



# Philadelphia TB Newsletter

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## TB Control Program

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The Philadelphia TB Newsletter is a quarterly publication that is intended to be a resource for clinicians, infection control personnel, and laboratories who diagnose, treat, and/or report tuberculosis (TB) in Philadelphia. It will provide treatment updates and recommendations, review local and national TB epidemiology, and present case studies.

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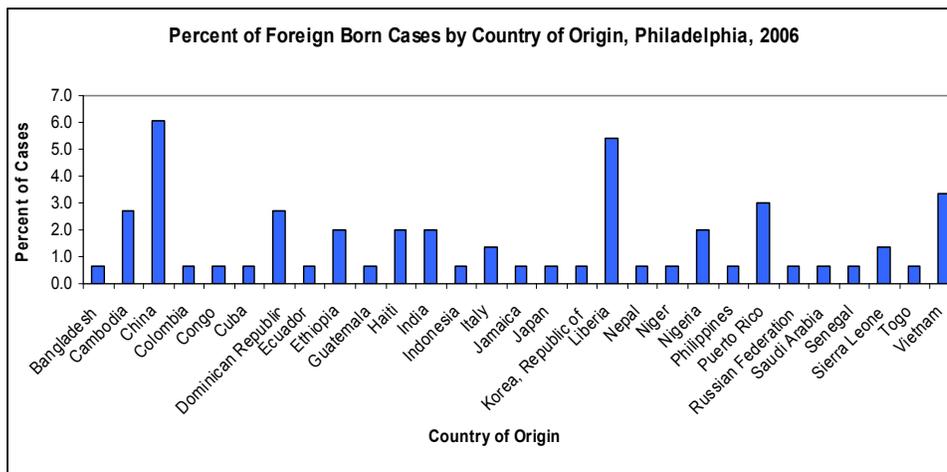
## Cultural Diversity: Healthcare Challenges

By Carol Hagan, DPA, RN  
TB Program Nurse

Today, the population in the U. S. is more diverse than ever. Increasing diversity brings increasing challenges on the part of health care providers as well as health care professionals. The need to ensure provision and delivery of culturally appropriate and sensitive patient care, among many other patient care issues, becomes imperative.

culturally diverse staff members who are able to communicate in Spanish, Russian, French, Chinese, Tagalog and some of the major African dialects. Educational materials for patients are written and translated in different languages as well.

The TB Control Program also recognizes the importance of cultural competence



As depicted in the graph above, in 2006, foreign born TB cases originated from all over the world, with the highest percentage coming from China, Liberia, Vietnam, and Puerto Rico.

The TB Control Program of Philadelphia is committed to meeting and exceeding the needs brought about by cultural diversity. Language, one of the major barriers in providing and delivering culturally appropriate and sensitive patient care, is effectively managed during clinic patient encounters and directly observed therapy (DOT) by utilizing telephonic services of a language line. Furthermore, the Program has

preparation and training of staff in meeting the demands of its culturally diverse patients. Just recently, the Program's CDC Advisor, Daniel Dohony, MPH, and field staff, Maria Gonzalez and Encarnacion Figueroa, discussed and presented some of the culture and health care practices of the Chinese, Vietnamese, and Filipinos. Plans for group presentations on cultural and health care practices of African Americans and Hispanics are part of this year's program activities as well.

*Movies with TB  
in the Storyline:*

**The Constant Gardener  
(2005)**

**Moulin Rouge  
(2002)**

**Gangs of New York  
(2002)**

**Batman Forever  
(1995)**

**Tombstone  
(1993)**

**The Others  
(2001)**

**Finding Neverland  
(2004)**

**The Alamo  
(2002)**

**Angelas Ashes  
(2000)**

## Discharging Patients with Suspected or Confirmed TB Disease

By Daniel Dohony, MPH  
CDC Public Health Advisor

### General Principles for Estimating the Infectiousness of a TB Patient

Transmission of *M. tuberculosis* is most likely to result from exposure to persons who have 1) unsuspected pulmonary TB disease and are not receiving anti-tuberculosis treatment, 2) TB disease and are receiving inadequate therapy, or 3) TB disease and are early in the course of effective therapy. Administration of effective anti-tuberculosis treatment has been associated with decreased infectiousness among persons who have TB disease.

Effective treatment reduces coughing, the amount of sputum produced, and the viability and number of organisms in the sputum. However, the duration of therapy required to decrease or eliminate infectiousness varies. Certain TB patients are never infectious, whereas those with unrecognized or inadequately treated drug-resistant TB disease might remain infectious for weeks or months.

The infectiousness of patients with TB correlates with the number of organisms they expel into the air. The number of organisms expelled are related to the following factors: 1) presence of cough lasting >3 weeks; 2) cavitation on chest radiograph; 3) positive AFB sputum smear result; 4) respiratory tract disease with involvement of the lung or airways, including larynx; 5) failure to cover the mouth and nose when coughing; 6) lack of incorrect or short duration of anti-tuberculosis treatment; or 7) undergoing cough-inducing or aerosol-generating procedures (e.g., sputum induction,

bronchoscopy, and airway suction). Patients who have suspected or confirmed TB disease and who are not on anti-tuberculosis treatment usually should be considered infectious if the following clinical characteristics are present:

- cough;
- cavitation on chest radiograph;
- positive AFB sputum smear result;
- respiratory tract disease with involvement of the lung or airways, including larynx;
- failure to cover the mouth and nose when coughing; and
- undergoing cough-inducing or aerosol-generating procedures (e.g., sputum induction, bronchoscopy, and airway suction).

If a patient with one or more of these characteristics is on standard multidrug therapy with documented clinical improvement usually in connection with smear conversion over multiple weeks, the risk for infectiousness is reduced.

### Guidelines for Discharging Patients with Suspected or Confirmed TB Disease

If a hospitalized patient who has suspected or confirmed TB disease is deemed medically stable (including patients with positive AFB sputum smear results indicating pulmonary TB disease), the patient can be discharged from the hospital before converting the positive AFB sputum smear results to negative AFB sputum smear results, if the following parameters have been met:

- a specific plan exists for follow-up care with the local TB Control Pro-

gram;

- the patient has been started on a standard multidrug antituberculosis treatment regimen, and DOT has been arranged;
- no infants and children aged <4 years or persons with immunocompromising conditions are present in the household;
- all immunocompetent household members have been previously exposed to the patient; and
- the patient is willing to not travel outside of the home except for health-care-associated visits until the patient has negative sputum smear results.

Patients with suspected or confirmed infectious TB

disease should not be released to group settings or homes in which the patient can expose others who are at high risk for progressing to TB disease if infected (e.g., persons infected with HIV or infants and children aged <4 years). Coordination with the local TB Control Program is indicated in such circumstances.

**Please call the Philadelphia TB Control Program to coordinate follow-up care at 215-685-6744.**

**Excerpt from Centers for Disease Control and Prevention. Guidelines for Preventing the Transmission of *Mycobacterium tuberculosis* in Health-Care Settings, 2005. MMWR 2005;54(No. RR-17):pp. 42-44.**

## Extensively Drug Resistant Tuberculosis (XDR-TB)

By Nikki Pritchett, MPH  
TB Program Epidemiologist

Extensively Drug Resistant Tuberculosis (also referred to as Extreme Drug Resistant TB and XDR-TB) is defined as cases of TB disease in persons whose *Mycobacterium tuberculosis* isolates are resistant to isoniazid and rifampin (MDR-TB) plus resistant to any fluoroquinolone and at least one of the three injectable second-line drugs (i.e., amikacin, kanamycin, and capreomycin). Resistance to anti-TB drugs occurs primarily due to poorly managed TB care. Problems include incorrect drug prescribing practices by providers, poor quality drugs or erratic supply of drugs, and patient non-adherence. XDR-TB is of particular concern among persons with HIV infection. These persons are more likely to develop TB disease once they become infected with *Mycobacterium tuberculosis* and have a higher risk of death.

XDR-TB has emerged worldwide as a threat to public health and TB control, raising concerns of a future epidemic of virtually untreatable TB. A recent survey conducted by the World Health Organization (WHO) and the Centers for Disease Control (CDC) on data from 2000-2004 found that XDR-TB has been identified in all regions of the world, but is most prevalent in the countries of the former Soviet Union and in Asia. In the United

States, 4% of multi-drug resistant TB cases met the criteria for XDR-TB. Additionally, XDR-TB patients were 64% more likely to die during treatment than patients with MDR-TB. No cases of XDR-TB have been reported in Philadelphia. However, during the past 8 months, 4 cases of MDR-TB were reported in Philadelphia compared to only one case being reported over the past three years from 2003-2005.

Recommendations outlined by the WHO for the management of XDR-TB include:

- strengthen basic TB care to prevent the emergence of drug-resistance
- ensure prompt diagnosis and treatment of drug resistant cases to cure existing cases and prevent further transmission
- increase collaboration between HIV and TB control programs to provide necessary prevention and care to co-infected patients
- increase investment in laboratory infrastructures to enable better detection and management of resistant cases.

CDC is collaborating with health agencies to provide leadership, technical support, and capacity building to ensure proper action is taken to limit the development and spread of XDR-TB.



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**Tuberculosis Control Program**

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**Philadelphia, PA 19146**

**Phone: 215-685-6873 or 215-685-6744**

**Fax: 215-685-6477**

## Reporting

All TB cases and suspected cases must be reported to the TB Control Program within 24 hours of identification. To report a case or suspect, call 215-685-6873. Reports can also be faxed to 215-685-6477 or submitted through the Pennsylvania National Electronic Disease Surveillance System (PA-NEDSS). Reporting information is available on the TB Control website at [www.phila.gov/health](http://www.phila.gov/health) or can be obtained by calling 215-685-6873.

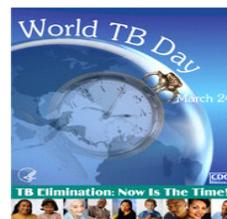
## Philadelphia Department of Public Health World TB Day Activities

In appreciation of our many community partners who assist our efforts to control Tuberculosis, the Philadelphia Department of Public Health's (PDPH) Tuberculosis Control Program cordially invites you to our World TB Day 2007 update. This event will be held on Thursday, March 22, 2007 in the PDPH Auditorium at 500 S. Broad Street beginning with a continental breakfast at 8:30 am. Breakfast will be followed by a series of short updates on reported TB trends in Philadelphia and the US, the emergence of Drug Resistant TB worldwide and in Philadelphia, Pediatric TB, and information on where to get the latest TB information and training. These sessions will end by 11:00 am.

CME/CEU Credits will be offered and refreshments will be served.

The theme of World TB Day 2007 is **"TB Anywhere is TB Everywhere"** and the importance of Community involvement in TB Control will be recognized throughout the session. Certificates of Appreciation will be presented to Community Partners and TB Control Staff who have made outstanding contributions over the last year to TB Control in Philadelphia.

Please join us as we mark World TB Day 2007. RSVP to 215-685-6873 or e-mail [nikki.pritchette@phila.gov](mailto:nikki.pritchette@phila.gov) at the PDPH Tuberculosis Control Program by Friday March 16, 2007.



### Agenda

- 8:30 Continental Breakfast
- 9:15 Welcome and Introductions
- 9:30 Reported TB trends in Philadelphia and the US
- 9:45 Emergence of XDR worldwide and MDR in Philadelphia
- 10:00 Pediatric TB Update
- 10:15 Overview of the N.E. Regional Training and Medical Consultation Center
- 10:30 Certificates of Appreciation to Community Partners and TB Control Staff
- 10:45 Comments, Q&A, Wrap-up, and Evaluation