



CONTRA COSTA
HEALTH SERVICES

Public Health Division
Communicable Disease Programs

TUBERCULOSIS REPORT

March 24, 2009 - World TB Day

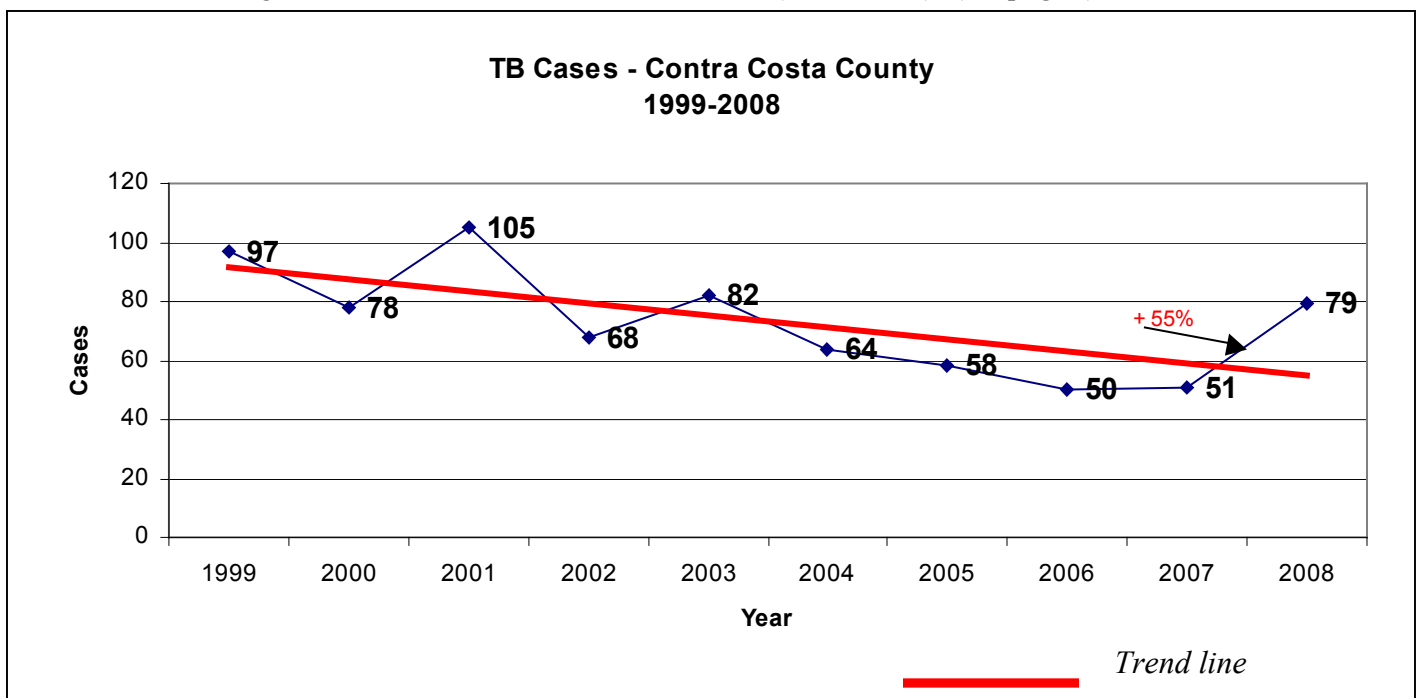


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Significant Increase in TB in 2008

In 2008, there were 79 cases of active tuberculosis (TB) diagnosed in residents of Contra Costa County, an increase of 55% from 2007, when there were 51 cases, and reversing several years of steady decline. Our TB rate increased to 7.5 cases/100,000, 11% higher than the rate for California as a whole (7.0/100,000). (see page 2)



Significant Increase in TB in 2008 *(continued)*

Of the 79 cases, 55 (70%) were born outside the US (see Table), an increase of 72% since 2007 (32 cases). The greatest increase was in cases from Latin America and Asia. By contrast, US born cases increased 26%.

Increases were seen in all racial and ethnic groups, and in all regions of CCC. In 2008, 39 TB cases resided in West CCC, nearly twice as many as in 2007 (20). Foreign-born cases in West CCC increased fourfold, from 7 in 2007 to 29 in 2008.

For CA as a whole, there were 2,696 TB cases in 2008, a decrease of 1% from 2007 and 25% since 1999. 75% of CA cases were foreign-born. Of the 16 health jurisdictions reporting 40 or more cases in 2008, only 6 others reported increases from 2007 (San Joaquin, Fresno, Kern, San Bernadino and Long Beach).

Internationally, the World Health Organization estimates that there are 9.3 million new TB cases, leading to 1.8 million deaths each year. TB can be easily treated in even the poorest setting, with a 6-month course of multiple medications. Since TB patients become non-contagious rapidly on treatment, treatment equals prevention. TB disproportionately affects our most vulnerable populations. For example, it is the biggest killer of people with AIDS. Yet over half of the world's population does not have access to effective treatment. Due to ineffective or absent TB control programs, global TB rates are not coming down fast enough. Moreover, a new strain of TB, called extensively drug-resistant (XDR) TB, which is very hard to treat, is spreading. Last year, in a highly publicized case, a US patient with MDR TB exposed many passengers on several international flights. Initially he was thought to be an XDR case. TB is truly a disease without borders. Time is running out. It is vital that all countries, rich and poor, work together to control TB, globally and locally, before it's too late to stop XDR.

What can local communities do?

World TB Day is March 24. The Centers for Disease Control and Prevention (CDC) and Stop TB USA have announced the theme for this year: "Partnerships for TB Elimination". Local governments and community-based organizations can play a vital role in TB control efforts by working with Contra Costa Health Services to promote community awareness of this devastating disease. Educational materials are available from our office.

Too many TB patients are diagnosed late in the course of their disease, often because they don't realize that their cough is serious, or because of lack of access to care. Delayed diagnosis can lead to prolonged illness, prolonged infectiousness, hospitalization and death. Early diagnosis and treatment are essential to control TB. Everyone should be aware of the symptoms so that they can spread the message: *if you think you may have TB, go to a health care provider. Now!*

But even for those without any symptoms, people who are at increased risk for TB should get a TB skin test (TST), or one of the new IGRA blood tests for TB. For most people infected with TB, it is in the dormant (latent) stage, which can become active at any time. Although people with latent TB infection are not sick and are not contagious, treatment with isoniazid (INH), a TB drug, for 9 months is usually recommended to prevent the development of active TB.

What can health care providers do?

Think TB. To minimize diagnostic delays, it is vital that providers consider active TB as part of the differential diagnosis of any patient with TB symptoms and compatible radiographic findings, especially if they are at increased risk for TB or known to have latent TB infection. Order 3 sputa for AFB smear and culture. Even if the smears are negative, if TB is a likely diagnosis, consider empiric treatment with 4 drug therapy (INH, rifampin, pyrazinamide, and ethambutol) while cultures are pending. Remember, early TB treatment protects the community, not just the individual patient.

Report TB. CA law (Title 17, CCR, Section 2500) requires that health care providers report to the local health officer in the jurisdiction where the patient resides all cases and suspected cases of TB within one working day of diagnosis. Reports should be made by completing a Confidential Morbidity Report (CMR), and sending it to us by FAX at 925-313-6465. CMR forms are available from our office, by calling 925-313-6740

Targeted Testing and Treatment of Latent TB Infection (LTBI). Providers should routinely test all patients at increased risk of TB with either a TST or an IGRA test, unless previously infected. Patients with a positive test should be further evaluated with a targeted history and physical exam and a CXR. If there is no clinical or radiographic evidence of active TB, treatment of LTBI is generally indicated.

Medical consultation is available from Charles M. Crane, M.D., M.P.H., Medical Director of our TB Program, or one of our other Chest Clinic physicians. Call us at 925-313-6740 for medical consultation and reporting information.

Demographic Characteristics of TB Cases - Contra Costa County, 2005-2008

	2005 (n=58)	2006 (n=50)	2007 (n=51)	2008 (n=79)
<u>Gender</u>				
Male	33 (57%)	32 (64%)	30 (59%)	50 (63%)
Female	25 (43%)	18 (36%)	21 (41%)	29 (37%)
<u>Age</u>				
0-14 years	2 (4%)	1 (2%)	3 (6%)	4 (5%)
15-24 years	6 (10%)	10 (20%)	5 (10%)	8 (10%)
25-44 years	12 (21%)	16 (32%)	13 (26%)	31 (39%)
45-64 years	27 (47%)	12 (24%)	19 (37%)	19 (24%)
65 + years	11 (19%)	11 (22%)	11 (22%)	17 (21%)
<u>Race/Ethnicity</u>				
White	5 (9%)	4 (8%)	5 (10%)	9 (11%)
African American	9 (16%)	13 (26%)	12 (24%)	15 (19%)
Latino/a	19 (33%)	10 (20%)	12 (24%)	21 (27%)
Asian/PI	25 (43%)	22 (44%)	22 (43%)	34 (43%)
<u>Country of Origin</u>				
US Born	17 (29%)	21 (42%)	19 (37%)	24 (30%)
Foreign Born	41 (71%)	29 (58%)	32 (63%)	55 (70%)
- Philippines	16	7	10	9
- Asia (Other)	9	11	11	24
- Latin America	14	9	10	20
-Other	2	2	1	2
<u>County Region</u>				
West	28 (48%)	16 (32%)	20 (39%)	39 (49%)
Central	15 (26%)	18 (36%)	15 (29%)	18 (23%)
East	15 (26%)	16 (32%)	16 (31%)	22 (28%)
<u>Risk Factor</u>				
Any Substance Abuse	13 (22%)	8 (16%)	9 (18%)	10 (13%)
Homeless	7 (12%)	4 (8%)	3 (6%)	5 (6%)
<u>Drug Resistance</u>				
INH (alone or with others)	4	6	0	9
INH and Rifampin (MDR)	2	0	0	1

TB Risk Factors

Recent immigration from, or travel to, a high incidence region:

- . Central and South America
- . Pacific Islands, including the Philippines
- . Asia, including Southeast Asia, China, India, the former USSR
- . Eastern Europe, Africa

Medical Conditions:

- HIV infection, AIDS
- Diabetes, especially if poorly controlled
- Immunosuppressive therapy, including
 - corticosteroids, cancer chemotherapy,
 - anti-TNF- α agents, post-transplant therapy
- Renal failure, hemodialysis
- Head and neck cancer
- Lymphoma, leukemia

Social/behavioral factors:

- Homelessness
- Street drug use
- Alcoholism
- Smoking

Residential/occupational factors:

- Health care workers, correctional officers
- Patients/residents of hospitals, long-term care facilities, correctional facilities

***In-vitro* interferon- γ release assays (IGRAs)**

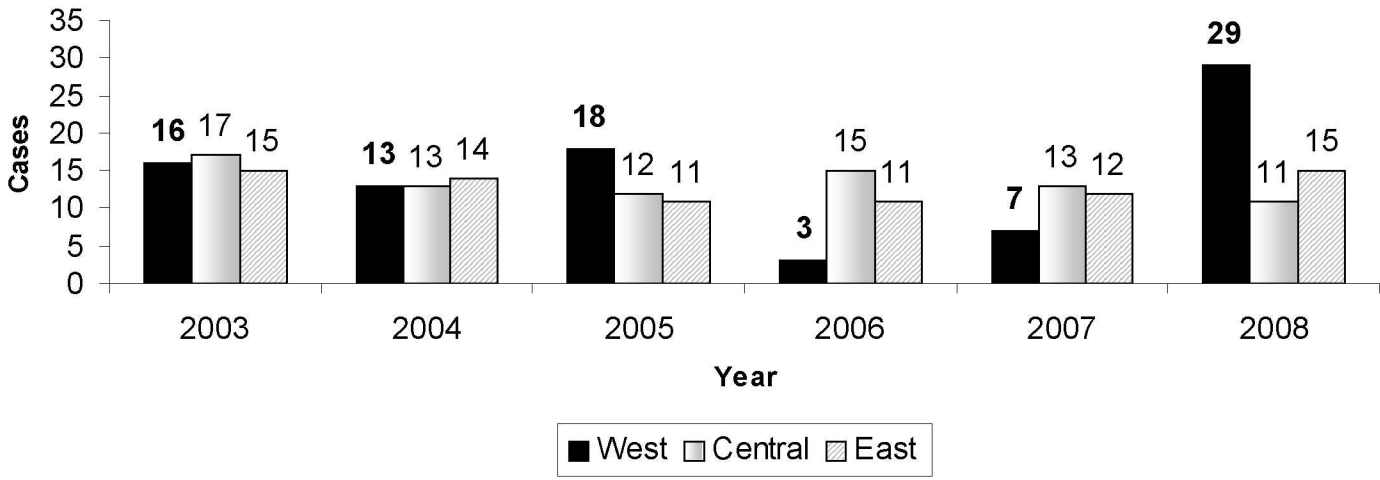
IGRAs are blood tests for TB infection. They measure interferon- γ produced in response to the incubation of the blood with antigens derived from a region of the genome of *Mycobacterium tuberculosis* that is not present in most non-tuberculous mycobacteria (NTM), including the BCG strain of *M. bovis*. A positive IGRA is therefore more specific for TB infection than a positive TST.

There are now two IGRAs approved by the FDA: QuantiFERON Gold In Tube (QFT), and T-SPOT TB, a new elispot assay. Our Public Health Lab uses the QFT, which is available for selected patients at CCRMC and Clinics.

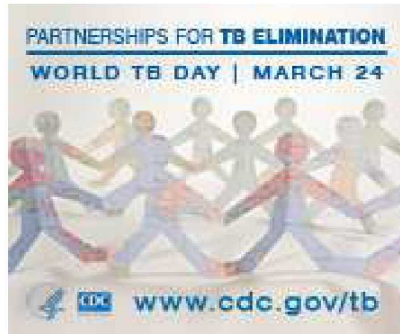
We recommend that persons who have had a BCG vaccination, including virtually everyone born outside the US, receive an IGRA test, if available, rather than a TST. The CDC plans to issue revised guidelines for the use of IGRA tests in the near future.

For further information about TB,
call the CCHS TB Program at **1-925-313-6740**,
or visit our web site www.cchealth.org/topics/tb

Foreign Born Cases by Contra Costa County Region, 2003-2008



TB Symptoms: Cough for ≥ 3 weeks - Fever - Night sweats - Unintended weight loss



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