



Philadelphia TB Newsletter

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WORLD TB DAY EDITION

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Tuberculosis Control Program
500 S. Broad Street, 2nd Floor
Philadelphia, PA 19146

Michael Nutter
Mayor

Donald Schwarz MD, MPH
Deputy Mayor, Health and
Opportunity

Nan Fyler
Chief of Staff

Caroline Johnson, MD
Director of Disease Control

David Schlossberg, MD, FACP
TB Program Medical Director

Barry Dickman, MPA
TB Program Director

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 provides treatment updates and recommendations, reviews local and national TB epidemiology, and presents case studies.

Contributing to this issue:

Daniel Dohony, MPH
CDC Senior Public Health
Advisor

David Schlossberg, MD
TB Program Medical Director

Christina Dogbey, MPH
TB Epidemiologist
Editor

World TB Day 2011

Christina Dogbey, MPH
Epidemiologist, Tuberculosis Control Program

World TB Day is held annually on March 24th in order to raise awareness about the threat of TB and the measures needed to control the disease. World TB Day also commemorates the discovery of the TB bacillus by Dr. Robert Koch in March 1882. At that time, TB killed one in seven people in the United States and Europe. Although this disease can be cured and controlled, TB still remains the second leading cause of death among infectious diseases in the world.

According to the World Health Organization (WHO), the global healthcare community continues to make significant progress toward eliminating tuberculosis as a public health threat. Yet, despite these efforts, each year TB continues to cause nine million new cases worldwide. In 2008, there were an estimated 9.4 million new cases of TB, 11.1 million prevalent cases of TB, 1.3 million deaths from TB among HIV-negative people and an additional 530,000 TB deaths among HIV-positive people (WHO, 2010). These alarming rates are partially attributed to the emergence of drug-resistant strains of *M. tuberculosis*.

World TB Day provides an opportunity to communicate TB-related problems and solutions and to support local TB control efforts. The Philadelphia Department of

Public Health and our partners are committed to controlling TB by identifying active TB

Cases in the city and assuring that these persons complete a course of curative treatment by evaluating persons in close contact to those with active TB to assure they are not infected and, if infected, by offering preventative treatment, and by screening those at increased risk for exposure to TB. In the United States, the theme for World TB Day is **“TB Elimination: Together We Can!”**

To commemorate World TB Day 2010, the Tuberculosis Control Program is issuing the annual World TB Day edition of the Philadelphia TB Control Newsletter. Included in this issue are surveillance updates on TB in Philadelphia, information about requirements for reporting suspected and confirmed TB cases, and more. For more information on the Philadelphia TB Control Program, please visit our website at: <http://www.phila.gov/health/DiseaseControl/TB.html>

For more information about World TB Day, please visit the World Health Organization at: www.worldtbday.org

TB Elimination



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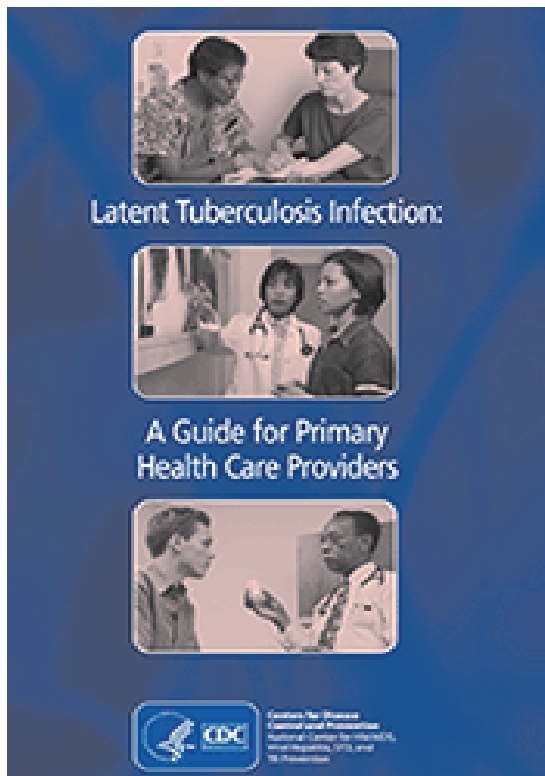
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Ten Killer Facts about TB

- Every 20 seconds, someone in the world dies of TB.
- Two billion people, or about one-third of the world's population, are infected with the bacteria that causes TB.
- About one out of every 10 of those people will develop active TB.-- If left untreated, a person sick with TB in their lungs can infect 10 to 15 people a year.
- TB is the leading infectious killer of people living with HIV/AIDs in the world.
- Some 9.2 million new cases of tuberculosis occurred worldwide in 2006, up nearly 40 percent from 1990, due mostly to population growth.
- India had the highest number of new absolute cases, followed by China, Indonesia, South Africa and Nigeria.
- Just 22 countries account for 80 percent of the worldwide cases of TB. The disease is most prevalent in developing countries.
- Multi drug-resistant TB, a form of TB that does not respond to the usual drugs and must be treated with special drugs, has proliferated in recent years and causes about 130,000 deaths annually.
- An even more extreme form of drug resistant TB, known as XDR-TB, is virtually incurable.

Source: World Health Organization

From the Centers for Disease Control and Prevention: Division of TB Elimination



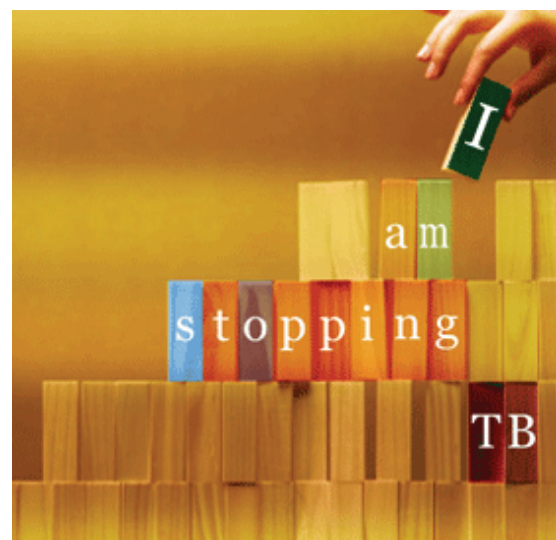
Latent Tuberculosis Infection: A Guide for Primary Health Care Providers (Updated: 2010)

Latent tuberculosis infection (LTBI) is the presence of *Mycobacterium tuberculosis* in the body without signs and symptoms, or radiographic or bacteriologic evidence of tuberculosis (TB) disease. The CDC recently updated their June, 2000 Guidelines for testing and treating LTBI to include recommendations for the use of interferon-gamma release assays (IGRAs). This guide is intended for primary care providers who care for individuals and popula-

tions who may be at risk for infection with *Mycobacterium tuberculosis*.

Approximately one-third of the world's population is infected with *M. tuberculosis*. In the United States, an estimated 9–14 million people have LTBI. Without treatment, approximately 5–10% of persons with LTBI will progress to TB disease at some point in their lifetime. Identifying and treating those at highest risk for TB disease will help move toward elimination of the disease. Primary care providers play a key role in achieving the goal of TB elimination because of their access to high-risk populations.

The updated guidance can be found and downloaded at the following website:
<http://www.cdc.gov/tb/publications/LTBI/default.htm>



Tuberculosis Treatment: Frequently Asked Questions

David Schlossberg, MD
Medical Director, Tuberculosis Control Program

Question: When can antiretroviral therapy be started in treatment-naïve HIV-positive patients being treated for tuberculosis?

Answer: In view of clinical trials showing clinical and survival benefits of early ART during the treatment of TB, the following recommendations have been made:

1. The DHHS Panel (<http://aidsinfo.nih.gov>)
 - a. For patients with CD4 count <200/mm³, start ART within 2-4 weeks of TB Rx
 - b. For patients with CD4 count 200-500/mm³, start ART within 2-4 weeks, or at least by 8 weeks
 - c. For patients with CD4 count >500/mm³, start ART within 8 weeks
2. The World Health Organization advises treating all patients “as soon as possible” (within 8 weeks).
3. Some observers recommend deferring therapy for 2 months in patients with a high risk of Immune Reconstitution Inflammatory Syndrome (IRIS), e.g. those with CNS or pericardial tuberculosis.

Question: Can the Immune Reconstitution Inflammatory Syndrome (IRIS) be seen in HIV-negative patients?

Answer: the IRIS syndrome was known long before HIV; it was often called a paradoxical response. Other settings in which IRIS may be encountered are:

- Immunocompetent patients – during anti-TB Rx, especially of lymphadenopathic TB
- Transplantation – when immunosuppressive Rx is tapered
- The post-partum state
- During rapid recovery from neutropenia after administration of colony-stimulating growth factor
- After Rx with TNF-alpha antagonists

Question: Can patients be discharged from the hospital while they are still contagious?

Answer: Yes, depending on their home situation. They may be discharged to Home Isolation if there are no household members who are highly susceptible (children, immunosuppressed patients), and if the household members have already had contact with them and have begun evaluation for TB infection. Patients on Home Isolation may not leave home except to visit their physician (in which case they should wear a mask) and may have no visitors. They should observe hygienic precautions by coughing into tissues which are then discarded, and the house should be optimally ventilated. **Please contact the DOH (215-685-6836) for further guidance on this issue**



Philadelphia Department of Public Health

Tuberculosis Control Program

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Philadelphia, PA 19146

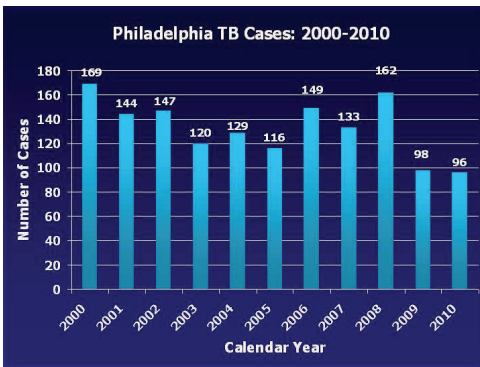
Phone: 215-685-6873 or 215-685-6744

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 or can be obtained by calling 215-685-6873.

Tuberculosis Surveillance Update: 2010

Christina Dogbey, MPH
Epidemiologist, Tuberculosis Control Program



In 2010, the Philadelphia TB Control Program reported 96 confirmed cases of TB. This represents a 3% decrease from the previous year when 98 new cases of TB were reported.

Philadelphia TB cases represent 79% (up from 62% in 2009) of the TB cases reported in the Southeast Pennsylvania Health District and 68% of the cases in the Commonwealth of Pennsylvania for the period.

The majority of cases were male (65%) and the bulk of cases (38%) between the ages of 45-65 years. The number of cases among children less than 5 years of age remained consistent at 2 cases (0.2%) in 2010.

The percent of cases reported among African American patients increased from 49% to 51% while the percent among Hispanic patients decreased from 13.3% in 2009 to 8.3% this year. While the percent of cases among Asians increased 28% to 38%, the percentage of TB cases among white patients decreased by half from 22.4% in 2009 to 11.5% this year.

Once again, more than half of Philadelphia TB

cases (58%) were foreign born, continuing the trend we have seen in the data on Philadelphia patients starting in 2007. This trend closely reflects the national data, in that as U.S. born cases steadily decline, foreign born cases remain constant, but are beginning to consistently exceed the number of U.S. born cases. The 56 foreign-born TB cases reported last year in Philadelphia originated from 23 different countries and all 6 World Health Organization (WHO) regions. The Western Pacific Region (which includes Cambodia, China, Lao PDR, the Philippines and Vietnam) have accounted for nearly 38% of the foreign-born cases since 2005.

Eleven and a half percent of our cases were resistant to at least one anti-tuberculosis agent, including Philadelphia's first counted case of Extensively Drug Resistant Tuberculosis (XDR-TB), defined as resistance to Isoniazid, Rifampin, fluoroquinolones, and at least one of the three injectable anti-tuberculosis agents. The World Health Organization has identified increasing drug resistance as a disturbing global trend in managing and treating TB patients. Drug resistance emphasizes the need for timely reporting of cases and suspects, effective case management, treatment of latent TB infection and innovation for the development of new tuberculosis drugs in the near future.

