multiple puncture tests. In this regard it has been found that differential skin testing with PPD-B and PPD-T does *not* adequately differentiate between tuberculosis and atypical mycobacterial infection. Decisions about antituberculosis therapy must therefore be based solely on the standard PPD skin test and on clinical judgment.

SUMMARY

The pediatrician should review and analyze tuberculin test results based on his personal experience. This analysis coupled with knowledge of the tuberculosis situation in the community from which he draws his patients will suggest the degree to which he continues to perform tuberculin tests as a routine procedure. In effect, personal judgment of the pediatrician must determine on an individual basis whether tuberculin testing is necessary.

REFERENCES

1. Report of the Committee on Infectious Disease, ed. 16. Evanston, Ill.: American Academy of Pediatrics, 1970.
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3. Edwards, P. Q., and Ogasawara, F. R.: Phasing out the Child-Centered TB Program. NTRDA Bulletin, November 1971.
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5. Tuberculosis Programs, 1972. Tuberculosis Programs Reports, November 1973 edition, Tuberculosis Branch, Center for Disease Control.