Preliminary figures indicate that sixty one cases of tuberculosis disease were recognized in Fresno County during 2006. This number is down somewhat from 2005, down significantly from 2004, and represents 6.8 cases per 100,000 people. In 2003 TB affected 5.1/100,000 in the US, 8.9/100,000 in California, and 13.4/100,000 in Fresno County (see Figure 1). The current public health goal for reducing TB disease (Healthy People 2010) is 1/100,000.

Of the 61 cases of TB disease this last year 41 (67.2%) were males and 20 (32.8%) were females. Five of the 61 (8.2%) had extrapulmonary disease including meningitis (1), scrofula (2), osteomyelitis (1), and epididymitis (1). Seven patients had a history of treatment for TB in the past.

Thirty three TB disease patients (54.1%) were Hispanic and 15 (24.6%) were Southeast Asian (See Figure 2 for further details). Thirty eight cases (62.3%) were foreign born (Mexico, Philippines, Laos, Cambodia, Thailand, India, Ethiopia, Vietnam, and Australia).

Homeless persons accounted for four (6.5%) cases of TB. Twelve (19.7%) patients with TB reported drug use and 2 (6.9% of those TB disease patients tested) were HIV positive (32 of the 61 cases had unknown HIV status). Three patients with TB died in 2006.

The median age of TB patients diagnosed in Fresno County in 2006 was 42 years with a range from 4 months to 84 years. (See Figure 3 for age related details). Five (8.2%) patients were age five or younger.

Of the 61 cases of diagnosed TB in 2006, 15 (24.6%) were culture negative. Of the 46 culture positive TB cases 2 (4.3%) were MDR, 4 (8.7%) were INH resistant only, 1 (2.2%) was resistant to INH and streptomycin. Thirty nine (84.9%) were pansensitive.

Referral for TB disease in Fresno County came from hospitals (28 ), private medical providers (19 ), Department of Community Health contact investigations (4), immigration B Notifications (2), school screenings (2), Department of Community Health’s Health Screening and Prevention Program (1), county jail diagnosis (1), self referral (2), immunization clinic (1), and another county (1) (see Figure 4).

Figure 5 indicates TB disease by zip code in Fresno County in 2006.

Fully 1/3 of the world’s population is infected with TB. Worldwide there are nine million new cases of TB disease annually with two million deaths. TB is the second leading cause of infectious disease – related deaths worldwide, the leading cause of death in those with HIV/AIDS, and the leading killer of women of childbearing age.

It is estimated that 10% of Californian’s are infected with TB and of these 10% will develop TB disease during their lifetime.
Recent recognition of TB disease that is resistant to both INH and rifampin and three or more second line anti-TB medications poses a grave threat to public health. In the United States 4% of MDR or multi-drug resistant TB (those resistant to at least INH and rifampin) were found to be this XDR (extensively drug resistant) TB between 2000 and 2004. These drug resistances make the disease almost untreatable with currently available antibiotics and the mortality rate in those with this disease and co-infection with AIDS is extremely high. There have been no known cases of XDR-TB recognized in Fresno County to date.

California statute (Title 17) requires notification of the county health department of all diagnosed or suspicious cases of tuberculosis by telephone or fax within one working day of identification. Health and Safety Code statute (121362) also requires that providers treating persons with active TB report to the local health officer any information as required at such times as the health officer requires.

Three recognized processes are involved in the control of, and attempt to eliminate, TB. The first of these is finding and promptly and adequately treating individuals that have active disease. The second process in TB control is identifying individuals who have been exposed to someone with TB disease and evaluating them for TB infection or TB disease then treating them if they have either of these. The third process in the control of TB is “targeted testing” and involves screening individuals known to be at higher risk for contracting TB to determine if they may have the infection or the disease. Three programs within the Department of Community Health’s Communicable Disease Division are busy daily with these three aspects of TB control. The dedicated, knowledgeable, and professional staff of the Chest Clinic, Communicable Disease Outreach, and Health Screening and Prevention Program identify and treat TB disease and infection, identify and evaluate exposures to TB, and screen high risk populations respectively.

If you have any questions regarding TB infection or disease or the control of TB in Fresno County please contact our Community Liaison Nurse at 559-445-3413.
FIGURE 1

Tuberculosis

FRESNO COUNTY 2006
6-Year Incidence Rates Per 100,000 Population

Source: Fresno County Department of Community Health, Epidemiology Program
Race / Ethnicity Distribution (Figure 2)

- Hispanic (33, 54.1%)
- Caucasian (6, 9.8%)
- Hmong (8, 13.1%)
- Cambodian (4, 6.6%)
- Black (2, 3.3%)
- Samoan (1, 1.6%)
- Punjabi (1, 1.6%)
- Laotion (1, 1.6%)
- Filipino (3, 4.9%)

Age Distribution (Figure 3)

- Incidence
- Patient Age

- 0 - 5: 5
- 5 - 18: 0
- 18 - 35: 20
- 35 - 50: 10
- 50 - 65: 10
- 65 - 85: 16
Referral Source (Figure 4)

- Hospital (28, 45.9%)
- Contact Investigation (4, 6.6%)
- B Note (2, 3.3%)
- self (2, 3.3%)
- School (2, 3.3%)
- Other county (1, 1.6%)
- Private provider (19, 31.1%)
- Jail (1, 1.6%)
- Immunization Clinic (1, 1.6%)
- HSPP (1, 1.6%)

FIGURE 5

Fresno County TB Cases by Zip Code 2006