JULY 1999

CALIFORNIA UPDATE

LEGISLATIVE ANALYST'S OFFICE

State Recovering From Tuberculosis Epidemic

California is in its sixth consecutive year of recovery from a 1986 to 1992 resurgence of tuberculosis (TB) that boosted the state's number of TB cases by 56 percent (see Figure 1). Compared to the peak of the epidemic in 1992, TB cases have dropped 28 percent in California and 31 percent nationwide (through 1998). Similarly, TB case rates (per 100,000 population) declined 32 percent and 35 percent, in California and the U.S. respectively, between 1992 and 1998. California's decline represents the sixth largest reduction in TB rates among the states.

The federal Centers for Disease Control and Prevention (CDC) associates the resurgence in the late 1980s with the emergence of multidrug-resistant TB (MDR-TB), the HIV/AIDS epidemic, and increased immigration from countries with high rates of TB. The CDC attributes the decline in cases to successful efforts to strengthen TB control activities.

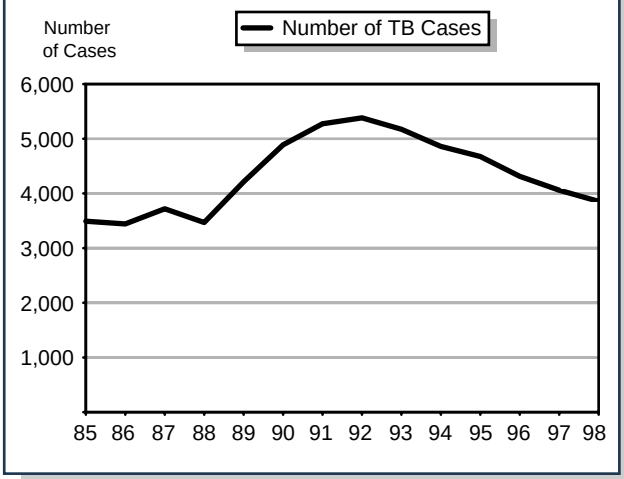
State Interventions Aim to Increase Completion of Therapy

Using federal and state funds totaling $85.5 million over six years, the Department of Health Services (DHS) has implemented intervention

Figure 1

California TB Cases

1985 Through 1998



What Is Tuberculosis?

Tuberculosis (TB) is a contagious disease transmitted through the air when a person with active TB coughs or speaks. Anyone inhaling air containing the TB bacteria may become infected. The immune system usually prevents the development of the active disease. However, if untreated, about 5 percent of those who are infected will develop active TB disease at some point in their lives. The risk is much higher for persons who have suppressed immune systems, including those with HIV infection. If active TB disease develops, it usually takes six or more months of drug therapy to cure it.

Multidrug-resistant TB—active TB caused by bacteria resistant to the most powerful drugs—is much more difficult and costly to treat and may be incurable.

measures that focus on increasing the number of clients who complete their drug therapy. California's efforts appear to have had some success. Specifically, between 1993 and 1996, the percent of patients completing therapy in less than 12 months (CDC's model timeframe) increased from 59 percent to 69 percent. Figure 2 shows this rise in completion of therapy, as well as the decline in TB cases from 1993 through 1997 (the latest year in which complete data are available).

Completing one's TB drug regimen is critical for preventing the spread of the disease and the development of TB strains that are resistant to one or more drugs. Because medication alleviates symptoms early in the six-month treatment cycle, many patients fail to maintain their prescribed drug regimens. When the regimen is not followed, two adverse consequences occur: First, the patient can become contagious again and transmit TB to others. Second, the TB organisms within the patient can develop resistance to the TB drugs the patient has taken, creating multidrug-resistant TB. Since 1994, approximately 13 percent of California's TB cases have developed resistance to one or more drugs.

The DHS initiated and expanded various intervention measures that served to facilitate completion of therapy, including the following:

- ***Expanding Directly Observed Therapy.*** The DHS has increased the number of patients for whom Directly Observed Therapy (DOT) is administered. DOT is a technique of TB treatment that requires a staff person to assist patients with taking TB medications, in order to ensure that the correct dose is taken at the correct time for an entire course of medication. Of the number of TB patients who began treatment in 1996 in California, 53 percent had DOT at some point in their treatment, compared to 26 percent in 1993 (see Figure 2). Thirty-seven percent had their *whole course* fully supervised in 1996, an increase from 17 percent in 1993.

- ***Improving Case Management.*** The state allocates funds for case management for all TB patients. Each TB patient is assigned a local health department employee as a case manager to ensure that the patient is educated about TB and its treatment, therapy is appropriate and completed, and contacts are examined for infection. In response to the TB resurgence, the state funded an increase in the number of case managers.

With approximately 50 percent of TB patients being treated by providers outside of local health departments, the case managers must coordinate with managed care plans and other providers to case manage patients' therapy regimens. In 1997, the DHS, in conjunction with the California Tuberculosis Controllers Association (CTCA), developed and disseminated *Guidelines for Oversight of Tuberculosis Care Provided Outside Local Health Departments*, which serves as the framework for how practitioners and other local agencies should interface with local health departments to effectively coordinate services.

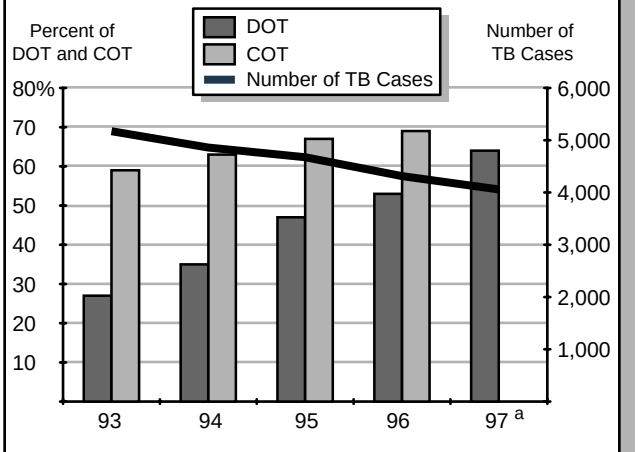
- ***Treating Homeless TB Patients.*** Studies have shown that homelessness is a strong predictor of poor adherence to TB therapy. Without stable housing and adequate food, the provision of directly observed therapy to homeless patients is likely to be difficult. In November of 1997, the DHS initiated a program to house homeless TB patients for the duration of their DOT. Most patients stay at motels, inns, or hotels. The DHS currently awards $2.3 million to 34 counties for housing, food, and services related to the prevention of homelessness among TB patients.

- ***Detaining Nonadherent Patients.*** The DHS estimates that approximately 40 TB patients need to be detained each year because they refuse to take their medication. Because "nonadherent" patients pose a public health threat, local health departments have the statutory authority to detain these persons, once less costly and less restrictive alternatives have been attempted. The DHS reimbursed local health departments for approximately 26 detentions in the first nine months of 1998-99 at a cost of $401,232. Both correctional facilities and civil facilities—such as acute care hospitals and rehabilitation centers—are used to house detained patients.

Figure 2

Tuberculosis Cases, Directly Observed Therapy (DOT) and Completion of Therapy (COT)

California, 1993-1997



[a] COT data not available in this year.

California's Challenges

Despite the state's gains in curtailing the disease, California still faces a formidable challenge in fighting TB.

- In 1998, the CDC's most recent year of data, California had the second highest rate of TB cases in the U.S.

- More than two-thirds of California's TB cases are foreign-born. Birth in a country with high TB rates is an important reason

for high case rates among Asians and Latinos in California: 95 percent of Asian cases and 75 percent of Latino cases reported in the state in 1998 were foreign-born.

- California's U.S.-born cases (while only one-third of the total) are relatively difficult to treat. Among U.S.-born cases, for example, California has a disproportionately high number of persons who are homeless, move through the correctional system, or use drugs. It is relatively difficult to track and case manage patients in these groups.

- While the decline in TB cases since 1992 has been significant, major disparities in the risk of TB persist among racial and ethnic groups. For example, compared to Whites, case rates were 4.7 times higher for Latinos; 5.5 times higher for African-Americans; and 14 times higher for Asians in 1998.

Currently, DHS indicates that it is focusing on better identifying persons infected with TB and on increasing the percentage of patients who complete drug therapy. Specifically, the department plans to (1) increase targeted TB skin testing of high-risk groups—persons in contact with infectious TB, immigrants, correctional inmates, and those with HIV infection; (2) develop activities to reduce the incidence of TB among racial and ethnic groups; and (3) expand data collection and analysis in order to better evaluate the programs' impacts and cost-effectiveness.

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About the LAO

California Update is published monthly—except January and February—by the Legislative Analyst's Office (LAO). The LAO is a nonpartisan office which provides fiscal and policy information and advice to the legislature. The Legislative Analyst's Office is located at 925 L Street, Suite 1000, Sacramento, CA 95814.

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