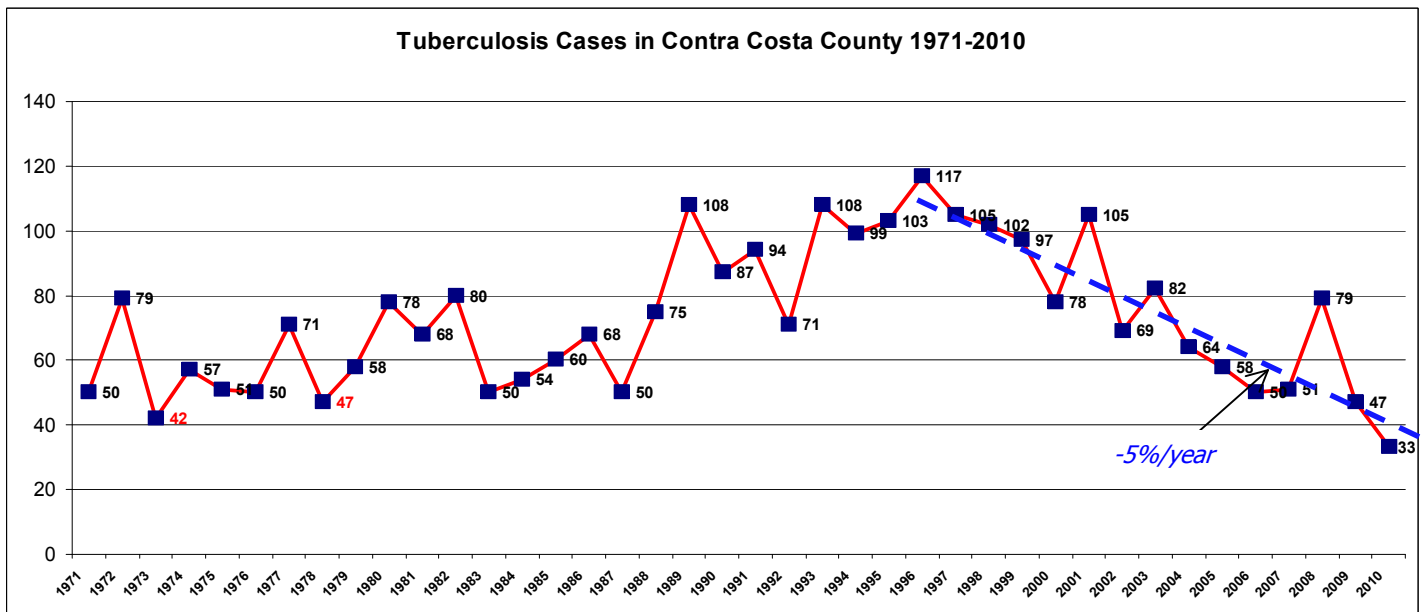


March, 2011

TUBERCULOSIS EPIDEMIOLOGY REPORT - 2011

In 2010, 33 cases of confirmed active tuberculosis (TB) were reported in Contra Costa County (CCC), for a case rate of 3.1/100,000. It is a decrease of 30% since 2009 (47 cases) and 58% since 2008 (79 cases). Since 1996, the case rate has declined an average of 5% per year. With 33 cases, last year was the lowest number of cases on record. Our case rate was 48% lower than for CA as a whole (6.0/100,000), and 14% lower than for the US (3.6/100,000).



Place of Birth

Of the 33 cases, 6 (18%) were born in the U.S., and 27 (82%) were born outside the U.S. Of the 27 foreign-born cases, 17 (63%) were from Asia, 9 (33%) from the Americas, and 1 (3.7%) from Africa. The most common country of origin was the Philippines (8 cases). Of the 27 foreign-born cases, 10 had an immigration visa, and the immigration status was unknown or other for the remaining 17. Of the 22 cases in Central and East CCC, 20 (91%) were foreign-born, whereas in West CCC, only 7 of 11 (64%) were foreign born. Of the 6 cases born in the U.S., 4 lived in West CCC, and only 2 lived elsewhere in CCC.



Demographics

Of the 33 cases, 17 (52%) were of Asian ethnicity, 9 (27%) were Hispanic, and 6 (18%) were African-Americans. Only 1 (3%) was white, a record low number and proportion. There were no pediatric TB cases (under 14 years of age).

Risk factors and Co-morbidities

Among our cases, 4 (12%) had a substance use disorder. None were homeless. One (3.7%) had HIV infection. 4 (12%) had diabetes, and 3 (9.1%) had end-stage renal disease. None were on anti-TNF- α therapy, post-transplant immunosuppressive therapy, or were immunosuppressed from other causes.

Characteristics of TB Cases in Contra Costa County, 2005-2010

| TB | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|--------------------------|----------|----------|----------|----------|----------|----------|
| Total Cases | 58 | 50 | 51 | 79 | 47 | 33 |
| Gender | | | | | | |
| Male | 33 (57%) | 32 (64%) | 30 (59%) | 50 (63%) | 30 (64%) | 22 (67%) |
| Female | 25 (43%) | 18 (36%) | 21 (41%) | 29 (37%) | 17 (36%) | 11 (33%) |
| Age | | | | | | |
| 0-14 years | 2 (4%) | 1 (2%) | 3 (6%) | 4 (5%) | 2 (4%) | 0 |
| 15-24 years | 6 (10%) | 10 (20%) | 6 (12%) | 8 (10%) | 3 (6%) | 4 (12%) |
| 25-44 years | 12 (21%) | 16 (32%) | 12 (24%) | 31 (39%) | 16 (34%) | 10 (30%) |
| 45-64 years | 27 (47%) | 12 (24%) | 19 (37%) | 19 (24%) | 12 (26%) | 11 (33%) |
| 65 + years | 11 (19%) | 11 (22%) | 11 (22%) | 17 (22%) | 14 (30%) | 8 (24%) |
| Race/Ethnicity | | | | | | |
| White | 5 (9%) | 4 (8%) | 5 (10%) | 9 (11%) | 5 (11%) | 1 (3%) |
| African American | 9 (16%) | 13 (26%) | 12 (24%) | 15 (19%) | 6 (13%) | 6 (18%) |
| Latinos | 19 (33%) | 10 (20%) | 12 (24%) | 21 (27%) | 11 (23%) | 9 (27%) |
| Asian/PI | 25 (43%) | 22 (44%) | 22 (41%) | 34 (43%) | 25 (53%) | 17 (52%) |
| Country of Origin | | | | | | |
| US Born | 17 (29%) | 21 (42%) | 19 (37%) | 24 (30%) | 10 (21%) | 6 (18%) |
| Foreign Born | 41 (71%) | 29 (58%) | 32 (63%) | 55 (70%) | 37 (79%) | 27 (82%) |
| County Region | | | | | | |
| West | 28 (48%) | 16 (32%) | 20 (39%) | 39 (49%) | 21 (45%) | 11 (33%) |
| Central | 15 (26%) | 18 (36%) | 15 (29%) | 18 (23%) | 17 (36%) | 12 (36%) |
| East | 15 (26%) | 16 (32%) | 16 (31%) | 22 (28%) | 9 (19%) | 10 (30%) |
| Risk Factor | | | | | | |
| Substance Abuse | 13 (22%) | 8 (16%) | 9 (18%) | 10 (13%) | 4 (9%) | 4 (12%) |
| Homelessness | 7 (12%) | 4 (8%) | 3 (6%) | 5 (6%) | 2 (4%) | 0 |



Drug resistance

Of the 27 cases with a positive culture, one (3.7%) was resistant to INH. None were resistant to Rifampin. There were new no cases of multiple drug-resistant (MDR) or extensively drug-resistant (XDR) TB, although one patient with MDR TB, diagnosed in 2009, was still on treatment.

Summary and Recommendations

A number of factors likely contributed to the decline of TB in CCC last year to a historically low level. In 2007, the CDC Division of Migration and Quarantine (DMQ) revised the technical instructions to its panel physicians (who evaluate applicants applying in their country of origin for immigration to the U.S.). These revisions have now been fully implemented in virtually all countries that contribute foreign-born TB cases to CA, decreasing the number of newly imported cases. The decline in jobs in the U.S. likely decreased the number of persons coming to the U.S. to work.

Our TB Program has implemented a number of interventions with persons living in, and health care providers working in, our at-risk communities, resulting in a reduction in diagnostic delays, which prevents TB infection. We have improved our methods for the identification and management of contacts to infectious cases, which prevents the progression of latent TB infection (LTBI) to active disease in that high-risk group. Our Public Health Laboratory (PHL) has implemented more advanced technology to detect TB and MDR TB more accurately and rapidly, thus further reducing diagnostic delays. Finally, we have been expanding our use of the QuantiFERON®-TB test, improving our ability to target the treatment of LTBI to those who are at increased risk of developing active TB.

In addition to providing PHN case management, contact investigation, and directly observed therapy services to the 33 TB cases, we provided similar services to a number of TB suspects who did not become cases, and to TB patients diagnosed previously who were still on treatment in 2010. We also evaluated 262 immigrants to CCC who received a B Classification (TB infection or disease) from DMQ, one of whom was diagnosed as a TB case as a result of this evaluation.

It is vital that our TB Program, including the PHL, be able to continue this important work to control TB and maintain our vigilance in the effort to eliminate TB in CCC and the U.S. To reduce the level of this work now would leave us once again vulnerable to a resurgence of this deadly disease.

It remains essential that patients with TB symptoms (cough of greater than 3 weeks duration, usually accompanied fever, night sweats or unexplained weight loss) seek care as soon as possible, and that providers maintain a high index of clinical suspicion for TB when evaluating such patients, and report TB suspects to us promptly.

If you would like to receive future reports electronically, if you have not already done so, please send your E-mail address to us at: charlie.crane@hsd.cccounty.us. For further information about TB and our services, visit our website at <http://www.cchealth.org/topics/tb>, or call us at 925-313-6740.

