Louisiana

DEPARTMENT OF HEALTH AND HUMAN RESOURCES
OFFICE OF HEALTH SERVICES AND ENVIRONMENTAL QUALITY
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MONTHLY MORBIDITY REPORT

Provisional Statistics

Reported Morbidity
September, 1981

PUBLIC HEALTH STATISTICS and DIVISION OF DISEASE CONTROL

TUBERCULOSIS CONTROL HIGHLIGHTS

ABSTRACTED FROM THE TUBERCULOSIS CONTROL MANUAL

The following is a summary of policies for tuberculosis control in Louisiana, detailed in the new Tuberculosis Control Manual soon to be published by the Office of Health Services and Environmental Quality:

1. Classification:

   0 – No exposure to Tuberculosis
   1 – Tuberculosis exposure, no infection
   2 – Tuberculosis infection, no disease
   3 – Tuberculosis, current disease
   4 – History of previous Tuberculosis disease
   5 – Suspect

2. Tuberculin Test (Mantoux only):

   Results should be recorded in mm – **not** as positive, negative or doubtful.

Size of Reaction	Personal Characteristic	Usual Interpretation
10mm or more	All individuals	M. tuberculosis infection
5 to 9mm	Contact, suspect high-risk individual	M. tuberculosis infection
	Other	Cross reaction to other mycobacteria
0 to 4mm	All individuals (asymptomatic)	Not M. tuberculosis infection*

   * However, about 5 – 10% of confirmed tuberculosis cases have < 4mm reaction at time of diagnosis.

3. Bacteriology:

   Positive smear = M. Tuberculosis (or atypical mycobacteria) disease.

   Positive smear + no tuberculin test conversions among contacts = probable atypical mycobacteriosis.

   A positive culture will confirm the diagnosis.

   Only the bacteriology will tell how infectious a case may be. The smear results are very important for public health management.

   M. tb on culture + positive smear
   = VERY INFECTIOUS

   M. tb on culture + negative smear
   = SLIGHTLY INFECTIOUS

   No M. tb on culture
   = NOT INFECTIOUS

4. Chest X-Ray

   Should always be obtained on:

   A. Close contacts of infectious cases, regardless of size of the tuberculin reaction.

   B. Tuberculin reactors

   C. Tuberculosis suspects

   D. Tuberculosis cases

   X-raying someone for evaluation of tuberculosis without establishing current or recent skin test results **DOES NOT MAKE SENSE.**

   Systematic X-rays are a wasteful way of finding relapses.

5. Drugs and Treatment

   A. Drugs

   (1) ISONIAZID (INH)

   First line bactericidal drug used in practically all tuberculosis cases; administered orally in daily doses: adults 5-10mg/kg (maximum 300 mg), children 10-30mg/kg;

biweekly dose: 15mg/kg (maximum 900mg). side effects include: hepatic toxicity (monthly interview to elicit symptoms) and peripheral neuritis at high doses (vitamin B6).

(2) RIFAMPIN (RIF)

First line; extremely potent bactericidal drug, administered one hour before or two hours after meals: oral daily doses: adults 600 mg, children 10-15mg/kg; biweekly doses: 10mg/kg (maximum 600mg) for adults or children. Side effects include: cutaneous, abdominal, respiratory, and flu syndromes, red coloration of secretions and, rarely hematologic crisis and hepatitis.

(3) ETHAMBUTOL (EMB)

Second line drug; companion to INH and RIF to prevent resistance; oral daily dosage: adults (and children above 13 years) 15mg/kg (avoid any overdose); biweekly doses: 50mg/kg (maximum 2400mg) for both adults and children. Side effects include: neuro-optic toxicity (check visual acuity and color vision monthly).

(4) STREPTOMYCIN (SM)

Second line drug: companion to INH and RIF; for use in resistant or extensive cases; intramuscular, daily doses: adult 1 gm, children 15mg/kg; biweekly doses: 27 mg/kg for both adults and children; total cumulative dose should not exceed 45 to 60 gm. Side effects include: hearing loss, perturbation of sense of balance (audiometry).

(5) PYRAZINAMIDE (PZA)

Second line drug; companion to INH and RIF; daily oral doses: adults 15-30mg/kg in 2 doses (maximum 2gm); biweekly doses: 60mg/kg (maximum 3 gm). Side effects include: hepatotoxicity and arthralgia.

(6) PARA-AMINO SALICIYLIC ACID (PAS)

Second line drug still being used in children; companion to INH and RIF in resistant cases; oral daily dosage: 200-300mg/kg for children after meals. Side effects include: gastrointestinal disturbances.

Treatment is tailored to INDIVIDUAL circumstances.

B. Schedules commonly used:

(1) INH - RIF for 6 months after conversion of sputum and a minimum duration of 9 months.

(2) INH - RIF for 12 months.

(3) INH -RIF - Ethambutol (or Streptomycin) if resistance is suspected; switch to INH - RIF if culture demonstrates sensitivity.

(4) INH - RIF - Ethambutol for 6 months followed by INH - Ethambutol for an additional 12 months.

(5) INH - Ethambutol for a duration of no less than 18 months of treatment.

Intermittent therapy (twice weekly regimens) has proven to be as efficient as a daily dose regimen. Twice weekly intermittent therapy allows easier supervision of drug administration.

C. DRUG RESISTANCE occasionally occurs during treatment. Regular bacteriologic and medical evaluation is the key to early diagnosis of resistance. Sputum smear and culture monitoring as well as X-ray and clinical monitoring are indispensable.

A SINGLE CULTURE WITH RESISTANT BACILLI DOES NOT AUTOMATICALLY MEAN THAT RESISTANCE HAS DEVELOPED. TRANSIENT DRUG RESISTANCE MAY OCCUR. THE CASE SHOULD BE CAREFULLY RE-EVALUATED BEFORE A FINAL DECISION IS MADE.

A patient with drug resistant tuberculosis should be treated with AT LEAST TWO DRUGS TO WHICH THE BACILLI ARE SENSITIVE. If INH resistance has developed, it may still be useful to keep INH on the treatment schedule.

6. Case Finding and Screening

The majority of cases are found among SYMPTOMATIC PERSONS COMING VOLUNTARILY FOR HELP.

Screening is recommended for:

A. HOUSEHOLD MEMBERS and other CLOSE CONTACTS.

B. EPIDEMIOLOGICALLY CONFIRMED HIGH RISK GROUPS

Long term prisoners
Immigrants from high edemicity countries

C. PATIENTS IN NURSING HOMES AND LONG TERM RESIDENTIAL FACILITIES, AT TIME OF ADMISSION ONLY.

D. EMPLOYEES OF HEALTH RELATED RESIDENTIAL FACILITIES at the time of employment and yearly thereafter. No screening for other non-residential health related facilities necessary unless there is CLOSE CONTACT WITH TB CASES.

E. SCHOOL EMPLOYEES AT THE TIME OF EMPLOYMENT; there is no need for annual rescreening.

Screening groups with a low prevalence of tuberculosis, such as school children and children coming for immunizations, is a wasteful approach to the control of tuberculosis. IT IS TOO TIME CONSUMING FOR THE LITTLE PREVENTION IT WILL ACHIEVE.

The tuberculin test is the main tool for screening except in case contacts and elderly persons admitted to nursing homes where X-rays are also recommended.

Institutions with annual skin testing should use the BOOSTER TECHNIQUE. (See TB Manual for details).

Extensive efforts should be concentrated on CONTACTS. Contact investigation HAS TO BE PLANNED AND EVALUATED.

Contact investigation is not merely a family member interview.

IDENTIFYING A TUBERCULOSIS INFECTION HAS NO PREVENTIVE VALUE: IT IS HAVING THESE PERSONS COMPLETE A COURSE OF INH PROPHYLAXIS THAT HAS A PREVENTIVE VALUE.

SCREENING IS NOT AN END IN ITSELF. SCREENING, SHOULD NOT BE EVALUATED ACCORDING TO THE NUMBER OF PERSONS SCREENED BUT ACCORDING TO THE NUMBER OF PERSONS IDENTIFIED THRU SCREENING WHO COMPLETE A YEAR OF INH PROPHYLAXIS.

7. Case Management

DRUG TREATMENT OF INFECTIOUS CASES IS EFFECTIVE IN LIMITING THE SPREAD OF TUBERCULOSIS, THEREFORE, ENSURING THAT ALL INFECTIOUS TUBERCULOSIS CASES ARE PROPERLY TREATED IS A PUBLIC HEALTH RESPONSIBILITY.

Systematic hospitalization is not justified. Hospitalization for isolation purposes is useless. The rate of infection among contacts of patients hospitalized and contacts of patients treated at home is the same. Hospitalization to remedy poor compliance by the patient is not a satisfactory solution.

A. Proper follow-up of a tuberculosis case includes:

(1) DRUG COMPLIANCE AND TOXICITY MONITORING

(2) BACTERIOLOGIC EXAMS (sputum smear and culture)

(3) MEDICAL EVALUATION (clinical and X-ray)

ALL 3 COMPONENTS ARE INDISPENSABLE. If any of these 3 components is neglected complications and problems will be missed in the early stages when corrective actions are the most effective.

B. A MINIMUM SCHEDULE FOR FOLLOW UP HAS BEEN ESTABLISHED:

(1) MONTHLY DRUG PICKUP WITH COMPLIANCE AND TOXICITY MONITORING.

(2) MONTHLY BACTERIOLOGIC EXAM WHILE CASE IS CULTURE POSITIVE. THEN QUARTERLY AFTER 3 CONSECUTIVE MONTHS OF NEGATIVE CULTURES.

(X-RAYS ARE NOT A SUBSTITUTE FOR BACTERIOLOGIC EVALUATION)

(3) QUARTERLY MEDICAL EVALUATION.

Compliance is the key to successful treatment. Compliance depends on the patient's attitude BUT ALSO ON THE MEDICAL PROVIDER'S ATTITUDE AND INSTRUCTIONS. Compliance is enhanced by positive attitudes, simple instructions, adequate follow up, and reinforcement.

Intermittent supervised treatment is A WAY TO DEAL EFFECTIVELY WITH NON-COMPLIANT CASES. Quarantine and hospitalization are poor solutions to this problem; long term evaluation show that they usually fail. In a few weeks or months quarantined cases are back on the streets, less compliant than ever. Quarantine only provides relief to the frustrated public health workers. For intermittent supervised treatment to be successful imaginative solutions are necessary.

Once a case is closed it is USELESS TO PERFORM ANNUAL EXAMINATION (i.e. x-rays). Extensive studies have proven that most relapses are found during a patient's visit for recrudesence of symptoms. PATIENT EDUCATION is the key to early relapse case finding.

8. Contact Investigation

Contacts are the persons AT HIGHEST RISK OF BEING INFECTED AND DEVELOPING TUBERCULOSIS DISEASE.

Contact investigation is the most productive means

to:

A. Identifying new cases, either source cases or secondary cases.

B. Identify recent converters, the people at highest risk of developing tuberculosis disease.

C. Identify exposed person, the people that will benefit from PRIMARY PREVENTION.

THE HIGHEST PRIORITY should be given to CONTACTS OF A SMEAR POSITIVE PULMONARY CASE.

Contacts should be classified and given priority according to risk categories. Then the contact investigation should proceed in stages, addressing the highest risk group first.

9. INH Prophylaxis

A. Groups of persons to be placed on INH prophylaxis in order of priority:

(1) CLOSE CONTACTS regardless of age and tuberculin skin test results

a. Initial skin test less than 5mm: start INH prophylaxis. Repeat skin test two months after contact is broken and if less than 5mm: stop INH; if greater than 5mm: continue INH for a total of 12 months.

b. Initial skin test 5mm or more; INH prophylaxis for 12 months.

(2) POSITIVE REACTORS WITH ABNORMAL CHEST X-RAY and a history of tuberculosis disease not treated adequately.

(3) NEWLY INFECTED PERSONS (RECENT CONVERTERS) regardless of age.

(4) POSITIVE REACTORS WITH TB MEDICAL RISK FACTORS regardless of age including: steroid therapy, immunosuppressive therapy, transplant recipients, dialyzed patients; hematologic and reticulo endothelial disease, diabetes, silicosis, history of digestive tract resection.

(5) POSITIVE REACTORS less than 35 years of age.

(6) POSITIVE REACTORS older than 35 when there is likelihood of serious consequences to contacts who may become infected; nursery personnel, dialysis unit employees, etc..

Before starting INH:

a. Rule out progressive tuberculosis disease.

b. Rule out previous INH prophylaxis.

c. Rule out contraindication, such as previous INH related toxicity or acute liver disease.

d. Identify patients at high risk of INH toxicity, i.e. alcoholism, persons with chronic liver disease, pregnancy and epileptics treated with diphenylhydantoin.

B. Monitoring

Initial evaluation with clinical evaluation and x-ray. Subsequently, MONTHLY COMPLIANCE AND DRUG TOXICITY MONITORING by public health nurses at the health units.

Clinical monitoring for hepatic toxicity is appropriate; however, routine SGOT monitoring has proven to be difficult to interpret and unreliable for predicting toxic reactions. It is not recommended.

Chest clinic visit and x-ray are only needed if patient developes a complication or a toxic reaction. There is no need to systematically x-ray at 6 months or 1 year.

SELECTED REPORTABLE DISEASES

(By Place of Residence)

STATE AND PARISH TOTALS REPORTED MORBIDITY SEPTEMBER, 1981	VACCINE PREVENTABLE DISEASES					ASEPTIC MENINGITIS	HEPATITIS A AND UNSPECIFIED	HEPATITIS B	LEGIONNAIRES DISEASE	MALARIA**	MENINGOCOCCAL INFECTIONS	SHIGELLOSIS	TUBERCULOSIS, PULMONARY	TYPHOID FEVER	OTHER SALMONELLOSIS	UNDERNUTRITION SEVERE	GONORRHEA	SYPHILIS, PRIMARY AND SECONDARY	RABIES IN ANIMALS (PARISH TOTALS CUMULATIVE, 1981)
	MEASLES	RUBELLA*	MUMPS	PERTUSSIS	TETANUS														
TOTAL TO DATE 19 80	11	10	66	32	5	61	649	225	5	42	70	190	366	1	119	7	17354	993	13
TOTAL TO DATE 19 81	4	9	5	5	2	82	705	262	1	6	102	82	318	2	147	1	17332	1262	31
TOTAL THIS MONTH	2	0	1	0	0	18	118	26	0	2	6	17	53	0	23	0	2752	155	4
ACADIA													3		1		9		
ALLEN							1												
ASCENSION													1				3	3	
ASSUMPTION																	6	1	
AVOYELLES																	8		1
BEAUREGARD																	5	1	
BIENVILLE																	8	1	3
BOSSIER						2		4					3				35	1	1
CADDO						6	2	1				11	4		4		266	19	1
CALCASIEU						2	1	2					2				105	3	
CALDWELL																	4		
CAMERON																	1		
CATAHOULA								2									3		
CLAIBORNE							1										6		
CONCORDIA																	6		
DESOTO																	7	1	
EAST BATON ROUGE	1						1			2			4		2		206	13	
EAST CARROLL																	4	1	
EAST FELICIANA													1				3	1	1
EVANGELINE							1										1		1
FRANKLIN													1				2		
GRANT																	6		
IBERIA													2		1		13	3	
IBERVILLE																	9		
JACKSON																	2	3	
JEFFERSON						2	41	4			1		7		1		219	10	
JEFFERSON DAVIS							1								2		8		
LAFAYETTE						2	2	3					2				78	2	
LAFOURCHE															1		26	4	
LASALLE																			1
LINCOLN																	10		
LIVINGSTON							2										6		
MADISON							1				1						14		
MOREHOUSE																	18	1	
NATCHITOCHES																	1		7
ORLEANS			1			1	15	2			1		3		4		1111	54	
OUACHITA							11						5				160	5	
PLAQUEMINES																	5		
POINTE COUPEE																	1	1	
RAPIDES	1						1	1			1		1				96	3	7
RED RIVER																	1		1
RICHLAND													1				9		
SABINE						1							1				1		1
ST. BERNARD							1					1					8		
ST. CHARLES							3										14		
ST. HELENA																			
ST. JAMES							1										10	1	
ST. JOHN							3										7		
ST. LANDRY											1	1					18	4	
ST. MARTIN							2	1					1		1		17		
ST. MARY							2						3				3	1	
ST. TAMMANY							3	4					1		1		13	4	
TANGIPAHOA								1				1	3		1		19	2	
TENSAS																	9		
TERREBONNE						1	20	1				3			2		56	3	
UNION																	1		1
VERMILION																	3		
VERNON																	5	1	4
WASHINGTON							1										5		
WEBSTER						1					1		3				30	6	1
WEST BATON ROUGE																	9		
WEST CARROLL							1								1		2		
WEST FELICIANA													1		1		12	1	
WINN																	7		
OUT OF STATE																	22	1	

* Includes Rubella, Congenital Syndrome.

** Acquired outside United States unless otherwise stated.

From January 1, 1981 - September 30, 1981, the following cases were also reported:
1 - Leptospirosis; 1 - Psittacosis; 3 - Reyes Syndrome; 1 - Brucellosis.

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