

# WISCONSIN EPI EXPRESS

March 13, 2006

[Wisconsin Department of Health & Family Services](#)  
Division of Public Health  
Bureau of Communicable Diseases and  
Preparedness

***"If the number of victims is a measure of the significance of a disease, then all diseases, even the most dreaded infectious diseases, such as plague or cholera, must rank far behind tuberculosis. Statistics show that one-seventh of all human beings die of tuberculosis, and that if one considers only the productive middle-age groups, tuberculosis carries away one-third and often more."***

*Robert Koch. The Etiology of Tuberculosis [1882].*

*This special issue of the WISCONSIN EPI EXPRESS is in recognition of World TB Day, March 24, 2006. Even more than that though, it is to recognize the work of the DPH Tuberculosis Program, and the WSLH Mycobacteriology Laboratory, and the work of the Local Health Departments of the State, who collectively have made Wisconsin a leader in TB control.*

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## 1. WORLD TB DAY – MARCH 24

World TB Day, held on March 24 each year, is an occasion for people around the world to raise awareness about the international health threat presented by tuberculosis (TB). It is a day to recognize the collaborative efforts of everyone involved in fighting TB. TB can be cured, controlled, and, with diligent efforts and sufficient resources, eventually eliminated.

World TB Day is a worldwide event, yet different countries and regions choose locally relevant activities and messages. For information about planning a local event, go to URL <http://www.cdc.gov/nchstp/tb/WORLDTBDAY/2006>. You may also order posters, brochures, and fact sheets from this site. Please forward information about local press releases or World TB Day activities to Tanya Oemig ([oemigtv@dhs.state.wi.us](mailto:oemigtv@dhs.state.wi.us)) at the TB Program.

In the late 19<sup>th</sup> century, TB killed one out of every seven people living in the United States and Europe. On March 24, 1882, Dr. Robert Koch announced the discovery of the TB bacillus. At the time, his discovery was the most important step taken toward the control and elimination of this deadly disease.

In 1982, a century after Dr. Koch's announcement, the first World TB Day was sponsored by the World Health Organization (WHO) and the International Union Against Tuberculosis and Lung Disease (IUATLD). The event was intended to educate the public about the devastating health and economic consequences of TB, its effect on developing countries, and its continued tragic impact on global health.

TB remains a threat to the health and well-being of people around the world. Among infectious diseases, TB remains the second leading killer of adults in the world, with more than 2 million TB-related deaths each year. Until TB is controlled, World TB Day won't be a celebration. But it is a valuable opportunity to educate the public about the devastation TB can spread and how it can be stopped.

"Now is the time to grasp a vision. A vision of coming together on World TB Day in the near future to celebrate the elimination of tuberculosis in this country."

--Dr. Kenneth G. Castro

Director of CDC's Division of Tuberculosis Elimination

## **2. UPDATES TO THE TB INCENTIVE PROGRAM**

Michelle Mercure, Senior Program Manager of the American Lung Association is now the contact person for the TB Incentive Program. Michelle can be reached at 262-703-4845.

The Tuberculosis (TB) Control Incentive Program administered by the American Lung Association of Wisconsin is designed to assist you with the treatment of tuberculosis clients by providing funding to purchase incentives and enablers that will encourage clients to complete therapy. The program is to be used primarily for clients who have active TB disease, but it can also be used for clients on treatment for Latent Tuberculosis Infection (LTBI) to encourage and reward them along the course of their treatment. A link to program guidance and forms is located on the TB Program web site at <http://dhfs.wisconsin.gov/tb>

## **3. WISCONSIN REPORTS HIGHEST RATE OF "MILIARY" TB**

The 2004 national TB data was recently released by CDC, revealing a disproportionately high rate of reported "miliary" TB in Wisconsin compared to the rest of the country. During 2004, 11% (11 of 95) of Wisconsin TB cases were classified as miliary compared to 2% of cases nationally. However, the discrepancy may only be one of definition, rather than the identification of a Wisconsin anomaly.

Miliary TB was originally named for "millet like" nodules seen on chest radiograph. However, modern terminology frequently uses "miliary TB" synonymously with disseminated TB. Histologically, the disseminated lesions often consist of a central caseating necrosis with peripheral epithelioid and fibrous tissue. Tuberculosis with multiorgan involvement is probably much more common than is recognized because once *M. tuberculosis* is identified in any specimen; other sites are generally not evaluated. (Diagnostic Standards and Classification of Tuberculosis in Adults and Children found at URL <http://www.thoracic.org/adobe/statements/tbadult1-20.pdf> ).

The tuberculosis program has defined miliary or disseminated TB as tuberculosis identified by culture or characteristic pathologic finding in 2 or more non-contiguous organs.

For more state-by-state TB comparisons, go to URL

<http://www.cdc.gov/nchstp/tb/surv/surv.htm>.

## **4. PROTOCOL CHANGES FOR FEE-EXEMPT LIVER FUNCTION TESTING AT WSLH**

The TB Program has an arrangement with the Wisconsin State Laboratory of Hygiene (WSLH) to provide liver function testing (primarily ALT) fee exempt through the local health department

for patients at risk of medication-induced liver toxicity. The accuracy of liver function testing performed on a patient specimen is time sensitive. Recent testing protocol changes require that the specimen submitted to the WSLH MUST arrive at the WSLH within 24 hours of the draw time. Thus, specimens arriving more than 24 hours (1 day) after the draw time will be rejected for testing.

To avoid specimen rejection, be sure that blood for liver function testing is only drawn Monday-Thursday and is delivered to the WSLH in a manner that ensures it's arrival the following morning. Do NOT hold blood specimens for batch delivery and do NOT draw blood on Friday. Specimens that are not received within one day of collection will be rejected.

If you have additional questions about specimen acceptability for liver enzyme testing, contact WSLH Customer Service at 608-262-6386. If you are unable to meet the WSLH submission requirements, call the TB Program at 608-266-9692 to discuss alternatives.

## **5. UPCOMING TB TRAINING OPPORTUNITIES**

The Heartland National TB Center has scheduled several TB Nurse Case Management Courses in our neighboring states. Attendance is open to any nurse involved in TB case management within the "Heartland Region" including the states of Arizona, Illinois, Iowa, Kansas, Minnesota, Missouri, Nebraska, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, and Wisconsin.

The TB Nurse Case Management Course provides an in-depth training experience covering the knowledge and skills essential for the nurse with the primary responsibility for TB case management. The course covers evaluation, treatment and case management of medically and psychosocially difficult to treat patients and is designed to go beyond the basic TB curriculum and enhance the participant's ability to be accountable for all facets of case management, by capturing the experience and competencies of expert TB public health nurses now working in field settings throughout the Heartland region. This conference targets nurses, program managers and those who assist them in their duties as TB case managers. This workshop will include lecture presentations, case scenarios and participant break-out sessions with ample time for questions and answers.

Near-by TB Nurse Case Management Courses are currently scheduled:

April 26-28    Bloomington, MN    Contact: Mary Long ([mary.long@uthct.edu](mailto:mary.long@uthct.edu))

July 11-13    Lisle / Naperville, IL    Contact: Kim Petrilli ([kimberly.petrilli@uthct.edu](mailto:kimberly.petrilli@uthct.edu))

July 19-21    Des Moines, IA    Contact: Mary Long ([mary.long@uthct.edu](mailto:mary.long@uthct.edu))

The Heartland National TB Center is a joint project of The University of Texas Health Center at Tyler and the Texas Center for Infectious Disease. The philosophy and goal of the Heartland National TB Center is to increase the capacity to conduct TB prevention and control activities by enhancing expertise through partnerships that link each state's existing TB knowledge and resources.

## **6. UPDATE ON TB BLOOD TESTING: QUANTIFERON®-TB GOLD**

The Centers for Disease Control (CDC) has published new guidelines for using the QuantiFERON®-TB Gold (QFT-G) test for detecting tuberculosis infection. The guidelines can be found in the MMWR from December 16, 2005, volume 54 (no. RR-15) at URL [http://www.cdc.gov/nchstp/tb/pubs/mmwrhtml/mmwr\\_testing.htm](http://www.cdc.gov/nchstp/tb/pubs/mmwrhtml/mmwr_testing.htm)

CDC recommends that QFT-G may be used in all circumstances in which the tuberculin skin test (TST) is currently used, including contact investigations, evaluation of recent immigrants, and TB screening of health-care workers and others undergoing serial evaluation for *M. tuberculosis* infection. QFT-G can be used in place of (and not in addition to) the TST. A positive QFT-G result should prompt the same public health and medical intervention as a positive TST result. Persons who have a positive QFT-G result should be evaluated for TB disease before latent TB infection (LTBI) is diagnosed. HIV counseling, testing, and referral is recommended because HIV infection increases the suspicion for TB and the urgency of treating LTBI. After TB has been excluded, treatment of LTBI should be considered (page 52).

The majority of healthy adults who have negative QFT-G results are unlikely to have *M. tuberculosis* infection and do not require further evaluation. However, for persons with recent contact to infectious TB, negative QFT-G results should be confirmed with a repeat test 8-10 weeks after exposure has ended (page 53). Each QFT-G result and its interpretation should be considered in conjunction with other epidemiologic, historic, physical, and diagnostic findings (page 52).

An indeterminate QFT-G result does not provide useful information. For persons with an increased likelihood of *M. tuberculosis* infection who have an indeterminate QFT-G result, administration of a second test, either QFT-G or TST, might be prudent. For persons who are unlikely to *M. tuberculosis* infection, no further tests are necessary after an indeterminate QFT-G result.

Agencies wishing to switch from TST to QFT-G for their infection control related testing (e.g. employee health) should first review their relevant regulations for language that requires a specific test (e.g. Mantoux tuberculin skin test). Agencies may request a variance to perform QFT-G in lieu of a Mantoux, if so required. Contact the TB Program for additional assistance on requesting a variance.

Effective January 1, QFT-G has received a new, permanent CPT code: 86480. As of January 18, 2006 the Wisconsin Medicaid program has increased the reimbursement rate to \$77.93 (from the original \$35). Medicare has established a federal reimbursement rate of \$86.59. Health departments with TB dispensary contracts may call the TB Program at 608-266-9692 to discuss instances in which the TB Dispensary Program may be billed the \$77.93 MA rate for non-Medicaid, non-Medicare clients with no other source of payment.

## **7. WISCONSIN TB DATA FOR 2005 NOW AVAILABLE**

You may now view and download TB statistics for the past 5 years online by going to the statistics portion of the TB Program web site at URL <http://dhfs.wisconsin.gov/tb>

Here are some 2005 TB statistics of note:

- 78 confirmed cases of tuberculosis reported
- 2 cases multi-drug resistant TB
- 67% of TB patients were born outside the United States

- Tuberculosis was not identified in 2 patients until after their death (including 1 child)
- 4 patients died while being treated for their TB
- 4 Wisconsin colleges reported a total of 6 students with active TB
- TB cases occurred in 20 different counties, 2 of which had not had a TB case in at least 5 years
- The state spent approximately \$403,000 on tuberculosis (\$206,000 for TB medications and \$197,000 to local public health TB dispensaries for TB services)

## **8. THE WISCONSIN STATE LABORATORY OF HYGIENE MYCOBACTERIOLOGY LABORATORY**

The Wisconsin State Laboratory of Hygiene (WSLH) mycobacteriology laboratory serves as both a primary diagnostic facility and reference laboratory for clinicians and private mycobacteriology laboratories located throughout Wisconsin, as well as a public health laboratory serving the Wisconsin Division of Public Health and Wisconsin's local public health agencies.

The WSLH mycobacteriology laboratory is a full-service Level III laboratory based on Centers for Disease Control (CDC) guidelines and provides state-of-the-art Tuberculosis (TB) laboratory services performed in a 1,200 square foot BSL-III facility dedicated to mycobacteriology. Ninety-six percent of primary patient specimens processed and cultured for mycobacteria at the WSLH are received from University of Wisconsin Hospital and its associated clinics, city and county local public health agencies, or state correctional institutions. All of the other 30 laboratories in Wisconsin that perform some level of testing for mycobacteria submit positive TB cultures to the WSLH for identification and/or drug susceptibility testing and TB genotyping. More than 80% of TB cases in Wisconsin are confirmed by culture.

Following the guidelines set forth by the Association of Public Health Laboratories (APHL) and the CDC, the WSLH mycobacteriology laboratory uses recommended basic and rapid methodologies for the isolation, identification, and susceptibility testing of *Mycobacterium tuberculosis*. The WSLH TB laboratory's focus is on the public health aspects of TB infection, with emphasis on rapid detection and reporting of infection, drug susceptibility, and possible outbreak situations.

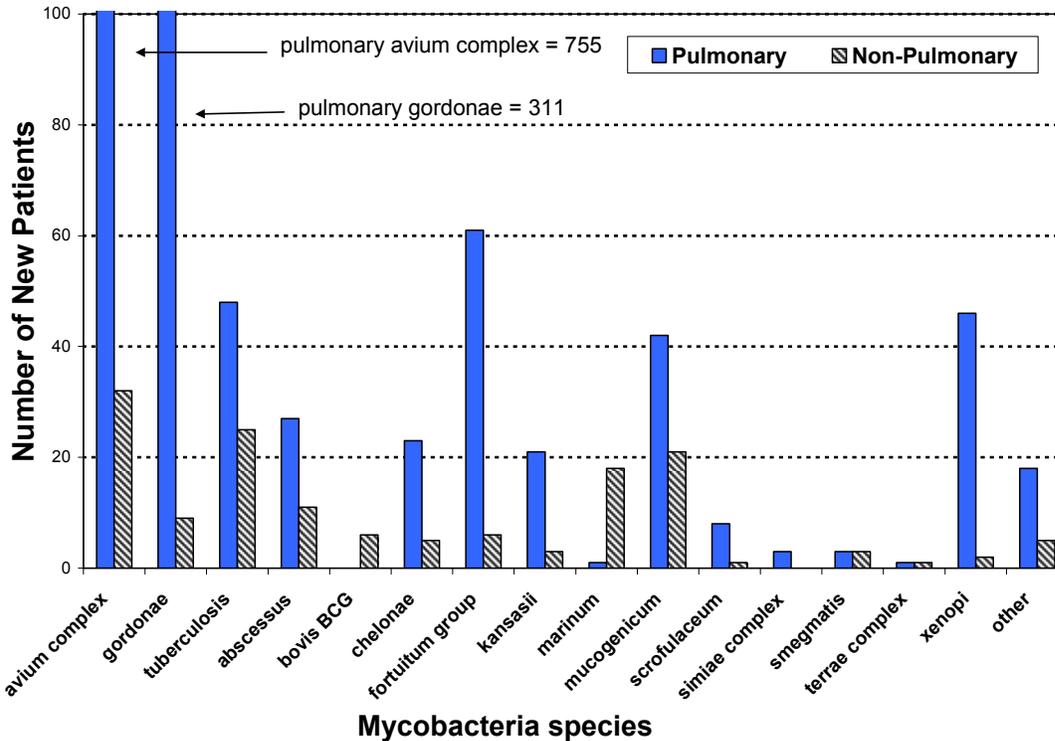
### **The Wisconsin Mycobacteriology Laboratory Network (WMLN)**

The Wisconsin Mycobacteriology Laboratory Network (WMLN) is comprised of the WSLH and 30 other laboratories in Wisconsin (1 city public health lab and 29 private labs) that perform some level of TB testing. The organization of the WMLN, now in its eighth year of existence, has provided the means for the ongoing assessment of TB laboratory practices and testing capacity in Wisconsin. The network is used as a conduit for transfer of information from national authorities and the state TB Control Program to Wisconsin TB laboratories. Annual full-day statewide meetings of the network are held each fall. These conferences serve as a forum to discuss and address relevant issues including laboratory safety practices, testing methodologies, turn-around-times, reporting processes, proficiency, and new technologies.

The WMLN is also a forum for providing laboratory-based surveillance. Network participants who perform in-house identification report mycobacterial isolations on a monthly basis to the WSLH. The WMLN coordinator at the WSLH combines state-wide data to produce monthly, quarterly, and annual isolation reports. Through the network, the WMLN coordinator monitors the incidence of mycobacterial infections, *M. tuberculosis* infections, and TB drug resistance.

Compiled statistics are shared with all participant laboratories, the state TB Control Program and local public health agencies. The graph below shows the new mycobacterial isolations in Wisconsin for 2004.

### New Mycobacteria Isolates in 2005



### Telephone Reporting of Unusual Disease Occurrences

*Occurrences of diseases that are uncommon or atypical in Wisconsin, and outbreaks or clusters of disease which are identified, should be reported by phone as soon as possible, to (608) 258-0099. Reports may be made to this number on a 24/7 basis, but please do not use it for normal and routine disease reporting*

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