

## **TB NOTES**



**TB Notes 3, 2016 June 29, 2016**

### **Notes from the Director**

Dear Colleague:

This past spring, the Division of Tuberculosis Elimination (DTBE) staff have been involved in a variety of events. The Field Services Branch (proposed) convened their annual meeting of the entire staff last month; the meeting included field staff who work with state and local TB programs. Branch updates, trainings, and team building activities were provided during the meeting, as well as discussions on future direction and priorities for the branch.

DTBE staff traveled to San Francisco for the American Thoracic Society International Conference, which was also held last month. Division staff participated in six poster presentations that included topics such as latent TB infection, TB control strategies, and multidrug-resistant TB. You can learn more about the presentations in this issue of *TB Notes*.

In other news, the Federal TB Task Force Meeting was held earlier this month. DTBE staff joined colleagues from the United States Agency for International Development (USAID), the National Institutes of Health (NIH), and other federal agencies to discuss the scope of the [National Action Plan for Combating Multidrug-Resistant Tuberculosis \(NAP\)](#) and the federal government's roles and ongoing efforts in support of TB elimination. During the meeting, current programs and research that relate to NAP Goals were discussed. Strategies to increase collaboration across the federal government in support of TB elimination and the NAP were discussed as well.

From the release of the NAP earlier this year to the U.S. Preventive Services Task Force's draft recommendation statement, "[Latent Tuberculosis Infection: Screening](#)" this past spring, we have gained renewed energy and support in our efforts to eliminate TB. As we enter the last half of the year, I continue to be inspired by your commitment to the very important work that you are doing every day. I hope all of you have a safe, enjoyable, and productive

summer.

Philip LoBue, MD, FACP, FCCP  
Director,  
Division of Tuberculosis Elimination  
National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention

## Highlights from State and Local Programs

### Union-NAR/NTCA Joint 20th Annual Conference Pre-Conference Training Now Available Online

A training offered in February before the Union-North American Region (NAR) and the National Tuberculosis Controllers Association (NTCA) Joint 20th Annual Conference is now available for viewing online. “[Using Epidemiology for Data-Driven Decision Making in TB Programs](#)” was designed to highlight the various ways that epidemiologic tools and concepts can be used to enhance TB program activities and to encourage data-driven decision making whenever possible.

The half-day training was jointly sponsored by the TB Regional Training and Medical Consultation Centers (RMTCCs) (i.e., Curry International Tuberculosis Center, Heartland National Tuberculosis Center, Mayo Clinic Center for Tuberculosis, Rutgers Global Tuberculosis Institute, and Southeastern National Tuberculosis Center) and The Union. Planning committee members and course faculty included individuals from NTCA’s Society for Epidemiology in TB Control (SETC).

The training was recorded by NTCA, at the request of the SETC leadership, as an educational resource that would be beneficial to others interested in learning more about applied epidemiology in TB programs. The archived training reflects a collaboration between NTCA/SETC, the five RMTCCs, and The Union. Visit the [Curry International Tuberculosis Center’s website](#) for more information on the training.

*Submitted by Kelly Musoke, MPH, Curry International Tuberculosis Center*

## Office of the Director Updates

### DTBE Staff Present at American Thoracic Society International Conference

The American Thoracic Society (ATS) International Conference was held May 13 -18 in San Francisco. DTBE staff participated in the CDC/ATS session during the conference, which included the following presentations:

- Prospects for Elimination: An Individual-Based Model to Assess TB Control Strategies in California –A. Goodell, P. Shete, R. Vreman, J. Metcalfe, T. Porco, P. Barry, J. Flood, S. Marks, A. Cattamanchi, J. Kahn;
- The Cost-Effectiveness of Testing and Treatment for Latent Tuberculosis Infection among Foreign-Born Persons in the U.S. –B. Linas, A. Tasillo, N. Menzies, C.

- Horsburgh, S. Marks, J. Salomon;
- Reactivation Risk of Latent Tuberculosis Infection by Population Subgroup: A Systematic Review and Meta-Analysis—J. Yeats, S. Patel, P. Shete, A. Cattamanchi, B. Baker;
  - Treatment of MDR TB in Pregnancy: Results of a Systematic Review Process—R. Kowalski, F. Kheir, B. Seaworth, S. Mase, F. Parvez;
  - Clinical Impact of *rpoB* Mutations Conferring Discordant Phenotypic-genotypic Rifampin Resistance in *Mycobacterium tuberculosis*—N. Shah, S. Lin, P. Barry, G. Schechter, E. Desmond; and
  - High Rates of Active TB among B1 Immigrants from the Philippines to Hawaii, 2010—2014. K. Schmit, R. Brostrom, A. Pyan, A. Largen, Z. Wang, S. Mase, S. Morris.

*Submitted by Carla Winston, PhD, DTBE*

## **TB Trials Consortium (TBTC) Updates** + =

### **Update on TB Trials Consortium Study 31**

TB Trials Consortium (TBTC) Study 31 (also known as ACTG A5349 and briefly described in a [previous issue](#) of TB Notes) continues to enroll. It is well-described by its title, “Rifapentine-Containing Treatment Shortening Regimens for Pulmonary Tuberculosis: A Randomized, Open-label, Controlled Phase 3 Clinical Trial.” The trial is registered [online](#), where information about design and participating sites is available.

Study 31/A5349 is a collaboration between two networks: the TBTC sponsored by CDC and the AIDS Clinical Trials Group (ACTG) sponsored by the National Institute of Allergy and Infectious Diseases (NIAID). Responsibility for data management for the trial resides in the Clinical Research Branch (CRB) of CDC/DTBE, where a novel [Clinical Data Interchange Standards Consortium \(CDISC\)](#) has been developed. Substantial pharmacokinetic and pharmacodynamics sub-studies are embedded within the trial, which will provide useful new information on both the novel and standard treatment regimens.

As of May 2016, TBTC Study 36A has enrolled over 80% of its projected target of 250 persons being treated for active TB disease for the CTB2 (Consortium for TB Biomarkers) specimen bank. Visit the [CTB2 Biorepository webpage](#) to learn more about this collaborative Biobank effort and the specimens that it intends to make available.

CRB has been actively supporting initiation of a new clinical study under the Combating Antibiotic Resistant Bacteria (CARB) initiative. The study involves comparing electronic with in-person directly observed therapy (DOT). Contact [Barbara DeCausey](#), CRB Deputy Chief, for more information.

*Submitted by Barbara DeCausey, MPH, MBA, DTBE*

## **Communications, Education, and Behavioral Studies Branch Updates** + =

### **Revised Self-Study Modules on Tuberculosis, 1-5**

The Division of Tuberculosis Elimination (DTBE) is pleased to announce the release of the revised [Self-Study Modules on Tuberculosis, 1-5](#). These educational modules are designed to provide basic TB information in a self-study format for health care workers, including outreach workers, nurses, physicians, and health educators. Originally developed in 1995, and revised several times since, these booklets have served as an important resource in training new TB control workers.

To ensure that TB control workers have access to the most up-to-date information about TB control, *Modules 1-5* were revised to reflect current CDC guidelines, including information on diagnosis and treatment. Updated topics include interferon-gamma release assays, the Xpert MTB/RIF assay, and the 12-dose regimen for treatment of latent TB infection. The modules also have an updated look and feel with a new layout.

The [Self-Study Modules on Tuberculosis, 1-5](#) packet includes an introduction, five modules, and a glossary:

- **Introduction**
- **Module 1:** Transmission and Pathogenesis of Tuberculosis
- **Module 2:** Epidemiology of Tuberculosis
- **Module 3:** Targeted Testing and the Diagnosis of Latent Tuberculosis Infection and Tuberculosis Disease
- **Module 4:** Treatment of Latent Tuberculosis Infection and Tuberculosis Disease
- **Module 5:** Infectiousness and Infection Control
- **Glossary**

## **Companion Products**

### *Modules 1-5 Slide Set and Facilitator Guide*

The Modules 1–5 slide set was developed as an accompaniment to the print-based *Self-Study Modules, 1–5* to aid in the presentation of module content for a facilitator-led training. The Facilitator Guide provides facilitator guidance and tips for leading a training using the *Self-Study Modules on Tuberculosis, 1–5 Slide Set*. The updated slide set and facilitator guide will be available on the DTBE website in the coming months.

### [Self-Study Modules on Tuberculosis, 6-9](#)

The Modules 6-9 provide programmatic TB information. The Modules 6-9 packet includes an introduction, four modules, and a glossary:

- **Introduction**
- **Module 6:** Managing Tuberculosis Patients and Improving Adherence
- **Module 7:** Patient Rights and Confidentiality in Tuberculosis Control
- **Module 8:** Contact Investigations for Tuberculosis
- **Module 9:** Tuberculosis Outbreak Detection and Response
- **Glossary**

Visit the DTBE website to view [Modules 1-9](#) online. Hardcopies of Modules 1-5 will be

available to order in the coming months. Visit the CDC [online ordering system](#) to order hardcopies of Modules 6-9.

Continuing education for Modules 1-9 is offered free of charge for various professions. Visit the DTBE website for more information on [continuing education](#). If you have questions about the *Self-Study Modules on Tuberculosis*, please contact [Sarah Segerlind](#).

*Submitted by Sarah Segerlind, MPH, DTBE*

## Supporting Graphics on Latent TB Infection Now Available



The Communications, Education, and Behavioral Studies Branch (CEBSB) has designed [supporting graphics](#) based on its “Take on Latent TB Infection” [infographic](#). These graphics focus on latent TB infection treatment regimens, cost-effectiveness, at-risk populations, and testing. The downloadable graphics are available in sizes suitable for Facebook, Twitter, and Instagram and can be used in web, print, and social media communications.

*Submitted by Leeanna Allen, MPH, DTBE*

## The DTBE Spanish Website Transitions to Responsive Design

Hola! Last month, DTBE communications staff updated the Division’s [Spanish website](#) to responsive design. Spanish speaking users can now access the TB information they are searching no matter the device they use to access the site. Whether it’s a mobile phone, tablet, laptop, or desktop computer, the information will be easy to read and search.

In addition to design improvements, content for some of the most frequently visited topic sections was revised. Design and content revisions were guided by a review of web metrics, as well as results from usability assessments conducted earlier this year. This review provided insight into the findability of website information and how users think content should be organized. The findings directly informed decisions about topic labeling and organization, as well as website navigation paths.

*Submitted by John Parmer, PhD, DTBE*

## Data Management, Statistics, and Evaluation Branch (proposed) Updates



### Data Management and Applications Development Group Wins Award

The Data Management and Applications Development Group received the National Center for

HIV/AIDS, Viral Hepatitis, STD, and TB Prevention (NCHHSTP) award for *Excellence in Innovation and Creativity in Software Reuse*. There are four categories of surveillance systems available to report TB cases to the CDC – commercial systems, state developed systems, the NEDSS Base System (NBS), and the eRVCT (Electronic Report of a Verified Case of Tuberculosis). Each of these systems is available to states reporting TB cases and provides case management, as well as secure transmission to CDC using the standard TB Case Notification Message. The eRVCT used tools and technology that were no longer supported, and it required a change in order to continue serving the state TB programs. The Data Management and Applications Development Group successfully produced a viable solution to replace the eRVCT in ten months from design to production.

The solution built to replace the eRVCT is the NTSSCR (National Tuberculosis Surveillance System Case Reporting) System. The NTSSCR is a centralized case reporting system that captures all features of the eRVCT. It also reduces the burden on the DTBE Helpdesk and the Applications Development Team by providing support to one centralized system instead of multiple state deployed systems. NTSSCR represents a simple and efficient way for states that wish to report TB cases without also engaging separate state sponsored surveillance systems. Of the nine states using eRVCT, eight are transitioning to the NTSSCR and one to a commercial system. To date, most eRVCT users have been enrolled in the NTSSCR, data has been migrated from multiple state eRVCT systems, and the transition has been smooth.

The NTSSCR is designed to quickly and easily allow for form expansions and additions that will support the state TB programs during transition to revised or new case collection forms, as needed. The group's ability to envision future needs and to ensure that the NTSSCR could be easily expanded to support some of the revisions anticipated for the TB case report will enable a robust system that is expected to be used for many years.

*Submitted by David Wilson, MEd, DTBE*

## **Laboratory Branch Updates** + =

### **Diagnostic Mycobacteriology Workshop, 2016**

The annual Diagnostic Mycobacteriology Workshop was held March 29 through April 1, 2016 at CDC. This course is a collaboration among the DTBE Laboratory Branch (LB), the Association of Public Health Laboratories National Laboratory Training Network, and the Laboratory Training Team in the CDC Center for Surveillance, Epidemiology, and Laboratory Services. This intermediate-level course was held for public health and clinical laboratorians who perform detection, isolation, identification, and drug susceptibility testing for *Mycobacterium tuberculosis* complex (MTBC).

Participants were selected based on their experience with and knowledge of MTBC testing, expectations for the course, and training needs. Didactic lectures included discussion of biosafety practices for the mycobacteriology laboratory, test methods for growth-based and molecular detection of MTBC and drug resistance, results interpretation, approaches for validation, performance metrics, and regulatory standards. Hands-on laboratory exercises included drug susceptibility testing and real-time polymerase chain reaction (PCR) for the detection of MTBC. Participants were asked to present a case study or lesson learned from



their individual laboratories during the course. The course provided an opportunity for participants to ask questions of CDC and state public health laboratory subject matter experts, as well as network with fellow laboratorians. This was the ninth year of the diagnostic mycobacteriology course.



([https://www.cdc.gov/tb/publications/newsletters/notes/tbn\\_16/images/diagnosticworkshop.jpg](https://www.cdc.gov/tb/publications/newsletters/notes/tbn_16/images/diagnosticworkshop.jpg)).

*Submitted by Frances Tyrell, MPH, MT (ASCP), SM, DTBE*

## **New CDC Publications** + -

Johnson MG, Stout JE, Benator DA, Whitworth WC, Holland DP. [Medium matters: modeling the impact of solid medium performance on tuberculosis trial sample size requirements](#). Int J Tuberc Lung Dis 2016;20:600–4.

Nandakumar S, Kannanganat S, Dobos KM, Lucas M, Spencer JS, Amara RR, Plikaytis BB, Posey JE, Sable SB. [Boosting BCG-primed responses with a subunit Apa vaccine during the](#)

[waning phase improves immunity and imparts protection against \*Mycobacterium tuberculosis\*](#). Sci Rep 2016;6:25837.

Pathak RR, Mishra BK, Moonan PK, Nair SA, Kumar AM, Gandhi MP, Mannan S, Ghosh S. [Can intensified tuberculosis case finding efforts at nutrition rehabilitation centers lead to pediatric case detection in Bihar, India?](#) J Tuberc Res 2016;4:46–54.

Volkman T, Moonan PK, Miramontes R, Oeltmann JE. [Excess alcohol use and death among tuberculosis patients in the United States](#), 1997–2012. J Tuberc Res 2016;4:18–22.

Yuen CM, Kammerer JS, Marks K, Navin TR, France AM. [Recent transmission of tuberculosis –United States, 2011–2014](#). PLoS One 2016;11:e0153728.

Zetola NM, Modongo C, Moonan PK, Click E, Oeltmann JE, Shepherd J, Finlay A. [Protocol for a population-based molecular epidemiology study of tuberculosis transmission in a high HIV-burden setting: the Botswana Kopanyo study](#). BMJ Open 2016;6:e010046.