DEPARTMENT OF HEALTH & HUMAN SERVICES Public Health Service

Centers for Disease Control
and Prevention (CDC)
Atlanta GA 30333

TB Notes
No. 2, 2007

Dear Colleague:

On March 23, 2007, CDC's *Morbidity and Mortality Weekly Report* (*MMWR*) included a World TB Day "box" statement on the cover, as well as two articles, "Extensively Drug-Resistant Tuberculosis" and "Trends in Tuberculosis Incidence" (*MMWR* 2007; 56[11]: 245–253). In the trends article, DTBE provisionally reported a total of 13,767 tuberculosis (TB) cases (4.6 per 100,000 population) for 2006, representing a 3.2% decline from 2005. I congratulate all who helped achieve this accomplishment, but our optimism must be tempered by caution: the TB rate in 2006 was the lowest since national reporting began in 1953, but the rate of decline is slowing. The average annual percentage decline in the TB incidence rate decreased from 7.3% per year during 1993–2000 to 3.8% during 2000–2006. Our challenge, which I know we can meet, is to maintain our progress in the face of the realignment of public health resources.

World TB Day is observed around the world on March 24. This year, staff of the Division of Tuberculosis Elimination (DTBE) contributed to the global observance of this event in several ways. In addition to producing the *MMWR* statement and reports mentioned above, DTBE staff in Atlanta gathered for a World TB Day luncheon on March 23. We were entertained and enlightened by a number of outstanding performances and presentations. On March 24, World TB Day, DTBE staff and their friends, families, and coworkers, including CDC Director Dr. Julie L. Gerberding and National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention (NCHHSTP) Director Dr. Kevin Fenton, gathered in Grant Park in Atlanta for the first TB Awareness Walk. DTBE staff also produced two articles that appeared on the CDC employee Intranet website, "CDC Connects." Please see the related items in this issue.

The Advisory Council for the Elimination of Tuberculosis (ACET) met on March 20–21, 2007, in Atlanta, Georgia. Highlights from the meeting are as follows: In his update, Dr. Kevin Fenton reported that Dr. Gerberding had participated in a Congressional briefing on March 7, at which she had the opportunity to inform Congress about TB and extensively drug-resistant (XDR) TB. She also testified on March 21 in a hearing before the Subcommittee on Africa and Global Health of the House Foreign Affairs Committee. The hope is that these briefings will result in increased resources to address unmet needs in the fight against TB. In an update on the NCHHSTP budget, Dr. Fenton announced that the joint FY2007 budget resolution provides flat funding for TB; for FY2008, the President's budget request for TB is $136.8 million. Describing changes in NCHHSTP's leadership, he announced that Dr. Nick DeLuca of DTBE is serving a 120-day detail as the Acting Associate Director for Health Disparities, subsequent to Dr. Hazel Dean

taking the position of Acting Deputy Director, NCHHSTP. Susan DeLisle is the Acting Associate Director for Program Integration.

Dr. Fenton also discussed program integration, the concept of organizing and blending interrelated activities and services in order to maximize public health impact, through linkages that facilitate the delivery of services. He stated that integration should be focused at the field level or client level, where the interface between the system and the consumer takes place. Dr. Fenton's short-term goals for program integration include supporting implementation of new adult hepatitis B vaccination guidelines in STD and HIV evaluation and care settings; developing strategies to strengthen partnerships among governmental and community organizations; and building collaborations across NCHHSTP's HIV, STD, and viral hepatitis prevention and surveillance programs.

He then indicated several priority integration activities: conducting integrated Program Consultant meetings; establishing reverse site visits, in which state or field staff come to Atlanta for program review meetings, and an integrated approach for program review; improving communication to grantees on PGO issues; developing a web-based NCHHSTP Intranet and Internet presence for Program Consultant sharing and communication of best practices; developing templates and standards for joint trip reports; and maximizing Program Consultant and field staff deployment during public health emergencies. He then described a successful site visit to California during the week of February 5–9, 2007. During the visit, the NCHHSTP team examined integrated, client-centered programs. Finally, Dr. Fenton reminded the group about the TB Awareness Walk, the first of what is hoped to be an annual event. It was being held on Saturday, March 24, in Atlanta's Grant Park.

Dr. Fleenor provided information on a March 15–16 meeting of the Board of Scientific Counselors (BSC). He indicated that the BSC meeting had been quite positive and energizing. The group had discussed the need for new technology for surveillance of drug-resistant TB and for new diagnostic technologies. He summarized the meeting by saying that he was pleased with the direction of the new BSC so far.

Ms. Carol Pozsik, Executive Director of the National TB Controllers Association (NTCA), described issues and challenges that TB control programs face in attempting to obtain reimbursement from Medicaid for TB services. In a 2006 survey, NTCA found that only 5 of the 50 states use the Medicaid TB option; the others do not use it for a variety of reasons such as the complexity of the process, the limitations of the coverage, and the administrative burden it puts on TB programs. We also learned that some states require copayments from clients; several ACET members commented that patient copayments are a barrier to patient completion of therapy and a real deterrent to TB control efforts. I mentioned that studies have been done on the costs of treatment and hospitalization for TB patients, and commented that ACET might want to recommend discontinuation of the requirement of TB patient copayments, in

order to remove all barriers to patient treatment and care to interrupt the chain of TB transmission.

In my DTBE Director's report, I described recent CDC TB-related activities. On March 6–7, CDC staff met with staff of the Office of the Global AIDS Coordinator (OGAC); that office is providing funds for fighting TB/HIV in the amount of $120 million. Also, in the upcoming weeks CDC staff would be meeting with a White House interagency team on XDR TB.

I presented the data mentioned earlier, i.e., that there has been a statistically significant slowing in the rate of TB decline since 2000. In both 2004 and 2005, 1.2% of TB cases were multidrug resistant. However, the proportions of MDR and of XDR TB cases occurring in foreign-born persons are increasing. I also communicated that we recently learned the National Electronic Disease Surveillance System (NEDSS) TB Program Area Module (PAM) is no longer being supported by CDC. However, the NEDSS standards and the NEDSS Base System will still be supported by CDC. In the short term, TIMS will continue to be used. In the long term, DTBE will collaborate with NTCA, TB program directors, and TB surveillance coordinators to agree on an action plan.

Dr. Phil LoBue gave an update on the Federal TB Task Force (FTBTF) response to XDR TB. The charge to the FTBTF was to develop an action plan by February 28, 2007. Most sections of the plan were submitted by the deadline. The document will be shared with partners such as ACET, NTCA, APHL, and ATS. The document will be revised based on comments and then cleared by CDC, OGAC, and USAID. Dr. LoBue had learned recently that the White House was convening an interagency team to address XDR TB. The FTBTF plan will be shared with the White House team; further action will be determined by direction from the White House.

Claire Wingfield of the Treatment Action Group (TAG) discussed funding needs and gaps in global TB research and development efforts; according to TAG, about $20 billion will need to be spent over the next decade in order to eliminate TB by the year 2050. Dr. Rachel Albalak gave an update on the TB Epidemiologic Studies Consortium (TBESC). While a number of new research studies have been approved for FY2007, TBESC's budget has been reduced; these reductions may require fundamental changes to its approaches or operating model. Dr. Andy Vernon gave an update on the Tuberculosis Trials Consortium (TBTC), in which he discussed current studies and reported on recent external TBTC reviews. The TBTC received excellent assessments from the external reviewers; however, funding for this activity has also declined.

We also heard summaries of the recently completed projects, "Intensification of TB Prevention, Control, and Elimination Activities in African-American Communities." Highlights from the Chicago site, the South Carolina site, and the Georgia site were provided by Ms. Gail Burns-Grant of DTBE, Mr. Joseph

Kinney, and Mr. Ken Johnson, respectively. Dr. Ana Lopez-DeFede presented findings from the project evaluation that identified potential barriers to TB control in this population, including poor knowledge of TB, which was much lower than among other racial groups, and patient beliefs and fears about TB, which may also present barriers to accessing care. For example, many associate TB with HIV, which may create stigma, or may consider TB itself stigmatizing. Suggestions for overcoming these barriers included providing education to patients about preventing TB and to health care providers about making and maintaining client contact; developing new treatment strategies; and providing a comprehensive community health care approach.

Drs. Nick Deluca and Rachel Royce presented reports on two additional projects concerning disparities in African Americans. Nick discussed the evaluation results of the “Stop TB in the African-American Community” summit, describing the many specific action items that had been completed by the summit’s breakout groups. Rachel provided formative research results from TBESC task order 11, “Addressing TB Among African Americans in the Southeast,” describing challenges similar to those outlined by Dr. Ana Lopez-DeFede: socioeconomic and other health problems, lack of knowledge about TB, and stigma.

We received several updates on international topics. Dr. Diana Schneider and Mr. Dan Reyna gave reports on US-Mexico border issues, and Dr. Kathleen Moser and Ms. Del Garcia gave updates on San Diego County’s CureTB and the Migrant Clinicians Network’s TBNet. These persons and their organizations are helping ensure that migrating TB patients complete their therapy. Challenges include discontinued funding for printing the TB binational card and problems in Mexico with directly observed therapy. With global concerns about extensively drug-resistant (XDR) TB, it is vital to ensure treatment completion for patients.

Dr. Dolly Katz gave a progress report on the revised guidelines for preventing and controlling TB in foreign-born persons; important data supporting the revision will be provided by the nearly completed TBESC task order, “Missed Opportunities for TB Prevention in Foreign-born Populations in the United States and Canada.” Dr. Drew Posey discussed the Technical Instructions for Overseas Screening and Treatment of Tuberculosis. The revised instructions have been formally distributed to the Department of State and the International Organization for Migration to allow for budget planning and to begin implementation; several countries are expected to implement the new instructions in 2007. As others had said, ensuring patient completion of therapy is a challenge in many countries.

Members discussed several policy issues, the first being whether DTBE should promote the recent HIV testing recommendations in health care settings. These guidelines recommend offering HIV testing to all TB patients, with written consent not required; patients have the option to refuse the testing. ACET supported the recommendations but were concerned about the financial implications of performing HIV testing in large contact investigations. The group will develop a

statement of support for the new HIV testing policy, and will continue its discussions on addressing barriers to implementation.

We next discussed the revised Report of Verified Case of Tuberculosis (RVCT). The RVCT workgroup has finalized the revision and cleared it through DTBE. By June 26, 2007, ACET and NTCA must provide their comments on the revision; July 2, 2007, is the deadline for submitting the final version to the Office of Management and Budget for approval. In addition, we considered the establishment of a workgroup to address TB in African Americans. After discussing the merits of the issue, the group decided by vote to approve the establishment of a “TB in African Americans” workgroup; I noted that this represents a reestablishment of ACET’s previous such American workgroup that was chaired by Dr. Stephanie Bailey. Mr. Shannon Jones was designated acting chair of the new ACET workgroup.

The group also revisited the issue of Medicare/Medicaid reimbursement for TB services. After a discussion of the evidence that a requirement for patient copayments has a negative effect on patient treatment, the group agreed to issue a formal statement recommending removal of all patient copayments for Medicaid TB services. Finally, several members of DTBE presented a special World TB Day observance. Drs. Bill MacKenzie and Eric Pevzner presented data from their recently published *MMWR* reports, and Mr. Vic Tomlinson wrapped up the presentations with a reminder about the TB Awareness Walk. The next ACET meeting is scheduled for July 10–11, 2007, in Atlanta.

Please note that the DTBE Web team recently updated the DTBE website URLs (webpage addresses). Specifically, "NCHSTP" was removed, and long, cumbersome URLs were shortened. Redirects to the new URLs are being temporarily posted on the old webpages. The Web team will monitor usage of the old URLs and, as usage decreases, will replace the specific redirects with a general redirect to the DTBE homepage. Once usage drops to zero, the general redirect will be removed. Remember to update your bookmarks.

Forging Partnerships to Eliminate Tuberculosis: A Guide and Toolkit has been posted on the DTBE website and is available at www.cdc.gov/tb. The print version should be available within the next few months. In addition, several new fact sheets on XDR TB are also available on the website.

The 2007 National TB Controllers Workshop is being held in Atlanta, Georgia, June 12–14, 2007, at the Crowne Plaza Ravinia Hotel. I hope that many of you will be attending the workshop and taking advantage of all the opportunities this meeting presents for TB control professionals. See you there!

Kenneth G. Castro, MD

In This Issue

Note: The use of trade names in this issue is for identification purposes only and does not imply endorsement by the Public Health Service or the U.S. Department of Health and Human Services.

TB Notes

Centers for Disease Control and Prevention
Atlanta, Georgia 30333

Division of Tuberculosis Elimination ♦
National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention

Number 2, 2007

HIGHLIGHTS FROM STATE AND LOCAL PROGRAMS

Successful Collaborations by New England TB Prevention and Control Programs

The six New England tuberculosis (TB) control programs have recently created a mechanism for communicating, coordinating, and collaborating on specific issues related to TB prevention and control. As a consequence of increasing immigration from a wide diversity of countries, all of the New England states are greatly impacted by the changing epidemiology of TB reflected in the growing foreign-born population. Another common challenge for the New England TB programs is to maintain the low TB rates among traditional populations that are vulnerable to TB, especially the homeless and incarcerated, to prevent outbreaks and to hasten the decline of TB in these groups. These challenges come at a time when funding to local and state TB programs is declining. This article will detail examples of the collaboration that has resulted from this new partnership among public health departments.

New England Region TB Plan
The New England region TB plan provides a framework for promoting regionalization as a means to improve and enhance TB prevention and control as part of the vision for TB elimination. The framework sets out the goals and objectives for effective collaboration between programs and partners in the region and identifies five key regional TB strategies:

- Engage in ongoing dialogue to promote regional planning and policy development
- Increase education and training geared to identified needs
- Actively use data from molecular genotyping of *Mycobacterium tuberculosis* strains
- Use program evaluation to improve health outcomes
- Intensify coordination of cross-jurisdictional contact investigations

CDC's Division of Tuberculosis Elimination (DTBE) and state and local partners are supporting this effort to share experiences and resources. Starting in 2005, Dr. Mark Lobato, a DTBE medical officer, has been working with the New England TB programs to help develop a regional approach to capacity building. This is done through supporting existing programs and implementing new initiatives via systematic collaboration on priority areas.

"Eliminating TB Case by Case"
One success story has been the series of TB case presentations entitled "Eliminating TB Case by Case." Several sources of evidence indicate that health providers have ongoing educational needs, including 1) a regional education needs assessment, and 2) studies, including one by CDC documenting nonadherence to national TB standards and guidelines by private providers. This highly successful TB case series was organized by

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for other publications, information, and
resources available from DTBE.

a coordinating group from the New England TB Programs, the Northeastern Regional Training and Medical Consultation Center (RTMCC), and DTBE. Contributors to creating the series included Kathy Hursen, RN, director of education and training for the Massachusetts Division of TB Prevention and Control, the moderator for the series; Judy Proctor, RN (New Hampshire); Erin Howe, health educator for the Northeast RTMCC; and Mark Lobato (CDC).

The web-based case series is designed to allow providers to present patients whose cases illustrate public health principles and practices. The objectives of the TB case series are to offer a forum for discussing the public health implications of infectious TB, describing the clinical management of TB, increasing awareness of national recommendations for TB diagnosis and treatment, and discussing options for ongoing patient care. To date, the six presentations have reached 60–80 nurses, physicians, health educators, and others. The inaugural presentation featured Robert Horsburgh, MD, from the Boston School of Public Health and the Boston Medical Center and formerly with CDC. Dr. Horsburgh, a local and national expert in TB and HIV treatment, skillfully drew participants into an active dialogue around the case, thereby laying the groundwork for future presentations. An upcoming presentation is planned with Dr. Marie Turner, medical director of the TB Treatment Unit at the Lemuel Shattuck Hospital in Boston.

NewEnglandTB.org

Another success has been the development of the regional TB website, NewEnglandTB.org. The intent of the website is to provide a means for building program capacity by sharing developed resources and materials, communicating experiences and successful strategies, and giving providers access to education and training resources and patient education materials. Developed by a regional team including Marilyn DelValle (MA) and Lisa Roy (NH), the TB programs are learning how to improve the website and promote its use by public health nurses and TB providers.

Molecular TB Genotyping

Finally, the TB programs are at the beginning stages of sharing molecular TB genotyping data to define the specific TB strains circulating in their states. In investigating infectious TB patients, state programs often communicate and collaborate with their neighboring states to prevent possible interstate TB transmission. By identifying the specific TB strains, the programs can define and quantify the extent of transmission across states lines. The first discussion among New England TB programs of a common cluster strain involving 25 patients in four states took place recently. Regina Grebla, an MPH intern from Columbia

University, has started work on the creation of a shared database of genotyping results. The New England TB programs intend to continue and expand their collaborations. At a future NTCA meeting it is hoped that the regional experience can be shared with other TB programs.

—Submitted by Mark Lobato, MD, New England Region TB Consultant, DTBE, and Kathy Hursen, RN, Director of Education and Training Massachusetts Div of TB Prevention and Control

First Annual TB Awareness Walk

TB is the leading cause of death among those with HIV/AIDS, and is a leading infectious disease cause of death among women in some countries. Educating the public and raising awareness about TB was the purpose of the First Annual TB Awareness Walk, held on World TB Day, March 24, 2007, in Atlanta's Grant Park.

The walk, about 2 miles long, was preceded by a program of speakers, including Dr. Julie Gerberding, Director of CDC; Dr. Kevin Fenton (Director, NCHHSTP); Carol Pozsik (Executive Director, National TB Controllers Association [NTCA]); and Patti Arias (RESULTS International). In addition, DTBE's own Regina Bess read a poem she had written for World TB Day. The NTCA partnered with DTBE, the Fulton County Health Department, the Georgia Division of Public Health, the American Lung Association–Southeast Region, RESULTS International, the Watsonian Society (a CDC employee organization), local businesses, and others for this awareness-raising event. As a result of energetic recruiting efforts of DTBE staff, 635 people registered online and about 500 walkers showed up for the event – truly a remarkable showing! We would also like to congratulate the Field Services and Evaluation Branch, winners of the TB Walk recruiting contest!

Many CDC staff turned out for the event, some with their family or friends. Because so many individuals assisted with the planning and coordinating of the walk, it proceeded without incident or mishap and was truly enjoyable. The perfect spring weather, the inspiring remarks of the speakers, and the opportunity to raise awareness about TB made this first TB Awareness Walk a rewarding and enjoyable experience that we hope to repeat next year.

—Reported by Vic Tomlinson Div of TB Elimination, and Carol Pozsik National TB Controllers Association

TB and HIV Analogy

Cheryl Tryon of CDC's DTBE wrote this poem while in Botswana conducting a training course, and presented it for World TB Day 2007. Note from Cheryl: I have conducted a number of TB and HIV trainings in Africa while working for CDC. I learned many things from African trainers who helped with the courses. One thing is that they use analogies extremely well when explaining various concepts. Another is that they ask, "Are we all together?" to gain consensus and determine if course participants are following along. I used both techniques in this poem.

To me, HIV is like an enormous fire that has spread to practically every country in the world.

It is a fire that leaves a path of destruction as it destroys the lives that it comes into contact with.

And TB is like an enormous drought that also leaves a path of destruction.
It too, destroys the lives that it comes into contact with.

When people have HIV, they are more susceptible to getting TB.
And in many countries, most of the people who have HIV actually die of TB.

When there is drought, fires often erupt.
And when there are fires, there are often drought-like situations left behind where the land is all dried up.

So there is a relationship between fire and drought, just like there is a relationship between TB and HIV.

Are we all together?

But there is hope because something falls from the sky that can end the fire and drought.
That hope is rain.

Our efforts as health care workers are like the rain. We -

…Teach people how to prevent getting these diseases
…Help people get treatment to cure TB
…Help people get treatment for HIV so that they can live longer and healthier lives
…Work together to develop new skills and motivate each other to solve all of the many problems in dealing with these two diseases

Are we all together?

When I work at my desk in Atlanta I feel overwhelmed, and my efforts seem so small as to not make much of a difference. It is like only one drop of rain trying to put out this enormous fire and end this devastating drought.

But I know that if my one drop of water helps save one life or helps one person live a longer and healthier life so they can see their children grow, then it helps me remember that even though my effort is small it is worthwhile.

I work with courageous coworkers at CDC and with our dedicated partners in countries who are at the forefront of these two diseases. Every day they work hard trying to fight these diseases.

I feel that all of our efforts, each of our drops of rain together can create a great storm. It is a storm that can make a tremendous difference to put out this fire and end this drought. And that helps motivate me and feel like there is hope.

On this issue of hope, are we all together?

—By Cheryl Tryon
Div of TB Elimination

From Us to You

Regina D. Bess of CDC's DTBE wrote this poem for World TB Day 2007 to convey messages of commitment and hope in the efforts to eliminate TB. It captures the essence of the TB program's mission and dedication to the communities it serves.

In 1882, Robert Koch discovered a staining technique,
And about this great scientist, today we still speak.

It enabled him to see *Mycobacterium tuberculosis*,
And from this process we began to determine a diagnosis.

TST, chest x-ray, and drug susceptibility test,
In our days ahead, we didn't find much rest.

And sometimes we now wonder- MDR,
XDR? What could it be?
We'll put our resources together to provide appropriate therapy.

Resistant to isoniazid, rifampin, and some fluoroquinolones,
We take this challenge, continue our efforts, we won't leave you alone.

Don't want you to complain of pills, lab tests, and all those injections,
We just want to protect you from a deadly coinfection.

A new vaccine, new drugs, and much more DOT,
We're short of our funding, but we hear your desperate plea.

Don't want you to sing the blues like they did in the days of old,
But we will be precise using QuantiFERON-TB Gold.

Don't want you to give up, lose hope, or stop fighting,
We'll examine the DNA with accurate genotyping.

Don't want to hear you cry out, too late? too late? too late,
So we pledge to research, train, and educate.

Don't want to hear you moan, that old graveyard is a lonesome place,
Our efforts will be vigilant, and yes, we'll run this race.

Don't want you to suffer from this terrible disease,
But want you to find comfort and your mind be at ease.

We'll gather statistics, RVCT reports, and surveillance data,
We'll do it now because Now is the Time, not later.

You may be from Africa, Asia, or Latin America,
We'll send out our troops, we'll come there, you betcha!

And yes, it is a challenge to us, you see,
But we will not stop until we eliminate TB.

—By Regina Bess
Div of TB Elimination

Judy Gibson, BSN, MSN, Receives Chief Nurse Officer Award

On March 19, 2007, Carol Romano, Assistant Surgeon General, Chief Nurse Officer, USPHS, presented the Chief Nurse Officer Award to 11 individual recipients and three groups of awardees, along with certificates of appreciation to an additional 14 CDC/ATSDR nurses and nursing supporters.

Among the 11 individual nurse recipients was Judy Gibson, BSN, MSN, Nurse Consultant,

Field Services and Evaluation Branch, DTBE. The letter of nomination for Judy summarized her qualifications by stating that she "is clearly deserving of this award because of her demonstrated outstanding contributions to the nursing profession throughout her 15-year career as the nurse consultant at the Division of Tuberculosis Elimination, Centers for Disease Control and Prevention (CDC)."

The U.S. Public Health Service (PHS) Chief Nurse Officer Award was established to recognize professional nurses who have made an impact in clinical or nonclinical settings through their commitment to the spirit of nursing, and the ideals of the PHS. The award consists of the Chief Nurse Officer's certificate.

—Submitted by Wanda Walton, PhD
Div of TB Elimination

TB EDUCATION AND TRAINING NETWORK UPDATES

Member Highlight

Margaret Marek Rohter, MPH, has been an Outreach Program Supervisor for the Suburban Cook County TB District in Illinois since February of 1996. She received a bachelor of arts degree from Washington University in St. Louis, Missouri, in 1973. Five years later, she graduated from the University of Illinois School of Public Health with a masters degree in public health. Margaret is a Certified Public Health Administrator in the state of Illinois, as well as a Licensed Environmental Health Practitioner. In addition, she is a fellow with the Institute of Medicine of Chicago.

Margaret's job responsibilities include planning and delivering effective training and instructional programs (primarily in English, but also in Spanish when appropriate); developing and maintaining community relationships; and facilitating collaboration and communication with external groups to ensure participation of key stakeholders, such as immigrant groups. Her duties also encompass coordinating targeted testing programs at community sites, reviewing and developing educational materials for patients and staff, and developing content for her agency's website.

In the late 1990s, Margaret began contacting TB programs around the country requesting that they share their foreign language educational materials. Through this effort, she heard about the first TB ETN conference — C*ulture, Language, and Literacy in TB Education and Training* — in 2001. Unfortunately, she was unable to attend that conference, but has attended every TB ETN conference beginning with the following year and has learned a great deal at each one.

Margaret joined the Cultural Competency subcommittee in 2002 and was impressed with the efforts of that group to identify resources for TB programs. In 2004 she volunteered to serve as the incoming co-chair of that subcommittee. "I have been most impressed with the caliber of the individuals who have served as co-chairs of this subcommittee. They have become a long-distance support network for me. Members of this subcommittee are dedicated professionals who are always willing to share resources, experiences, and insights." She is very proud of the Cultural Competency Resource List that is available on the TB

Education and Training Resources website (findtbresources.org).

It is Margaret's belief that the role of TB educators will continuously evolve with the development of new technologies, such as webinars, and diagnostic tools such as the QuantiFERON blood test. It is critical for TB ETN to continue to develop new materials to educate the public and other health professionals about these changes. As the number of TB cases and financial resources decreases in the United States, it will be even more important for TB ETN to provide a network for staff members to use in sharing resources and to provide a forum for discussing education and training issues. She also hopes that TB ETN will be able to advocate for international programs to reduce the burden of disease in other countries.

Margaret's most recent accomplishment has been the redesign of her agency's Website, www.suburbantb.org. Margaret noted that in the past, she had been more of an "implementer" than a "developer" of products. Over the course of 10 years, she has provided in-service training in all of the long term–care facilities in the district. She also provided training and materials for school district nurses, drug abuse agency personnel, social service providers, paramedics and police departments, and other community agencies.
On a more personal note, Margaret has two children in college and a husband who is a civil engineer and a geographic information systems (GIS) instructor. She is the oldest of seven daughters (no brothers). In her spare time, Margaret enjoys listening to Brazilian music, bicycling, and canoeing. She also loves traveling and seeking out new experiences as was evidenced when she traveled throughout South America for 6 months in 1976 after serving 2 years in Bahia, Brazil, as a Peace Corps volunteer. She is involved with fundraising for the Peace Corps Partnerships through the Oak Park Council on International Affairs as well as advocacy for TB through the Metropolitan Chicago TB Coalition. She is also a member of Campaign for Better Health Care, the Sao Paulo-Illinois Partners of the Americas, and the Chicago Area Peace Corps Association.

If you'd like to join Margaret as a TB ETN member and take advantage of all it has to offer, please send an e-mail requesting a TB ETN registration form to tbetn@cdc.gov. The registration form is available online as well at http://www.cdc.gov/tb/TBETN/PDF/RegistrationForm.pdf. You can also send a request by fax to (404) 639-8960 or by mail to TB ETN, CEBSB, Division of Tuberculosis Elimination, CDC, 1600 Clifton Rd., N.E., MS E10, Atlanta, Georgia 30333. Please visit http://www.cdc.gov/tb/TBETN/default.htm if you would like additional information about TB ETN.

—By Jeuneviette Bontemps-Jones, MPH, CHES
Div of TB Elimination

Cultural Competency Workgroup: Special Topic Discussion on "The Culture of Substance Users"

At the 2006 TB ETN Annual Conference, the Cultural Competency workgroup decided to hold quarterly discussions to explore cultural issues regarding TB control among specific populations that were not traditionally defined foreign cultural groups. Suggested topics for the quarterly discussions included TB among substance users, corrections, African Americans, alternative sexualities, and the homeless. The quarterly discussions are conducted in conjunction with the monthly workgroup conference call meetings. The first 30 minutes of the calls are devoted to the normal business of the workgroup. The special cultural issue discussion is held for the next hour. The current format includes

guest speakers who facilitate a discussion on the topic. Ideally, these discussions will include an exchange of resources that will be incorporated into the Cultural Competency Resource List. This list is on the *Behavioral and Social Science Resources* page of the *TB Education and Training Resources* website (*www.findtbresources.org/Behavioral).*

The first special topics discussion, "The Culture of Substance Users," took place in November 2006 and included guest speakers from New York City and Washington State. The first guest speakers were Douglas Goldsmith, an anthropology professor from the John Jay College of Criminal Justice and staff from the TB Control Program at the Snohomish Health District in Everett, Washington. The staff included Susan Robison, public health nurse; Jenny Donovan, disease investigator; Gloria Fiedler, HIV/AIDS Program Manager; and Donna Allis, TB program manager.

Based on his methadone treatment research for heroin addicts, Dr. Goldsmith discussed different subcultures of drug users, their unique set of beliefs and perceptions, and how those influence treatment compliance behavior. The staff from the Snohomish Health District described their recent experience with an outbreak of TB among individuals who use methamphetamines, and identified some behavioral norms of substance users.

The next edition of the Northeastern RTMCC's Cultural Competency Newsletter, "TB and the Subculture of Methamphetamine Users," will be based on the experience of the Snohomish Health District; see http://www.umdnj.edu/globaltb/products/newsletter.htm

—Submitted by Kristina Ottenwess, MPH
Training Specialist
Southeastern National TB Center

CULTURAL COMPETENCY TIPS

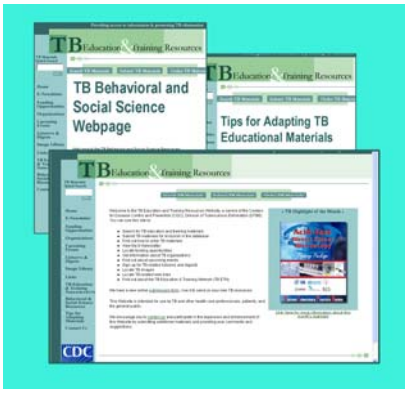
We have become not a melting pot but a beautiful mosaic. Different people, different beliefs, different yearnings, different hopes, different dreams.

—Former President Jimmy Carter

COMMUNICATIONS, EDUCATION, AND BEHAVIORAL STUDIES BRANCH UPDATE

New Additions to www.findtbresources.org

The TB Training and Education Resources Website (www.findtbresources.org) has continued to grow and expand since its creation in 2003. Two new webpages have been added to the site, the Behavioral and Social Science Resources page and the Tips for Adapting Tuberculosis Materials page. Moreover, the number of resources listed on the website and the number of visitors to the site continue to grow.



Behavioral and Social Science Resources

The Behavioral and Social Science Resources page (www.findtbresources.org/behavioral) was added in September 2006. This page includes useful links to TB behavioral and social science resources, descriptions of research studies, a literature database, and research tools, surveys, and guides. Also found on this page is the TB ETN Cultural Competency Resource Guide. This guide includes a list of organizations, readings, and assessment tools associated with cultural

competence and health. Additionally on this page, one can sign up for the TB Behavioral and Social Sciences Listserv, a forum for exchanging information related to TB behavioral and social science issues.

Tips for Adapting Tuberculosis Materials
Another new addition to the website is the Tips for Adapting Tuberculosis Materials page. This page contains tips and resources to consider when evaluating and adapting education and training materials.

Marketing Efforts
Each month, we continue to send out an E-Newsletter to thousands of subscribers. The purpose of this monthly newsletter is to inform readers about the Highlight of the Month, additional helpful resources in the database, and other updates to the website. There are two ways to receive the TB Education and Training Resources E-newsletter: join the TB Educate listserv or join the TB Education and Training Network.

Join the TB-Educate Listserv
Subscribers of the TB-Educate listserv automatically receive the TB Education and Training Resources E-newsletter on the first day of each month. In addition to receiving the e-newsletter, subscribers can ask questions, share comments, and exchange information about TB education and training issues. To subscribe, go to the TB-Educate listserv on the NPIN Website at http://www.cdcnpin.org/scripts/listserv/tb_educate.asp, where you will find complete sign-up information.

Join the TB Education and Training Network
The TB Education and Training Network (TB ETN) brings TB professionals together to share resources and training skills. The TB Education and Training Resources E-newsletter is sent out to TB ETN members on the first day of each month. For a registration form and additional information go to the TB ETN website at http://www.cdc.gov/tb/TBETN/default.htm

Marketing efforts, such as the E-Newsletter, help boost recognition and visits to the website. Information and materials on the TB Training and Education Resources website were displayed at CDC's 2006 Health Education Day at and the 2006 TB Program Managers Course, as well as at the 2006 Union World Conference on Lung Health in Paris, France, and the 2007 IUATLD North America Region meeting in Vancouver, Canada.

New materials and resources are constantly being added to the website. There are approximately 2,000 records in the database. Visitors to the website are invited to share their organization's TB-related education and training materials. Thanks to marketing efforts and the abundance of materials on the website, the website receives visitors from all around the world.

Several new expansions and revisions are planned for the website in the coming months. Please continue to visit and utilize the TB Training and Education Resources website!

—Reported by Allison Maiuri, MPH, CHES and Amera Khan, MPH
Div of TB Elimination

CLINICAL AND HEALTH SYSTEMS RESEARCH BRANCH UPDATES

MDR TB and XDR TB Clinical Trials Design Working Group Formed

In 2004, over 424,000 cases of multidrug-resistant (MDR) TB are estimated to have occurred worldwide, representing an

increase of 55% from 2000[1]. These cases accounted for 4.3% of all new and previously treated TB cases. Persons with MDR TB are 54% more likely to die or have treatment failure[2]. The recent identification of outbreaks of XDR TB among HIV-infected persons[3] has emphasized the lack of controlled studies to define optimal treatment regimens for MDR and XDR TB. A working group has been formed under the aegis of the TB Trials Consortium and is actively working to identify strategies to best evaluate new TB drugs for the treatment of MDR and XDR TB. The goals of the working group include-

- Developing a research agenda for improving outcomes of treatment of MDR and XDR TB,
- Identifying the most efficient path to new drug regimens for MDR and XDR TB,
- Integrating animal and preclinical research with clinical trials design,
- Stimulating funding for clinical trials of MDR and XDR TB treatment by providing a defined pathway for the future, and
- Defining compatibility between antiretrovirals and drugs for MDR treatment.

The working group is developing a management plan to guide policymakers and scientists, both clinical and preclinical, in the effort to develop new therapies for MDR TB. The group is emphasizing the need for development of new MDR regimens in parallel with new drug development for drug-susceptible TB. Members of the group include Bill Burman (Denver Public Health), Peter Cegielski (DTBE, CDC), Mary Ann de Groote (Colorado State University), Mark Harrington (Treatment Action Group), Bob Horsburgh (Boston University School of Public Health), Dikoe Makhene (DMID, NIAID, NIH), Carole Mitnick (Harvard Medical School), Sonal Munsiff (DTBE, CDC), Nesri Padayatchi (CAPRISA: Centre for the Program for AIDS Research in South Africa), Jussi Saukkonen (Boston University Medical Center), Neil Schluger (Columbia University), Barbara Seaworth (University of Texas, Tyler), Tim Sterling (Vanderbilt University School of Medicine), and Elsa Villarino (DTBE, CDC).

—Submitted by C. Robert Horsburgh, Jr., MD
Boston Univ. School of Public Health

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The Long Road to a Shorter, Stronger, Safer Cure for TB – How to Get There Faster

How short is shorter, how strong is stronger, how safe is safer?

There are common worldwide goals for a TB treatment regimen: duration of 2 months or less; high efficacy (99% cure rate) and intermittent dosing (once or twice a week), with a relapse rate approaching 0%; and better-tolerated therapy (decreased common and serious side effects; fewer drug interactions, especially with anti-HIV medicines). The good news in TB treatment is that there are now at least six new TB drugs in development (http://new.tballiance.org/new/portfolio/html-portfolio.php). The bad news: it could be several decades before we arrive at a shorter, more effective treatment regimen which employs these drugs.

In 1962, TB treatment lasted 24 months, requiring 1460 doses and hospitalization, and was associated with treatment failure rates of 10%, relapse in 2%, and acquired resistance in 7% (*Tubercle* 1962, 43:201-67). In 1979, less than 20 years later, it had been shown that treatment duration could be shortened to 6 months, requiring 96 doses and no hospitalization, and with 0% treatment failure, 2% relapse, and 0% acquired resistance (*Am Rev Respir Dis* 1979;579-85).

It has now been 28 years since "short-course" therapy was proven effective. For most of that time, there were no new candidate TB drugs; no movement down the road was even possible. Now, with six new drugs in the pipeline, can we expect to make the kind of exciting progress that was witnessed in the 1960s and 1970s? The recent recognition of extensively drug-resistant (XDR) TB in South Africa and other sites adds urgency to the need for evaluation of novel agents to treat TB (*MMWR* 2006;55: 301-305).

Traditionally, clinical trials for new TB drugs are based on 6- to 9-month treatment regimens, with follow-up efficacy evaluations lasting 1 to 2 years to detect any cases of relapse. Accounting for the completion of phase I, II, and III trials, it can take 6–7 years or more to register a new drug for TB. Most experts anticipate that more than a single drug substitution in the multidrug TB treatment regimen will be required to achieve a regimen that is dramatically shorter and more effective than current treatment. Because the effect of single substitutions doesn't predict the effect of combining multiple new drugs in a treatment regimen, it would theoretically be necessary to conduct trials with all possible permutations of the six or eight drug classes contributing to a three- or four-drug regimen to discover the "correct" combination. This approach would take centuries to complete, and only dumb luck could be expected to shorten the process!

Four strategies have the potential to provide significant shortcuts to our destination: the use of preclinical data from mouse models; the use of surrogate markers (biomarkers) to predict relapse risk; a clinical trials format designed to speed the evaluation of multiple new agents in a multidrug regimen; and clinical evaluation of novel agents through compassionate-use protocols for patients with XDR TB.

The first shortcut to consider is the use of mouse models to assist in choosing candidate regimens for study. Despite the many obvious biologic differences between mice and people, and the fact that the overall course of TB infection in mice does not closely follow the course of TB infection in humans (no real correlate of latent TB infection), the mouse model of TB disease has proved very useful in predicting the results of human TB treatment. In the early development of TB treatment, mouse models predicted some important tenets of now-proven regimens: that INH provides two phases of killing (early and rapid, then prolonged and slow) and that the addition of rifampin and/or PZA provides sterilizing activity (*J Exp Med* 1956;104:737-62,*Tubercle* 1978;59:287-97). Recent data from mouse models predict the utility of quinolones in combination with a rifamycin; these data were used to inform the design of Study 28 (Nuermberger et al. *Am J Respir Crit Care Med* 2004;169:421-6).

The second shortcut strategy is to find and employ biomarkers that can predict the risk that TB treatment will be unsuccessful. TB treatment can fail in two ways: 1) it can fail to effect a clinical response (such as weight gain or defervescence) or a microbiologic response (sputum cultures rendered sterile) while the therapy is being given; and 2) it can

lead to relapse of disease within 2 years after completion of therapy. Because these failures of treatment will not be directly evident for months or years after the start of a treatment regimen, clinical trials can take several years to reach these important endpoints. It is possible to identify biomarkers that can be measured early during the treatment period and for which a threshold value can predict later treatment failure or relapse. Once the predictive value of such a biomarker is established, the biomarker result could become the primary outcome of a clinical trial. For example, the lack of 2-month culture conversion has been associated with increased risk of treatment failure and relapse; this endpoint is a primary outcome for a current TBTC phase II trial, Study 28. Using a biomarker measured at 2 months after starting therapy (instead of 2½ years), it would be feasible to complete a clinical trial in a year or less.

The problem with using a biomarker that has a dichotomous result (positive or negative), instead of a continuous result for a primary study endpoint, is the relatively large sample size required to demonstrate a difference in study arms. Potentially useful biomarkers that provide results on a continuum include quantitative sputum cultures, quantitative nucleic acid amplification tests, and therapeutic drug levels (pharmacokinetic sampling). In the past, quantitative sputum cultures were frequently employed to determine the early bactericidal activity of individual TB drugs (Jindani et al. *Am Rev Respir Dis* 1980; 121: 939-49), but have not been used as a primary endpoint for multidrug treatment trials.

The third shortcut strategy is to pursue the identification of a very promising new multidrug TB regimen (utilizing one or more new agents) for evaluation in a phase III trial by first conducting sequential phase II trials. Concurrent phase II trials can be used to efficiently identify the optimal dose of each new drug (e.g., for each candidate drug, a trial with two dose arms of 150 patients each with enrollment and follow-up completed in 8 months). The next step would be to use a multiarm phase II study to identify the place of a new drug (X) or drugs within a regimen, e.g., Arm 1: HRZX, Arm 2: MRX, Arm 3: MRZX, with 150 patients per arm with enrollment and follow-up completed in 6 to 8 months (H=INH, R=rifamycin, Z=PZA, M=moxifloxacin, X=new drug). As mentioned above, data from the mouse model can be very useful in choosing arms for these trials. A phase III trial of a new TB regimen will require enrollment of 1400 patients or more (based on 80% power to detect a decrease of relapse or toxicity from 5% to 2%) and require a minimum of 3 years to complete enrollment and follow-up. By using sequential phase II trials to design optimal new regimens for inclusion in phase III trials, it is feasible to reach the goal of a shorter regimen in the next decade.

The design of clinical trials to evaluate the effectiveness of novel TB drugs could also be based on the approach used for studying therapies for drug-resistant HIV in treatment-experienced patients. A common approach to the evaluation of novel agents for HIV treatment has been to use 1 (or more) novel agent in a controlled trial in which all patients (with drug-resistant HIV) receive optimized background therapy (or salvage therapy) based on currently approved or available medications and a proportion are randomized to receive the novel agent in addition (Lazarrin et al. *N Engl J Med* 2003; 348:2186-95). Indeed, novel drugs for TB will likely have the greatest impact on the treatment of MDR TB and studying new TB agents in patients with MDR TB is a reasonable approach to demonstrate effectiveness. Studies could be designed as add-on studies in which a placebo is compared against the new agent in the

context of the background regimen containing the best options that would otherwise be available to the patient (optimized background therapy or OBT). In such a design, patients with differing drug resistance patterns may be enrolled because each patient will have individualized OBT.

The discussion above was based on presentations given by William Burman, MD, at TBTC Semiannual meetings.

Study enrollment updates:
Study 24 is a single-arm study of largely intermittent, short-course therapy for patients with INH-resistant TB or INH intolerance. Enrollment closed Dec. 2004 with a total of 98 patients. By mid 2007, all patients will have reached the end of follow-up for study outcomes (treatment failure and relapse).

Study 26 is a trial of short-course treatment of latent TB infection among contacts of active cases, using a 3-month once-weekly regimen of isoniazid 900 mg and rifapentine 900 mg, compared to standard 9-month therapy with isoniazid 300 mg. As of March 17, 2007, Study 26 enrollment was up to 7046, over 88% of the intended 8000 subjects. Enrollment completion is anticipated by October 2007.

Study 27 was a double-blind, placebo-controlled comparison of 2-month culture conversion rates when substituting moxifloxacin for *ethambutol* in the initiation phase of treatment of pulmonary TB. Enrollment began in July 2003 and was completed in March 2005, with a total of 337 patients. Over 50% of patients were enrolled from two African study sites. The primary study results were published in 2006 and showed there was no difference between study arms in terms of time to sputum conversion (Burman WJ et al. *Am J Respir Crit Care Med* 2006; 174: 331-338). There were differences, however, between North American sites and African sites, with significantly more North American patients converting their sputum to negative by 2 months (84%) compared to African patients (60%). Further analyses are ongoing.

Study 28 is a double-blind, placebo-controlled comparison of 2-month culture conversion rates when substituting moxifloxacin for *isoniazid* in the initiation phase of treatment of pulmonary TB. This isoniazid-sparing regimen for TB treatment is based on data from the murine model of TB; in this model, the substitution of moxifloxacin for isoniazid resulted in significant reductions in the time to culture conversion and the time to sterilization when compared to the standard combination of rifampin, isoniazid, and pyrazinamide. Improved sputum culture conversion after 2 months of treatment with a moxifloxacin-containing regimen would support phase-3 trials of moxifloxacin-based treatment regimens of less than the current 6-month standard regimens. The plan is to enroll 410 patients from both domestic and international TBTC sites. Enrollment began in March 2006 and was completed in March 2007 with 433 enrolled.

—Submitted by Susan M. Ray, MD
Emory Univ. School of Medicine
Member, Advocacy & External Relations Committee, TBTC

INTERNATIONAL RESEARCH AND PROGRAMS BRANCH UPDATE

Building the Capacity of Health Care Workers from the Former Soviet Union on TB/HIV Surveillance Activities

Bryan Kim, MPH, presented the following as a poster at the 2007 International Union Against Tuberculosis Conference, North America Region, which took place February 22–24, 2007.

Tuberculosis (TB) is a leading cause of morbidity among people living with HIV (PLWH). Many of the Former Soviet Union (FSU) countries have a high TB burden and a rapidly expanding HIV epidemic. Enhanced surveillance of HIV-related TB (TB/HIV) is a recommended activity in order to monitor the overlap of the two epidemics. To increase capacity among health care workers (HCWs) from the FSU countries, a training course on HIV surveillance among TB patients was developed.

A week-long TB/HIV surveillance training for HCWs from FSU countries was conducted in Croatia in May 2005 and May 2006. The training was developed to increase the skills of HCWs to plan, implement, and evaluate TB/HIV surveillance according to WHO/UNAIDS guidelines. Course participants developed protocols to describe how TB/HIV surveillance activities would be implemented in their respective countries. Each participant took a pretest and a posttest to assess knowledge gained from the course. In May 2005, a total of 14 participants were trained; in May 2006, a total of 18 participants were trained. Participants were trained on research methods, multidrug-resistant TB, data collection and analysis, data dissemination and usage, and ethics.

Posttest results indicated that participants increased their knowledge of TB/HIV surveillance activities. Course evaluations done at the end of the training indicated that the participants felt the protocol development activity was very practical. Some participants indicated that, depending on resources, they would be able to implement the protocols in their countries. WHO and CDC are providing technical assistance to a few of the participating countries to help them follow up in the implementation of their protocols.

—Submitted by Bryan Kim, MPH
Div of TB Elimination

SURVEILLANCE, EPIDEMIOLOGY, AND OUTBREAK INVESTIGATIONS BRANCH UPDATES

RVCT Revision

The Report of Verified Case of Tuberculosis (RVCT) is the national TB surveillance form. Data from the RVCT are used to create the DTBE Annual Surveillance Report and to monitor national TB trends. The last major revision of the RVCT was in 1993. Since that time, the epidemiology of TB has changed in terms of risk factors, new drug treatments, and enhanced laboratory capacity for diagnostic tests.

In 2001, DTBE initiated a comprehensive review of existing variables and instructions for the RVCT. A DTBE-sponsored work group with nearly 30 members from CDC, 15 TB programs, and the National TB Controllers Association (NTCA) convened a series of 26 conference calls to draft the next revision to the RVCT. The group collaborated to consider variable additions, deletions, and revisions based on surveillance significance, ease of data collection, and ability to yield meaningful and useful data. The revision also benefited from review and consultation with TB experts active in research and field services.

The RVCT revision work group finalized their working draft in December 2006 and forwarded the draft to DTBE in January 2007. There was broad consensus on which variables and which instructions should be revised, with a few remaining issues for which DTBE guidance was requested. DTBE is currently reviewing the draft and making final suggestions prior to sharing the draft with partners. In March 2007, the draft was made available for review by the Advisory

Council for the Elimination of Tuberculosis (ACET), NTCA, TB Controllers, Surveillance Coordinators, and other stakeholders. Partners will provide feedback on the revision and DTBE will make final decisions based on comments. The RVCT revision will be field-tested and must be submitted to the Office of Management and Budget (OMB) clearance process by October 2007.

—Reported by Carla Winston, PhD
Div of TB Elimination

10th Semiannual Meeting of the TB Epidemiologic Studies Consortium

The 10th Semiannual Meeting of the TB Epidemiologic Studies Consortium (TBESC) convened on January 24-25 in Las Vegas, Nevada. The primary purpose of the TBESC is to conduct epidemiologic, behavioral, economic, laboratory, and operational research in TB prevention and control.

Over 110 persons participated in the meeting. Attendees included Centers for Disease Control and Prevention staff, TBESC principal investigators, project coordinators, and project specific personnel.

This meeting had a more research oriented focus than previous meetings with scientific presentations and discussions on research topics that were identified as a top priority by TBESC. In addition, consortium members and CDC staff gave updates on the status of ongoing TBESC research projects and activities. Administrative and fiscal issues were also discussed.

Participants heard presentations from CDC staff, TBESC members, and invited guests on a broad array of topics that included--

- TB in foreign-born persons
- Effects of diabetes on tuberculosis
- TB in African Americans
- Administrative and fiscal updates on consortium-related activities
- Update on the Semiannual Tuberculosis Advisory Review (STAR) process
- Updates from the Process Evaluation, Publications and Presentations, External Relations, and Research Committees.

The 10th semiannual meeting represents the midway point or 5 years of the TBESC. This is a very exciting time for the consortium with a number of its studies in the data analysis phase and others beginning to report results and describe implications for TB programs. For more information on the TBESC, visit http://www.cdc.gov/tb/TBESC/default.htm.

—Reported by Indhira Gnanasekaran, MPA
TBESC Project Manager
Div of TB Elimination

NEW CDC PUBLICATIONS

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PERSONNEL NOTES

Peter Cegielski, MD, of DTBE's International Research and Programs Branch received the 2007 Brachman Award on April 19, 2007, at the 56th Epidemic Intelligence Service (EIS) Conference for excellence in teaching epidemiology to EIS Officers. Peter was selected to receive this award by the EIS Class of 2005, which just completed its 2-year training. Peter was the co-recipient of this year's award along with Dr. Joshua Mott of the National Center for Immunization and Respiratory Diseases. Congratulations, Peter!

Al Forbes is returning to DTBE in Atlanta in June as a TB Program Consultant. He has been serving in the Miami, Florida, public health advisor position since September 18, 2005. Al began his CDC career in 1993 as a public health associate with the New York City (NYC) Department of Health Bureau of Tuberculosis Control. His assignment to NYC provided him with a broad understanding of public health and knowledge about programmatic issues and clinical services. In 1997, he was promoted and transferred to the New Jersey Department of Health and Senior Services Tuberculosis Program, where he served as the assistant to the senior public health advisor. While there, he provided consultation and technical assistance in program planning, coordination, operations, training, administration, and evaluation. In 1999, Al was selected as the assistant project manager for the Tuberculosis Information Management System (TIMS). In this position he provided technical assistance and training to TIMS users nationwide. He worked closely with the Surveillance Branch regarding the interface of TB surveillance data and with the Field Services and Evaluation Branch (FSEB) program consultants regarding resource needs and management problems. In 2001, he became a program consultant and assumed the duties of overseeing DTBE's COAG activities and providing guidance and consultation to the Mid-Atlantic region. Welcome back, Al!

Judy Gibson, BSN, MSN, Nurse Consultant, Field Services and Evaluation Branch, DTBE, was a recipient of the Chief Nurse Officer Award. Please see the related article in this issue.

Regina Gore is being reassigned to DTBE in Atlanta as a TB program consultant in May. Since January 2003, she has been the special projects coordinator for the TB Control Program in Frankfort, Kentucky. Regina started her CDC career in 1989 as a public health associate assigned to the Fulton County Sexually Transmitted Disease (STD) control program in Atlanta, Georgia. She also held STD positions in Tampa, Florida, from June 1990 until January 1992, when she was promoted to a first-line supervisor position in Kansas City, Missouri. After resigning from CDC in 1994, she moved to Miami, Florida, where she became the program coordinator for a mobile HIV testing team. In September 1998, she

relocated to Atlanta, Georgia, and became a research interviewer for Emory University, providing STD services for clients enrolled in a program called Project Prevent, which provided assistance for expectant mothers with substance abuse problems. She was rehired by CDC/DTBE in January 2000 and was assigned to the Palm Beach County, Delray Beach Health Department, TB Program from 2000 to 2003. Her duties in Delray Beach included providing DOT and DOPT therapy, presenting cases in chart review with the regional consultant, and conducting contact investigations and case management.

Darryl Hardge has been selected for the senior public health advisor position for the state of Pennsylvania. His official start date in Harrisburg was March 19, 2007. Darryl most recently served as the Program Director for the Washington, DC, TB Control Program. During his tenure there, Darryl made significant progress in strengthening and modernizing the TB control program through the recruitment of key staff and by planning and coordinating the renovations for a new, state-of-the-art TB clinic, to open in 2007. In addition, he completed a temporary duty assignment assisting the Louisiana TB program with recovery efforts from hurricanes Rita and Katrina.

Darryl came to work for CDC in May 1991 as a public health associate in the Division of Sexually Transmitted Disease Prevention, and was assigned to the Division's Disease Intervention Specialist (DIS) training center in Decatur, Georgia. In 1992 Darryl was reassigned to Milwaukee, Wisconsin, as a DIS working in high-morbidity areas. From January until February 1996, he had a temporary duty assignment in Baltimore, assisting the STD program with an outbreak of syphilis and HIV. In 1996 Darryl became a lead worker in Milwaukee, supervising six DIS staff. In October 1997, he joined DTBE and was assigned with promotion to the state of Louisiana TB program. In November 1998, Darryl assumed a number of the senior PHA duties on an interim basis for the Louisiana TB Program and received a promotion for these efforts. In May 1999, he was assigned to the Baltimore TB program as the program manager. During this assignment, Darryl led the program through two large and complex TB outbreaks. During his tenure in Baltimore, Darryl participated on a temporary duty assignment in Washington, DC, helping with CDC's effort to respond to the anthrax attacks. In 2002, Darryl took a position as a Program Consultant with DTBE at CDC headquarters and was responsible for providing consultation and assistance to TB control programs in Missouri, Kansas, Iowa, Nebraska, South Dakota, North Dakota, and Minnesota. FSEB thanks Darryl for an excellent duty assignment in Washington, DC, and congratulates him on his new assignment to Pennsylvania.

Ken Johnson, formerly a DTBE public health advisor (PHA), left the division and joined CDC's Division of Global Public Health & Capacity Development In March 2007. Ken began working with CDC in 1990 as a PHA with the Division of Sexually Transmitted Disease in Chicago, Illinois, working with the Chicago Department of Health and then working with the North Carolina State Department of Health. Subsequently he transitioned to and began working with the Division of Tuberculosis Elimination in New York City and the Fulton County Department of Health and Wellness. He has worked at various levels in public health management, including his most recent position as the TB Program Coordinator in Fulton County, Georgia. While working in DTBE, he was also deployed to various locations for temporary duty assignments including Brazil, New Orleans after Hurricane Katrina, and most recently Mississippi.

Heather R. Morrow-Almeida, MPH, completed her assignment with DTBE on April 13, 2007. This was her first assignment as a Public Health Prevention Service Fellow. While in DTBE's Field Services and Evaluation Branch, she worked on several projects, focusing primarily on evaluation with the Program Evaluation team. She collaborated with members of the Program Evaluation team and the Surveillance team (SEOIB) on the development and pilot testing of the National Tuberculosis Indicators Project (NTIP), a monitoring tool consisting of indicator reports that match national TB program objectives. This tool will help TB control programs monitor their progress in meeting the national objectives for TB and will inform future directions for program evaluation. She also worked on several documents that complement the evaluation toolkit materials developed by the Program Evaluation team for state partners. These documents include profiles of TB indicators focused on TB program priorities, and a model evaluation plan to be refined into a case study.

Heather's next assignment is with the Associate Director for Science in the National Center for Environmental Health. She will be working on advancements in the field of health and the built environment. Heather truly enjoyed her time working in DTBE, and leaves with tremendous respect for the hardworking and dedicated individuals she met in the division. She is secretly plotting her return to the division, and hopes it won't take long.

Charles Wells, MD, Chief of DTBE's International Research and Programs Branch (IRPB), is leaving CDC for a research position in private industry. Charles obtained his medical degree from the University of North Carolina, Chapel Hill, completed his postgraduate training at Emory University School of Medicine, and is board certified in internal medicine and infectious diseases. From 1995 until 1997 he served as an Epidemic Intelligence Service (EIS) officer in DTBE's then-named International Activity, where he helped define the epidemiology of TB in foreign-born persons and identify risk factors associated with active TB in recent immigrants and refugees. He then completed an infectious disease fellowship at Emory University School of Medicine in Atlanta, Georgia (1997-1998). After completing the fellowship, he held the position of Associate Director, Medical Affairs with PathoGenesis Corporation in Seattle (1998-1999). In this role, he led clinical research activities, specifically being responsible for the design and medical monitoring of phase 1, 2, and 3 novel anti-TB drugs. In November 1999 he was again recruited to join DTBE's International Activity, this time as a Medical Epidemiologist. In that position, Charles served as the project officer in the development and implementation of a model center for multidrug-resistant (MDR) TB treatment in Latvia, and was instrumental in implementing operations research activities in Russia and Peru. In 2000, Charles was selected as the Chief of the branch to replace Dr. Nancy Binkin, who was retiring. As Chief, Charles leads a branch of medical epidemiologists, public health advisors, fellows, research nurses, and administrative support staff in Atlanta, Botswana, Brazil, India, Paris, and Thailand, with a current total of 78 in the branch. He has supervised projects in Russia, Ukraine, Latvia, Estonia, Lithuania, Romania, Mexico, Peru, El Salvador, Brazil, Guyana, Haiti, South Africa, Botswana, Ethiopia, Mozambique, Rwanda, India, Thailand, Cambodia, Vietnam, and Philippines. In this coordinating role, Charles was responsible for developing and maintaining crucial political and financial relationships with global partners, donors, and individual countries.

In addition to leading the unit in providing technical assistance and supportive research for TB control in more than 20 countries, Charles has also served on several important international committees. From September 2000 to January 2005, he served as the CDC alternate for the World Health Organization (WHO) Green Light Committee (GLC). The GLC is a 6-member panel drawn from leading international technical agencies coordinated by WHO to facilitate access by resource-limited countries to lower-priced second-line drugs for treatment of MDR TB. The GLC serves as a protective mechanism to prevent development of widespread resistance to second-line drugs for TB treatment. From January 2001 to 2007, he served as a board member of the TB Coalition for Technical Assistance (TBCTA). The coalition coordinates USAID resources totaling $150 million for provision of technical assistance to developing countries with a high TB burden. Also, from June 2004 to 2007, Charles was a member of the U.S. government interagency TB/HIV technical working group for PEPFAR. This group provides technical support and input to the Office of the Global AIDS Coordinator related to the screening, diagnosis, treatment, and management of HIV-associated TB within the framework of the PEPFAR initiative. In addition to his accomplishments as a scientist, Charles embodies the caring, dedicated, and visionary spirit that sets our division apart from others and which enables him every year to recruit outstanding new EIS officers and permanent staff to the division in pursuit of global TB elimination. We wish Charles all the best in his new position, and will miss his dynamic leadership.

CALENDAR OF EVENTS

May 17–18, 2007
CTCA Annual Conference: TB Global Issues, Local Impact
San Francisco, CA
California TB Controllers Association
http://www.ctca.org/conferences/index.html

May 18–23, 2007
ATS 2007 International Conference
San Francisco, California
American Thoracic Society
http://www.thoracic.org/

June 3–5, 2007
2007 APHL Annual Meeting
Jacksonville, Florida
Association of Public Health Laboratories
http://www.aphl.org/conferences/2007_annual_meeting.cfm

June 4–8, 2007
Comprehensive Clinical TB Course
Lantana, Florida, AG Holley Hospital
Southeastern National TB Center
http://sntc.medicine.ufl.edu/Training.aspx

June 12–14, 2007
2007 NTCA Workshop
Atlanta, Georgia
National TB Controllers Association
Event Coordinator: Sherry Brown
E-mail: smh6@cdc.gov
Phone: 404-639-8989; Fax: 404-639-8960

July 10–11, 2007
ACET Meeting
Atlanta, Georgia
Advisory Council for the Elimination of TB
CDC/DTBE

July 12–13, 2007
11th Semiannual TBESC Meeting
Atlanta, Georgia
TB Epidemiologic Studies Consortium

August 2–5, 2007
1st Conf. of the IUATLD Asia Pacific Region
Kuala Lumpur, Malaysia
Malaysian Assoc. for the Prevention of TB
http://www.tibi2007.com/msg_president.html

August 7–9, 2007
7th Annual TB Education and Training Network Annual Conference
Atlanta, Georgia
www.cdc.gov/tb/TBETN/conference.htm

August 23–24, 2007
Rocky Mountain TB Controllers Meeting
Portland, Oregon

September 4–7, 2007
Southeastern TB Controllers Meeting
Greenville, South Carolina

September 15–19, 2007
European Respiratory Society Annual Congress
Stockholm, Sweden
http://dev.ersnet.org/

September 17–20, 2007
47th ICAAC (Interscience Conference on Antimicrobial Agents and Chemotherapy)
Chicago, Illinois
American Society for Microbiology
http://www.icaac.org/future.asp

September 24–25, 2007
Northeastern TB Controllers Meeting
Salem, Massachusetts

September 26–27, 2007
Midwest TB Controllers Meeting
Chicago, Illinois

October 4–7, 2007
45th Annual IDSA Meeting
San Diego, California
Infectious Diseases Society of America
http://www.idsociety.org/

October 15–19, 2007
Program Managers Course
Atlanta, Georgia
CDC/DTBE

October 20–25, 2007
CHEST 2007
Chicago, Illinois
American College of Chest Physicians
http://www.chestnet.org/

October 31, 2007
Southwestern TB Controllers Meeting
Durango, Colorado

November 3–7, 2007
135th APHA Annual Meeting and Exposition
Washington, DC
American Public Health Association
http://www.apha.org/meetings/

November 8–12, 2007
38th Union World Conference on Lung Health
Cape Town, South Africa
International Union Against Tuberculosis and Lung Disease
http://www.iuatld.org/index_en.phtml