



COUNTY OF RIVERSIDE PUBLIC HEALTH UPDATE

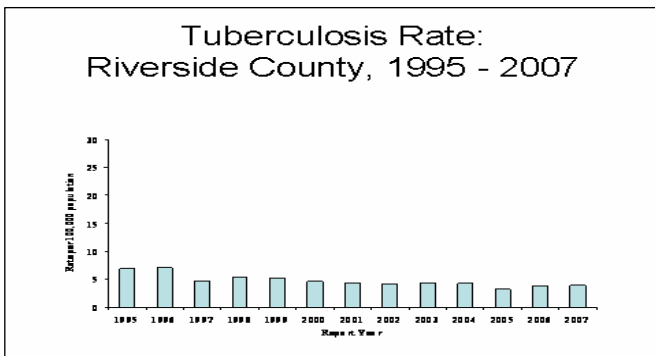
COMMUNITY HEALTH AGENCY ■ DEPARTMENT OF PUBLIC HEALTH
■ DISEASE CONTROL BRANCH

March 2008

The Epidemiology of Tuberculosis in Riverside County

Disease Trend

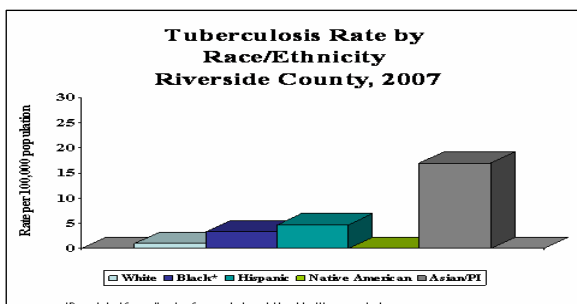
Although progress has been made, tuberculosis (TB) remains a significant public health problem in California and locally in Riverside County. Two thousand seven hundred and twenty-six (2,726) cases were reported in California in 2007 compared to 2,779 cases in 2006. Riverside County was one of 16 jurisdictions with increases in TB cases in 2007; eighty cases were reported, compared to 75 cases in 2006. This represents an eight percent increase.



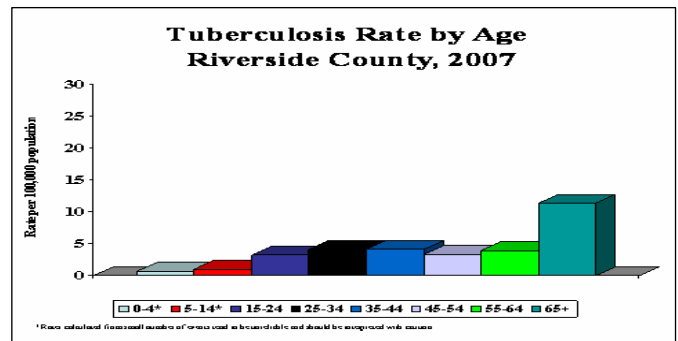
PROFILE OF TB CASES

Race/Ethnicity

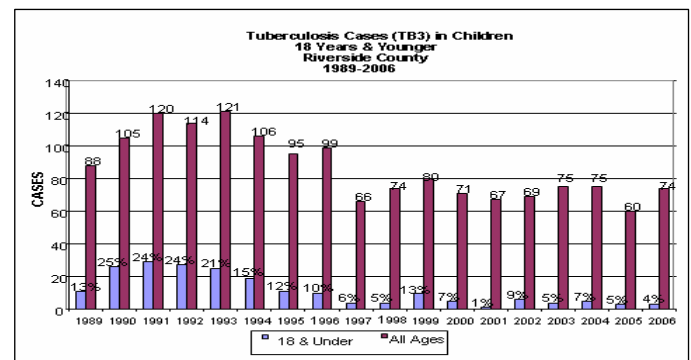
In 2007, minorities in Riverside County were disproportionately affected by tuberculosis. Asian/Pacific Islanders had the highest rate (17%) followed by Hispanics (4.7%). There were similar rates in 2006.



Age



TB continues to be primarily a disease of the elderly with a case rate of 11.4 for individuals 65 and over, in 2007. However, cases still occur in children ≤5 years of age. Disease in this age group serves as a sentinel event and indicates recent disease transmission.

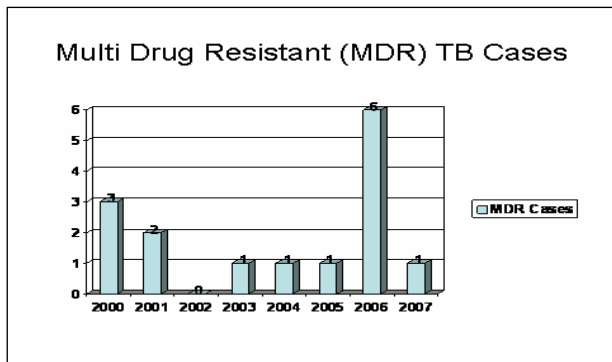


Riverside County elected to discontinue mandatory TB screening for school entry in August 2007. A review of TB screening data for children indicated that 3.7 percent of children tested during the years 2004-2006 had latent TB infection. Three active pediatric cases were identified during this time-period, compared to 1992 (29 cases); 1993 (27 cases); and 1994 (20 cases).

Multi-Drug Resistant TB (MDR-TB)

MDR-TB presents a challenge for clinical management of patients. Treatment ranges from 18-24 months with 4 to 5 anti-tuberculosis medications. It is recommended that an injectable medication be included in the regimen.

Riverside County reported six MDR-TB cases in 2006. One MDR-TB case was identified in 2007.



A retrospective study of all MDR-TB cases reported in Riverside County since 2000 indicated that one of the three MDR-TB cases in 2000 met the case definition for extensively drug resistant (XDR) TB. A case definition for XDR-TB was established by the CDC in 2006. Patients with XDR-TB are difficult to treat due to the limited number of effective drugs available for the regimen. Current case definition for XDR-TB from the World Health Organization:

**WHO TASK FORCE ON XDR-TB
REVISED CASE DEFINITION
(10 OCT 2006)**

Resistance to \geq isoniazid and rifampin (MDR) plus resistance to fluoroquinolone and one of the second-line injectable drugs (amikacin, kanamycin, or capreomycin)

Geographic Distribution

TB cases are seen throughout Riverside County. A review of cases by city indicates the highest number of cases in the City of Riverside (20 cases) followed by Corona with 10 cases.

**Table 1. Tuberculosis Cases by City
Riverside County 2007**

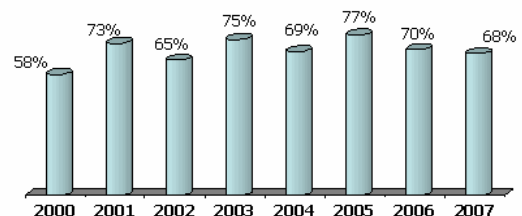
N=80

City	Cases Reported
Aguanga	1
Beaumont	1
Blythe	1
Cabazon	1
Cathedral City	4
Coachella	2
Corona	10
Desert Hot Springs	1
Hemet	2
Indio	5
Lake Elsinore	3
Menifee	1
Mira Loma	2
Moreno Valley	7
Murrieta	2
Palm Desert	1
Palm Springs	1
Perris	4
Riverside	20
San Jacinto	5
Sun City	1
Temecula	5

Foreign Born

Foreign-born cases represented 68 percent of total reported cases in Riverside County during 2007. Primary countries of origin were Mexico (27 cases); Philippines (13 cases); Vietnam and Guatemala (6 cases each).

**TB CASES AMONG FOREIGN BORN
RIVERSIDE COUNTY 2000-2007**



Site of Disease

In 2007, 84% of TB cases were diagnosed with pulmonary disease; 11 individuals (14%) had extra-pulmonary disease, and three were diagnosed with both forms of tuberculosis. A variety of extra-pulmonary sites occurred in the eleven reported cases and are delineated in Table 2 below.

Table 2: Tuberculosis Cases Major Site of Disease Other Than Pulmonary - 2007

SITE	NUMBER OF CASES
Bone and/or joint	1
Cranial, Spinal & Peripheral Nerve	1
Genitourinary	1
Lymphatic Cervical	2
Peritoneal	2
Pleural	1
Skin and Skin Appendages	1
Subcutaneous Tissue	1

Case Study

A 20 year-old Hispanic female was diagnosed with MDR-TB while she was pregnant. The pregnancy made it difficult to treat the patient with an appropriate MDR-TB regimen. Thus, she continued to be smear and culture positive for an

extended period of time. This presented challenges for the delivery and management of the newborn infant. The patient's two year-old child was also infected, subsequently developed TB disease, and required hospitalization. The newborn was separated from the mother until she was no longer infectious. This case demonstrates the importance of treatment and follow-up of individuals with latent TB infection. This patient was a contact of a relative with MDR-TB two years earlier, and was lost to follow-up at that time.

World TB Day

March 24th commemorates the day in 1882 when Dr. Robert Koch discovered that tubercle bacillus is the causative agent for tuberculosis. This observation is held March 24th of each year to highlight the progress made in the fight against tuberculosis. This day of recognition also provides increased awareness that TB continues to be a significant public health concern. The theme selected for World TB Day 2008, "TB a Disease without Borders" highlights the global nature of tuberculosis.

TB is reportable within 1 day of identification by
Telephone: (951) 358-5107 or
FAX: (951) 358-7922

WORLD TB DAY MARCH 24, 2008



TB A DISEASE WITHOUT BORDERS