



County of Los Angeles
Department of Public Health

Tuberculosis Control Program



Overview

- Overview of TB Control program
- Role of Nurses in TB Control program
- TB Epidemiology Update
- TB Basics



LA County TB Control Program will assist with:

Surveillance

Referral / Reporting

Community / Professional Health Education /
Training

Consultation

For more information call: (213) 744-6160
www.lapublichealth.org/tb



TB Control Program Inter-disciplinary Team Members



TBC Program Priorities

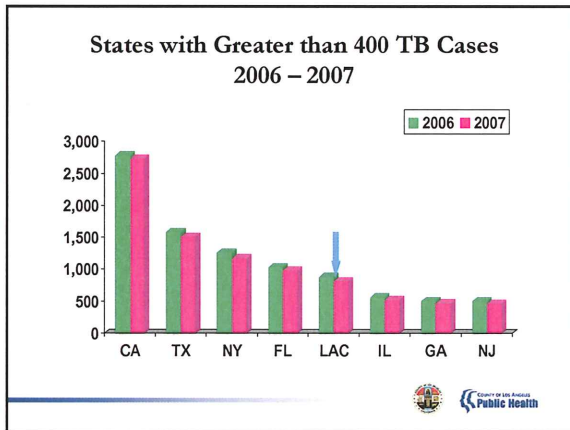
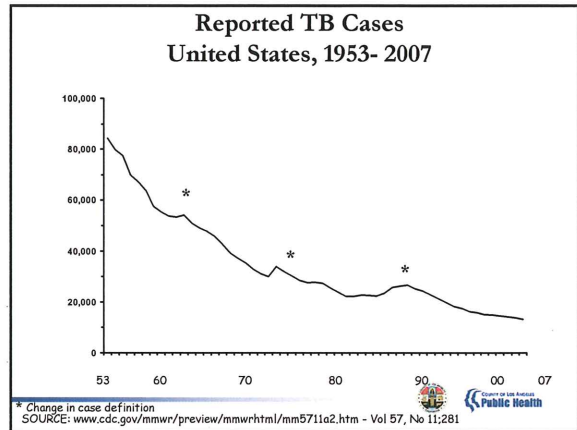
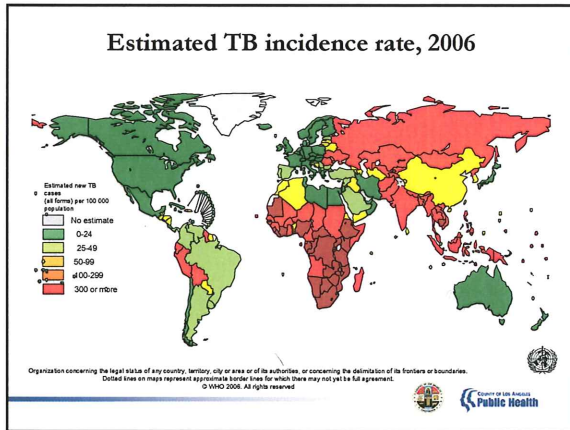
- Prompt identification and treatment of TB cases
- Prompt identification and treatment of contacts to infectious cases
- Targeted testing and treatment of LTBI



Role of PHNs in TB Control Program

- Surveillance
- Health Center APS
- Education

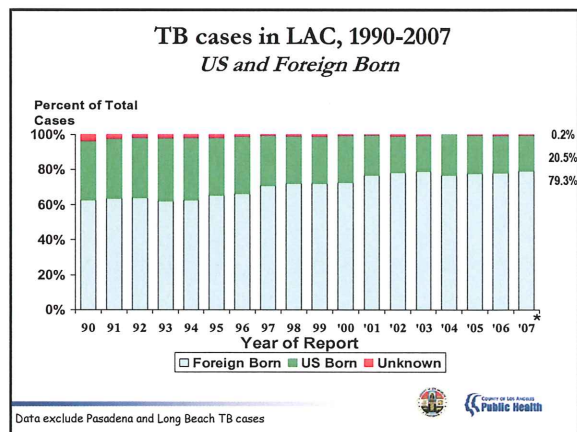
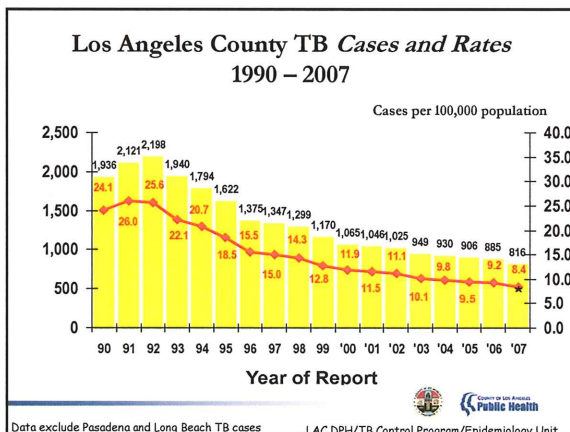


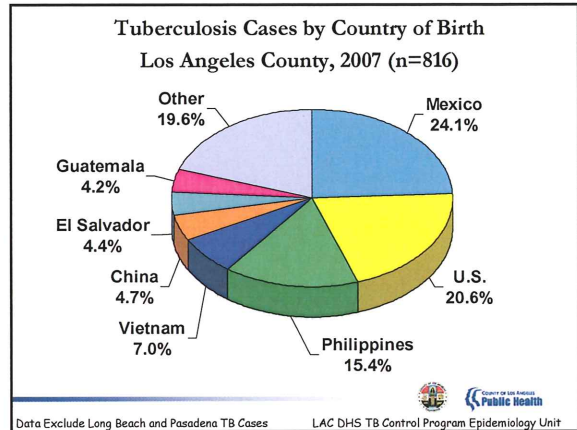
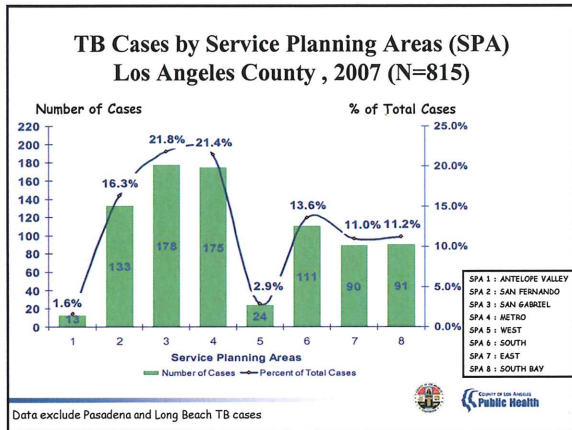


REPORTED TUBERCULOSIS CASES IN THE YEAR 2007

	Los Angeles County	California*	United States
Cases	816	2,726	13,293
Percent change (Since 2006)	-7.8%	-1.9%	-3.3%


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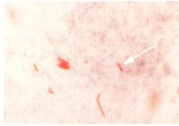


The Discovery of TB

Dr. Robert Koch




Tubercle Bacilli
1882



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What is TB?



- **TB** is short for a disease called Tuberculosis
- **TB** is a communicable disease caused by tiny germs called *Mycobacterium tuberculosis*

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Names of Tuberculosis

- *Consumption*
- *King's Evil*
- *Pott's Disease*

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How TB Is NOT Transmitted

Kissing

Dishes

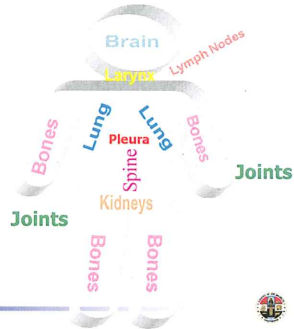
Food

Clothes

Dust

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Parts of the Body Affected by Tuberculosis



Healthy Immune System Response to TB Germ

- Takes two to ten weeks
- Body's immune system usually halts progression and TB is kept in a dormant state
- Mantoux TB skin test will normally be positive



Latent Tuberculosis Infection (LTBI)

No Active Disease

- Positive Mantoux TB skin test reaction
- Chest X-ray negative
- No symptoms
- Cannot spread TB infection to others
- Not considered an active TB case
- Potential for active disease



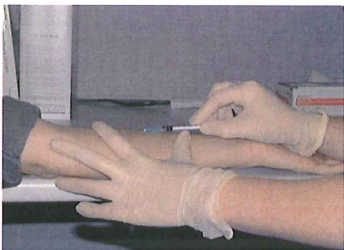
Treatment of Latent TB Infection

The standard regimen is isoniazid (INH) as a single drug.

- **INH alone:** 6-9 months ideal for all patients 6 months (minimum) for immune-competent adults. 9 months (ideal) and should be used especially for:
 - Children and adolescents (up to age 16-18)
- HIV- infected or suspected of having HIV infection
- Clinical diagnosis of old, inactive TB disease



How Do We detect LTBI?



QuantiFERON®- TB Gold In-Tube Test

- Patient's blood mixed with antigens (ESAT-6 and CFP-10) specific to *M.tb*
- T-cells previously exposed to *M.tb* release interferon-*gamma*
- QFT-GIT measures interferon-*gamma*
- Blood sample must be processed within 16 hours



A small percent of TB infected individuals progress on to active disease.



Progression from Infection to Disease

Increased risk

- HIV infection or other immunocompromised conditions
- X-ray evidence of old, untreated TB
- Substance abuse, injecting drug use
- Silicosis, diabetes, renal failure
- Certain cancers
- 10% or more underweight or rapid weight loss



Persons at Increased Risk for Drug Resistance

- History of treatment with TB drugs
- Contacts of persons with drug-resistant TB
- Foreign-born persons from high prevalent drug resistant areas
- Smears or cultures remain positive despite 2 months of TB treatment
- Received inadequate treatment regimens for >2 weeks



Multidrug-Resistant TB (MDR-TB) Extensively-Resistant TB (XDR-TB)

- Presents difficult treatment problems
- Treatment must be individualized and given by daily DOT
- Clinicians unfamiliar with treatment of MDR TB should seek expert consultation
- The LAC TBC MDR-TB Unit consults on and monitors all MDR-TB cases



Standard Treatment for Active TB

Initiate Therapy with 4 drugs immediately

- Isoniazid (INH)
- Rifampin (RIF)
- Pyrazinamide (PZA)
- Ethambutol (EMB) or Streptomycin (SM)

Discontinue PZA and EMB* after 2 months

Continue INH and RIF for an additional 4 months

Longer therapy may be indicated if HIV + or drug-resistant

*discontinue based on susceptibility results



Directly Observed Therapy (DOT)

- Standard of care for all TB patients in LAC
- Health care worker watches patient swallow each dose of medication
- DOT should be used with all intermittent regimens
- DOT can lead to reductions in relapse and acquired drug resistance
- Use DOT with other measures to promote adherence – incentive/enabler program



Adherence

- Nonadherence to therapy is a major problem in TB control
- Use case management and directly observed therapy (DOT) to ensure patients complete treatment
- Other monitoring methods:
 - Bacteriology
 - Pill counts
 - Clinical response
 - Urine tests
 - Patient interviews / home visits



Public Health Aspects

- Reporting
- Contact Investigations
- Health Officer's Orders



**Think
TB!**

persistent cough
coughing blood
malaise
night sweats
fever
positive mantoux
fatigue
weight loss

