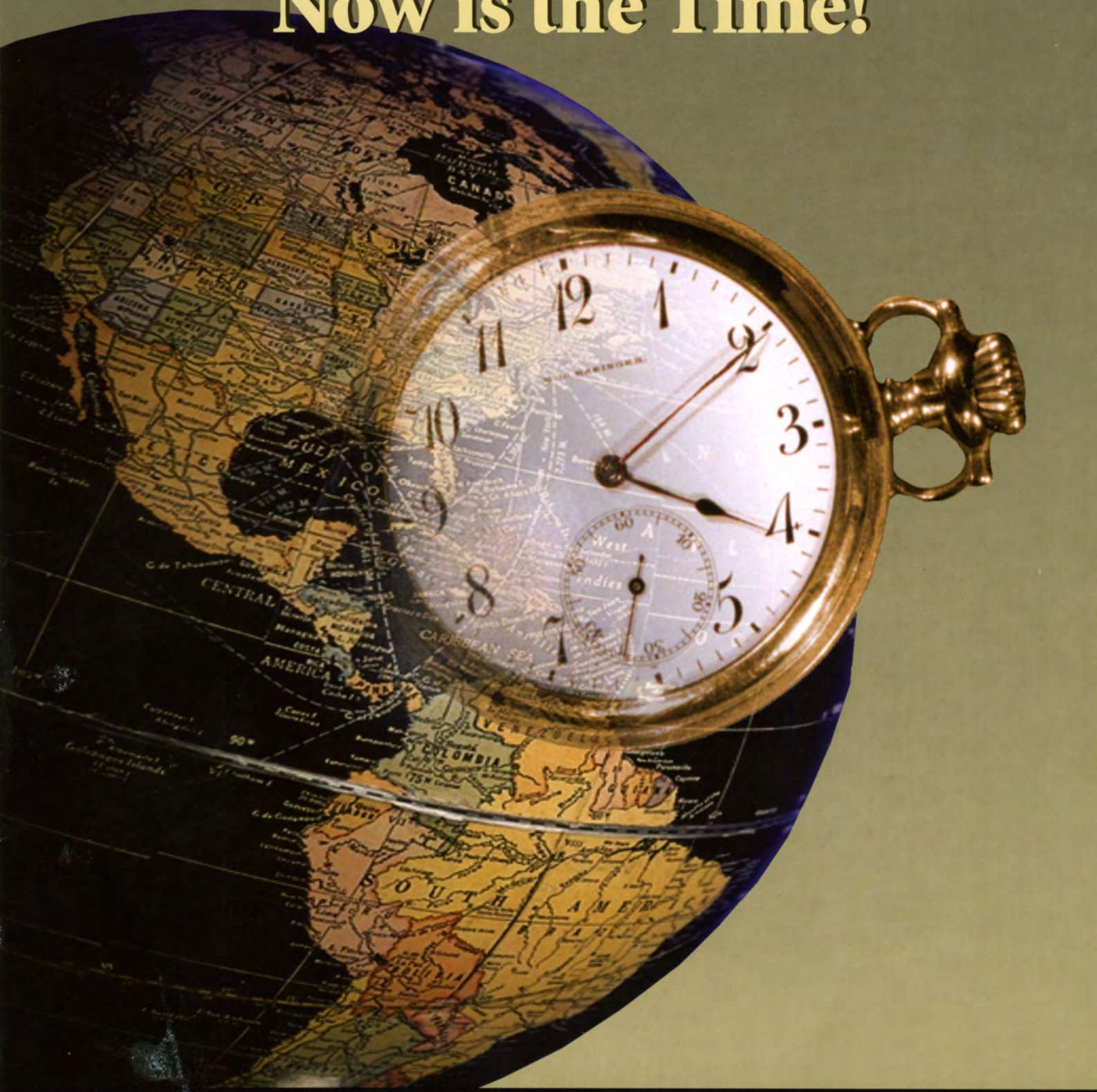
TB Elimination: Now is the Time!



TB Elimination: Now is the Time!

Many people think that tuberculosis (TB) is a disease of the past — an illness that no longer threatens us today. One reason for this belief is that, in the United States, we are currently experiencing a decline in TB. We are at an all-time low in the number of persons diagnosed with active TB disease.

That very success makes us vulnerable to complacency and neglect. But it also gives us an opportunity to eliminate TB in this country. Now is the time to take decisive actions, beyond our current efforts, that will ensure that we reach this attainable goal.

The Price of Neglect

In the 1970s and early 1980s, the nation let its guard down and TB control efforts were neglected. The country became complacent about TB, and many states and cities redirected TB prevention and control funds to other programs.

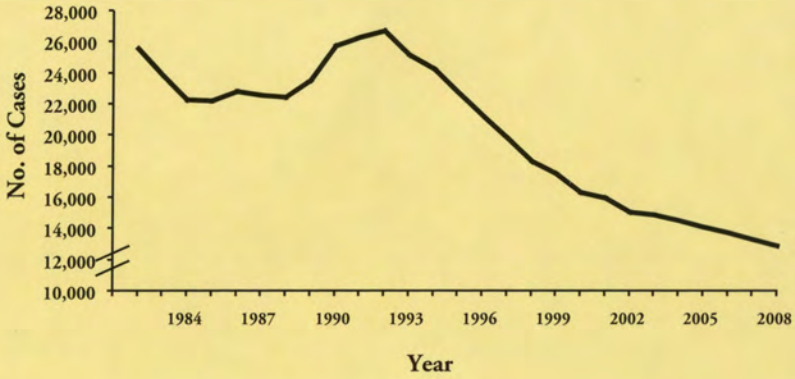
Consequently, the trend toward elimination was reversed and the nation experienced a resurgence of TB, with a 20% increase in TB cases reported between 1985 and 1992. Many of these were persons with difficult-to-treat drug-resistant TB.

Back on Track Toward TB Elimination

The nation's mobilization of additional resources in the 1990s has paid off:

- **We are now at an all-time low in reported TB cases, with 16 consecutive years of decline.**
- **In 2008, there were 12,904 persons with TB disease reported in the United States, declining from 15,056 cases in 2002.**
- **However, compared to the 3.2% decline in the number of cases in 2007, the decline in 2008 was smaller at 2.9%.**

Reported TB Cases United States, 1982-2008



What is TB?

TB is caused by bacteria called *Mycobacterium tuberculosis.* When a person with active TB disease of the lung or throat coughs or sneezes, tiny particles containing *M. tuberculosis* may be expelled into the air. If another person inhales air that contains these particles, the bacteria may enter the lungs causing infection.

However, not everyone infected with TB bacteria becomes sick. As a result, two TB-related conditions can exist: latent TB infection and active TB disease.

A Person with Latent TB Infection	A Person with Active TB Disease
• Usually has a skin test or blood test result indicating TB infection	• Usually has a skin test or blood test result indicating TB infection
• Has a normal chest x-ray and a negative sputum test	• May have an abnormal chest x-ray or positive sputum smear or culture
• Has TB bacteria in his/her body that are alive, but inactive	• Has active TB bacteria in his/her body
• Does not feel sick	• Feels sick and may have symptoms such as coughing, fever, and weight loss
• Cannot spread TB bacteria to others	• May spread TB bacteria to others
• Should consider treatment for latent TB infection to prevent active TB disease	• Needs treatment for active TB disease

A Global Perspective on Tuberculosis

TB is one of the world's deadliest diseases:

One third of the world's population are infected with TB.

Each year, nearly 9 million people around the world become sick with TB.

Each year, there are almost 2 million TB-related deaths worldwide.

TB is the leading killer of people who are HIV infected.

What You Can Do to Help

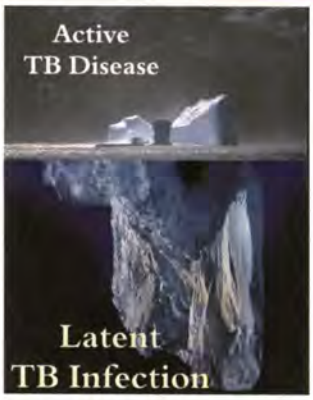
- Find out more about TB services in your area.
- Educate your community about TB.
- Ensure that efforts to eliminate TB continue.

TB Continues to Lurk Beneath the Surface

There are an estimated 9 million to 14 million persons in the United States infected with *M. tuberculosis*.

On average, without treatment about 5-10% of infected individuals will develop active TB disease at some point in their lives.

Some underlying conditions increase the risk that latent TB infection will progress to active TB disease — for example, the risk is higher in persons with HIV infection or diabetes.



The Threat of Drug-Resistant TB

Drug resistance poses a serious threat to our ability to treat and control TB, both in the United States and abroad. Drug-resistant TB is extremely difficult and costly to treat. Persons with drug-resistant TB are more likely to die of TB than persons with drug-susceptible TB.

Multidrug-Resistant Tuberculosis (MDR TB)

- **MDR TB is active TB disease caused by bacteria that are resistant to the two drugs most commonly used for treatment (isoniazid and rifampin).**
- **Forty-eight states and the District of Columbia have reported diagnosing and caring for persons with MDR TB.**
- **It has been estimated that one MDR TB case can cost as much as $1.5 million (direct medical expenses and productivity losses).**

Extensively Drug-Resistant Tuberculosis (XDR TB)

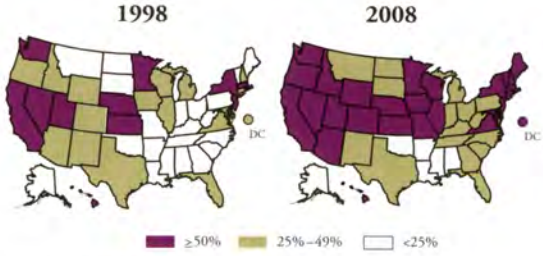
- **There has been a global emergence of XDR TB, a rare type of MDR TB.**
- **XDR TB is resistant to almost all drugs used to treat TB, raising concerns of an epidemic of virtually untreatable TB.**
- **XDR TB has been found in every region of the world, including the United States.**
- **XDR TB is much more expensive to treat (two times that of MDR TB); there are also more side effects from the medications, and the person is more likely to die.**

The Global Challenge

In 2008, foreign-born persons accounted for 59% of all TB cases diagnosed in the United States, as compared to 42% of all TB cases in 1998.

The number of states with at least 50% of TB cases occurring among foreign-born persons has increased from 12 states in 1998 to 29 states and the District of Columbia in 2008.

Percentage of TB Cases Among Foreign-born Persons, United States*



*Updated as of May 20, 2009.

HIV and TB Coinfection

Because HIV weakens the immune system, persons with both latent TB infection and HIV infection have a very high risk of progressing to active TB disease.

It is crucial that persons with both latent TB infection and HIV infection receive treatment, coordinated in consultation with experts, for both of these conditions.

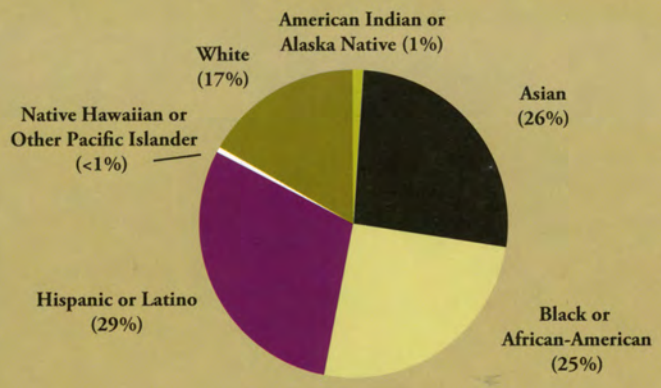
The Burden of TB in Minorities

Disparities in TB persist among members of racial and ethnic minority populations. In 2008, the majority (81%) of all reported TB cases in the United States occurred in racial and ethnic minorities.

Several factors likely contribute to the burden of TB in minorities:

- **Among people from countries where TB is common, TB disease may result from an infection acquired in their country of origin.**
- **Among racial and ethnic minorities, unequal distribution of TB risk factors, particularly HIV infection, can also increase the chance of developing the disease.**

Reported TB Cases by Race/Ethnicity* United States, 2008



*All races are non-Hispanic. Persons reporting two or more races accounted for less than 1% of all cases.

What is Needed to Eliminate TB in the United States

Maintaining Control: By strengthening current TB control, treatment, and prevention systems, we ensure the ability to diagnose and provide proper treatment to people with active TB disease. This will prevent spread to others; as well as prevent the emergence of MDR TB and XDR TB.

Accelerating the Decline: By finding better methods of identifying and treating latent TB infection and improving strategies for reaching at-risk populations, we will speed our progress toward elimination.

Developing New Tools for Diagnosis, Treatment, and Prevention: Through research to develop more effective methods of testing for latent TB infection, better drugs to treat latent TB infection, and an effective TB vaccine, we can find vital ways to stop the progression from latent infection to contagious disease.

Engaging in Global TB Prevention and Control: In providing leadership, contributing technical support, and forming international partnerships, we improve global health. Worldwide control of TB is in the nation's best interest.

Mobilizing Support for TB Elimination: By reaching leaders of high-risk groups, we can work together to eliminate a disease that burdens their communities.

Monitoring Progress: By assessing the impact of our elimination efforts, we can continually monitor our progress and identify and address any lapses in our efforts.

Contact Information

Centers for Disease Control and Prevention
Division of Tuberculosis Elimination Website: www.cdc.gov/tb

State TB Control Offices
Website: www.cdc.gov/tb/links/tboffices.htm

Resources

TB Education and Training Resources Website
Website: www.findtbresources.org

TB-Related News and Journal Items Weekly Update
Website: www.cdcnpin.org/lyris/ui/listservs.aspx#journal

World Health Organization
The World Health Organization is the United Nations specialized agency for health.

- **Stop TB Department**
  Website: www.who.int/tb/en/
- **Extensively Drug-Resistant TB (XDR TB)**
  Website: www.who.int/tb/challenges/en/

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