Tuberculosis

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Division of Tuberculosis Elimination
AND IN THE UNLIKELY EVENT OF A PASSENGER WITH TUBERCULOSIS, SURGICAL MASKS WILL DROP FROM THE OVERHEAD COMPARTMENTS...
TB-infected traveler quarantined

U.S. health officials said Tuesday that they have issued a rare federal order of isolation to detain a Georgia man diagnosed with a highly drug-resistant form of tuberculosis after he flew on international flights to Paris and Montreal, potentially infecting fellow travelers.

The unidentified patient had been undergoing TB treatment at an Atlanta clinic. Doctors told him not to travel, but he chose to do so for unspecified "compelling reasons," said Julie Gerberding, director of the Centers for Disease Control and Prevention (CDC). He may not have known when he left the...
Presentation Outline

– An overview of tuberculosis (TB)
– Epidemiology of TB Globally and in the United States
– Epidemiology of TB the African-American community
– Overview of Division of Tuberculosis Elimination sponsored activities to address TB in the African-American community
– Overview of additional resources to address TB
Overview of Tuberculosis
Tuberculosis

- Caused by bacteria *Mycobacterium tuberculosis*
- Usually attacks the lungs, but can affect any part of the body
- TB disease can be fatal
- Once the leading cause of death in the United States
When a person with infectious TB disease coughs, sneezes, speaks, or sings, tiny particles containing *M. tuberculosis* (droplet nuclei) may be expelled into the air.

If another person inhales the droplet nuclei, transmission may occur.
Tuberculosis Transmission

• Expelled when person with infectious TB coughs, sneezes, speaks, or sings
• Close contacts at highest risk of becoming infected
• Transmission occurs from person with infectious TB disease (not latent TB infection)
<table>
<thead>
<tr>
<th>Active TB</th>
<th>Latent TB Infection</th>
</tr>
</thead>
<tbody>
<tr>
<td>• TB germs in the body</td>
<td>• TB germs in the body, but latent (dormant) state</td>
</tr>
<tr>
<td>• May be infectious (before treatment)</td>
<td>• NOT infectious</td>
</tr>
<tr>
<td>• Symptoms of TB (e.g., cough)</td>
<td>• No symptoms</td>
</tr>
<tr>
<td>• An active “case” of TB</td>
<td>• Not a “case” of TB</td>
</tr>
<tr>
<td>• Treatment needed to cure disease</td>
<td>• Treatment may be provided to prevent transition from TB infection to TB disease</td>
</tr>
</tbody>
</table>
Symptoms of TB

- Productive, prolonged cough
- Fever
- Chest pain
- Hemoptysis
- Chills
- Night sweats
- Weight loss
Background Epidemiology
Global TB

• One-third of the world’s population is infected with TB
• Someone in the world is newly infected with TB bacilli every second
• Each year, 9 million people around the world become sick with TB
• In 2005, there were 1.6 million TB-related deaths worldwide from this curable disease
• TB is the leading killer of people who are HIV infected
On average an untreated person with infectious TB infects between 10 and 15 people each year.
Reported TB Cases* United States, 1982–2006

*Provisional Data as of March 23, 2007
TB Case Rates,* United States, 2005

*Cases per 100,000.
Number of TB Cases in U.S.-born vs. Foreign-born Persons United States, 1993–2005*

*Updated as of March 29, 2006.
Trends in TB Cases in Foreign-born Persons, United States, 1986–2005*

*Updated as of March 29, 2006.
Percentage of TB Cases Among Foreign-born Persons, United States*

*Updated as of March 29, 2006.
Countries of Birth of Foreign-born Persons Reported with TB United States, 2005

Mexico (25%)
Philippines (11%)
Viet Nam (8%)
India (7%)
China (5%)
Haiti (3%)
Guatemala (3%)
Other Countries (38%)
Reported TB Cases by Age Group, United States, 2005

- 25–44 yrs (34%)
- 45–64 yrs (29%)
- >65 yrs (20%)
- 15–24 yrs (11%)
- <15 yrs (6%)
- ≥65 yrs (20%)
Reported TB Cases by Race/Ethnicity*
United States, 2005

- Hispanic or Latino (29%)
- Black or African-American (28%)
- Asian (23%)
- White (18%)
- Native Hawaiian or Other Pacific Islander (<1%)
- American Indian or Alaska Native (1%)

*All races are non-Hispanic. Persons reporting two or more races accounted for less than 1% of all cases.
Reported TB Cases by Origin and Race/Ethnicity,* United States, 2005

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

**American Indian or Alaska Native and Native Hawaiian or Other Pacific Islander accounted for less than 1% of foreign-born cases and are not shown.

U.S.-born
- White (34%)
- Hispanic or Latino (15%)
- Native Hawaiian/Other Pacific Islander (<1%)
- American Indian or Alaska Native (2%)
- Asian (2%)

Foreign-born**
- White (6%)
- Hispanic or Latino (40%)
- Asian (40%)
- Black or African-American (14%)
Primary MDR TB
United States, 1993–2005*

*Updated as of March 29, 2006.

Note: Based on initial isolates from persons with no prior history of TB. MDR TB defined as resistance to at least isoniazid and rifampin.
Completion of TB Therapy United States, 1993–2003*

- *Updated as of March 29, 2006.

- **Healthy People 2010 target: 90% completed in 1 yr or less.

Note: Persons with initial isolate resistant to rifampin and children under 15 years old with meningeal, bone or joint, or miliary disease excluded.
TB in the African-American Community

Despite substantial declines in tuberculosis (TB) in the United States, in 2002, non-Hispanic blacks continued to have TB at rates eight times greater than non-Hispanic whites (1). To better understand racial disparities in TB, CDC analyzed surveillance data collected during 1991--2002, comparing TB cases in seven southeastern states where TB rates were higher than the national average with TB cases in the rest of the United States. This report summarizes the results of that analysis, which indicated that TB rates among non-Hispanic blacks in the seven southeastern states continued to exceed those among non-Hispanic whites but were similar among non-Hispanic blacks in the rest of the country. In addition, non-Hispanic blacks with TB in the southeastern states were more likely than non-Hispanic whites to report certain risk factors, suggesting differences in socioeconomic status might create barriers to diagnosis and treatment. The continued disparity in TB cases underscores the need for effective, targeted strategies to prevent TB in non-Hispanic blacks.
TB in African Americans

• While overall rates continue to decline in the U.S., TB continues to disproportionately affect racial and ethnic minorities

• In 2005
  – 82% of all reported TB cases occurred in racial and ethnic minorities
  – 45% of TB cases reported in U.S.-born persons were among African Americans
  – The TB case rate for U.S.-born blacks (8.9/100,000) is more than 8 times higher than the rate in U.S.-born whites (1.1/100,000)
### Characteristics Among Selected U.S.-born Persons with TB, 2004

<table>
<thead>
<tr>
<th></th>
<th>Black*</th>
<th>White*</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. cases</td>
<td>2,675</td>
<td>2,209</td>
</tr>
<tr>
<td>Male</td>
<td>70%</td>
<td>67%</td>
</tr>
<tr>
<td>Median age (years)</td>
<td>46</td>
<td>57</td>
</tr>
</tbody>
</table>

*Non-Hispanic
Completion of TB Therapy $\leq$ 1 year
United States,* 1993–2003

*Timely completion within 12 months
**U.S.-born non-Hispanic
TB/HIV Co-infection

- HIV is a significant risk factor for progression from TB infection to TB disease
- TB disease is an AIDS defining illness
- Knowledge of HIV/TB co-infection is important for patient management
HIV Infection Among Reported TB Cases, 2005

• All TB cases
  – Estimated 9% HIV/TB co-infection
  – Estimated 31% with unknown HIV status

• TB cases in blacks
  – Estimated 18% HIV/TB co-infection
  – Estimated 21% with unknown HIV status

*Excludes California data
TB and HIV

- CDC has recommended HIV counseling and testing of all TB patients since 1989
- In September 2006, CDC released guidelines recommending HIV screening for patients in all health-care settings (including TB clinics) after being notified that testing will be performed unless the patient declines (opt-out screening)
- Knowing the HIV status of TB patients is necessary for optimal patient management for contacts, and persons with LTBI or TB disease
Addressing TB in the African-American Community
Division of Tuberculosis Elimination Activities to Address TB in the African-American Community

- Research
- Demonstration Projects
- Education and Training
- Communication
- Partnerships
- Community Mobilization
Georgia Campaign-- HALT TB

**H**ear
What is TB?
“TB” is short for a disease called Tuberculosis. TB disease primarily affects the lungs but can attack any part of the body (e.g., the kidneys, the brain, or the spine). People who have TB disease need to be seen by a medical professional, if they don’t get help, they can die. However, TB can be treated and cured.

**A**ct
How To Get Tested For TB?
A TB skin test is the only way to find out if a person has been infected with TB. Skin tests are available at health department or a local doctor’s office for a nominal fee.

**L**earn
How is TB Spread?
TB is spread through the air when a person with TB disease of the lungs or throat coughs, sneezes, sings or screams. The people nearby can then breathe the TB germs into their lungs.

**T**reat
How is TB Disease Treated?
TB disease is treated by taking medicine for at least 6 months. TB disease can always be cured when the medicine is taken properly.

**NIP TB**
In the Blood

**What Are The Symptoms of TB Disease?**
Symptoms of TB depend on where in the body the TB germs are growing. TB disease in the lungs may cause:
- A bad cough that lasts longer than 2 weeks
- Chills
- Coughing up blood or phlegm (“green”)
- Fever
- No appetite
- Pain in the chest
- Sweating at night
- Weakness or fatigue
- Weight loss

A person should get tested for TB if:
- The person spends time with someone known or suspected to have TB disease
- The person has HIV infection or another condition that puts them at high risk for TB disease
- The person thinks they might have TB disease
- The person injects drugs
- The person lives in an area where TB disease is more common (homeless shelter, prison, jail or nursing home)
- The person lived or spent time in countries where TB disease is very common (most countries in Latin America and the Caribbean, Africa, Asia, Eastern Europe, and Russia)

For more information call: 404-733-1450
TB may only be a breath away. Find out if you are at risk.

South Carolina Campaign

How can you tell if it might be TB?
You might have:
- A cough that lasts for more than two weeks
- Fever or chills
- No appetite
- Weight loss
- Feeling tired for no reason
- Sweating at night
- Chest pain when you cough
- Coughing up blood (late symptom)

Have you been exposed to TB?
For more information on how you can get TB, please call DHEC’s CareLine at 1-800-868-0404.
Chicago Campaign

Last year in the African-American Communities in Chicago, Tuberculosis (TB) was 3 times the National Average.

TB is spread in the air when an untreated person laughs, sings, talks, coughs or sneezes.

TB is preventable & curable!
For more information call (312) 745-4124
Summit Goals

- Raise awareness of the problem
- Build upon accomplishments from the 2003 meeting
- Create links and build networks to lead to ongoing strategies to address the problem
Summit Participants

Over 100 individuals from:

– CDC and TB prevention programs

– Professional organizations
  • National Medical Association, National Black Nurses Association

– Academic institutions
  • Representatives from Historically Black Colleges and Universities

– Local and national advocacy organizations (civic, faith-based, community-based; fraternities)
  • NAACP, Rainbow-Push Coalition

– HHS State and Regional Minority Health Consultants
Summit Breakout Sessions

- Convened groups based on organizational type to facilitate working with peers
- Groups devised actions based upon group discussion
  - Lists of options
  - Restricted to items that could be implemented in the upcoming year
Categorization of Summit Action Items

- Education and Awareness
- Networking
- Building Capacity
- System Change
- Publicity
- Political Will
Education and Awareness
Action Items

• Distributed CDC educational materials
  – Exhibits and health fairs
  – Professional organization conference packets
  – Community based organizations

• Increased distribution of *TB Challenge* Newsletter

• Established TB in African-American Community Website

• Established TB in African-American Community Electronic Mailing List
Disparities in tuberculosis (TB) persist among minority and ethnic minority populations. In 2004, the majority of reported TB cases in the United States occurred in these minorities.

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

- Among people from countries where TB is endemic, disease may result from an infection acquired in the United States.
- Among racial and ethnic minorities, unequal access to health care and risk factors, particularly HIV infection, can increase the chance of developing the disease.

**Reported TB Cases by Race/Ethnicity, United States, 2004**

- White: 36%
- Black or African American: 26%
- Hispanic or Latino: 19%
- Native Hawaiian or Other Pacific Islander: 1%
- Asian (includes Pacific Islander): 13%
- American Indian or Alaska Native: 1%

*All race are non-Hispanic. Persons reporting two or more races accounted for less than 1% of all cases and are not shown.

**TB Elimination: Now Is the Time!**

Black, non-Hispanic persons continue to have a disproportionate share of tuberculosis (TB) in the United States.

- In 2004, TB was reported in 4,066 black, non-Hispanic persons—28% of all persons reported with TB nationally.
- In 2004, the rate of TB in black, non-Hispanic persons was 11.3 cases per 100,000 population, which is more than 8 times higher than the rate of TB in white, non-Hispanic persons (1.3 cases per 100,000 population).

The proportion of TB in black, non-Hispanic persons is even greater if only U.S.-born persons reported with TB are examined.

- U.S.-born persons represented 46% of all TB cases reported in the United States in 2004.
- Among U.S.-born persons reported with TB in 2004, 45% were black, non-Hispanic individuals.

Although rates of TB in both blacks and whites have declined substantially over the past decade, the disparity remains. We must better target our efforts to prevent and control TB in this minority population.
More than 100 individuals from myriad organizations gathered in Atlanta to participate in the "Stop TB in the African-American Community" summit, which took place May 16–17, 2006, at CDC’s new Tom Harkin Global Communications Center. The participants met to discuss the nature of this public health problem, exchange strategies, and identify ways to help address tuberculosis (TB) in the African-American community. The summit was sponsored by CDC’s Division of Tuberculosis Elimination (DTBE) and RTI International. The purpose of the summit was to:

1. raise awareness about the problem of TB in the African-American community, and
2. create links and build networks that will lead to ongoing activities and strategies to decrease TB in this community.

In 2005, CDC provisionally reported 3,927 TB cases in non-Hispanic blacks, 38% of all persons reported with TB nationally. The proportion of cases in black, non-Hispanic persons is even greater if only U.S.-born persons reported with TB are examined. In 2005, 45% of TB cases reported in U.S.-born persons were among non-Hispanic blacks. Also in 2005, the TB case rate for this population was more than eight times higher than the rate in white, non-Hispanic persons.

The summit included keynote addresses from Dr. Louis Sullivan, President Emeritus, Morehouse School of Medicine and former Secretary of Health and Human Services (HHS); and Dr. Garth Graham, Deputy Assistant Secretary for Minority Health, Office of Minority Health, HHS. CDC leaders also addressed the group, including Yvonne Lewis of the Office of Minority Health and Health Disparities; Dr. Kevin Fenton, Director of the National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention (proposed); and Dr. Kenneth Castro, Director of DTBE.

Summit participants learned about state-of-the-art research and interventions addressing TB in the African-American community, and learned directly from a panel of patients about their experience having TB. The majority of the summit was devoted to participants working in small groups to strategize actions that their organizations may be able to implement to help eliminate TB in the African-American community. Participants included community and religious leaders, health care providers, public health leaders, policy and decision makers, state and local health department staff,
Stop TB in the African-American Community Website

http://www.cdc.gov/nchstp/tb/TBinAfricanAmericans/
Stop TB in the African-American Community Electronic Mailing List
Subscription Information

To subscribe:

“The Summit was very beneficial in putting TB on our radar screen and brought about new networking. Before the Summit, we were not doing anything in TB.”

---National Advocacy Group participant
TB Education Resources
CDC Division of Tuberculosis Education Resources

• Source for TB education, communication, and training materials for:
  – Health care professionals
  – Patients
  – General public

• Website
  – www.cdc.gov/tb
TB RTMCCs
Areas of Coverage
Focus of TB RTMCC Activities

• To increase human resource development through TB education and training activities

• To increase the capacity for appropriate TB medical evaluation and management
“Stand-up” Training
Webinars
Sample of TB RTMCC Products
TB RTMCC Newsletters

S NIRNEASTE R SPOTLIGHT

SPRING 2007
VOLUME 2: 1

Dear Colleagues:

Greetings from the States. Although I am officially on a 6-week sabbatical at the New TB Partnership, 1 remember frequent contact with the Global TB Institute (1RTMCC) and access regularly to Windows for updated training resources.

As always, we have included some announcements about the latest in the Norfolk Annual TB Project. We have included a brief summary of some articles and a list of other sessions so I will keep it in HTML format for easy access. This will allow each reader to access resources. We will provide a PDF version for those that prefer it. We also encourage you to share this information with your colleagues and other interested in TB control. We have included some recent resources on the website.

On-Line Survey

WE VALUE YOUR FEEDBACK. LEARN MORE AND TELL US WHAT YOU THINK OF THIS NEWSLETTER

NORTHEASTERN TB MC
TB PROJECT AREAS

December 2006

In This Issue...

Headlines
Introducing
Related Links
TBI
In The Works
Case Presentation
Upcoming Trainings
Regional News

Educational and Training Resources for the TB Professional

For today’s TBI health professional, staying informed and up-to-date with the ever-changing field of tuberculosis diagnosis, treatment and patient management can be a daunting task. There are several TB-specific educational and training resources that can make the job easier.

Website

This website is sponsored by the Centers for Disease Control and Prevention (CDC), Division of Tuberculosis Elimination (CTBE) and maintained by the National Prevention Information Network (NPIN). This Website is intended for use by TB and other health care professionals, patients, and the general public. You can use this site to:

• Search for TB education and training materials
• Submit TB materials for inclusion in the database
• Read out how to order TB resources
• View the E-Newsletter
• Locate funding opportunities
• Get information about TB organizations
• Find out about upcoming events
• Sign up for TB-related listservs and digests
• Locate TB images
• Locate TB-related web sites
• Find out about the TB Education & Training Network (ETRN)

Each month, the website highlights a new resource material that can be viewed on-line, ordered from the publishing agency or printed out (if in printable form).

Click here for TB Education & Training Resources website

Contact Information

Email: info@tbeducationresources.org
Phone: 800-458-5231 / FAX: 301-556-3710
Continued on page 2

The VISION of the Institute is to provide excellence, partnership, and collaboration in training, medical consultation, and product development to reduce the impact of tuberculosis in our region.
The TB Training and Education Resources Website

www.findtbresources.org

Your one-stop site to find and share TB resources
Welcome to the TB Education and Training Resources Website, a service of the Centers for Disease Control and Prevention (CDC), Division of Tuberculosis Elimination (DTBE). You can use this site to:

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- Locate TB images
- Locate TB-related web links
- Find out about the TB Education & Training Network (TB ETN)

We have a new online submission form. Use it to send us your new TB resources.

This Website is intended for use by TB and other health care professionals, patients, and the general public.

We encourage you to contact us and participate in the expansion and enhancement of this Website by submitting additional materials and providing your comments and suggestions.
Conclusions

• TB is a significant health threat in the world and the United States
• TB is a health disparity for the African-American community
• CDC is undertaking activities to address this health disparity, but additional commitment, political will, partners, and resources are needed
• CDC has TB education and training resources available free of charge
THINK TB!

Recognize positive signs and symptoms of tuberculosis. Early diagnosis and treatment reduces spread. Contact your Health Department or Physician for more information.

U.S. DEPARTMENT OF HEALTH & HUMAN SERVICES
Public Health Service

CDC
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Tuberculosis Transmission