

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



**Virtual Meeting of the  
Advisory Council for the Elimination of Tuberculosis  
March 3, 2015**

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**Record of the Proceedings**

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**U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES  
CENTERS FOR DISEASE CONTROL AND PREVENTION  
National Center for HIV/AIDS, Viral Hepatitis, STD and TB Prevention  
Division of Tuberculosis Elimination**

**ADVISORY COUNCIL FOR THE ELIMINATION OF TUBERCULOSIS  
March 3, 2015**

**Minutes of the Virtual Meeting**

The U.S. Department of Health and Human Services (HHS) and the Centers for Disease Control and Prevention (CDC), National Center for HIV/AIDS, Viral Hepatitis, STD and TB Prevention (NCHHSTP), Division of Tuberculosis Elimination (DTBE) convened a virtual meeting of the Advisory Council for the Elimination of Tuberculosis (ACET) on March 3, 2015 from 11:00 a.m.-3:30 p.m. EST.

ACET is chartered to provide advice to the Secretary of HHS and the Director of CDC regarding the elimination of tuberculosis (TB); make recommendations regarding policies, strategies, objectives and priorities; address the development and application of new technologies; provide guidance on CDC's TB Prevention Research portfolio and program priorities; and review the extent to which progress has been made toward eliminating TB.

Information for the public to participate on the ACET virtual meeting via teleconference and webinar was published in the *Federal Register* in accordance with Federal Advisory Committee Act regulations. All sessions of the meeting were open to the public.

**Opening Session**

**Hazel Dean, ScD, MPH**

Deputy Director, National Center for HIV/AIDS, Viral Hepatitis, STD and TB Prevention  
Centers for Disease Control and Prevention  
ACET Designated Federal Officer (DFO)

Dr. Dean conducted a roll call to determine the ACET voting members, *ex-officio* members and liaison representatives who were attending the virtual meeting. She announced that ACET meetings are open to the public and all comments made during the proceedings are a matter of public record.

Dr. Dean reminded the ACET voting members of their responsibility to disclose any potential individual and/or institutional conflicts of interest for the public record and recuse themselves from voting or participating in these matters.

CONFLICT OF INTEREST DISCLOSURES	
ACET Voting Member (Institution/Organization)	Potential Conflict of Interest
Lisa Armitage, MD, PhD (Heartland National Tuberculosis Center)	No conflicts disclosed
Jennifer Cochran, MPH (Massachusetts Department of Public Health)	Grantee of CDC's TB Cooperative Agreement (CoAg)
Barbara Cole, RN, MSN, PHN (Riverside County Department of Public Health)	No conflicts disclosed
Susan Dorman, MD (Johns Hopkins University School of Medicine)	No conflicts disclosed
Eric Houpt, MD (University of Virginia)	No conflicts disclosed
Michael Lauzardo, MD, MSc (University of Florida College of Medicine)	No conflicts disclosed
James Sunstrum, MD (Wayne County, Michigan TB Clinic)	No conflicts disclosed
David Warshauer, PhD (Wisconsin State Laboratory of Hygiene)	No conflicts disclosed

Dr. Dean announced that the voting members and *ex-officio* members in attendance constituted a quorum for ACET to conduct its business on March 3, 2015. She called the proceedings to order at 11:00 a.m. EST and welcomed the participants to the virtual meeting. Dr. Dean noted the temporary and permanent changes to ACET's membership.

- Dr. Stephen Kralovic would serve as the *ex-officio* member for the Department of Veterans Affairs in the absence of Dr. Gary Roselle.
- Mr. Kenyon Farrow has replaced Ms. Colleen Daniels as the liaison representative for the Treatment Action Group.
- Dr. Ameer Patrawalla has replaced Dr. Lee Reichman as the liaison representative for the American College of Chest Physicians.
- Dr. Saul Levin is no longer serving as the liaison representative for the Association of State and Territorial Health Officials. Efforts are underway to appoint Dr. Levin's replacement before the next ACET meeting.

**Barbara Cole, RN, MSN, PHN, ACET Chair**  
 TB Controller  
 Riverside County (California) Department of Public Health

Ms. Cole joined Dr. Dean in welcoming the participants to the virtual meeting. She reviewed the agenda

and announced that the updates and presentations were intended to assist ACET in continuing to provide advice on reaching the national TB elimination goal.

## Update on TB in Foreign-Born Persons in the United States

### Dolly Katz, PhD, MPH

Division of Tuberculosis Elimination  
Centers for Disease Control and Prevention

#### Advice Requested from ACET by DTBE:

1. What is ACET's input on the prevention and control of TB in foreign-born persons (FBPs)?
2. What are ACET's recommendations on expanding latent TB infection (LTBI) testing and treatment among FBPs?

Dr. Katz presented data to demonstrate the burden of TB in FBPs in the United States. CDC surveillance data show that with the exception of a peak in the late 1980s through the early 1990s, the number of TB cases reported in the United States has steadily declined from ~25,000 cases in 1982 to 9,582 cases in 2013. TB morbidity also has decreased nationally from a case rate of 4.2/100,000 in 2008 to 3.0/100,000 in 2013.

By country of origin, the number of TB cases has declined much more rapidly in U.S.-born persons (USBPs) than in FBPs in the United States in 1993-2013. Moreover, the proportion of TB cases attributed to FBPs has been steadily increasing since 1993. FBPs comprise only 13% of the U.S. population, but accounted for 65% of all TB cases reported in the United States in 2013. At the state level, FBPs accounted for >50% of TB cases in several Midwestern, Southwestern and Southern states in 2013.

The TB case rate was 13 times higher in FBPs (15.6/100,000) than in USBPs (1.2/100,000) in 2013. The disparity in TB cases between USBPs and FBPs is greater now than in 1993. Primary isoniazid (INH) resistance and multidrug-resistant TB (MDR-TB) are much more common in FBPs than in USBPs and also contribute to greater TB disparities between these two populations.

The 2013 American Community Survey reported that 41.3 million FBPs resided in the United States in 2013. By country of origin, Latin America (~52%), Asia (~30%), Europe (~12%) and Africa (~4%) accounted for ~98% of all foreign-born residents. By race/ethnicity, Asians (46%), Hispanics (33%), and blacks (14%) accounted for 93% of all foreign-born TB cases reported in the United States in 2013. Mexico (20%), the Philippines (13%), India (8%), Vietnam (7%), China (6%), Guatemala (3%), and Haiti (3%) accounted for 60% of the TB burden in the United States in 2013.

With the exception of India (49%), the vast majority of FBPs reside in the United States  $\geq 5$  years prior to their TB diagnosis: 74% of FBPs from Mexico, 68% of FBPs from the Philippines, and 54% of FBPs from all other countries. The upcoming Liu, *et al.* study estimated TB rates in 2006 among adult FBPs by their visa status in 20 U.S. jurisdictions. TB case rates by visa status were highest in refugees (300.0/100,000) and legal residents with U.S. residency 0-1 year (268.0/100,000).

TB case rates were much lower in FBPs in other visa categories: students (54.8/100,000), temporary workers (40.8/100,000), undocumented FBPs with U.S. residency 0-5 years (37.2/100,000), legal residents with U.S. residency >1 year (21.6/100,000), and undocumented FBPs with U.S. residency >5

years (10.5/100,000). The upcoming Davidow, *et al.* study examined the association between visa status and smear-positive TB. The percentages of TB cases by visa status were ~26% among undocumented FBPs, ~13% among FBPs with temporary visas, and ~67% among FBPs with permanent visas.

The percentages of smear-positive TB in these foreign-born cases at diagnosis were ~69% among undocumented FBPs, ~54% among FBPs with temporary visas, and ~53% among FBPs with permanent visas. These data are particularly problematic because undocumented FBPs are more likely to have smear-positive TB at diagnosis, but are excluded from coverage under the Affordable Care Act (ACA).

The Liu and Davidow studies demonstrate that the length of U.S. residency is a greater contributor to TB rates among FBPs in the United States than visa status. The majority of these foreign-born cases are attributed to reactivation of TB infection at some point after U.S. arrival rather than the development of active TB disease upon U.S. entry.

The 2011 Linas study estimated the cost effectiveness of screening various risk groups in the United States for LTBI. The study reported the number of persons who would need to be screened to prevent one infection: 3,631 diabetics, 436 homeless persons, 128 recent immigrants, 73 close contacts, and 71 HIV-infected persons.

CDC guidelines currently do not recommend LTBI screening for immigrants 25-44 years of age with U.S. residency >5 years, but 301 persons in this group would need to be screened to prevent one infection. Incremental cost-effective ratios for quality-adjusted life years ranged from \$12,800 among HIV-infected persons to \$511,300 among diabetics. The number of TB cases prevented over a lifetime ranged from 1,000 among close contacts to 50,000 among immigrants 25-44 years of age with U.S. residency >5 years.

A 2015 study published in the *Journal of Immigrant and Minority Health* reported the LTBI care cascade among 1,367 patients with positive tuberculin skin test or interferon gamma release assay (IGRA) results who were referred to a Baltimore TB clinic from February 2009 to March 2011. Compared to USBPs, refugees and non-refugee FBPs had much higher rates of evaluation, diagnosis, and initiation and completion of treatment. The upcoming Hirsch-Moverman study examined the predictors of completing LTBI treatment at 12 sites. Foreign-born status was highly associated with an increased probability of treatment completion. The new three-month, once-weekly INH/rifapentine (3HP) regimen also is expected to improve treatment completion because previous studies have demonstrated that a shorter course is a major factor in this regard.

Overall, future progress toward TB elimination will be largely determined by success in FBPs because this population accounts for nearly 66% of TB cases reported in the United States. The length of time of FBPs in the United States rather than their visa status appears to be the main determinant of TB rates. TB rates are highest in FBPs 1-2 years after U.S. entry and decrease thereafter. Because most TB cases in FBPs occur with long-term U.S. residency of  $\geq 5$  years, prevention through LTBI screening and treatment is feasible. Expansion of LTBI treatment in FBPs is likely to have the greatest impact on TB elimination efforts.

In response to ACET's questions, Dr. Katz described specific strategies to expand LTBI treatment in FBPs to impact TB elimination efforts. First, ACA should be revised to provide full coverage of LTBI screening for high-risk groups. Second, local health departments should have a much smaller burden to perform LTBI screening and treatment due to their limited resources. Local physicians and community clinics should have general clinical responsibility to test their high-risk, foreign-born patients for LTBI

and discuss treatment as needed. Local health departments could then serve as TB experts, referral networks and backup resources to provide local clinicians with education and assistance. Dr. Katz asked ACET to consider these strategies during its deliberations.

Ms. Suzanne Marks, of DTBE, responded to ACET’s questions regarding the cost-effectiveness data reported in the 2011 Linas study. CDC will publish more recent TB cost-effectiveness data among diabetics and homeless persons. CDC’s new modeling data also will analyze TB rates and intervention costs among FBPs with diabetes.

**NCHHSTP Office of Director’s Report**

**Hazel Dean, ScD, MPH**

Deputy Director, National Center for HIV/AIDS, Viral Hepatitis, STD and TB Prevention  
Centers for Disease Control and Prevention  
ACET Designated Federal Officer

Dr. Dean covered the following topics in the NCHHSTP Office of Director’s (OD) report to ACET. At the agency level, CDC, other U.S. government agencies, the World Health Organization (WHO) and international partners are continuing to respond to the rapidly changing ebola outbreak in West Africa. As of February 21, 2015, 14,167 of the total 23,574 ebola cases were laboratory-confirmed.

The ebola outbreak is the largest outbreak of this disease in history and has accounted for 9,556 deaths to date. Guinea, Liberia and Sierra Leone have accounted for the vast majority of cases. CDC has deployed 315 staff to the ebola response as of February 17, 2015, including 187 staff to Africa, 127 staff throughout the United States, and 1 staff to another country with reported ebola cases.

The President’s FY2016 budget request has been released and proposes the following appropriations: the CDC budget request of \$70 billion, the NCHHSTP budget request of \$1.162 billion, and the TB budget request of \$142.2 million (or level funding with the FY2015 enacted amount).

At the National Center level, NCHHSTP has deployed ~200 staff to the ebola response over the past few months, including ~85 staff to Africa. NCHHSTP finalized its new Strategic Plan and drafted a framework to guide center-wide activities.

Vision	<i>A future free of HIV, viral hepatitis, STDs and TB</i>
Mission	“Save lives, protect people, and reduce health disparities associated with HIV, viral hepatitis, STDs and TB”
Goals	<ul style="list-style-type: none"> <li>• Decrease the incidence of infection</li> <li>• Decrease morbidity and mortality</li> <li>• Decrease health disparities</li> </ul>
Strategies	<ul style="list-style-type: none"> <li>• Use of data for program improvement</li> <li>• Scientific discovery and evaluation</li> <li>• Prevention through health care</li> <li>• Program Collaboration and Service Integration</li> <li>• Organizational excellence</li> </ul>
Guiding Principle	High-impact prevention to maximize impact through efficient implementation of cost-effective and feasible interventions, research and policies

NCHHSTP redesigned and launched the CDC National Prevention Information Network (NPIN) in November 2014 to be more mobile, social and searchable. NPIN is available to the public and serves as a U.S. reference and referral service for information on HIV/AIDS, viral hepatitis, STDs and TB. Users can visit the NPIN site (<http://npin.cdc.gov>) to search for and access content across pages and databases from desktop computers, tablets or Smartphones. The redesigned website also includes a new NPIN Social Community for public health colleagues to connect online in real-time to exchange ideas and resources.

NCHHSTP combined the former HIVTest.org and FINDSTDtest.org websites to launch the new GetTested website (<https://gettested.cdc.gov>) to provide a single resource that is accessible from any device. Key features of the new website include an assessment tool to assist individuals in selecting appropriate tests for their needs and a “Frequently Asked Questions” page with answers to common questions on testing, transmission, risks and prevention.

ACET made two comments in follow-up to the NCHHSTP OD Report. First, NCHHSTP is to be commended on drafting a clear and easily understandable framework to guide its Strategic Plan activities. Second, the 7 countries that have been most heavily affected by ebola also account for 20,000 TB-related deaths and 2,000 new MDR-TB cases each month. Due to this morbidity and mortality, the global TB response by CDC and its partners should be at the same level as the ebola response.

## DTBE Director’s Report

### **Philip LoBue, MD**

Director, Division of Tuberculosis Elimination  
Centers for Disease Control and Prevention

Dr. LoBue covered the following topics in his Director’s report to ACET. DTBE’s current budget of \$142.2 million and its actual spending amount of \$138.7 million reflect level funding between FY2014 and FY2015. Dr. Carla Winston was appointed as the DTBE Associate Director for Science. CDC will soon post a job announcement for a permanent DTBE Data Management and Statistics Branch Chief. Dr. Andrew Hill currently is serving as the Acting Branch Chief.

DTBE held a consultation on February 10-11, 2015 to obtain input from ~60 TB controllers on strategies for TB elimination. DTBE used the 2000 Institute of Medicine (IOM) Report, *Ending Neglect: The Elimination of Tuberculosis in the United States*, as the framework for the TB controllers to provide input. CDC’s response to the IOM Report included six goals that are elements of a national elimination strategy. The TB controllers were divided into small groups to address specific questions for each of the six goals: “What current policies, practices and programs support or do not support achievement of the goals? What substantial changes should be made to better support achievement of the goals?”

**Goal 1** is to maintain control of TB. The TB controllers were asked to provide input based on five components: detection and diagnosis of TB cases, treatment of TB cases, investigation of contacts, treatment of infected contacts, and infection control. DTBE was challenged by summarizing the responses because the TB controllers described a multitude of strategies that have been both effective and ineffective in the field. Instead, DTBE identified key themes that were common across all five components.

The importance of oversight and support by health departments was strongly emphasized to ensure patients complete treatment. Directly observed therapy (DOT) and enablers have been effective in the field, but these strategies are resource-intensive and difficult to sustain over time. Alternative strategies were proposed, such as videos or electronic DOT. DTBE expressed an interest in conducting a systematic evaluation of these newer approaches to build the peer-reviewed literature and drive the development of new evidence-based policies. The loss of expert personnel, particularly experienced public health nurses, was noted as a key barrier to maintaining control of TB.

**Goal 2** is to accelerate the decline of TB. The TB controllers were asked to provide input based on three components: LTBI, regionalization, and genotyping/outbreak detection and response. Genotyping was found to be useful in the field, but programs can apply the technology differently based on their TB incidence. For example, genotyping is not as valuable in low-incidence states for outbreak detection, but might be more useful for detecting false-positives. Whole-genome sequencing and other methods with better resolution are needed in some situations. Current surge capacity to respond to TB outbreaks was found to be insufficient. With the exception of recommending continued support for CDC's Regional Training and Medical Consultation Centers (RTMCCs), the TB controllers proposed no clear themes on regionalization.

The TB controllers described LTBI as a vast problem, particularly among FBPs. The last National Health and Nutrition Examination Survey estimated that 11 million persons have LTBI. A major initiative with national funding was recommended to address the LTBI burden in the United States. The new initiative should include five key components:

- An LTBI registry or surveillance system
- Scale-up of testing to target populations, including more focused guidance on specific individuals to target, elimination of approaches that waste resources to test low-risk persons, and allocation of specific funding for IGRAs, particularly for FBPs
- Scale-up of short-course LTBI treatment
- Large-scale communication and outreach efforts to engage and educate affected communities and their medical providers
- Adequate staffing

**Goal 3** is to develop new tools for the diagnosis, treatment and prevention of TB. The TB controllers discussed research that should be prioritized over the next five years by CDC, its federal partners and other stakeholders. The key research priorities that were proposed included shorter treatment regimens for TB and LTBI, point-of-care diagnostics, a vaccine, and an LTBI test with better capacity to predict persons who will progress to TB disease.

**Goal 4** is to reduce the global burden of TB by increasing U.S. involvement in international TB control activities. The TB controllers focused on the screening of immigrants due to their direct involvement in this aspect. The TB controllers were equally divided on the strategy that should be initially prioritized: expansion of screening for TB disease to populations beyond permanent immigrants and refugees versus the addition of LTBI testing and treatment to current screening programs. Regardless of the approach that DTBE selects for prioritization, however, all of the TB controllers emphasized the need for decisions to be data driven to the extent possible.

**Goal 5** is to mobilize and sustain support for TB elimination by engaging policy and opinion leaders, healthcare providers, affected communities and the general public. The TB controllers described critical needs in three areas: (1) better messaging that is simpler, clearer and more memorable; (2) more active champions and advocates; and (3) activities to more effectively target and engage affected communities.

**Goal 6** is to monitor progress toward reaching the TB elimination goal and regularly report on progress to all target audiences. The TB controllers found standardization with national indicators to be effective overall, but some exceptions were noted. Targets and indicators for program performance are not as relevant in low-incidence states. The program evaluation process for the TB CoAg is overly complex and rigid. A simpler and more flexible process should be developed.

Ms. Donna Wegener is the Executive Director of the National Tuberculosis Controllers Association (NTCA). She announced that in follow-up to CDC’s consultation with TB controllers, NTCA began administering a survey to state and large-city TB programs. The survey is designed to obtain feedback on the needs, burden and feasibility of TB programs submitting data to a new national LTBI registry or surveillance system. Ms. Wegener confirmed that the LTBI Workgroup or NTCA would present the survey results to ACET during the next meeting.

ACET discussed two key issues with Dr. LoBue on outcomes from CDC’s consultation with TB controllers.

- Potential opportunities in global TB efforts to promote the development of new TB drugs and point-of-care TB diagnostics in the United States, particularly since U.S. manufacturers see no economic benefit in this area.
- Strategies for CDC to strengthen and support the capacity of local TB programs, particularly given the loss of programmatic, clinical and epidemiologic TB expertise across the country.

**Update on CDC’s Global TB Coordination Activities**

**Susan Maloney, MD, MHSc**  
 Global Tuberculosis Coordinator, Center for Global Health  
 Centers for Disease Control and Prevention

**Advice Requested from ACET by DTBE:**  
 1. What is ACET’s input on CDC’s global TB coordination activities and its progress in this area to date?

Dr. Maloney presented an update on CDC’s global TB coordination activities. CDC’s role and mandates for global TB activities are defined in the 2008 Comprehensive TB Elimination Act and the 2008 Lantos-Hyde U.S. Global Leadership Against HIV/AIDS, TB and Malaria Reauthorization Act. These authorities allow CDC to provide foreign assistance for TB with a focus on technical support, laboratory strengthening, clinical and operational research, TB/HIV-related service integration, and program activities.

The Center for Global Health (CGH) is shifting to a “one-CDC” approach to global TB control through closer collaboration and coordination among four divisions that conduct TB activities.

CDC Division	TB Control Activities	TB Priorities
Division of Global Migration and Quarantine	Screen and treat TB among immigrants and refugees	Reduce the importation of active TB disease among screened entrants

CDC Division	TB Control Activities	TB Priorities
Division of Tuberculosis Elimination	Oversee operations and conduct clinical trial research across all TB control programs; strengthen laboratory and surveillance systems	Build the evidence base for improved TB control strategies and provide technical support to National TB Programs to improve program performance
Division of Global Health Protection	Oversee the Field Epidemiology and Laboratory Training Program; conduct surveillance studies at Global Disease Detection sites	Improve epidemiology support and surveillance system capacity
Division of Global HIV/AIDS	Conduct infection control, TB/ HIV service integration and screening among persons living with HIV/AIDS	Implement President's Emergency Plan For AIDS Relief TB/HIV programs and provide technical support

CGH established five key objectives to guide CDC's global TB coordination activities: (1) serve as the CDC-wide global TB focal point and represent CDC's activities with external partners; (2) elevate the visibility of CDC's global TB portfolio; (3) map current global TB research and program activities across CDC; (4) identify and facilitate opportunities for collaboration; and (5) develop a unified CDC global TB strategy.

CGH's progress to date in achieving the global TB coordination objectives is summarized as follows. Annual reports were developed describing CDC's global TB achievements and activities. Several cross-CDC initiatives were launched to implement infection control strategies in healthcare facilities and pilot comprehensive technical assistance models in focus countries.

A Global TB Steering Group was created to inform the strategic direction, implementation and monitoring of CDC's global TB efforts. The steering group is divided into three smaller groups to specifically focus on the CDC global TB strategy, regional and local coordination and collaboration, and targeted initiatives, such as TB infection control and technical assistance and program support (TAPS).

A strategic planning retreat was convened with >30 staff across CDC to draft the Global TB Strategic Plan. The strategic approach for CDC's global TB activities was designed with three key components. Technical support and training will be provided to strengthen in-country capacity and implement evidence-based interventions. Clinical and operational research will be conducted in collaboration with Ministries of Health to build an evidence base for improved TB control and prevention strategies. Guidelines and recommendations will be developed to translate research into practice to inform decision-making.

Several issues were prioritized to "prevent," "find" and "cure" TB cases.

- TB infection control
- Active case finding and new screening approaches
- Implementation of new diagnostics and development of laboratory capacity
- Enhancement of National TB Program management and capacity
- Development of better drug regimens and treatment approaches
- Optimization of TB/HIV services and integration
- Drug-resistant TB management
- Surveillance and impact measurement

TAPS was used to demonstrate the one-CDC Global TB Strategy in key focus countries: China, India, the Philippines and Vietnam. The overarching goal of this initiative was to engage country offices and key subject-matter experts across CDC to develop an operational plan. Operational plans for each focus country were designed to identify key needs and challenges of Ministries of Health and TB programs; determine common objectives of CDC's TB activities in-country; determine strategies to coordinate activities, address key needs and maximize impact and efficiency; and establish a process to provide ongoing technical support as needed.

CDC's global TB coordination activities will be aligned with the global strategy and targets articulated in the WHO *END TB Strategy* for the prevention, care and control of TB after 2015.

- By 2025, reduce TB mortality by 75% compared to 2015.
- By 2025, reduce TB incidence by 50% compared to 2015.
- By 2035, end TB.

ACET advised CDC to include Mexico as a key focus country in its global TB coordination activities, particularly since Mexico is the largest contributor of foreign-born TB cases in the United States.

### Update by the DTBE Health Equity Workgroup

#### Awal Khan, PhD

Health Equity Coordinator

National Center for HIV/AIDS, Viral Hepatitis, STD and TB Prevention

Centers for Disease Control and Prevention

#### Advice Requested from ACET by DTBE:

1. What strategies can be implemented to continue the momentum of prioritizing health equity in TB?
2. What approaches can be used to reduce disparities and advance health equity?
3. What assets or options can be leveraged to promote health equity?
4. What is ACET's input on health disparities and health inequity of TB morbidity, mortality and care?
5. What approaches or opportunities must be utilized to reduce disparities and promote health equity?

Dr. Khan presented an update by the DTBE Health Equity Workgroup regarding approaches to better understand TB health disparities. The number of TB cases reported in the United States has steadily declined since the peak of resurgence in 1992, from ~25,000 cases in 1983 to 9,582 cases in 2013 with a case rate of 3.0/100,000 in 2013.

TB case rates have been steadily declining in the United States from 1994-2013, but DTBE has documented persistent disparities. By geographic location, nine states and the District of Columbia still have TB case rates above the national average of 3.0/100,000 in 2013 and account for nearly 62% of TB cases. By age, the TB case rate is highest in persons  $\geq 65$  years compared to all other age groups of 0-14, 15-24, 25-44 and 45-64 years, and in 2013 the rate was 4.9/100,000. By race/ ethnicity, TB case rates are higher in African Americans, Hispanics, Asian/Pacific Islanders and American Indians/Alaska Natives (AI/ANs) compared to whites. In 2013, racial/ethnic minorities accounted for 85% of all reported TB cases. By country of origin, TB case rates are significantly higher in FBPs compared to USBPs and in 2013, FBPs accounted for 65% all reported TB cases.

African Americans, Hispanics and AI/ANs account for a larger number of TB cases diagnosed at death or during treatment. The ratio of TB rates compared to whites is greater in Asians than in African

Americans, Hispanics and AI/ANs. The rate ratio stays relatively stable over the 20 years for African Americans and Hispanics. By race/ethnicity, Hispanics has the lowest completion rates within one year among patients who initiate TB treatment until 2009, however, completion rates remains at 80-90%. By country of origin, completion rates within one year of treatment initiation were similar between FBPs and USBPs in 2011.

DTBE identified several underlying factors that are associated with TB disparities. By race/ ethnicity and age, whites accounted for a much higher proportion of TB cases among persons  $\geq 65$  years of age compared to African Americans, Hispanics, Asians and AI/ANs in the same age group. By co-infection and race/ethnicity, African Americans accounted for a much higher proportion of HIV/TB co-infection compared to whites, Hispanics, Asians and AI/ANs. By race/ ethnicity, the proportion of TB patients who knew their HIV status was highest among African American and AI/ANs patients compared to white, Hispanic and Asian patients.

The number of TB cases among homeless persons  $\geq 15$  years of age has decreased from 795 in 2005 to 514 in 2013. The TB case rate is  $\sim 80.0/100,000$  in this population. The number of TB cases among incarcerated persons  $\geq 15$  years of age has decreased from 534 in 2005 to 359 in 2013. The TB case rate is  $\sim 25.0/100,000$  in this population. Unemployment, excess alcohol use, non-injection drug use, homelessness, and age  $< 15$  years were the top five social and behavioral characteristics that contributed to TB cases in 2010-2013. Residence in correctional facilities, injection drug use and residence in long-term care facilities had a much smaller impact on TB cases over the same period of time.

By race/ethnicity, substance abuse as determined by use of injecting, or non-injecting drugs, or excess alcohol among reported TB cases was substantially higher in AI/ANs compared to African Americans, whites, Hispanics and Asians. However, reported substance abuse is almost the same over the past 20 years. By geographic location, the Pacific Islands, South Texas, Mexico, the Philippines and India accounted for the top five areas with adult TB cases with diabetes; 10-40% TB cases reported to have diabetes in the United States. By poverty level, AI/ANs and Hispanics had the highest rates of insurance in 2009, while African Americans, AI/ANs, and Hispanics had the highest rates of poverty. By race/ethnicity, Native Hawaiians/Pacific Islanders, AI/ANs and Hispanics had higher rates of multi-generational family households.

DTBE implemented several efforts to address or reduce TB disparities. DTBE aligned its health equity activities to be consistent with the Healthy People 2020 goals.

- Attain high-quality, longer lives that are free of preventable disease, disability, injury and premature death.
- Achieve health equity, eliminate disparities and improve the health of all groups.
- Create social and physical environments that promote good health for all.
- Promote quality of life, healthy development and healthy behaviors across all life stages.

DTBE established five priorities in TB prevention and control, and three of these are to achieve its health equity goals: (1) interrupt the transmission of *Mycobacterium tuberculosis* (*M.tb*); (2) reduce TB in foreign-born populations; (3) reduce TB in racial/ethnic populations; (4) mitigate or reduce the impact of MDR-TB and extensively drug-resistant TB; and (5) reduce TB associated with HIV and other co-morbidities.

DTBE already collects, recommended or did not recommend a core set of social determinants of health (SDH) variables to include in CDC's TB surveillance system.

#### *SDH Variable Already Collected*

- Incarceration status
- Occupation
- U.S. citizenship/immigration status
- Homeless status
- Country of birth/origin
- Receipt of TB treatment
- Previous HIV/TB diagnosis
- Gender

#### *SDH Variable Recommended*

- Income
- Educational attainment
- Crowding
- Insurance status

#### *SDH Variable Not Recommended*

- Military service
- Marital status
- Sexual orientation

DTBE's 71 publications that highlighted SDH in TB in 2010-2014 covered TB disparities by race/ethnicity, age, HIV co-infection, country of origin, socioeconomic status, physical environment (e.g., homelessness), substance abuse, and TB drug resistance. Of 66 articles that the TB Epidemiologic Studies Consortium has published, submitted, or prepared, analyzed and revised for clearance, 23 have addressed SDH in TB. These publications focused on TB disparities between foreign-born children and U.S.-born children with foreign-born parents as well as TB disparities related to LTBI, HIV/TB co-infection and TB diagnostics.

DTBE's next steps in its health equity activities will be to host a biannual "TB Health Disparities Speakers Series" to maintain the current momentum and promote further awareness of this issue. An analytical plan will be submitted to describe the context and mechanism to clearly explain TB disparities. A participatory research proposal will be developed to combine knowledge and practices and increase access to the diagnosis, care and treatment of TB co-morbidities. The relative effectiveness of different levels and types of programmatic efforts will be explored and examined through collaboration with other NCHHSTP divisions. The types of interventions that are most effective in addressing and reducing TB disparities will be identified.

ACET responded to some of the TB health disparities and health equity questions posed by Dr. Khan.

#### *Question 1: Maintain momentum for TB health equity*

- DTBE already collects a robust and relevant set of SDH variables in its TB surveillance system to document TB health disparities. However, a stronger focus should be placed on compiling and widely disseminating these data in formats other than peer-reviewed publications, particularly to continue the momentum and promote TB health equity in affected communities.

#### *Question 2: Reduce TB disparities and advance health equity*

- Efforts to reduce TB disparities and advance health equity should focus on the massive U.S. incarcerated population of 2.3 million persons. Most notably, the TB case rate of ~25.0/100,000 in correctional settings is 8 times higher than the case rate of 3.0/100,000 in the general U.S.

population. An effective strategy to reduce TB health disparities among incarcerated persons would be for CDC to collaborate with NTCA and other stakeholders to publicize the adoption of 3HP by the Bureau of Prisons. Because the 3HP regimen is much shorter and easier to administer (12 doses) than the nine-month INH course (76 doses), the completion rate of TB treatment has dramatically increased to 90% in prisons. Initially, resources should be devoted to administering 3HP in prisons in the four states that account for the highest TB rates nationally: Arizona, California, Florida and Texas.

- HHS is one of 19 federal departments and agencies that serve on the U.S. Interagency Council on Homelessness (USICH). USICH currently is measuring its progress on advancing the goals of the *Federal Strategic Plan to Prevent and End Homelessness*. DTBE should ensure that its future guidance on TB health disparities in homeless populations is consistent with national standards and goals established by USICH.
- DTBE should address “government-sponsored” transmission of TB in prisons, homeless shelters and nursing homes because disadvantaged populations are more susceptible to TB infection in these congregate settings.

Dr. LoBue noted the complexity, broad scope and magnitude of addressing TB health disparities and health equity issues. For example, strategies for FBPs primarily should focus on LTBI, while approaches for persons in congregate settings primarily should focus on the completion of TB treatment. As a result, he thanked ACET for providing advice to DTBE that narrowly focused on specific populations and settings.

In its ongoing deliberations, Dr. LoBue asked ACET to consider additional input to provide to DTBE, such as the administration of 3HP in homeless shelters or other settings with TB outbreaks and specific guidance for DTBE’s Homeless and Corrections Workgroups to address.

## Update on the Impact of Funding Cuts on Local TB Programs

### John Bernardo, MD

Professor of Medicine and Biochemistry, Boston University School of Medicine  
ACET Liaison Representative & President, National Tuberculosis Controllers Association

#### Advice Requested from ACET by NTCA:

1. What are ACET’s proposed revisions to CDC’s TB Program Funding Formula to assure the integrity of state program operations, particularly in “low-incidence” states?
2. What is ACET’s advice on developing cross-jurisdictional synergies to maximize program efficiencies?
3. Will ACET support federal funding for a new joint “NTCA/CDC Targeted Prevention Initiative” to prevent future TB cases?

Dr. Bernardo described the impact of funding cuts on local TB programs in the field. Federal resources for TB programs in the United States are provided by CDC CoAg funds for TB prevention, control, training, education and laboratory services; CDC in-kind support for program consultants, outbreak assistance, the TB Reference Laboratory, RTMCCs and operational research; and the U.S. Food and Drug Administration 340B Drug Pricing Program.

State and local resources for TB programs significantly vary across the country. Most states rely on CDC support to provide at least 50% of their services, but states also allocate categorical funding to

maintain the TB infrastructure (e.g., staff, clinical services and laboratory services). States support TB patient costs related to clinical services, hospitalizations and drugs as well.

CDC uses the TB Funding Formula for state and large-city CoAg recipients to conduct TB prevention and control activities based on two categories. "Need" is defined as three-year averages and weights of TB incidence in complex cases (e.g., foreign-born, smear-positive pulmonary TB, MDR-TB and homeless TB cases). "Performance" is defined by two National Tuberculosis Indicators Project (NTIP) variables: completion of therapy and documentation of drug susceptibility testing results.

Exceptions to the TB Funding Formula include 14 "hold-harmless" (*i.e.*, low-incidence) states that received <\$255,000 for TB prevention and control activities based on their 2009 budgets. The hold-harmless states were excluded from the TB Funding Formula in the FY2010 CoAg, but were assured a base amount of \$100,000 per year due to concerns regarding unintended consequences of weakening the infrastructure for TB services in a time of a national economic crisis. The TB Funding Formula was phased-in from FY2010 to FY2014 and was fully implemented in the FY2015 CoAg.

NTCA recently administered a survey to determine the impact of funding from 2012 to 2015. Surveys were completed by 11 of the 14 hold-harmless states: Idaho, Iowa, Maine, Montana, Nebraska, New Hampshire, North Dakota, Rhode Island, South Dakota, Utah and West Virginia. Decreases in CoAg budgets for TB prevention and control were reported by six hold-harmless states and ranged from \$3,522 (Idaho) to \$134,448 (West Virginia). With the exception of increases reported by Iowa (\$35,769) and Maine (\$11,769), the remaining three hold-harmless states reported level funding of \$1,687 (Utah), \$1,665 (Nebraska), and \$4,529 (North Dakota).

NTCA gathered extensive data from the hold-harmless states to perform a detailed analysis of funding outcomes from 2012 to 2015. **West Virginia** reported 13 TB cases in both 2013 and 2014, but the complexity of the cases was greater in 2014. A large workplace contact investigation required extensive resources to treat one case of pulmonary and bone/spinal TB. An elderly TB patient with diabetes was on dialysis and required multiple hospitalizations and daily DOT.

After a delayed diagnosis led to advanced TB, a large contact investigation identified children and grandchildren who needed treatment. However, none of these persons complied with treatment guidelines. TB treatment in an inpatient setting was court ordered for a homeless TB case with alcohol abuse in a correctional facility due to non-compliance.

Of all 11 hold-harmless states that responded to the NTCA survey, West Virginia reported the largest funding cut of \$134,448. The state was required to decrease direct patient services and most of its TB elimination activities. As of 2015, West Virginia no longer provides targeted TB testing for high-risk persons (e.g., diabetics, substance abusers and persons from endemic countries). West Virginia no longer evaluates or treats persons at highest risk of TB. West Virginia only has resources for staff to test and treat active TB cases. Contacts of active TB cases are tested and treated if resources permit. West Virginia lost its radiology technician due to attrition and will be unable to support a replacement unless funding is restored.

**Nebraska** reported 38 TB cases in 2014 (or a 55% increase over 2013). Foreign-born, high-endemic countries accounted for 82% of these cases. The age of patients widely ranged from 2-97 years. Congregate settings accounted for three cases; two large contact investigations were required in a church and school; and forced hospitalization was required for one case. In terms of drug resistance, two cases were *Mycobacterium bovis* with pyrazinamide resistance and two cases were mono-resistant to INH. Nebraska's TB prevention and control budget was \$246,291 in FY2014.

Nebraska identified six TB cases in the first two months of 2015. Foreign-born, high-endemic countries accounted for 100% of these cases. Nebraska's TB prevention and control budget of \$155,819 in FY2015 represents a 28% decrease from the FY2014 level. As of 2015, Nebraska no longer provides funds for training, travel or support to local health departments for TB follow-up and DOT. Nebraska's staff includes a 1.00 full-time equivalent (FTE) for a TB Program Manager, a 0.20 FTE for a TB Education Focal Point, and a 0.50 FTE for a secretary funded by state dollars.

Nebraska's increase in refugee resettlement in recent years has contributed to a higher proportion of foreign-born TB cases. A secondary migration with employment opportunities in the meat packing industry also has impacted the number of TB cases. Nebraska relies on TB CoAg funds from CDC to support ~60% of prevention and control activities.

Increases in TB cases were reported by three hold-harmless states from 2013 to 2014: a 55% increase in Nebraska from 21 to 38 cases; a 20% increase in North Dakota from 12 to 15 cases; and a 15% increase in Iowa from 47 to 54 cases. These states also reported TB cases to date in 2015: 4 cases and 8 suspects in Iowa, 6 foreign-born cases in Nebraska, and 1 HIV/TB co-infected case in North Dakota.

The upcoming Kanouse, *et al.* study reported changes in TB case counts, resources and select program activities from 2009 to 2012 among 56 responding states.

Change in TB Control Capacity	% of States Reporting Change
Decrease in funding	64%
Decrease in staffing	68%
Increase in case complexity	79%
Decrease in outbreak response capacity	30%
Decrease in capacity for extended contact investigations	37%
Decrease in capacity to provide DOT to pulmonary TB patients	21%
Decrease in capacity to provide DOT to high-risk LTBI patients	50%

Results of the NTCA survey emphasize that the TB infrastructure is in jeopardy, particularly in low-incidence states with pockets of morbidity. The overall reduction in the incidence of disease drives the perception that TB has been eliminated, but TB increasingly is being restricted to disadvantaged populations. Although program losses have resulted in fewer TB staff in the field to serve patients, 18 states reported increases in their TB cases from 2012 to 2013. Preliminary data indicate that several states will report increases in 2014 as well.

Perceptions that ACA will cover cuts to TB budgets are not based on reality because public health costs to support TB patients are excluded from ACA coverage. The aging TB workforce has resulted in the loss of nursing, medical and laboratory expertise. A strong alliance among CDC, the National Institutes of Health (NIH) and other federal partners is needed to collaborate in a common, unified effort.

NTCA gathered extensive input from TB programs across the country in preparation of the consultation that CDC held with TB controllers in February 2015. Common problems described by the TB programs are highlighted as follows. Significant decreases in federal CoAg and state funding have forced TB programs to change their priorities, such as reducing categorical staffing; decreasing or entirely

eliminating training and education; and reducing or entirely eliminating support for local health departments to conduct case management, particularly contact investigations and DOT.

Barriers to TB prevention and control in the field have increased. Cultural or behavioral barriers include large refugee and immigrant resettlements in several states, other FBP's with work and student visas who are at risk for TB, and homeless shelters and other congregate settings that increase opportunities for TB to spread. The loss of access to TB prevention services and competent clinical, laboratory and public health resources among at-risk patients has increased patient costs. The need to engage the private medical sector to assure appropriate diagnosis and management of TB cases is much stronger than in the past.

The complexity of TB cases continues to increase, but resources have been diverted to meet other federal priorities. Program evaluations are based on NTIP variables, but questions have been raised on whether measuring these objectives is appropriate. Funding for TB prevention and control activities has been decreased in the CoAg with offsets to laboratory and other services.

ACET released the *Essential Components of a Tuberculosis Prevention and Control Program* in 1995. TB programs currently are able to prioritize and address only 2 of the 7 Essential Components: (1) management of TB cases and suspects and (2) identification and treatment of persons with active TB disease. The remaining 5 Essential Components are being neglected and are conducted only if the TB program has adequate resources: overall planning and policy, identification and management of persons infected with *M.tb*, laboratory and diagnostic services, data collection and analysis, and training and education.

In addition to barriers to TB prevention and control, TB programs also are challenged by conducting activities to meet 3 of the 6 goals of the national TB elimination strategy: accelerate the decline, reduce the global burden of TB, and mobilize and sustain support. Moreover, progress in developing new tools has been slow and inadequate to date.

Because continual funding cuts to low-incidence, hold-harmless states likely will destroy the TB program infrastructure, three critical issues should be addressed: (1) the need to reconsider the TB Funding Formula; (2) the need to assure a higher base amount of federal dollars due to the potential for unintended consequences of weakening the infrastructure for TB services in a time of a national economic crisis; and (3) the need to create inter-jurisdictional synergies to fulfill the TB Essential Components.

ACET discussed additional impacts of funding cuts on local TB programs in the field.

- Adverse impacts of decreased federal and state funding on TB laboratory services (e.g., an MDR-TB outbreak in Wisconsin and a large TB outbreak in a homeless shelter in Atlanta).
- The advantages and limitations of regionalization as a strategy to decrease the overall burden of TB disease and allocate resources to the most affected jurisdictions.
- The inability of ACA to increase the number of TB providers or strengthen the level of TB expertise in the field.
- The possibility of including "drug intolerance" as an additional indicator in the TB Funding Formula due to the increasing age of TB cases.
- The impact of decreased state and local funding on TB prevention and control (e.g., the provision of TB care by less experienced nurses and providers with limited clinical experience in TB case management and the replacement of expert TB controllers with generic public health physicians).
- The need for CDC to require all states to match a specific percentage of their TB CoAg awards, particularly since some states entirely rely on federal funding for core TB prevention and control services.

## Preparation for the ACET Business Session

**Barbara Cole, RN, MSN, PHN, ACET Chair**

TB Controller  
 Riverside County (California) Department of Public Health

Ms. Cole summarized key points and outcomes from the presentations in preparation of the Business Session. She asked ACET to consider topics that should be developed as formal resolutions, placed on a future agenda for additional information, or proposed as action items.

Presentation	Topic to Consider
TB in Foreign-Born Persons in the United States	<ul style="list-style-type: none"> <li>ACET’s resolution to request a revision to ACA to provide full coverage of LTBI screening and treatment for high-risk groups</li> </ul>
NCHHSTP Office of the Director’s Report	<ul style="list-style-type: none"> <li>Approaches to widely publicize the availability of NPIN to the general public</li> <li>ACET’s guidance to CDC on replicating the global TB response at the same level as the ebola response</li> </ul>
DTBE Director’s Report	<ul style="list-style-type: none"> <li>ACET’s formal endorsement for DTBE to conduct a systematic evaluation of newer, less resource-intensive and more sustainable approaches (e.g., videos or electronic DOT)</li> </ul>
CDC’s Global TB Coordination Activities	<ul style="list-style-type: none"> <li>ACET’s recommendation for CDC to include Mexico as a key focus country in its global TB coordination activities</li> </ul>
DTBE Health Equity Workgroup	<ul style="list-style-type: none"> <li>ACET’s recommendation to address the contribution of diabetes to TB in current screening protocols</li> <li>ACET’s resolution to narrowly focus TB health disparities and health equity issues on specific populations or settings (e.g., homeless persons and correctional/other congregate settings)</li> </ul>
Impact of Funding Cuts on Local TB Programs	<ul style="list-style-type: none"> <li>ACET’s recommendation to request a revision to the TB Funding Formula</li> </ul>

## ACET Business Session

**Barbara Cole, RN, MSN, PHN, ACET Chair**

TB Controller  
 Riverside County (California) Department of Public Health

Ms. Cole opened the business session and called for ACET’s review, discussion and/or formal action on the following topics.

## Topic 1: Draft ACET Meeting Minutes

Ms. Cole entertained a motion for ACET to approve the previous meeting minutes. A motion was properly placed on the floor by Dr. Lisa Armitage and seconded by Dr. Ana Alvarez for ACET to approve the previous meeting minutes.

**ACET unanimously adopted the Draft December 2-3, 2014 Meeting Minutes with no changes or further discussion.**

## Topic 2: ACET's Response to CDC's Request for Advice

Ms. Cole moderated a discussion for ACET to respond to CDC's formal requests for advice during the March 2015 virtual meeting.

Request for Advice from ACET	Requester	ACET Response
(1) Health disparities and health inequity of TB morbidity, mortality and care. (2) Approaches or opportunities to reduce TB health disparities and promote health equity.	DTBE Health Equity Workgroup	An existing ACET and/or DTBE Workgroup should be used to specifically focus on TB health disparities and health equity in correctional settings and homeless populations. Alternatively, ACET should establish a new, broader "Congregate Settings Workgroup" due to the close linkage between the two populations. The new workgroup would draft formal recommendations on TB health equity issues in correctional settings and homeless populations for ACET's review and comment. <b>General agreement:</b> ACET will consider these suggestions and propose a formal plan of action to address TB health equity during the next meeting.
(1) Prevention and control of TB in FBPs. (2) Expansion of LTBI testing and treatment among FBPs.	DTBE	The LTBI Workgroup will respond to this request for ACET's advice as an additional part of its charge of determining whether LTBI should be a reportable condition. The workgroup will draft recommendations for ACET's review and comment during the June 2015 meeting.

## Topic 3: ACET Letter to the HHS Secretary

Ms. Cole pointed out that the draft letter to the HHS Secretary was circulated to ACET for review and comment. She highlighted the key points raised in the letter.

- CDC's important role in the ebola response
- A reference to the recent measles outbreak in California as an example to emphasize that "eliminated" diseases can reemerge in the future as a public health threat
- TB as a persistent challenge at local, state, national and global levels
- Concerns that continue to be critically important to ACET:
  - Intermittent shortages of anti-TB drugs, particularly second-line drugs

- TB in correctional and detention facilities
- TB along the U.S.-Mexico Border
- Approaches to implement the TB elimination recommendations outlined in the 2000 IOM Report
- A request to meet with the HHS Secretary or her designee to discuss alignment between TB elimination strategies and the overarching vision, strategic direction and priorities of the Office of the HHS Secretary
- The critical need for support and leadership by the HHS Secretary to achieve the goal of TB elimination in the United States

Dr. Dean reviewed the proper procedure for ACET to submit letters and other documents to the HHS Secretary. The ACET Chair will revise, finalize and sign the draft letter based on comments by the members. The ACET DFO will submit the original signed letter and any attachments or enclosures to the CDC Committee Management Officer (CMO). The CDC CMO will forward a copy of all documents to the CDC Deputy Associate Director for Science and the CDC Chief of Staff for informational purposes. CDC will complete its internal review and circulation of the documents within three business days.

The CDC CMO will prepare a transmittal cover page to forward ACET’s original documents to the Office of the HHS Secretary and the HHS Executive Secretariat with a copy to the HHS CMO. The CDC CMO will notify the ACET DFO on the status of transmitting the documents to HHS. The ACET DFO will in turn inform the ACET Chair. Within 30 days after ACET’s documents have been forwarded to the Office of the HHS Secretary, DTBE can release ACET’s communications through prescribed program channels.

Chair’s call for a vote	Motion properly made by Ms. Jennifer Cochran for Ms. Barbara Cole, the ACET Chair, to send the draft letter to the HHS Secretary. Motion seconded by Dr. Lisa Armitage
Outcome of vote	<b>Motion unanimously passed by 8 ACET voting members</b>
Next steps	Ms. Cole will sign and finalize the draft letter by making the following revision to concern #4 on page 2: “Maintaining a strong public health infrastructure is paramount to carry out the recommendations in the 2000 Institute of Medicine (IOM) TB Elimination Report...”.

**Topic 4: Agenda Items**

Ms. Cole announced that the Agenda Setting Workgroup would convene its next teleconference meeting at the end of March 2015. She asked ACET to propose new items for the workgroup to consider placing on future agendas.

FUTURE AGENDA ITEMS	
Presenter(s)	Topic
NTCA (Ms. Donna Wegener)	1. Presentation of a case statement with concrete examples describing the role and needs of a TB Nurse Consultant position at the national level
NTCA/ACET LTBI Workgroup	2. Report on the NTCA survey results regarding the needs, burden and feasibility of TB programs submitting data to a new national LTBI registry or surveillance system
DTBE	3. Update on TB in homeless populations and correctional settings in the context of health disparities and health equity
DTBE & ACET Membership	4. Overview of TB messaging: the need to focus on 11 million LTBI cases versus <10,000 cases of active TB disease; strategies to maximize activities around World TB Day for more effective dissemination of messages; and approaches to better interface with the media
ACET Membership	5. Discussion on additional strategies to achieve 1 of the 6 TB elimination goals: “accelerate the decline of TB”
DTBE (Dr. Philip LoBue)	6. Update on the DTBE Research Agenda
ACET and DTBE	7. Workgroup Reports
Guest Speakers	8. Overview by CDC partners (e.g., Health Resources and Services Administration (HRSA), NIH and the Gates Foundation) on funding and other resources for TB, such as the use of HRSA-funded Federally Qualified Health Centers to scale-up treatment for TB infection in primary care settings
Guest Speaker	9. Overview of the Biomedical Advanced Research and Development Authority by the HHS Assistant Secretary for Preparedness and Response

## Public Comment Session

Ms. Cole opened the floor for public comments; no participants responded.

## Closing Session

Ms. Cole thanked ACET for providing CDC with sound guidance over the course of the webinar. She announced that the next two ACET meetings would be held on June 2, 2015 (a webinar) and December 15-16, 2015 (an in-person meeting in Atlanta).

With no further discussion or business brought before ACET, Ms. Cole adjourned the virtual meeting at 3:30 p.m. EST on March 3, 2015.

I hereby certify that to the best of my knowledge, the foregoing Minutes of the proceedings are accurate and complete.

\_\_\_\_\_  
Date

\_\_\_\_\_  
Barbara Cole, RN, MSN, PHN  
Chair, Advisory Council for the  
Elimination of Tuberculosis



## Participants' Directory

### ACET Members Present

Ms. Barbara Cole, Chair  
Dr. Ana Alvarez  
Dr. Lisa Armitage  
Ms. Jennifer Cochran  
Dr. Susan Dorman  
Dr. Eric Houpt  
Dr. Michael Lauzardo  
Dr. James Sunstrum  
Dr. David Warshauer

### ACET Member Absent

Dr. Robert Horsburgh, Jr.

### ACET Ex-Officio Members Present

Dr. Naomi Aronson  
Department of Defense

Dr. William Baine  
Agency for Healthcare Research and Quality

Dr. Michael Bartholomew (Alternate for Dr. Susan Karol)  
Indian Health Services

Dr. Amy Bloom  
U.S. Agency for International Development

Ms. Sarah Bur  
Federal Bureau of Prisons

Dr. Rupali Doshi  
HIV/AIDS Bureau, Health Resources and Services Administration

Dr. Diana Elson  
U.S. Immigration and Customs Enforcement

Dr. Nadine Gracia  
Office of Minority Health  
U.S. Department of Health and Human Services

Dr. Stephen Kralovic (Alternate for Dr. Gary Roselle)  
U.S. Department of Veteran Affairs

Mr. Stephen Martin  
National Institute for Occupational Safety and Health

Dr. Sheldon Morris  
U.S. Food and Drug Administration

Mr. José Velasco (Alternate for Dr. Bruce San Filippo)  
U.S. Section, U.S. Mexico Border Health Commission

### ACET Ex-Officio Members Absent

CDR Edward Chin  
United States Marshals Service

Ms. Caroline Freeman  
U.S. Department of Labor,  
Occupational Safety and Health Administration

Dr. Susan Karol  
Indian Health Service

Dr. Mamodikoe Makhene  
National Institute of Allergy and Infectious Diseases, National Institutes of Health

Dr. Chana Rabiner  
Substance Abuse and Mental Health Administration

Dr. Gudelia Rangel  
Mexico Section, U.S.-Mexico Border Health Commission

Dr. Gary Roselle  
U.S. Department of Veteran Affairs

Dr. Bruce San Filippo  
U.S. Section, U.S.-Mexico Border Health Commission

## **ACET Liaison Representatives Present**

Dr. Shama Ahuja  
Council of State and Territorial Epidemiologists

Dr. Robert Benjamin  
National Association of County and City Health Officials

Dr. John Bernardo  
National Tuberculosis Controllers Association

Mr. David Bryden  
RESULTS

Mr. Kenyon Farrow  
Treatment Action Group

Ms. Nuala Moore (Alternate for Dr. Fran du Melle)  
American Thoracic Society

Dr. Ameer Patrawalla  
American College of Chest Physicians

Dr. Susan Ray  
Infectious Diseases Society of America

Dr. Randall Reves  
International Union Against TB and Lung Disease

Dr. Lornel Tompkins  
National Medical Association

## **ACET Liaison Representatives Absent**

Dr. Fran du Melle  
American Thoracic Society

Dr. Mayleen Ekiek  
Pacific Island Health Officers Association

Mr. Eddie Hedrick  
Association for Professionals in Infection Control and Epidemiology

Dr. Ilse Levin  
American Medical Association

Mr. John Lozier  
National Coalition for the Homeless

Ms. Eileen Napolitano  
Stop TB USA

Dr. Howard Njoo  
Public Health Agency of Canada

Dr. Jennifer Rakeman  
Association of Public Health Laboratories

Dr. Michael Tapper  
Society for Healthcare Epidemiology of America

Ms. Tara Wildes  
National Commission on Correctional Health

## **ACET Designated Federal Officer**

Dr. Hazel Dean  
NCHHSTP Deputy Director

## **CDC Representatives**

Ms. Clemestine Andrews

Dr. Lori Armstrong

Mr. Glen Christie

Ms. Ann Cronin

Dr. Tracy Dalton

Mr. Justin Davis

Ms. Teresa Durden

Mr. Michael Fraser

Ms. Gail Grant

Dr. John Jereb

Dr. Dolly Katz

Dr. Awal Khan

Dr. Philip LoBue

Mr. Elvin Magee

Dr. Susan Maloney

Ms. Lilia Manangan

Ms. Suzanne Marks

Dr. Jerry Mazurek

Mr. Mark Miner

Ms. Kyasha Moore

Ms. Charisse Nitura

Dr. Michele Pearson

Mr. Robert Pratt

Ms. Angel Roca

Ms. Margie Scott-Cseh

Ms. Maria Sessions

Mr. Brian Sizemore

Dr. Angela Starks

Dr. Andrew Vernon

## **Member of the Public**

Ms. Donna Wegener  
National Tuberculosis Controllers Association



## Glossary of Acronyms

3HP	Three-month, once-weekly Isoniazid/Rifapentine
ACA	Affordable Care Act
ACET	Advisory Council for the Elimination of Tuberculosis
AI/ANs	American Indians/Alaska Natives
CDC	Centers for Disease Control and Prevention
CGH	Center for Global Health
CMO	Committee Management Officer
CoAg	Cooperative Agreement
DFO	Designated Federal Officer
DOT	Directly Observed Therapy
DTBE	Division of Tuberculosis Elimination
FBPs	Foreign-Born Persons
FTE	Full-Time Equivalent
HHS	U.S. Department of Health and Human Services
HRSA	Health Resources and Services Administration
IGRA	Interferon Gamma Release Assay
INH	Isoniazid
IOM	Institute of Medicine
LTBI	Latent TB Infection
<i>M.tb</i>	<i>Mycobacterium tuberculosis</i>
MDR-TB	Multidrug-Resistant TB
NCHHSTP	National Center for HIV/AIDS, Viral Hepatitis, STD and TB Prevention
NIH	National Institutes of Health
NPIN	National Prevention Information Network
NTCA	National Tuberculosis Controllers Association
NTIP	National Tuberculosis Indicators Project
OD	Office of Director

RTMCCs	Regional Training and Medical Consultation Centers
SDH	Social Determinants of Health
TAPS	Technical Assistance and Program Support
TB	Tuberculosis
USBPs	U.S.-Born Persons
USICH	U.S. Interagency Council on Homelessness
WHO	World Health Organization