



Centers for Disease Control
and Prevention (CDC)
Atlanta GA 30333
TB Notes
No. 4, 2013

Dear Colleague:

This year-end issue typically serves as an opportunity to reflect on the year's notable events and accomplishments in TB control and elimination. It's a time to celebrate the hard work of all in the TB community and to look ahead to opportunities for the next year.

In a number of respects, this has been a challenging year. We started 2013 with news of a shortage of isoniazid, one of the first-line drugs used to fight TB. The nation also experienced shortages of Tubersol and Aplisol, the only two tuberculin products commercially available for use in the diagnosis of infection with *Mycobacterium tuberculosis*.

In March, CDC's grantees received a letter announcing a series of spending cuts that significantly reduced federal resources. These cuts necessitated some difficult decisions about staffing and program activities.

In August, DTBE's Director, Dr. Castro, left DTBE to serve in a temporary capacity as Acting Director of the Division of HIV/AIDS Prevention when its director, Jonathan Mermin, was selected as the new Director of NCHHSTP. I have been honored to serve as Acting Director of DTBE in Dr. Castro's absence. In the same month, DTBE staff packed up files, papers, books, and documents, and moved (to the building next door) as part of series of moves to consolidate CDC staff, as much as possible, and to use government-owned rather than leased property.

In October, most of the staff members of our Division were furloughed for 17 days. During this time, DTBE could only address urgent issues, and many important activities experienced interruptions and delays.

However, there were also positive events and substantial accomplishments this past year. We welcomed a new Regional Training and Medical Consultation Center (RTMCC), the Mayo Center for Tuberculosis, located in Rochester, Minnesota. With the addition of the Mayo TB Center, the RTMCCs saw a reconfiguration of their coverage areas. We appreciate the efforts and cooperation of all involved in making this transition.

In March, CDC's World TB Day observance was held. Dr. Kenneth Castro, Director, DTBE, led the proceedings. Dr. Terrence Lo, EIS officer in DTBE, gave the TB trends update, and Dr. Susan Ray, Emory University professor and medical consultant for the

Georgia Department of Public Health, gave an inspiring and notable keynote address. Dr. Wanda Walton, Chief, Communications, Education, and Behavioral Studies Branch (CEBSB), DTBE, reported on DBTE's TB Personal Story project. In this initiative, TB and LTBI patients describe their TB experience, in print or on camera; these stories are then posted online. Three patients from Atlanta, Georgia, told their stories on camera, and Dr. Walton shared their stories at the observance. DTBE is seeking additional participants for this project. If you know of a person who successfully completed treatment for TB or LTBI, with help from the local TB program, whose TB story is compelling, and who is willing to share the story in person or in print, please let us know. Please contact Nicole Richardson-Smith or Ann Lanner to learn more.

On October 25, CDC released new guidelines on the use of bedaquiline fumarate, a new drug available to treat multidrug-resistant tuberculosis (MDR TB) — [Provisional CDC Guidelines for the Use and Safety Monitoring of Bedaquiline Fumarate \(Sirturo\) for the Treatment of Multidrug-Resistant Tuberculosis](#). Bedaquiline, which received accelerated approval from the Food and Drug Administration (FDA) in December 2012, is the first new type of TB drug to be approved in over 40 years to treat this deadly disease. Please see a report on it in this issue.

In July, Dr. Castro took part in a successful Healthy People 2020 Progress Review webinar, featuring the Immunization and Infectious Diseases and Global Health topic areas. The webinar examined the burden of infectious diseases nationally and internationally, with a special emphasis on TB. Participants also learned about one community-based organization's work on TB prevention and treatment in the U.S.-Mexico border region. You can read a summary of the event in this issue.

This fall, DTBE released its annual surveillance report, [Reported Tuberculosis in the United States, 2012](#), as well as the accompanying [slide set](#). The report presents summary data for TB cases verified and counted in 2012. This edition contains a number of new tables, including genotyping data. In 2012, the reported number of TB cases (9,945) and case rate (3.2 cases per 100,000) both decreased; these represent declines of 5.4% and 6.1%, respectively, compared to 2011.

In July, the FDA gave authorization for the marketing of the Xpert MTB/RIF, the first FDA-reviewed test that, in less than 2 hours, can simultaneously detect *M. tuberculosis*-complex and determine if the bacteria contain genetic mutations that indicate resistance to rifampin, an important antibiotic for the treatment of TB. In October, CDC published an *MMWR* report providing guidance on use of the Xpert assay.

On a lighter note, staff of DTBE's CEBSB had fun this summer and fall with their award-winning TB educational product, Edgar Allan Crow. He/it won first prize at the Atlanta Botanical Garden's event, Scarecrows in the Garden. Read about it here.

As for 2014, we already know the year ahead will bring significant change. On December 16, Dr. Castro announced his decision to vacate the position of Director, DTBE, effective December 31, 2013, and his plans to seek voluntary retirement from

the Commissioned Corps near the end of FY 2014. He indicated that this was a very difficult decision because of his passion for our shared mission and the great friends and colleagues that he had enjoyed working with in DTBE over the past 20 years. His tremendous achievements and impact on TB control and elimination efforts were recently recognized when he was selected to receive the International Union Against Tuberculosis and Lung Disease North American Region Lifetime Achievement Award. The announcement for the recruitment of a new permanent Director, DTBE, will be made in early 2014.

As the year draws to a close, I want to thank all of you for your hard work, resilience, and commitment to the important mission of TB control and elimination. It's a privilege to work with such outstanding staff and partners, here and around the globe. Have a peaceful and safe time with family and friends, and safe travels wherever your plans take you this season.

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

In This Issue

Highlights from State and Local Programs	5
The Retirement of Charles E. Wallace, PhD, MPH	5
Snohomish Health District TB Team Honored	7
Bedaquiline, a New Drug for MDR TB	8
NTCA Responds to the Shortages of TB Drugs and Diagnostics.....	10
TB Education and Training Network Updates.....	12
2014 TB ETN Conference	12
TB Epidemiologic Studies Consortium Updates	12
4th Semiannual Meeting of the Tuberculosis Epidemiologic Studies Consortium-II.....	12
Communications, Education, and Behavioral Studies Branch Updates	12
New Mobile App for LTBI Guide.....	12
TB Contact Investigation Interviewing Skills Course	13
DTBE Team Creates a Scarecrow to Deliver TB Messages.....	14
International Research and Programs Branch Updates	16
A High-Tech Approach to an Age-Old Problem	16
Laboratory Branch Updates	17
New Training Tool, "Essentials for the Mycobacteriology Laboratory," Now On-Line!.....	17
New Publications Addressing Use of the Cepheid Xpert MTB/RIF Assay in the U.S.	18
New CDC Publications.....	19
Personnel Notes.....	20
Calendar of Events.....	24

Note: The use of trade names in this publication is for identification purposes only and does not imply endorsement by the Centers for Disease Control and Prevention (CDC), the Public Health Service, or the Department of Health and Human Services. The findings and conclusions in the articles published in TB Notes are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

HIGHLIGHTS FROM STATE AND LOCAL PROGRAMS

The Retirement of Charles E. Wallace, PhD, MPH



Never having met a stranger, this man fills a room with his smile, infectious laugh, and loud, but reverent, “Can I hear an Amen?” when he, or someone else, provides an insight

or statement about TB control activities and those whom we seek to serve in our TB public health positions. Even as his imposing physical presence draws your attention to him, it is his personal magnetism, his unparalleled ability to listen and really hear, that captivates and charms you.

Dr. Charles E. Wallace recently retired from his position as Manager of the Tuberculosis Services Branch within the Texas Department of State Health Services, a position he held since 2007. His departure is a huge loss to the TB Branch, as his understanding of TB control has been learned over years of experience in the Department — first as a Public Health Technician in the City of Houston’s Health Department, and since 1985, in increasingly important and responsible positions in the Tuberculosis Control Division and the Infectious Disease Intervention and Control Branch within the Texas Department of State Health Services.

Charles earned his master’s degree in public health in Maternal and Child Health, with a

concentration in public administration, from the University of Pittsburgh, and his Doctorate of Philosophy in Education, with a specialty in human resource development and organizational behavior. Despite his impressive educational credentials, it was Charles’ real understanding of those within our communities who are minorities, impoverished, and suffering from disease, that contributed to his success. His knowledge of individuals, and the organizations designed to serve these individuals, facilitated his effectiveness and his ability to “be real” to those he served.

We all know of his work in TB control in the state of Texas and at the national level, but few of us know of his early interest in, and contributions to, maternal and child health, sickle cell anemia, and minority health programs. Dr. Wallace’s commitment to those in our society who have fewer resources and who suffer from huge health disparities has been a pattern since the early 1970s when he was the Executive Director of the Bexar County Anemia Association. There, he took special pride in the work he accomplished in directing the Southwest Sickle Cell Disease Education and Screening Clinic.

Following these early experiences, Dr. Wallace served as the Community Health Director for the Albert Schweitzer Hospital in Haiti, where he organized, developed, and directed preventive health care services for 120,000 residents. Here is where he was first introduced to communicable disease control and surveillance, and where he developed an appreciation of the interconnectedness of global and domestic diseases, which ignited a spark and passion that would continue to motivate him throughout his long career.

TB Notes is a quarterly publication of the Division of TB Elimination (DTBE) of the National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention (NCHHSTP), Centers for Disease Control and Prevention (CDC). This material is in the public domain, and duplication is encouraged. For information, contact

TB Notes Editor
CDC/NCHHSTP/DTBE, Mailstop E10
1600 Clifton Road, NE
Atlanta, GA 30333
Fax: (404) 639-8960

DIRECTOR, DTBE
Kenneth G. Castro, MD

EDITORIAL REVIEW BOARD
Ann Lanner, Managing Editor
Sandy Althomsons, MA, MHS
Beverly DeVoe-Payton
Michael Fraser
Philip LoBue, MD, FACP, FCCP
Kawi Mailutha
Mary Naughton, MD, MPH
Frances Tyrrell, MPH, MT (ASCP), SM

Visit DTBE's Internet home page,
<http://www.cdc.gov/tb>,
for other publications, information, and
resources available from DTBE.

Charles' departure from his position not only is a loss for the State of Texas: it also leaves a huge void at the national and international levels of TB control. Never one to shy away from additional responsibilities, he is the quintessential public health servant leader. Dr. Wallace served as the National TB Controllers Association (NTCA) Board President in 2001 and 2011. In 2007 and 2008, he served as the Vice-President/ Program Chair for the North America Region of the International Union Against Tuberculosis and Lung Disease (IUATLD). During 2005 and 2006, he served as the Secretary Treasurer and Chair

of the Abstract Committee.

Menn Biagtan, MD, MPH, Program Manager, British

Columbia Lung Association, shared the following thoughts about Dr. Wallace: "It is hard to find a

It is hard to find a man who is so passionate and committed to his work.

man who is so passionate and committed to his work. He takes every task seriously, and yet he's got a good sense of humour. He is well loved and respected by his colleagues at the NAR Region. I was just so fortunate to have worked with him."

In addition, Dr. Wallace was a member of the Advisory Committee for the Elimination of Tuberculosis (ACET) from July 2000 to June 2002, and he was the ACET Liaison Representative, representing NTCA from June 2011 to June 2012.

Many of us remember the National TB Conference in Atlanta immediately following Hurricane Katrina, when Charles Wallace and Charles DeGraw (director of the Louisiana TB Control Program) were overwhelmed with emotion describing the efforts and successes of their respective TB control programs in locating and resuming critical TB treatment to those who had fled the state in the immediate aftermath of the hurricane. It is with that same emotion and personal commitment that Charles did his job, day in and day out, in the aftermath of an unprecedented crisis or in the routine work and the daily responsibilities of a public servant protecting others from tuberculosis.

Jon Warkentin,
Immediate
Past-President

of the NTCA, has this tribute to Dr. Wallace's legacy in TB control: "My friend Charles has been a constant inspiration to me ever since I became involved in TB control and prevention at the state level many years ago. Through his involvement in NTCA and in the TBESC, the self-effacing yet powerful words of Charles Wallace have challenged the status quo, whether that be public health practices or research priorities, always pointing to those we serve and to the ethical challenge of eliminating health disparities across all boundaries."

My friend Charles has been a constant inspiration to me ever since I became involved in TB control and prevention at the state level many years ago.

Charles is someone I admire and respect. He is a true public health hero in my eyes.

Sue Etkind, long-time NTCA member, former Massachusetts TB controller,

and now Executive Director of Stop TB USA, says of Dr. Wallace, "Charles is someone I admire and respect. He is a true public health hero in my eyes. Charles has loved his 'TB journey' in spite of the many obstacles that he has faced along the way, obstacles that others may have found difficult to overcome. He embodies the sentiment that you do not give up when you still have something to give. His leadership and untiring advocacy for public health and the disenfranchised persons of the world are remarkable. Even more importantly, his gentle manner, enthusiasm, warmth, and humor are truly inspirational to all who have been fortunate enough to be his friend and colleague."

TB control and prevention, for Dr. Charles Wallace, is not an occupation but a passion, a mission, and a commitment to others and their health — this has been evident in everything he undertakes. We hope that, in his retirement, Charles will return in some capacity to rejoin the fight against TB. In the meantime, as friends and colleagues, we celebrate the many accomplishments of Dr. Wallace, and will carry on his legacy of inspiration, compassion, and justice.

—Reported by Donna Wegener
Executive Director
National TB Controllers Association

Snohomish Health District TB Team Honored

The following is reprinted with permission from The Snohomish Times.

The Snohomish Health District Tuberculosis (TB) Program was presented with the "2013 Outstanding TB Team" award from the Washington State Department of Health TB

Program on October 23, 2013, at the annual conference of state and local public health TB specialists in Tacoma.

State officials said the Snohomish Health District TB Program received the honor because of the staff's dedication to and leadership in TB control in Washington. The Health District's TB team handles some of the highest rates and most complicated cases of TB in the state.

"Tuberculosis is a serious disease that can be fatal, yet it is curable and preventable, so the community work of local health staff like those in Snohomish County is vital to prevention," said Secretary of Health John Wiesman. "The knowledge and expertise of the Snohomish Health District TB Program staff, along with their outstanding performance and dedication to TB control, is clearly helping make the community they serve safer and healthier there and throughout the state."



The TB program recently completed the treatment and management of four connected cases of active TB begun in 2012 among mental health patients in Everett. In addition to finding the active cases, the TB team looked for people who had been exposed over time to the lung disease. This led to screening and testing 107 more people for TB. Of those, 11 were treated for latent TB infection, which means they have breathed in TB bacteria but are not actively sick.

The local TB program in Snohomish County handles 20 to 26 active cases of TB annually. In prior years, staff worked on a complex medical investigation in the drug-using community, in a local high school, and in multicultural communities. An additional challenge is the rising incidence of TB that is resistant to many antibiotics used for treatment.

“All of us at the Snohomish Health District are very proud of our TB program staff for their devotion to helping people who have TB or who could get sick from it,” said Dr. Gary Goldbaum, Health Officer and Director of the county’s public health agency. “They do excellent, difficult work every day to keep county residents healthy. The ‘Outstanding TB Team’ award from the State Department of Health is an exciting and valued recognition of their effort.”

The program team members were Dr. Chris Spitters, physician consultant; Dr. Joseph Aharchi, program manager; nurses Naomi Kern, Karen Winchell, Anna Hippchen, and Christina Griffiths; Alicia McQuen, disease investigation specialist; outreach workers and linguists Vanny Khy-Preston and Kon Setiaev; and support staff Lisa Pederson, Sally Anderson, and Linda Douglas.

—Reported by *The Snohomish Times*
Snohomish, WA

Bedaquiline, a New Drug for MDR TB

On October 24, 2013, Dr. Sundari Mase, Medical Officer with DTBE’s Field Services and Evaluation Branch, gave a Brown Bag presentation on the new TB drug, bedaquiline (BDQ). The following is a summary of her talk.

What is BDQ? It’s a diarylquinoline, i.e., it’s in the fluoroquinolone class of drugs. It’s intended to be used as part of combination therapy in adults (≥ 18 years) with pulmonary multidrug-resistant (MDR) TB. This is the first new type of drug in 40

years to obtain approval from the Food and Drug Administration (FDA) for treating TB. It works through an unusual mechanism: it inhibits a process (the ATP synthase proton pump) that creates energy for the bacterium. BDQ is manufactured by Janssen, a subsidiary of Johnson & Johnson, and sold under the trade name Sirturo. BDQ is available from one distributor, Metro Medical Supply, which is in Tennessee. During the initial roll-out, Janssen will oversee the process of BDQ distribution to the 68 CDC-funded jurisdictions.

BDQ was approved under the FDA’s accelerated approval program, which allows FDA to approve a drug that treats a serious disease, based on clinical data showing that

- The drug has an effect on a surrogate endpoint, time to sputum culture conversion from positive results for *M. tuberculosis* to negative results, that is reasonably likely to predict a clinical benefit to patients with a serious or life-threatening illness
- It provides meaningful therapeutic benefit to patients over existing treatments.

Effectiveness: When tested in the laboratory, at recommended levels, BDQ is potent against both active and inactive *M. tuberculosis*. And when tested in mice, BDQ has significant bactericidal and sterilizing activity. However, at lower levels (0.3 mcg/ml), bedaquiline has a bacteriostatic effect and acquired resistance is more likely. (A bacteriostatic agent is an agent that stops bacteria from reproducing, while not necessarily harming them otherwise. Upon its removal, the bacteria usually start to grow again. This is in contrast to bactericidal agents, which kill bacteria.)

Dosage: The recommended dose of BDQ for the treatment of pulmonary MDR TB in adults is 400 mg given orally once daily for 2 weeks, followed by 200 mg orally three times weekly, for a total treatment duration of 24 weeks. It is to be taken

with food and in combination with other anti-TB drugs. The drug is available in 100 mg tablets.

Cost: This is a major consideration. A 24-week regimen costs

- \$30,000 for privately insured individual patients
- \$23,070 through the VA 340B plan for public health departments and other governmental entities

Procurement process: So far, most jurisdictions do not have a contract for Medicaid patients to get coverage for BDQ. Private insurance payment decisions will be made on a case-by-case basis. The good news is that patient assistance will be available for uninsured patients through the J&J foundation. Insured patients will have the option of a co-pay adjustment program.

Limitations: The FDA label states that neither the safety nor efficacy of BDQ has been established for the treatment of extrapulmonary TB, latent TB infection (LTBI), or drug-susceptible TB. However, the CDC guidelines give recommendations for off-label use of BDQ for extrapulmonary TB. The CDC guidelines do not mention its use for LTBI or drug-susceptible TB.

Warnings: For safety, you should reserve BDQ for when you cannot otherwise provide an effective treatment regimen for a patient with MDR TB. BDQ's safety risks require careful patient selection and active monitoring. It should be administered by directly observed therapy (DOT). Specific concerns are as follows:

Increased risk of death. In one placebo-controlled trial, there were increased deaths in the BDQ treatment group (9/79, 11.4%) compared to the placebo treatment group (2/81, 2.5%).

There was a significant imbalance in deaths, with more in the BDQ group. TB was the cause of death in 2/2 placebo deaths and in

5/10 BDQ deaths, which were all after BDQ treatment had ended. Of the 10 deaths in the BDQ group, 8 patients had a conversion of sputum culture results from positive for *M. tuberculosis* to negative (i.e., had culture conversion). No pattern was observed between death and culture conversion, relapse, microbiologic response, susceptibility to background regimen (i.e., standard four- or five-drug therapy, to which BDQ is added), HIV infection, and severity of disease. The reason for imbalance in deaths is unknown.

Cardiac events: The drug can cause an irregular heart rhythm owing to QT interval prolongation. In cardiology, the QT interval is a measure of the time between the start of one wave (the Q wave) and the end of the following wave (the T wave) in the heart's electrical cycle. A lengthened QT interval is a biomarker for ventricular heart rhythm disorders and a risk factor for sudden death. And using BDQ with other drugs that prolong the QT interval (such as some drugs for HIV infection) may cause additive QT prolongation. This could be life-threatening.

Liver damage: BDQ can be toxic to the liver. Concurrent conditions and medications associated with liver toxicity could pose additive hazards. Make the following adjustments in patients with kidney or liver impairment:

- Mild or moderate kidney or liver impairment — no dosage adjustment needed
- Severe kidney impairment — use with caution
- Severe liver impairment -- do not use

Lingering effects: BDQ has a long half-life. It remains in the body for months after the drug is stopped. Consider discontinuing BDQ 4–5 months before stopping the other drugs in the regimen, to reduce or avoid an extended

period of exposure to low levels of BDQ in the absence of other medications which are likely to be active against the infecting *M. tuberculosis* isolate. In addition, the QT interval (see above) takes a few months to revert to baseline.

Concerning but indefinite conclusions: A greater number of deaths among patients who took BDQ in the treatment trials. The reason for the imbalance could not be determined from the current safety data. Half the deaths were attributed to worsening of the underlying condition.

The role of BDQ in deaths where liver toxicity and heart failure are contributors could not be excluded. An association between BDQ and these deaths is difficult to determine because of the underlying condition, other co-existent medical conditions, and other drugs being given concurrently (background regimen).

What else do TB programs and clinicians need to know? You will need to monitor patient's progress as follows:

- Symptoms. Monitor patient weekly for nausea, headache, hemoptysis, chest pain, arthralgia (joint pain), and rash.
- Drug side effects. Monitor patient for other side effects related to other drugs in regimen. *Note: Do not use BDQ with rifamycins, or other drugs that induce or suppress CYP3A4.*
- Culture. Send one sputum specimen monthly to a TB laboratory for culture.

CDC also asks that you participate in monitoring for resistance. With the help of your public health laboratory, send one pre-treatment isolate and one additional isolate per month to CDC for surveillance of BDQ resistance.

Distribution. Janssen is providing oversight of BDQ distribution. A point of contact (POC) has

been selected for each of the 68 CDC-funded jurisdictions. These persons will (1) ensure that the patient meets criteria for BDQ, (2) facilitate procurement of BDQ, (3) work with the clinician, nurse, and case manager, and (4) ensure that expert consultation is sought. So far, the process has been smooth.

In summary, how could BDQ help? It could provide

- A stronger regimen for cases with extensive resistance or drug intolerance.
- A shorter regimen.
- A regimen less toxic than current MDR TB regimens.

Importantly, how could it hurt?

- Could cause liver toxicity and death.
- Prevents use of other drugs, i.e., moxifloxacin (MFX), clofazimine; most pre-XDR or XDR cases are treated with MFX.
- Could be misused, or used in a weak regimen leading to drug resistance.
- Can be costly and complex to procure.

TB program directors can call their DTBE Program Consultant for further information, such as the name of the POC for their jurisdiction.

*—Reported by Sundari Mase, MD,
and Ann Lanner
Div of TB Elimination*

NTCA Responds to the Shortages of TB Drugs and Diagnostics

TB drugs and diagnostics are truly a lifeline for TB control. However, shortages and price increases periodically make these tools inaccessible to health care providers. A series of shortages and price increases in TB drugs and diagnostics started in the fall of 2012 and continued in 2013. To address these problems nationally, federal agencies and advocacy organizations need real-time, verifiable

information about the scope and effects of these shortages.

The NTCA has been engaged in discussions with directors of TB control programs about the impact of these shortages on programs and on the patients served. For example, state program staff have been diverted from TB control activities to respond to frequent inquiries from local health departments and other community providers (hospitals, schools, correctional facilities, pharmacies, and long-term care facilities) about the shortages of tuberculin purified-protein derivative antigen solutions and how to meet state rules for testing. Program directors and healthcare providers have made decisions about setting priorities for whom to test, and ultimately to treat.

The TB community needs firm, clear information to provide to federal agencies to document the shortages and the price increases; however, to date there has been no single place to report these issues. In response, the NTCA Drug Shortages Workgroup developed an online system to report shortages of, and price increases in, TB drugs and diagnostics.

The TB Drugs and Diagnostics Reporting Form was developed and pilot-tested by NTCA members. It is intended for use by personnel in state, regional, county, and city TB programs as well as in public and private sector organizations that include TB screenings in their health maintenance activities, such as universities, schools, correctional facilities, hospitals, and long-term care facilities, to report a shortage or price increase of a TB drug or diagnostic. Interferon gamma release assays (IGRAs) were added prior to release of the reporting form, in recognition that some areas experienced interruptions in supply during the TB biologics shortage.

Goals for this reporting and tracking system include-

- Provide an interim notification system for drug and diagnostic supply issues until a national system is in place.
- Collect information on challenges in the United States relating to accessing drugs and diagnostics.
- Describe the frequency and distribution of shortages and cost escalations over time in the United States.
- Describe the effects of shortages on patients, programs, and TB control efforts in the United States.
- Describe the actions taken to resolve access problems.
- Provide summary data in periodic intervals to NTCA, CDC, FDA, policy makers, advocacy groups, and manufacturers working towards continuous, affordable pharmaceutical and diagnostic supplies.
- Provide documented evidence of price escalations to the proper federal agency for a federal investigation into the reported cost increases.

Attributes of the reporting mechanism include-

- Feasibility; simple, easy to use, brief, accessible
- Relevance to users in different settings
- Provision of actionable data
- Ability to provide periodic reports and to be maintained by NTCA
- Provision of definitions, terms, and categories that can accurately capture intended information

The web-based reporting mechanism is available on the NTCA website's home page, www.tbcontrollers.org. In addition to the link to the reporting mechanism, supplemental documents outline the background for the development of the reporting mechanism, instructions for the use of the reporting mechanism, and FAQs.

Please use this new tool to report the shortages and price escalations you have experienced. We ask that you also inform your community partners about this new reporting mechanism, so the database will have input from public and private health providers.

NTCA will report to *TB Notes* periodically on the status of the reporting mechanism, the information submitted to our federal partners, and the effectiveness of documenting these issues.

*—Submitted by Jennifer Kanouse
and Donna Hope Wegener, on behalf of
the NTCA TB Drug Shortages Workgroup*

TB EDUCATION AND TRAINING NETWORK UPDATES

2014 TB ETN Conference

The thirteenth TB Education and Training Network (TB ETN) Conference will be held September 16–18, 2014, in Atlanta, Georgia. The location for the conference is CDC's Roybal Campus. For a fourth year, TB ETN will join forces with the TB Program Evaluation Network (TB PEN) to deliver 2-and-a-half days of exciting, innovative, and rewarding plenary and breakout sessions. Planning is currently underway by TB ETN and TB PEN conference planning committees. Please visit our website in March 2014 for additional details:

www.cdc.gov/tb/education/tbetn/conference.htm

*—Reported by Peri Hopkins, MPH
Div of TB Elimination*

TB EPIDEMIOLOGIC STUDIES CONSORTIUM UPDATES

4th Semiannual Meeting of the Tuberculosis Epidemiologic Studies Consortium-II

Approximately 60 principal investigators, project coordinators, and other consortium personnel

attended the 4th Semiannual Tuberculosis Epidemiologic Studies Consortium-II (TBESC-II) Meeting on September 12, 2013, at the Crowne Plaza Ravinia Hotel in Atlanta, GA. After a warm welcome by Dr. Phil LoBue, DTBE's Acting Director, Dr. Denise Garrett presented the preliminary results of the Consortium's main study, Task Order (TO) 1: Prospective Comparison of the Tuberculin Skin Test and Interferon-Gamma Release Assays in Diagnosing Infection with *Mycobacterium tuberculosis* and in Predicting Progression to Tuberculosis. Then, during a session moderated by Dr. Tom Navin, meeting participants discussed the input from TBESC-II's Board of Advisors and the future directions for the Consortium. This discussion reflected the recognition that some adjustments need to be made, including potential changes in TO1 endpoints, intervention studies for improving latent TB infection (LTBI) diagnosis, and other next steps, including the creation of a "Protocol Revision Team."

Other highlights from the meeting included updates from the Cost-effectiveness Working Group by Dr. Lisa Pascopella and from the Biobanking Working Group by Dr. Bob Belknap. There was also discussion on the Registry Match and repeat testing of IGRAs. Planning for the next TBESC meeting, which will be held in July 2014, is underway.

*—Reported by Denise Garrett, MD
Div of TB Elimination*

COMMUNICATIONS, EDUCATION, AND BEHAVIORAL STUDIES BRANCH UPDATES

New Mobile App for Latent TB Infection Guide

DTBE's Communications, Education, and Behavioral Studies Branch is excited to

announce the release of the mobile application for health care providers, [Latent TB Infection \(LTBI\): Guide for Diagnosis and Treatment](#). The mobile application was designed to make it easy to view CDC's latest LTBI recommendations on an iPad, iPhone, iPod Touch, or Android device. When your device is connected to wireless or cellular service, the content is updated automatically to ensure you always have the most up-to-date information.

This application serves as a ready and useful reference that highlights the main points of key guidelines for diagnosis and treatment of latent TB infection.

Check out these features:

- CDC guidelines on latent TB infection
- Treatment table outlining regimen options
- TB testing and diagnosis recommendations
- TB education and training resources
- Sample documentation forms for TB testing
- Ability to personalize your experience with highlighting, annotation, and bookmark options
- Ability to share the content with others through social media, such as Facebook and Twitter

Download the app today!

—Reported by Maria Fraire Sessions, MPH, CHES
Div of TB Elimination

TB Contact Investigation Interviewing Skills Course

Background

The *TB Contact Investigation Interviewing Skills Course* is an interactive training course designed to improve the interviewing skills of both new and experienced staff responsible for conducting TB contact investigation interviews. The course

development was a collaborative effort between DTBE and the following TB Regional Training and Medical Consultation Centers (RTMCCs):

- Curry International Tuberculosis Center
- Heartland National Tuberculosis Center
- New Jersey Medical School Global Tuberculosis Institute at Rutgers
- Southeastern National Tuberculosis Center

The course provides an overview of the contact investigation process, basic communication and interviewing skills, and opportunities to apply those skills in role play activities.

Target Audience

Health care professionals responsible for conducting TB contact investigation interviews.

Development of the Course

A multi-phased, systematic health education process was utilized to develop the course. The five-step process includes needs assessment, development, pilot-testing, implementation, and assessing effectiveness.

The need for this training was confirmed after a review of National Tuberculosis Indicators Project data showed poor performance in finding and evaluating TB contacts in some jurisdictions. Additionally, discussions with staff from DTBE's Field Services and Evaluation Branch determined that there was a need for extensive interviewing skills training for public health staff who conduct TB contact investigations.

Recognizing the need for an in-person intensive skill-building course, a 4-day curriculum was developed. Materials were adapted from DTBE, RTMCC, and STD interviewing courses. Pilot testing of the course took place from October 2011 through December 2012. Eighteen pilot-test courses were conducted, resulting in a total of 271 trained participants.

Each RTMCC worked with CDC and selected TB programs in their respective regions to pilot test the course. Pilot testing locations included

- Connecticut
- Arizona
- Tennessee
- California
- Texas
- Baltimore, MD
- Florida
- Washington

Local TB program staff served as faculty, along with CDC public health advisors (PHAs) and program consultants. PHAs who served as course faculty included Shanica Alexander, Kim Do, Patrick Ndibe, Shameer Poonja, Sue Spieldenner, Vincent Fears, Cindy Castaneda, Edwin Rodriguez, Angel Roca, Vernard Green, Carlos Alcantara, Mark Miner, Tracina Cropper, Dawn Tuckey, Dan Dohony, Margaret Patterson, Vernell Fields, Scott Jones, Alan Locke, Kim Seechuck, Bruce Heath, and Maureen O'Rourke-Futey.

Feedback comments from the pilot course evaluations were very positive. For example, 99% of participants either agreed or strongly agreed that their interviewing skills were enhanced as a result of the training. Many also stated that the training should be offered to all TB staff, and approximately 98% of participants said that they would recommend this course to others. Participants also stated that hearing about the contact investigation experiences from the PHAs and other course faculty was a valuable part of the course.

Feedback from the course evaluations was used to make improvements to the course materials. After the final revisions were made, the course materials were uploaded to the DTBE website.

Accessing the Training

All of the RTMCCs now offer the *TB Contact Investigation Interviewing Skills Course* as part of

their standard curriculum. If you are interested in participating in one of these trainings, please contact the [RTMCC](#) that serves your region.

TB programs may also use the course materials to conduct their own trainings. All of the course materials are available on the DTBE website: www.cdc.gov/tb/education/skillscourse/default.htm.

Instructions on how to conduct this training are provided in the course Facilitator Guide. TB programs can also request technical assistance from their RTMCC to conduct the course.

*—Reported by Sarah Segerlind, MPH,
and Peri Hopkins, MPH
Div of TB Elimination*

DTBE Team Creates a Scarecrow to Deliver TB Messages

As many of you know, for the past 11 years the Atlanta Botanical Garden has been holding an annual event and competition, *Scarecrows in the Garden*. This year was no different, and neither was the participation of Dr. Wanda Walton and her branch, the Communications, Education, and Behavioral Studies Branch (CEBSB) of the Division of Tuberculosis Elimination (DTBE). This group likes to think of different and creative ways to educate others about tuberculosis (TB) – even if it means building a scarecrow! And not just your run-of-the-mill scarecrow...

Last year they designed and built Miss Scare-let Crow'Hara, a stunning 6-foot crow in a lovely green dress. Scare-let invoked the image of the famous *Gone with the Wind* character Scarlet O'Hara, portrayed by the actress Vivian Leigh, who died of TB in 1967. Through various elements of the display, CEBSB staff provided a message about TB. Members of CEBSB who visited Scare-let in the Garden observed visitors stopping to admire Scare-let, and actually reading her message that TB is still a global problem.

The *Atlanta Journal-Constitution* included Scare-let in their article about *Scarecrows in the Garden*, and noted that she was out and about with an important public service announcement. Buoyed by the fact that Scare-let was such a good spokes-bird, CEBSB decided to repeat their efforts.



The creature that CEBSB came up with for this year was ... *Edgar Allan Crow*. And this Edgar was a-ravin' against TB. Edgar's name was the brilliant brainchild of Allison Maiuri, Health Educator with CEBSB. Mr. Crow's namesake, Edgar Allan Poe (1809-1849), and his family were haunted

by tuberculosis. In 1810, when he was a young child, his mother died from TB. Later in life, his beloved wife Virginia, his brother Henry, and his stepparents also died of TB.

Following these many losses, Poe published his poem "The Raven" in 1945. Some critics believed that the lost "Lenore" in the poem was inspired by events in Poe's own life, either to the early loss of his mother, Eliza Poe, or the long illness from TB endured by his wife, Virginia. It is not clear whether Poe had TB. His death has been attributed to alcohol, brain congestion, cholera, drugs, heart disease, rabies, suicide, tuberculosis, and other agents.

Similar to Poe, Mr. Edgar Allan Crow has the artistic genius for writing "poe-try." Mr. Crow and Ann Lanner, Public Health Analyst, co-wrote his first (and only) poem, with critical assistance from Joan Mangan, PhD, Behavioral Scientist, and Cheryl Tryon, Health Education Specialist. It is

loosely based on "The Raven" and includes TB messages.

A-Ravin' Against TB!
by Edgar Allan Crow



*Once upon an autumn dreary
As I pondered, none too cheery,
Late one night these words I heard
Coming from a learned bird--
Spoken by a raven or a crow,
I can't be sure.*

*Speaking with a bold presumption
Of this old disease Consumption,
"We must fight this airborne menace
That still lurks from Beijing to
Venice (California)
'Til we beat this ancient foe!"*

*Let's fight TB together
'Til TB is nevermore!
Quoth the crow ... "TB Nevermore!"*

Over the course of 10 weeks and many, many hours, CEBSB staff met—offsite and outside of regular work hours—to carry out an assortment of tasks under the tutelage of Joan Mangan and Cheryl Tryon. All expenses for this activity were shared by the CEBSB staff (entry fee, paint, and other supplies).



Prior to being transported to the Atlanta Botanical Garden, Edgar visited DTBE on September 25 in

Building 12 of Corporate Square. The reception in his honor featured a cake that was too pretty to eat, but was eaten all the same: a huge sheet cake decorated to look like a garden, with miniature hand-crafted fruits, vegetables, and a mini-Edgar Allan Crow. Maria Fraire Sessions, Team Lead of the Communications Team of CEBSB, orchestrated this segment of the project.

This year's crow building could not have been completed without the help of CEBSB family and friends! Joan Mangan's house was the headquarters where this year's scarecrow grew up. Joan and her mother, Joanrose Mangan, organized the team's potluck dinners. Wanda's partner, Martha Martin, led clean-up efforts after each dinner so the team could get right to work. Maria's husband, David, cut up wood and boxes to allow safe transport of the garden cake. And Joan's neighbors lent needed tools and enthusiastic support to cheer on the branch during the process.



On October 3, Wanda and her team were among the crowd gathered at the Atlanta Botanical Garden to see the opening of the *Scarecrows* exhibit and to learn the winners of the contest. Please forgive the crowing, but out of 131 scarecrows entered into this year's competition, Edgar Allan Crow won *first place* in the non-professional entry category. The group earned a framed certificate, and bragging rights for the coming year!

All the scarecrows entered in the competition were on display at the Garden for the entire

month of October. We hope CDC staff in Atlanta had a chance to come out to the Atlanta Botanical Garden and visit Edgar, the scariest TB educational product CEBSB has developed!

Photo: DTBE's Communications, Education, and Behavioral Science Branch. From left to right: (back row) Teresa Goss, Amera Khan, Peri Hopkins, Cheryl Tryon, Edgar Allan Crow, Sarah Segerlind, Maria Fraire Sessions. (Bottom row) Allison Maiuri, Molly Dowling, Wanda Walton, Joan Mangan, Ann Lanner. (Not pictured: Nicole Richardson-Smith.)



—Submitted by Ann Lanner, Joan Mangan, Cheryl Tryon, and Wanda Walton
Div of TB Elimination

INTERNATIONAL RESEARCH AND PROGRAMS BRANCH UPDATES

A High-Tech Approach to an Age-Old Problem

A new, cutting-edge diagnostic tool that helps detect TB in hours instead of days or weeks is being studied at 13 sites in Botswana, in hopes of improving TB detection time and getting more people treated faster.

TB remains the leading killer of people living with HIV (PLHIV). In 2012, as many as 63 percent of TB patients in Botswana were co-infected with HIV. Additionally, Botswana faces a growing threat from multidrug-resistant (MDR) TB, a

disease that is much more difficult to diagnose and successfully treat.

Until recently, health providers routinely relied on smear microscopy, a diagnostic tool developed more than 100 years ago, to detect TB in the sputum of patients. But this method can miss many TB cases — especially among PLHIV — and does not detect drug resistance. Other diagnostic methods can detect drug resistance, but it can take many weeks or months to receive results.

It is hoped that a newly introduced diagnostic tool, called Xpert MTB/RIF, will help Botswana TB patients be treated as soon as possible through the rapid and accurate detection of TB disease and drug resistance. Thus, Xpert MTB/RIF may enable patients to be treated more quickly and, ultimately, save more lives.

Xpert MTB/RIF is a molecular test that uses a DNA probe in a sealed test kit to detect TB in sputum with greater sensitivity than traditional tests, while also detecting resistance to rifampicin, one of the most effective first-line TB drugs, much more quickly. The test can be performed simply and safely by minimally trained staff, with results in approximately 2 hours as compared to the days or weeks that it took before.

The U.S. government and the Botswana Ministry of Health have partnered to embark in an evaluation called XPRES (**X**pert **P**ackage **R**ollout **E**valuation **S**tudy) of the first 13 Xpert devices used in Botswana. The study's objectives are to 1) compare the sensitivity of the new Xpert diagnostic tool versus the older smear microscopy-based diagnostic tool when providing TB screening for PLHIV, and 2) evaluate the impact of Xpert on mortality rates of patients newly enrolled in antiretroviral therapy (ART).

The study began in August 2012 and, to date, more than 4,300 participants have been enrolled.

Machines have been placed in 12 districts covering 22 HIV care and treatment clinics that serve approximately 50 percent of PLHIV accessing ART. Lessons learned from the initial sites have informed the recent national expansion of the machines to an additional six sites — and plans for 14 more — across Botswana.



Photo: clinic nurse preparing a sample for analysis using Gene Xpert at a point-of-care clinic, Botswana.

Developing a successful new testing procedure in Botswana should help contain the spread of TB, which, in addition to saving lives here, could have an important public health benefit elsewhere in Africa and in the rest of the world.

*—Reported by Doug Johnson, MPH
Communications Officer, CDC Botswana
Submitted by Alyssa Finlay, MD
CDC Botswana*

LABORATORY BRANCH UPDATES

New Training Tool, “Essentials for the Mycobacteriology Laboratory,” Now On-Line!

The Association of Public Health Laboratories (APHL), in collaboration with CDC, is excited to present a new training tool, “Essentials for the Mycobacteriology Laboratory: Promoting Quality Practices.” This tool consists of a series of

interactive web-based modules for laboratorians, and is now online and publicly available.

The modules are designed to enhance competency and to address those issues of common mycobacteriology laboratory practice affecting quality testing and safety of the laboratorian. There is no charge to access these trainings.

There are currently four training modules available:

- Overview of Tuberculosis
- Laboratory Safety: Work Practices for *Mycobacterium tuberculosis*
- Specimen Collection, Transport, Handling, and Processing
- AFB Smear Microscopy

In addition to the online modules, the website includes PDF versions of the content, as well as many additional resources to supplement each of the trainings. These tools can be utilized to suit individual laboratories' training purposes. Please visit

<http://www.aphl.org/aphlprograms/infectious/tuberculosis/tb-core-curriculum/Pages/default.aspx> to access the modules.

Collaborating with laboratory experts, including staff from CDC, APHL is continuing to develop new content for these training modules. Laboratories are encouraged to share the trainings within their networks with all who might benefit. The modules and other valuable TB resources can also be accessed through APHL's homepage:

<http://www.aphl.org/Pages/default.aspx>

New Publications Addressing Use of the Cepheid Xpert MTB/RIF Assay in the United States

CDC Issues Guidance on the Xpert MTB/RIF Assay

At the end of July 2013, the Food and Drug Administration (FDA) granted market authorization to the Cepheid Xpert MTB/RIF assay. This nucleic acid amplification (NAA) test can simultaneously identify *Mycobacterium tuberculosis* complex (MTBC) and detect genetic mutations associated with resistance to rifampin from raw sputum and concentrated sputum sediments. A major advantage of this test is that results are available in less than 2 hours.

In October 2013, CDC published interim guidance in the *Morbidity and Mortality Weekly Report (MMWR)*. The guidance describes the background of this NAA test, practical considerations for its use in clinical decision making, and considerations for its use in infection control. The *MMWR* article provides a table highlighting interpretation, as well as proposed minimum laboratory report language for results from the Xpert MTB/RIF assay. It also includes an analysis of results of sputum smear and NAA testing for infection control in health-care settings involving patients with suspected tuberculosis.

http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6241a1.htm?s_cid=mm6241a1_w

APHL Releases Xpert Fact Sheet for Laboratorians

Recently, APHL's TB Subcommittee published Laboratory Considerations for Use of Cepheid Xpert MTB/RIF Assay, which is intended to guide laboratories to integrate this assay into existing TB testing practices. The document emphasizes the use of the Xpert MTB/RIF assay as part of a comprehensive testing algorithm that includes acid-fast bacilli (AFB) smear and culture, as well as drug-susceptibility testing. Included within the document is a summary of the considerations each laboratory should make based on in-house testing capabilities. This document may be distributed to clinical laboratory partners and other laboratory stakeholders. It is important to emphasize that the Xpert MTB/RIF assay does

not replace AFB smear and culture. Please see: http://www.aphl.org/AboutAPHL/publications/Documents/ID_2013Nov_Cepheid-Xpert-Fact-Sheet.pdf

Please contact APHL at info@aphl.org for more information.

—Reported by Frances Tyrrell, MPH, MT (ASCP), SM
Div of TB Elimination

NEW CDC PUBLICATIONS

Auld SC, Click ES, Heilig CM, Miramontes R, Cain KP, Bisson GP, Mac Kenzie WR.

[Association between tuberculin skin test result and clinical presentation of tuberculosis disease.](#)

BMC Infect Dis. 2013 Oct 4;13:460. doi: 10.1186/1471-2334-13-460.

Auld SC, Click ES, Heilig CM, Miramontes R, Cain KP, Bisson GP, Mac Kenzie WR. Tuberculin skin test result and risk of death among persons with active TB. PLoS One 2013 Nov 11; 8(11):e78779. doi: 0.1371/journal.pone.0078779.

Bristow CC, Podewils LJ, Bronner LE, Bantubani N, Walt Mv, Peters A, Mametja D. BMC Public Health. [TB tracer teams in South Africa: knowledge, practices and challenges of tracing TB patients to improve adherence.](#) 2013 Sep 4;13:801. doi: 10.1186/1471-2458-13-801.

Coleman MS, Marienau KJ, Marano N, Marks SM, Cetron MS. Economics of United States tuberculosis airline contact investigation policies: A return on investment analysis. Travel Med Infect Dis 2013 Nov 8. doi:pii: S1477-8939 (13)00185-3. 10.1016/j.tmaid.2013.10.016. [Epub ahead of print.]

Cruz AT, Starke JR, Lobato MN. Old and new approaches to diagnosing and treating latent tuberculosis in children in low-incidence countries. Curr Opin Pediatr. 2013 Dec 2. [Epub ahead of print.]

Dorman SE, Belknap R, Graviss EA, Reves R, Schluger N, Weinfurter P, Wang Y, Cronin W, Hirsch-Moverman Y, Teeter LD, Parker M, Garrett DO, Daley CL; for the Tuberculosis Epidemiologic Studies Consortium. Interferon-γ release assays and tuberculin skin testing for diagnosis of latent tuberculosis infection in healthcare workers in the United States. Am J Respir Crit Care Med 2013 Dec 3. [Epub ahead of print.]

Farhat MR, Shapiro BJ, Kieser KJ, Sultana R, Jacobson KR, Victor TC, Warren RM, Streicher EM, Calver A, Sloutsky A, Kaur D, Posey JE, Plikaytis B, Oggioni MR, Gardy JL, Johnston JC, Rodrigues M, Tang PK, Kato-Maeda M, Borowsky ML, Muddukrishna B, Kreiswirth BN, Kurepina N, Galagan J, Gagneux S, Birren B, Rubin EJ, Lander ES, Sabeti PC, Murray M. Genomic analysis identifies targets of convergent positive selection in drug-resistant Mycobacterium tuberculosis. Nat Genet 2013 Oct;45(10):1183-9. doi: 10.1038/ng.2747. Epub 2013 Sep 1.

Floyd S, Sismanidis C, Yamada N, Daniel R, Lagahid J, Mecatti F, Vianzon R, Bloss E, Tiemersma E, Onozaki I, Glaziou P, Floyd K. Analysis of tuberculosis prevalence surveys: new guidance on best-practice methods. Emerging Themes in Epidemiology 2013 10:10; doi:10.1186/1742-7622-10-10.

Gler MT, Guilatco R, Caoili JC, Ershova J, Cegielski P, Johnson JL. [Weight gain and response to treatment for multidrug-resistant tuberculosis.](#) Am J Trop Med Hyg 2013 Nov; 89(5): 943-9. doi: 10.4269/ajtmh.13-0011. Epub 2013 Sep 9.

Mangan JM, Galindo-Gonzalez S, Irani TA. Development and initial testing of messages to encourage tuberculosis testing and treatment among bacille Calmette-Guerin (BCG) vaccinated persons. Journal of Immigrant and Minority Health 2013. Published online ahead of

print Oct. 20, 2013. DOI: 10.1007/s10903-013-9928-z.

Nandakumar S, Kannanganat S, Dobos KM, Lucas M, Spencer JS, Fang S, McDonald MA, Pohl J, Birkness K, Chamcha V, Ramirez MV, Plikaytis BB, Posey JE, Amara RR, Sable SB. [O-mannosylation of the Mycobacterium tuberculosis Adhesin Apa Is Crucial for T Cell Antigenicity during Infection but Is Expendable for Protection.](#) PLoS Pathog 2013 Oct; 9(10): e1003705. doi: 10.1371/journal.ppat.1003705.

Shea KM, Kammerer JS, Winston CA, Navin TR, Horsburgh CR Jr. Estimated rate of reactivation of latent tuberculosis infection in the United States, overall and by population subgroup. Am J Epidemiol. 2013 Oct 18. [Epub ahead of print].

Shepardson D, Marks SM, Chesson H, Kerrigan A, Holland DP, Scott N, Tian X, Borisov AS, Shang N, Heilig CM, Sterling TR, Villarino ME, Mac Kenzie WR. [Cost-effectiveness of a 12-dose regimen for treating latent tuberculous infection in the United States.](#) Int J Tuberc Lung Dis. 2013 Dec 1;17(12):1531-7. doi: 10.5588/ijtld.13.0423.

Walter ND, Painter J, Parker M, Lowenthal P, Flood J, Fu Y, Asis R, Reves R; for the TB Epidemiologic Studies Consortium. Persistent latent tuberculosis reactivation risk in U.S. immigrants. Am J Respir Crit Care Med 2013 Dec 5. [Epub ahead of print.]

PERSONNEL NOTES

SEOIB has had several internal changes in staffing, both temporary and permanent, as follows: [Lee Ann Ramsey](#) has temporarily departed SEOIB to be the DTBE Acting Associate Director for Management and Operations (ADMO); [Brian Sizemore](#) has temporarily departed the Epidemiology Team to be SEOIB Acting Deputy Branch Chief; [Anne Marie France](#) has accepted the position of the Molecular Epidemiology Activity Lead; [Sandy](#)

[Althomsons](#) returned to SEOIB after a 3-month mission in South Sudan with Doctors Without Borders and has joined the Outbreak Investigations Team; [Tracie Gardner](#) is the new NCHHSTP EIS Lead; and [Lauren Lambert](#) has joined the Molecular Epidemiology Activity.

The DTBE Think Tank members are the worthy recipients of the DTBE Director's Quarterly Recognition Award for the first quarter of 2014. Members of the Think Tank are [Vernard Green](#), [Chad Heilig](#), [Christine Ho](#), [Amara Khan](#), [Bill MacKenzie](#), [Brittany Moore](#), [Krista Powell](#), [Sarita Shah](#), and [Angela Starks](#).

In mid-2013, the DTBE Division Director charged the Think Tank with offering "creative, concrete recommendations for cross-cutting activities to carry out DTBE's mission over the next 3-5 years." They were to make recommendations for 1) maintaining or restructuring TB control in the United States, 2) defining DTBE's activities and structure as they relate to global TB control, and 3) addressing future DTBE staffing needs.

The group immediately went to work, putting into place a series of rapid, substantive meetings, and using a comprehensive and highly analytic approach. Over a period of 6 weeks, Think Tank members went above and beyond their regular job duties and conducted intensive research, discussion, and writing of recommendations. This culminated in a 9-part, 26-page document that included recommendations on diverse aspects of the Division's activities and strategy. The analysis and recommendations fed directly into a senior staff strategic budget planning process and now are being used by three groups planning out the organizational and functional future of DTBE in consideration of potential future budget reductions.

The work of the Think Tank has been extremely well-received by Division leadership and Senior Staff. Think Tank members have provided unique input into the Division's strategic planning process at a critical juncture. Their ability to rise

above parochial concerns and describe long-term objectives has provided a powerful impetus to the Division's planning and decision making. Congratulations to the DTBE Think Tank for this well-deserved honor.

Warren Benson will be retiring from CDC and federal service, effective December 30, 2013, after 43 years of service with the federal government. Warren started his federal career in 1971 as a Data Analyst with the U.S. Navy and joined CDC in 1993 as an Office Automation Clerk with the Division of Reproductive Health. Warren has held several other positions at CDC including a stint within the Division of Adolescent and School Health as a Fiscal Accounting Assistant and finally moving to DTBE in 1999 as an Administrative Officer and Resource Management Specialist. There is a chance that you may unknowingly encounter Warren sometime in the future because Warren is a certified FAA Air Traffic Controller. He may decide to put those skills to use, but for now Warren is looking forward to traveling, fishing, catching up on reading, and spending time with his two dachshunds, Penny and Precious.

RADM Kenneth G. Castro, MD, Assistant Surgeon General, USPHS, Commanding Flag Officer, CDC/ATSDR Commissioned Corps, has been selected to receive The International Union Against Tuberculosis and Lung Disease North American Region Lifetime Achievement Award. This is a great and well-deserved honor for Ken's extraordinary contributions to the control, prevention, and eventual elimination of TB. Ken, who has served as the Director of the Division of Tuberculosis Elimination since 1993, has been on detail as Director of the Division of HIV/AIDS Prevention (DHAP), NCHHSTP, CDC, since August 2013.

On Dec. 16, Dr. Castro announced his decision to vacate the position of Director, DTBE, effective December 31, 2013, and his plans to seek voluntary retirement from the Commissioned Corps near the end of FY 2014. The

announcement for the recruitment of a new permanent Director will be made in early 2014.

Under Dr. Castro's leadership, we saw the reversal of the 1985-1992 resurgence of TB in the United States, and the steady downward incidence trends over the past 20 years, achieving the historic lowest incidence of this disease in the U.S. by 2012. DTBE staff produced guidelines to prevent the transmission of *Mycobacterium tuberculosis* complex in healthcare and other congregate settings. DTBE has provided supportive oversight of 62 cooperative agreements (CoAgs) between CDC and states, territories, and several large cities to implement core program functions and continuously evaluate progress. DTBE has also provided programmatic innovation and leadership by initiating the gradual redirection of CoAg resources, starting in 2005, to better address burden of disease and complexity of case management, provide a much-needed safety net for persons afflicted with TB, and most recently introduced performance-based funding incentives as part of the CoAgs. DTBE staff provide, and ensure access to, subject matter expertise and human development capacity through the CDC-funded TB Regional Training and Medical Consultation Centers. This has facilitated access to expert medical consultation and specialty training across the country. There is ongoing collaboration with DGMQ to revise and improve culture-based overseas TB screening and treatment of U.S.-bound immigrants and refugees.

DTBE has supported the implementation and use of universal genotyping of *M. tuberculosis* strains from persons reported with TB, coupled with the continued provision of national emergency and outbreak response capacity, to investigate and better understand transmission dynamics and thus interrupt those transmission chains. DTBE has also supported the provision of national and supranational reference laboratory diagnostic services, along with the evaluation and implementation of advanced molecular methods

for the rapid detection of TB and of drug-resistant strains. This has revolutionized the ability to rapidly detect TB and drug resistance, instead of exclusively relying on solid culture media for a slow-growing pathogen. DTBE has developed and published updated evidence-based guidelines for the use of interferon gamma assays to detect latent TB infection. DTBE has also provided longstanding support of two highly productive epidemiologic and clinical research consortia, thus enabling the implementation of randomized clinical trials which demonstrated the efficacy of once-weekly rifapentine containing regimens in the continuation phase of therapy, the safety and efficacy of a 12-dose regimen for the treatment of persons with latent TB infection, and the need for extended use of isoniazid to prevent TB disease in people infected with HIV. DTBE has also recognized and documented recent unprecedented national shortages in anti-TB drugs and diagnostic tests for latent TB infection. DTBE is now working with partners to seek solutions to these novel problems. And we can point to the fact that partners such as PEPFAR, USAID, WHO, Stop TB Partnership, the UNION, and host countries around the globe rely on our subject-matter expertise to advance our collective understanding of the epidemiologic drivers of TB and use that information to improve our interventions to advance global prevention and control.

Dr. Castro has asked to be placed into a Senior Medical Officer position at the Center until the effective date of his Commissioned Corps retirement near the end of FY 2014, to enable the recruitment of a permanent Director, DTBE, who – in turn – can make selections for the various positions that are presently occupied on an interim/acting basis.

Sekai Chideya, a Medical Officer for SEOIB's Epidemiology team, has taken a temporary detail with the Mycotic Diseases Branch, Division of Foodborne, Waterborne, and Environmental Diseases, National Center for Emerging and Zoonotic Infectious Diseases.

Gabrielle Fanning-Dowdell has joined SEOIB's Epidemiology Team as a Project Coordinator. Gabby is a contractor with Northrop Grumman and will be working closely with TBESC partners to facilitate study enrolment, data management, and analysis. Welcome Gabby!

Derrick D. Felix has transferred from Honolulu, Hawaii, to Atlanta, Georgia, and will continue working in the Field Services and Evaluation Branch of DTBE. In his new role, Derrick will be the Program Consultant for Alaska, Hawaii, and the U.S.-affiliated Pacific Islands (USAPI), which include, American Samoa, the Commonwealth of the Northern Mariana Islands, the Federated States of Micronesia, Guam, the Republic of the Marshall Islands, and the Republic of Palau. Derrick's start date in Atlanta was Dec. 1, 2013.

Prior to his reassignment to headquarters, Derrick served 8 years in Honolulu, Hawaii, as the Senior Public Health Advisor with the Hawaii TB Control Program. In that capacity, he managed the CDC TB cooperative agreement; developed and implemented programmatic activities to meet national TB objectives, which resulted in measureable improvements in state performance measures; established policies and procedures to standardize TB practices throughout the state; facilitated TB case conferences and cohort reviews; conducted quality assurance of TB surveillance data; served as lead for program evaluation; and provided various TB trainings statewide. Additionally, he provided technical assistance to local TB staff and partners throughout Hawaii and provided direct assistance with TB contact investigations in numerous dialysis centers, cruise ships, schools, and correctional facilities. He was also involved with regional TB control and prevention efforts, which included assisting with an Epi-Aid to the Republic of the Marshall Islands, providing monitoring and evaluation site visits to the Republic of the Marshall Islands and the Federated States of Micronesia at the request of the World Health Organization and Secretariat of the Pacific Community, and assisting with the

coordination of the Pacific Island TB Controllers Association annual workshop.

Derrick celebrated 10 years of service with CDC earlier this year and has spent that entire time with DTBE. His previous federal assignments include Fort Wayne, Indiana, and Chicago, Illinois. Prior to joining CDC, he worked one year as a Disease Intervention Specialist in the Palm Beach County TB Control Program in Delray Beach, Florida.

Michael F. Iademarco, MD, MPH, Captain (USPHS), is leaving DTBE for another CDC leadership position. Beginning January 6, 2014, he will serve as Director of the Center for Surveillance, Epidemiology, and Laboratory Services (CSELS), which is part of CDC's Office of Public Health Scientific Services (OPHSS).

Michael's expertise as a physician-scientist and laboratorian provide a strong foundation to lead CDC's efforts to track America's health, strengthen laboratory networks, and help public health officials identify the most urgent health threats. He most recently served as Chief of DTBE's Laboratory Branch, where he oversaw clinical laboratory referral services and helped strengthen laboratory capacity building. From 2006 to 2010, Michael was the Health and Human Services Health Attaché at the U.S. Mission in Vietnam, where he coordinated U.S. health activities for the Embassy and was the in-country representative for the Office of the Secretary. In 2011, he was awarded a Government of Vietnam medal by the country's prime minister in part for his work against HIV/AIDS. In addition, Michael served as Associate Director for Science for DTBE, where he oversaw the issuance of major guidelines.

Michael is an adjunct faculty member of Emory University's Division of Pulmonary, Allergy, and Critical Care Medicine. He serves as an attending physician annually at the Atlanta Veterans Administration Medical Center Medical Intensive Care Unit.

Rose Punnoose has joined SEOIB's Epidemiology Team as a Project Coordinator. Rose is a contractor with Northrop Grumman and will be working closely with TBESC partners to facilitate study enrolment, data management, and analysis. Welcome Rose!

Chaturia Rouse has left the Epidemiology team of SEOIB for Medical School at Case Western University. Chaturia was a project coordinator with TBESC and worked closely with the data management system and site-specific enrolment. SEOIB wishes Chaturia all the best in her upcoming studies!

Charlie Walker has joined CEBSB and will be working with DTBE as a web developer. He did his undergraduate studies and received a Master's Degree in Technology Education from Jackson State University in Jackson, MS. Prior to coming to DTBE, Charlie worked for CDC's OD/OCS, located at the Roybal campus; for the Department of Agriculture; and for IBM as a Web/SharePoint Analyst. Charlie is a member of the Omega Psi Phi Fraternity Inc. In his spare time, Charlie enjoys working out, playing flag football, and watching football.

Liping Zhu, scientific data analyst contractor from Northrop Grumman and TBESC's data manager, has left DTBE for a position with the National Center for Immunization and Respiratory Diseases. Liping led analysis on TBESC-I and TBESC-II study data. SEOIB wishes Liping all the best in her work with NCIRD!

In Memoriam

Don Kopanoff passed away on December 17, 2013, after a long illness resulting from Legionnaires disease. He had served as a long-time and valuable CDC employee for 34 years. Don retired from the Division of Tuberculosis Elimination (DTBE) on April 1, 1994, after last serving as Associate Director for External Relations, DTBE.

Don joined CDC in 1960 and first served in various field assignments with the Division of Sexually Transmitted Diseases and with the then-named Division of Tuberculosis Control (DTBC). He joined the headquarters staff of DTBC in 1967 as a member of the Training Unit, where he was instrumental in setting up several headquarters and field training courses, including TB Today.

In the early 1970s, he played a major role in moving the TB Research and Development Branch from Bethesda, Maryland, to Atlanta, a very difficult task. From 1974 to 1990, Don served as Deputy Chief, Clinical Research Branch. Don received numerous awards, including one for his assistance in the early 1990s in forming the National Coalition for the Elimination of Tuberculosis (NCET), the precursor to today's Stop TB USA.

After retiring, Don enjoyed spending his free time traveling the world with his wife, Alyce, as well as volunteering his time giving tours to school children at the Fernbank Museum of Natural History in Atlanta.

CALENDAR OF EVENTS

February 27–March 1, 2014
18th Annual UNION Conference - North American Region
Boston, MA
BC Lung Association

March 3–6, 2014
Conference on Retroviruses and Opportunistic Infections (CROI)
Boston, MA
CROI Foundation

March 4–5, 2014
ACET Meeting (tentative)
Atlanta, GA
Margie Scott-Cseh

April 9–12, 2014
Denver TB Course
Denver, CO
National Jewish Health

April 28–May 2, 2014
EIS Conference
Atlanta, GA

May 16–21, 2014
American Thoracic Society (ATS) International Conference
San Diego, CA
American Thoracic Society

June 1–4, 2014
APHL Annual Meeting and 8th Government Environmental Laboratory Conference
Little Rock, AR
APHL

June 3, 2014
ACET webinar (tentative)
Atlanta, GA
Margie Scott-Cseh

June 10–13, 2014
National TB Conference
Atlanta, GA
Grand Hyatt Atlanta in Buckhead
For info, contact Donna Wegener, Eva Forest, or Sherry Brown.