

**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**



**Virtual Meeting of the
Advisory Council for the Elimination of Tuberculosis
June 2, 2015**

Record of the Proceedings

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**ADVISORY COUNCIL FOR THE ELIMINATION OF TUBERCULOSIS
June 2, 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). The proceedings were held on June 2, 2015.

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 attend the ACET virtual meeting via teleconference or 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 (*Attachment 1: Participants' Directory*).

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

Dr. Dean conducted a roll call to determine the ACET voting members, *ex-officio* members and liaison representatives who were in attendance. She announced that ACET meetings are open to the public and all comments made during the proceedings are a matter of public record. She 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
Ana Alvarez, MD, FAAP (University of Florida College of Medicine)	No conflicts disclosed
Lisa Armitige, MD, PhD (Heartland National Tuberculosis Center)	No conflicts disclosed
Jennifer Cochran, MPH (Massachusetts Department of Public Health)	TB Cooperative Agreement (CoAg) grantee
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
Robert Horsburgh, Jr., MD, MUS (Boston University School of Public Health)	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

Dr. Dean announced that the 20 voting members and *ex-officio* members (or their alternates) in attendance constituted a quorum for ACET to conduct its business on June 2, 2015. She called the proceedings to order at 10:03 a.m. and welcomed the participants to the virtual ACET meeting. Dr. Dean noted temporary and permanent changes to ACET's membership.

- Dr. Michael Bartholomew would serve as the *ex-officio* member for the Indian Health Service in the absence of Dr. Susan Karol.
- Ms. Marla Clifton would serve as the *ex-officio* member for the Department of Veterans Affairs in the absence of Dr. Gary Roselle.
- LCDR Tiffany Moore would serve as the *ex-officio* member for the U.S. Department of Homeland Security, Immigration and Customs Enforcement in the absence of Dr. Diana Elson.
- Mr. Kenyon Farrow has replaced Ms. Colleen Daniels as the liaison representative for the Treatment Action Group.
- A search is underway to replace Dr. Sheldon Morris, the *ex-officio* member for the U.S. Food and Drug Administration, who recently retired.

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 ACET meeting. She noted that the ACET members were provided with a worksheet to guide the discussion on methods to accelerate the decline of TB in the United States. She concluded her opening remarks by reviewing the remainder of the agenda.

NCHHSTP Director's Report

Jonathan Mermin, MD, MPH

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

Centers for Disease Control and Prevention

Dr. Mermin covered the following topics in his Director's report to ACET. At the agency level, CDC's continued leadership in responding to the worldwide ebola crisis has tremendously impacted its operations in terms of staff and resources. As of April 30, 2015, CDC deployed 2,208 staff, including >1,000 staff to West Africa. These deployments have accounted for >40,000 workdays. NCHHSTP staff has accounted for ~230 of CDC's deployments since the fall of 2014, including ~110 staff to West Africa. Other key milestones in CDC's ebola response are highlighted below.

- The Emergency Operations Center supported >3,000 staff from all parts of CDC over the past year to address emerging ebola-related issues.
- The CDC laboratory in Bo, Sierra Leone administered >12,000 ebola tests.
- CDC trained 24,615 health workers in the field in West Africa.
- CDC conducted ebola screening on 180,859 travelers who were leaving Guinea, Liberia and Sierra Leone. State and local health departments have tracked >13,700 of these travelers to date. Of 27 travelers who arrived from West Africa and required medical evaluation, none had ebola. The World Health Organization recently declared Liberia as “ebola-free.”
- Of all U.S. hospitals, 55 were approved to treat ebola patients. To date, U.S. hospitals have provided treatment to 11 ebola patients.
- Of all U.S. laboratories, 56 had approved ebola testing capabilities, but only one had the capacity to test for the virus prior to the outbreak.
- The CDC National Contact Center, CDC-INFO, provided responses to 35,288 ebola-related questions.

At the National Center level, the organizational structure of the NCHHSTP Office of the Director now includes permanent directors for all five divisions and a new Program and Performance Improvement Office (PPIO). Dr. Richard Wolitski was appointed to lead PPIO to oversee NCHHSTP-wide efforts to enhance efficiency, outcomes and impact. PPIO will be responsible for the following activities.

- Expand capacity for high-impact prevention, particularly through performance indicator reports at national, state and local levels
- Strengthen epidemic and economic modeling, particularly through existing CoAgS with Emory, Harvard and the University of California-San Francisco
- Maximize healthcare system opportunities for prevention and treatment
- Enhance program collaboration and service collaboration across NCHHSTP
- Ensure alignment between funding opportunity announcements (FOAs) and NCHHSTP goals

PPIO will compile and analyze data to monitor NCHHSTP’s progress over time. For example, NCHHSTP’s National Progress Reports will be used to highlight states with TB case rates above the national average of >3.0/100,000 and states above, at or below the 2015 target of 2.5/100,000. State Progress Reports will be used to compare differences among contacts who are newly diagnosed with latent TB infection (LTBI) and completed treatment.

NCHHSTP’s Rapid Feedback Reports will be used to compare the six-month performance of grantees. In the Young Men Who Have Sex With Men (MSM) and Transgender of Color CoAg, for example, grantee performance was evaluated based on three major goals: the number of clients tested for HIV, the percent of HIV-positive clients, and the percent of HIV-positive clients who were linked to medical care.

NCHHSTP published a *Morbidity and Mortality Weekly Report (MMWR)* article on its joint investigation with the Indiana State Department of Health regarding a recent outbreak of HIV and hepatitis C virus (HCV) co-infection among persons who inject drugs (PWID). Of the small, rural Indiana community of 4,200 persons, ~150 PWID had HIV. Of PWID with HIV, >90% were co-infected with HCV. HCV infections were associated with injections of oxymorphone. Recent CDC data show that injection drug use has been the major contributor to the 150% increase in acute HCV cases in the United States in 2000-2013.

NCHHSTP issued a health advisory in April 2015 to notify all state/local health departments and healthcare providers of the growing HCV epidemic among PWID and the possibility of current or future HIV outbreaks. NCHHSTP also asked states to analyze their surveillance data to identify specific geographic areas that are at risk for clusters of HCV/HIV co-infection and report these findings to state and local health departments.

NCHHSTP recently published three documents on the CDC.gov website: *NCHHSTP Annual Report 2014*, “NCHHSTP Strategic Plan Through 2020,” and the Strategic Plan Executive Summary.

At the division level, DTBE recently reported the lowest number of TB cases in U.S. history. The 9,412 new TB cases diagnosed in the United States in 2014 represented a 2.2% decrease from 2013. DTBE data from the “iAdhere Study” showed that 78% of U.S. patients who self-administered the three-month, once-weekly isoniazid (INH)/rifapentine regimen (3HP) completed therapy. DTBE found that the shorter 3HP regimen resulted in more cost-savings and a much higher completion rate than the current nine-month INH regimen. Due to the success of the 3HP regimen, DTBE is providing technical assistance (TA) to the ongoing multi-state outbreak of INH-resistant TB among homeless persons.

The Division of HIV/AIDS Prevention (DHAP) released data to illustrate positive trends in the HIV epidemic in the United States. Based on 2011 data, 86% of persons living with HIV in the United States who knew their status represented the highest proportion reported to date. The annual rate of new HIV diagnoses in the United States decreased by 33% in 2002-2011. PWID accounted for ~70% of the reduction, while persons with heterosexual contact accounted for ~35% of the decline. However, HIV rates have increased in young MSM, particularly young MSM of color.

DHAP will release new three-year FOAs of up to \$185 million to support prevention efforts for MSM and transgender persons. Grantees will be required to increase the uptake of pre-exposure prophylaxis, apply surveillance data to improve engagement in care, and develop collaborative service networks. DHAP released estimates of transmission at each stage of HIV care for the first time. The data showed that persons who did not receive regular care, including those who were undiagnosed or not in care, accounted for 9 in 10 new HIV infections.

The Division of Viral Hepatitis (DVH) published analyses of the cost effectiveness of HCV testing and treatment. The data showed that full implementation of CDC's HCV testing recommendations could avert 320,000 deaths. The data further demonstrated that treating all HCV-infected patients at current market prices rather than delaying care until patients developed severe liver disease would cost <\$40,000 per quality-adjusted life-years. DVH provided TA to Egypt and Georgia due to the high burden of HCV in these countries. DVH implemented testing and linkage to care projects for chronic HCV and hepatitis B virus.

The Division of STD Prevention (DSTDP) conducted laboratory testing of novel compounds against *Neisseria gonorrhoeae*, including testing to determine the efficacy of a proprietary compound against ciprofloxacin-resistant isolates. DSTDP's application for the *2013 STD Treatment Guidelines* has been downloaded 830,000 times to date.

DSTDP will release the *2015 STD Treatment Guidelines* on June 5, 2015. DSTDP provided TA to Detroit to address limited access to quality STD services after the local STD clinic closed. DSTDP collaborated with CDC-funded STD/HIV Prevention Training Centers to implement provider- and clinic-based interventions to increase STD preventive services for MSM at 31 HIV care clinics in 14 states.

The Division of Adolescent and School Health (DASH) recently released the *Youth Risk Behavior Surveillance Report, United States 2013*. DASH developed a new web-based system to measure and evaluate the performance of its funded programs. DASH released the first cost-benefit study of school nursing services that estimated a \$98 million net benefit to the Massachusetts program. DASH is continuing to develop two major resources: indicators to monitor progress at national, state and grantee levels and an *MMWR Surveillance Summary on Sexual Minority Youth*.

Dr. Mermin provided additional details on NCHHSTP's ongoing activities in response to ACET's specific questions.

- The need to leverage global resources and other factors that caused the relocation of the DTBE International Research and Programs Branch (IRPB) from NCHHSTP to the CDC Center for Global Health.
- NCHHSTP's plans to monitor its performance and progress in reaching HIV, STD, viral hepatitis and TB goals for the incarcerated population of 3.2 million persons.

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 March 2015 publication of the most recent TB surveillance data showed that 9,412 new TB cases were reported in the United States in 2014. Foreign-born persons (FBPs) accounted for 67% of these cases. TB case rates of 3.02/100,000 in 2013 and 2.95/100,000 in 2014 reflected a 2.2% decrease between the two years, but this reduction has been the smallest in a decade. Moreover, tremendous disparities have persisted by country of origin: a 6.8% decrease in TB cases among U.S.-born persons versus a 1.5% decrease in TB cases among FBPs.

CDC decided to consolidate the majority of its global TB activities within a unit in the Center for Global Health. The new organizational structure will enhance coordination among experts, in-country staff and activities; promote collaboration across CDC and with external partners; raise the visibility of CDC's global TB portfolio; and demonstrate TB as an agency-wide priority.

The new "Division of Global HIV/AIDS and Tuberculosis" (DGHT) will be represented by the following organizational units: DTBE/IRPB, the DTBE Global Laboratory Activity, and an HIV/ TB team from the Division of Global HIV/AIDS and the Global TB Coordinator's Office. DTBE resources of 30 staff and \$7 million will be transferred to DGHT to support the reorganization. Daily functions of the individual units already have been relocated, but DGHT's new, official organizational structure will be launched in the fall of 2015.

The TB Trials Consortium recently completed the iAdhere Study. The study results supported use of the shorter, self-administered 3HP regimen in the United States. In U.S.-enrolled patients, self-administered therapy was not found to be inferior to directly observed therapy (DOT) in terms of the overall completion rate. The shorter 3HP regimen also resulted in more cost-savings than the current nine-month INH regimen. DTBE's next steps will be to publish a paper on the iAdhere Study in a peer-reviewed journal and release 3HP guidelines. However, DTBE's guidance will be coordinated and consistent with recommendations in the American Thoracic Society/Infectious Diseases Society of America LTBI Treatment Statement.

DTBE completed a one-year pilot project of surveillance for Large Outbreaks of TB in the United States (LOTUS). The LOTUS system is designed to identify large TB outbreaks based on analyses of genotyping data and program reports. The pilot sites detected 16 confirmed, probable or suspected outbreaks in the United States in April 2014-April 2015 and found that 50% of probable and confirmed outbreaks were detected through genotyping alone rather than from program reports. The LOTUS pilot underscored the value of universal genotyping.

DTBE included a component in the 2011-2012 National Health and Nutrition Examination Survey (NHANES) to estimate the prevalence of LTBI in the United States. The tuberculin skin test (TST) and interferon gamma release assay (IGRA) were requested for all persons enrolled in the study. Estimates were calculated based on whether results were positive for TST, IGRA or both tests. Estimates of TST prevalence were compared in the 1999-2000 and 2011-2012 NHANES. DTBE's manuscript of the study is undergoing the CDC clearance process at this time.

DTBE is continuing to offer several TB training and education resources. A Spanish version of the DTBE “TB 101 for Healthcare Workers” online course was released in March 2015. DTBE recently announced the availability of its “Interactive Core Curriculum on Tuberculosis: What the Clinician Should Know.” DTBE will hold the next TB Program Managers’ Course on September 14-17, 2015 at the CDC Global Communications Center.

DTBE is continuing to closely follow the timeline of the U.S. Preventive Services Task Force (USPSTF) to approve LTBI testing costs for reimbursement. During the summer of 2015, USPSTF expects to complete the evidence review of LTBI testing, initiate internal discussions of the evidence, draft recommendation language and open a public comment period. USPSTF has not yet specified dates to review and respond to public comments and issue a final report and recommendations. DTBE will provide ACET with periodic updates as additional information becomes available.

Dr. LoBue provided additional details on DTBE’s ongoing activities in response to ACET’s specific questions.

- Mechanisms to facilitate and sustain ongoing and effective communications between DTBE and DGHT over time, such as routine presentations by each branch; regular leadership meetings to address high-level issues; and CDC-wide TA by Epidemic Intelligence Service Officers to respond to both domestic and international TB outbreaks.
- The ability of the LOTUS system to detect the transmission of TB across states and local jurisdictions.

Ms. Sarah Bur, the *ex-officio* member for the Federal Bureau of Prisons (BOP), announced that 463 inmates from seven BOP facilities were enrolled in the iAdhere Study and had an extremely high completion rate of 92% of the 3HP regimen. BOP is still analyzing data for the random sample that was given the INH regimen, but the completion rate is likely to be <50%. These results emphasize the success of the 3HP regimen in correctional settings.

ACET Facilitated Discussion: Accelerating the Decline of TB in the United States

Barbara Cole, RN, MSN, PHN, ACET Chair

TB Controller

Riverside County (California) Department of Public Health

Ms. Cole facilitated a discussion for ACET to propose and prioritize methods to accelerate the decline of TB in the United States. She reiterated key points that will need to be emphasized to achieve this goal.

- The 2.2% decrease in the TB case rate from 2013 to 2014 is the smallest reduction in a decade.
- FBPs account for 67% of all TB cases with a case rate that is 13 times higher than in U.S.-born persons.
- Mexico, the Philippines, Vietnam, China and India are the top five contributors to foreign-born TB cases in the United States.
- Racial/ethnic minority groups account for ~85% of TB cases with a case rate that is 7-28 times higher than in whites.
- The key risk factors for TB include HIV (7%), homelessness (6%), incarceration (4%), and substance abuse (7%-12%).

Ms. Cole reminded ACET of the six goals outlined in the 2000 Institute of Medicine Report, *Ending Neglect: The Elimination of Tuberculosis in the United States*.

- Goal 1 is to maintain control of TB through timely diagnosis of active TB disease, appropriate treatment and management of persons with active disease, investigation and appropriate valuation and treatment of contacts of infectious cases, and prevention of transmission through infection control.
- Goal 2 is to accelerate the decline of TB by advancing toward TB elimination through targeted testing and treatment of persons with LTBI, appropriate regionalization of TB control activities, rapid recognition of TB transmission using DNA fingerprinting methods, and rapid outbreak response.
- Goal 3 is to develop new tools for the diagnosis, treatment and prevention of TB.
- Goal 4 is to reduce the global burden of TB by increasing U.S. involvement in international TB control activities.
- 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.
- Goal 6 is to monitor progress toward reaching the TB elimination goal and regularly report on progress to all target audiences

Ms. Cole clarified that ACET would focus on goal 2 for the current meeting. She pointed out that a worksheet was distributed with proposed interventions to assist ACET in formulating recommendations to CDC on accelerating the decline of TB.

1. IDENTIFYING AND ACCESSING HIGH-RISK POPULATIONS

Proposed Intervention

Create automatic referral for IGRA, sputum collection when CXR shows TB fibrosis

Incentivize TB prevention steps by community providers who serve high-risk populations

ACET Comments/Rationale to CDC

- Clarify potential environments for “automatic referrals:” community providers, primary care settings, emergency departments or electronic medical record (EMR) systems.
- Emphasize the need for education on TB screening in the private sector.
- Implement ACET’s previous recommendation on foreign-born TB: “All persons born in countries with a high burden of TB should be tested.”
- Replicate the HIV and HCV models for TB in which clear goals have been established to test high-risk patients in clinical, correctional and other settings.
- Change “TB fibrosis” to “abnormality.”
- Develop pay-for-performance indicators and allocate funding to strengthen the TB capacity of Community Health Centers.
- Prepare materials and convene workshops with guidance on engaging and accessing high-risk communities and effectively outreaching to local media to raise awareness of TB and decrease stigma.
- Offer incentives to health departments to conduct TB screening in high-risk communities, particularly to identify and reach persons who are not in care.
- Ensure that community providers are given new data collected by the TB Epidemiologic Studies Consortium (TBESC) on the TB continuum of care.
- Pilot interventions to determine those that are and are not effective in specific settings and broadly disseminate these results to community providers.
- Target outreach efforts to groups of community providers with foreign-born patient populations, such as professional organizations of Indian and Arab physicians.

1. IDENTIFYING AND ACCESSING HIGH-RISK POPULATIONS

Proposed Intervention	ACET Comments/Rationale to CDC
Stimulate providers to use a universal risk assessment for LTBI testing and treatment	<ul style="list-style-type: none"> • Launch a public education campaign (e.g., posters, billboards and newspaper/magazine articles) to increase TB screening in communities with large foreign-born populations. • Include new language in the TB CoAg for grantees to allocate resources at the local level to engage and educate providers and communities and build epidemiologic capacity, particularly in terms of the use of IGRA and the 3HP regimen.
Create local profiles of high-risk patient populations and their providers	<ul style="list-style-type: none"> • Target resources to states and localities to improve LTBI treatment of high-risk populations, particularly with the potential availability of 3HP self-administered therapy.
Evaluate contacts in a timely manner	<ul style="list-style-type: none"> • Provide health departments with incentives to analyze local data (e.g., local profiles, local epidemiologic data and funding) to better address needs in high-risk communities. For example, Ethiopia and South Korea are the major contributors to foreign-born TB cases in Virginia.
	<ul style="list-style-type: none"> • Agreement: ACET will identify high-risk groups for TB screening at a later time.

2. TB RISK ASSESSMENT

Proposed Intervention	ACET Comments/Rationale to CDC
Require universal college student risk assessment-directed testing	<ul style="list-style-type: none"> • Agreement: ACET will consider several important issues before deciding whether to recommend this intervention to CDC. <ul style="list-style-type: none"> ○ Data need to be reviewed to determine whether the intervention would have an impact on identifying TB infection and accelerating the decline of TB. ○ The intervention might result in the unintended consequence of discrimination or stigma to foreign-born college students.

2. TB RISK ASSESSMENT

Proposed Intervention

Perform a risk assessment and test those meeting specific risk threshold criteria for all persons entering the United States from endemic regions

Implement EMR triggers to stimulate risk assessment, testing and treatment

ACET Comments/Rationale to CDC

- FBPs who are granted U.S. entry with student visas do not receive overseas TB screening.
- CDC has no role in establishing screening policies for academic institutions.
- Revise the recommendation in CDC's current *LTBI Testing Guidelines* that does not require TB testing of FBPs with U.S. residency ≥ 5 years.
- Utilize EMR triggers, social media reminders and other electronic platforms to conduct TB risk assessments of "globally mobile" FBPs who routinely travel between the United States and their endemic countries of origin.
- **Agreement:** ACET will not recommend this intervention to CDC due to the complexity of EMR systems.

3. TESTING OF HIGH-RISK POPULATIONS

Proposed Intervention

Question 1: Should U.S. providers screen all FBPs or only a high-risk subset (e.g., those with HIV or other co-morbidities)?

Question 2: What are the top 5 populations that should be targeted to have the greatest impact on TB elimination in the United States?

Focus prevention interventions in defined geographic areas with highest case counts
 Require IGRA testing of all homeless shelter clients and staff
 Screening of U.S.-born children with foreign-born parents/caregivers

ACET Comments/Rationale to CDC

- **Agreement:** ACET will revise the intervention to recommend TB screening of all FBPs from TB-endemic countries. The TB case rate of 20/100,000 will be used to define "TB-endemic countries."
- Asian populations
- Persons with HIV
- TB contacts
- Jail inmates at booking
- Replicate the "Know Your Status" Campaign that CDC has launched for HIV and HCV.
- No discussion
- No discussion
- No discussion

4. LTBI TREATMENT

Proposed Intervention

Use pharmacies or other easily accessible venues for LTBI treatment

Increase access to new DOT and adherence technologies (e.g., free applications, video DOT, text message reminders for intermittent LTBI)

State and federal purchase/funding for LTBI diagnostics and medications (e.g., similar to the Vaccines for Children’s Program)

Incentivize treatment for children with LTBI

Maximize treatment of high-risk populations that have already been tested (e.g., persons with B-notifications, status adjusters, contacts)

Promote short-course 3HP and 4-month rifampin (4R) regimens over the longer 9-month INH regimen

Rebrand “latent TB infection” as “TB infection”

ACET Comments/Rationale to CDC

- **Agreement:** ACET addressed the role of pharmacies in #2, interventions for TB risk assessment.
- **Agreement:** ACET will recommend the use of new technologies to increase LTBI treatment to more individuals.
- **Agreement:** ACET will recommend the inclusion of new language in the TB CoAg that will call for funding to support LTBI diagnostics, medications and staff (e.g., nurses and community health workers) at state and local levels.
- **Agreement:** ACET will not recommend this intervention to CDC because local providers rather than the broader public health community would address LTBI treatment for children.
- **Agreement:** ACET will recommend treatment of FBPs with a positive test result in the past regardless of the duration of their U.S. residency.
- **Agreement:** ACET will recommend the short-course 3HP and 4R regimens as gold standards due to their much higher completion rates. The 9-month INH regimen will be recommended only for patients who are unable to tolerate short-course regimens. However, ACET will table this recommendation until its review of CDC’s new *LTBI Treatment Guidelines*.
- **Agreement:** ACET will recommend the replacement of “LTBI” with “TB infection” to increase treatment of more individuals.

Update by the ACET Latent TB Infection Workgroup

Robert Horsburgh, Jr., MD, MUS

Professor of Epidemiology, Biostatistics and Medicine & Department of Epidemiology Chair
Boston University School of Public Health
ACET Member & Workgroup Chair

Dr. Horsburgh covered the following topics in his update to ACET on the workgroup's recent activities. The workgroup identified several key factors to justify LTBI reporting. Reporting of LTBI test results could provide an estimate of the burden of infection, monitor changes over time, indicate prevalence among persons screened, raise awareness of the importance of LTBI, and facilitate the uptake of treatment.

Reporting of LTBI evaluation results and rates of treatment initiation and completion could provide process indicators of progress toward TB elimination, identify groups in need of assistance with treatment adherence, and indicate providers in need of TB education and outreach.

The workgroup extensively reviewed data from a survey that the National Tuberculosis Controllers Association (NTCA) administered to its membership to obtain feedback on all TB test results and both mandatory and voluntary LTBI reporting practices. NTCA designed the survey to collect data in four key areas.

- Specific data elements that are reported for particular populations
- The level of patient and TB infection (TBI) data reported to TB programs
- Perceived benefits and challenges of nationally reporting TB tests and TBI diagnoses
- The interest of TB programs in participating in national reporting of TB test results or TBI diagnoses

The workgroup commended NTCA on its success in achieving a high response rate to the survey of 88%. The TB program respondents included 100% of large cities, 96% of states and 50% of territories. Of 60 TB programs that responded to the survey, 43% have implemented voluntary LTBI reporting only, 28% have implemented mandatory LTBI reporting only, 27% have implemented both mandatory and voluntary LTBI reporting, and 2% have not implemented any type of LTBI reporting.

Responses to the NTCA survey are highlighted as follows. TB programs submit mandatory or voluntary LTBI reports for four key populations: all TB cases, contacts of infectious TB cases, refugees/asylees, and immigrants. TB programs also submit mandatory or voluntary LTBI reports on other populations, but on a much smaller basis.

- All FBPs

- Foreign-born children
- Healthcare workers
- Correctional inmates
- HIV-positive persons
- Immunocompromised persons
- Teachers and other staff due to school requirements
- Pre-kindergarten through 12th grade students due to school requirements
- College/university students due to school requirements
- All children
- Pregnant women

TB programs submit LTBI reports through various platforms: the Electronic Disease Network, local health departments, providers, healthcare facilities, correctional facilities, laboratories, state/local immigration services, and school/daycare administrators. TB programs use facsimile transmissions and printed copies by mail as the top two mechanisms to submit LTBI reports. TB programs also use other platforms to submit LTBI reports, but on a smaller basis: telephone, electronic laboratory reporting, other electronic venues and e-mail.

Most TB programs submit LTBI reports as individual patient reports, but other formats include aggregate data and line lists with patient-level data. All TB programs include the following data points in their LTBI reports.

- Reasons for testing the patient and status of the patient
- Date and type of LTBI test
- LTBI test result and diagnosis
- Patient demographics
- Chest x-ray result
- Patient risk factors
- Patient treatment initiation
- Patient treatment outcome
- Patient treatment type
- Completion of the patient's clinical evaluation
- Treatment delivery

TB programs tremendously varied in evaluating the quality of their self-reported data. Most notably, 60% of TB programs agreed that their LTBI reports were in compliance, but only 30%-50% of respondents were confident in the accuracy and completeness of their data. TB programs use their LTBI reports for diverse purposes.

- Case management and follow-up
- Initiation of treatment
- Provision of data for surveillance reports

- Resource planning
- Evaluation of patients
- Referrals to care
- Direct targeted testing
- Advocacy

TB programs expressed concerns regarding their ability to collect and manage current LTBI data or additional information, gather more LTBI data or variables, identify other populations with LTBI reports, and collect sufficient LTBI data. Of 60 TB programs that responded to the survey, 58% were not ready, had no plans or had not discussed the collection of LTBI data; 25% were ready, planned to or already were collecting LTBI data; 12% were nearly ready or developing a plan to collect LTBI data; and 5% did not respond to this question.

Of 60 TB programs that responded to the survey, 59% were not ready, had no plans or had not discussed the management of LTBI data; 25% were ready or made minimal changes to their existing plans to manage LTBI data; 8% were nearly ready or developing a plan to manage LTBI data; and 8% did not respond to this question.

The workgroup reached several conclusions based on the results of the NTCA survey. Several TB programs have existing systems to support LTBI reporting for their respective jurisdictions. Many TB programs are continuing to submit LTBI reports via manual data entry (e.g., telephone, mail or facsimile). The volume of manual LTBI reports that are entered into electronic databases is unknown at this time, but the reported information is detailed. Most TB programs use LTBI reports for patient follow-up and are willing to share information with CDC if a national system and resources are efficient and available.

The workgroup agreed that the development of a national LTBI reporting system with the capacity to report all TST and IGRA test results should be recommended to CDC. Key features of the proposed system are highlighted as follows: reasons for providers to order TB screening; the patient's demographic data, risk factors for progression to TB disease and previous history of TB treatment; provider and patient contact information; the patient's acceptance of a specific TB regimen; and treatment completion and non-completion rates of all patients.

The workgroup also agreed that the new national LTBI reporting system should be implemented in a stepwise process. First, existing data collected by the CDC Division of Global Migration and Quarantine on refugees and immigrants should be broadly disseminated to health departments. Second, individual patient data gathered from health department screening and contact investigations should be widely distributed to enable follow-up of individual patients. Third, efforts should be initiated to obtain status adjuster data from the U.S. Department of State. Fourth, non-governmental organizations and private providers should pilot and test the new national LTBI reporting system.

The workgroup noted that TBESC is creating a new universal form that will enable all health departments to submit LTBI reports in a consistent and user-friendly manner at the national level. However, state and local sites will need to expand their current efforts and resources to collect and enter data, provide information and conduct outreach, particularly since most TB programs are still submitting manual LTBI reports by telephone, mail or facsimile. TBESC intends to pilot the national LTBI reporting system, but the workgroup emphasized the need for CDC to extensively engage TB programs with experience in submitting LTBI reports.

The workgroup recommended that DTBE take the following next steps to focus on several key areas. TBESC's pilot of the new national LTBI reporting system will help to develop and refine tools. DTBE should implement a phased approach to implement national LTBI reporting that will increase uptake of the new system into routine practice. However, DTBE should first evaluate the potential cost of each of the four steps in the new national LTBI reporting system. Health departments will need additional resources to launch and sustain the new national LTBI reporting system over time.

Dr. Horsburgh concluded his update by asking ACET to consider two recommendations for formal action. One, ACET should recommend a staged introduction of reporting both positive and negative LTBI test results at the national level. Two, ACET should recommend that CDC perform an analysis of the cost for state and localities to report positive and negative LTBI test results.

Dr. LoBue made several clarifying remarks in follow-up to the workgroup's report. Although states have a legal mandate to report TB disease, their requirement to report TB cases and other data to CDC is only a condition of receiving CoAg funds. Because CDC has no authority to make LTBI a nationally reportable condition, DTBE recognizes that a cost analysis of national LTBI reporting would need to be conducted.

ACET made several suggestions in response to the workgroup's report.

- CDC should model national LTBI reporting in advance to determine whether the system will be effective and add value.
- DTBE should extensively engage and obtain input from Dr. Shama Ahuja, the liaison representative to the Council of State and Territorial Epidemiologists (CSTE). CSTE would need to develop a position statement with a strong rationale to champion the new national LTBI reporting system to the CSTE membership. The limitations and cost of the system would need to be clearly articulated as well.
- CDC should identify specific data elements to collect and determine guidance to provide to TBESC in piloting the national LTBI reporting system. Most notably, state systems that currently report LTBI should be replicated and enhanced rather than attempting to create an entirely new national system. Lessons learned, experiences and necessary resources for states and localities to collect positive and negative HIV test results should be reviewed.

Update by the ACET Essential Components Workgroup

Eric Brenner, MD

Adjunct Associate Professor, Epidemiology and Biostatistics
University of South Carolina

Dr. Brenner is a former ACET member who chaired the workgroup. The workgroup was charged with reviewing CDC's September 8, 1995 *MMWR* publication, *Essential Components of a Tuberculosis Prevention and Control Program*. The workgroup's review emphasized the need to update and replace CDC's 1995 document with more recent guidance on essential TB components for 2015 and in the foreseeable future.

In its last update to ACET during the June 2014 meeting, the workgroup highlighted key points from the draft report, *Essential Components of a Tuberculosis Prevention and Control Program: Recommendations of the Advisory Council for the Elimination of Tuberculosis*. However, several new issues need to be considered and discussed before the draft report can be finalized.

- A decision is needed on whether the title of the report should be changed to "Essential Components of a Tuberculosis Prevention, Control and Elimination Program." The workgroup noted that CDC's *MMWR* articles over the past few years have used the terminology of "TB control," "TB prevention and control" and "TB elimination."
- A decision is needed on whether ACET's updated Essential Components Report should be aligned with the 2014 WHO publication, *Towards TB Elimination: An Action Framework for Low-Incidence Countries*. Several practical implications will need to be considered in this regard.
 - Essential components proposed for domestic TB programs will need to be consistent with priority actions recommended for global TB programs in the WHO framework.
 - More emphasis will need to be placed on TB elimination as an essential component in addition to TB prevention and control. For example, the profile of TB elimination would need to be raised in all documents and discussions with partners. An LTBI registry in addition to a TB case registry might need to be developed. Targeted testing and use of the 3HP regimen in selected subpopulations might need to be expanded. TB elimination might need to be recommended for low incidence jurisdictions only. In 2014, only 10 states with TB case rates <1/100,000 were defined as "low incidence."
- A decision is needed on whether domestic and global TB case rates should be consistently reported based on a population of 1 million persons. For example, WHO has established a pre-elimination goal of 10/1 million by 2035 and an elimination goal of 1/1 million by 2050.

The most recent draft of the Essential Components Report dated March 29, 2015 includes the following sections.

- Summary
- Introduction
- Purpose
- Overall planning and policy
- Management of persons who have or are suspected of having disease
- Identification of persons who have clinically active TB
- Data collection and analysis
- Training and education
- Appendix 1: Epidemiologic perspectives on TB in the United States and implications for TB control and elimination
- Appendix 2: TB population dynamics: a useful epidemiologic model against which to conceptualize the functions of essential TB program components
- Appendix 3: Perspectives on the control, elimination and eradication of TB and other infectious diseases
- Appendix 4: Essential TB program components in the framework of public health core functions and essential services
- Select text from the 2014 WHO TB Elimination Framework for Low-Incidence Countries

Dr. Brenner highlighted text from select sections of the report: strategies for TB prevention and control; an overall TB control strategy with written policies and procedures; development of a treatment plan; drug resistance surveillance; data analysis and program evaluation; and maintenance of clinical and public health expertise in an era of declining TB incidence.

Overall, the Essential Components Report might become increasingly important due to the continued loss of experienced nurses, clinicians and TB controllers. The report also can serve as an important resource to meet diverse needs.

- A “TB Control 101” course for new TB controllers and other staff
- A briefing document to increase TB knowledge and understanding of health department staff
- A tool for TB controllers and leadership of disease control programs to provide key decision-makers and funders with a strong rationale and justification for resources to maintain TB core capacity
- Conceptual guidance to increase the number of jurisdictions that can shift from a TB control to a TB elimination structure in both U.S. and WHO long-term strategies

Ms. Cole summarized the next steps. Because the terms of ACET members who served on the workgroup have expired, a new workgroup chair and members need to be identified to further revise and finalize the Essential Components Report for submission to CDC. The most recent draft of the report will be distributed to ACET for review and comment. In the interim, however, all ACET members were in favor of changing the title of the report to “Essential Components of a

Tuberculosis Prevention, Control and Elimination Program.” Dr. Terence Chorba, Chief of the DTBE Field Services and Evaluation Branch, confirmed that he would continue to provide TA and expertise to the workgroup as needed.

The ACET members commended Dr. Brenner for his outstanding leadership in reviewing the literature and updating the Essential Components Report.

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 noted the following changes to the previous meeting minutes. All five references to “ACET’s resolution” should be replaced with “ACET’s recommendation” in the “Preparation for the ACET Business Session” chart on pages 20-21.

Ms. Cole entertained a motion for ACET to approve the previous meeting minutes. A motion was properly placed on the floor by Dr. Robert Horsburgh and seconded by Dr. Michael Lauzardo for ACET to approve the previous meeting minutes.

ACET unanimously adopted the Draft March 3, 2015 Meeting Minutes with the changes Ms. Cole noted for the record.

Topic 2: ACET Vote on Recommendations by the LTBI Workgroup

Chair’s call for a vote	Motion properly made by Dr. Robert Horsburgh for CDC to evaluate the implementation of national reporting of TB testing and infection and estimate the cost of the system in accordance with the four-step process proposed by the LTBI Workgroup. Motion seconded by Dr. Ana Alvarez.
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Outcome of vote	Motion passed by a majority vote of 6 members in favor and 2 opposed (Dorman, Lauzardo)
Next steps	Ms. Cole will submit ACET's formal recommendation to the CDC Director for consideration and action.

Topic 3: ACET Communications With HHS and CDC

Ms. Cole reminded ACET of its formal approval during the March 2015 meeting to finalize and send the draft letter to the HHS Secretary with the changes noted for the record. This action was taken and an update will be presented to ACET after the HHS Secretary responds to the letter.

Dr. Dean announced that ACET's key action items and recommendations during the March 2015 meeting were summarized and distributed to Dr. Thomas Frieden, the Director of CDC. He was unable to meet with Ms. Cole after the meeting, but he expressed a strong interest in ACET's current activities. In response to his request, DTBE informed Dr. Frieden that ACET's next in-person meeting would be held on December 15-16, 2015.

Topic 4: ACET Liaison Report

Ms. Cole is the ACET liaison to the Board of Scientific Counselors (BSC) for the CDC Office of Infectious Diseases. During its May 2015 meeting, the BSC sent a letter to the HHS Secretary to describe recent progress that has been made in controlling antibiotic-resistant bacteria. The BSC emphasized the following issues in its letter.

- Advances in informatics
- The ability of EMRs to better reach patients and providers
- Broader use of social networking for prevention and control of drug resistance
- Improvements in molecular diagnostics and other laboratory technology
- Antimicrobial stewardship, drug resistance and healthcare-associated infections

The BSC urged the HHS Secretary to increase investments and take other effective actions to control the threat of drug resistance and mitigate its impact on the healthcare system and individual patients.

Topic 5: DTBE Research Agenda

Dr. LoBue announced that DTBE is continuing its internal review to develop an inventory of existing TB research. The ongoing review is providing DTBE with an opportunity to identify gaps, determine projects that should be discontinued, and rank and prioritize the remaining research initiatives. DTBE expects to complete the inventory of existing TB research projects over the summer of 2015 for presentation to ACET during the December 2015 meeting.

Topic 6: 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 meeting.

Advice Requested	ACET Discussion	ACET Response
<p>(1) Prevention and control of TB in FBPs (2) Expansion of LTBI testing and treatment among FBPs</p>	<p>TB screening should be more heavily emphasized for subgroups of FBPs who typically are overlooked in current strategies: temporary workers, college students, and visitors to the United States from endemic countries. However, tremendous barriers to TB prevention and control in FBPs must be addressed. Most notably, FBPs with U.S. residence ≤ 5 years are prohibited from accessing Medicaid programs.</p>	<p>(1) CDC should explore other funding sources for TB prevention and control in FBPs who are not eligible for Medicaid. CDC should offer incentives to jurisdictions to design TB prevention and control programs for FBPs based on their local epidemiology. Localities should report these data to CDC. (2) CDC should develop and distribute guidelines to expand LTBI testing and treatment among FBPs. The guidelines should identify high-burden countries and recommend TB testing of FBPs regardless of the duration of their U.S. residency.</p>
<p>CDC's global TB coordination activities</p>	<p>ACET should adhere to its charter to advise DTBE on domestic TB activities.</p>	<p>ACET will provide guidance to DTBE on its ongoing communications with DGHT. Dr. Shannon Hader will present an update during the next meeting on CDC's reorganization of global TB activities.</p>

Advice Requested	ACET Discussion	ACET Response
TB disparities and health equity	Incarcerated persons are frequently overlooked during discussions on TB disparities and health equity of racial/ethnic groups. The disproportionate incarceration of racial/ethnic minorities should be used as an opportunity to improve TB control with a stronger focus on health equity, particularly due to availability of the short-course 3HP regimen. This population should be extensively engaged in all discussions of TB disparities.	<p>ACET agreed to establish a new Congregate Settings Workgroup that will have a short-term charge of drafting formal recommendations on TB health equity issues. The new workgroup will particularly focus on homeless and incarcerated populations in its guidance to ACET.</p> <p><u>Workgroup Membership</u> Dr. Lisa Armitige, Chair Dr. William Baine Ms. Sarah Bur Dr. Michael Lauzardo</p>
Impact of funding cuts on local TB programs	The funding cycle of the current TB CoAg will end in 2019. DTBE will begin developing TB CoAg language for the next funding cycle in 2016 or 2017.	<p>(1) ACET agreed to form a new workgroup in 2016 that will be charged with reviewing and proposing revisions to CDC's TB Program Funding Formula.</p> <p>(2) ACET agreed not to provide guidance in response to NTCA's question regarding cross-jurisdictional synergies in TB. This effort would be extremely challenging due to legal issues, policies and other requirements at state and local levels.</p> <p>(3) DTBE and NTCA are continuing to discuss the possibility of funding a new joint "NTCA/CDC Targeted Prevention Initiative." A status report on this item will be placed on the next ACET agenda.</p>

Topic 7: Agenda Items

Ms. Cole led ACET in a review of 9 agenda items that were proposed during the March 2015 meeting. Topic 1 was tabled for a future meeting, while topics 2, 3, 5, 6 and 7 were presented during the current meeting.

- Topic 4, TB messaging, will be further discussed by ACET in terms of changing “LTBI” to “TBI” and recommending that CDC launch a new “Know Your TB Status” campaign. Dr. Wanda Walton, Chief of the DTBE Communications, Education and Behavioral Studies Branch, will present a status report on her upcoming consultation with NTCA on the development of a TB communications strategy.
- Topic 8, overviews by CDC partners, will continue to be presented by Dr. LoBue during his review of collaborative efforts in the DTBE Director’s Report.
- Topic 9, overview of the Biomedical Advanced Research and Development Authority (BARDA), will continue to be placed on future agendas until a speaker is identified for this item.

Ms. Cole confirmed that the Agenda Setting Workgroup would hold its regular teleconference meeting after the full ACET meeting. She asked ACET to propose new items for the workgroup to consider placing on future agendas.

FUTURE AGENDA ITEMS	
Presenter(s)	Topic
CDC (Dr. Shannon Hader)	1. CDC’s reorganization of global TB activities
DTBE (Dr. Philip LoBue)	2. Update on the DTBE Research Agenda
DTBE (Dr. Philip LoBue)	3. Status report on potential funding of a new joint “NTCA/ CDC Targeted Prevention Initiative”
ACET (Ms. Barbara Cole)	4. Status report on NTCA’s willingness to collaborate with ACET in further revising and finalizing the Essential Components Report
DTBE	5. Update by the Drug Shortages Workgroup
Guest Speaker	6. Overview of BARDA 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

Dr. Dean announced that the term of Dr. Susan Dorman would expire on June 30, 2015. She confirmed that Dr. Dorman would receive a certificate of appreciation by mail. The participants joined Dr. Dean in commending Dr. Dorman for her outstanding contributions and excellent input during her tenure as an ACET member.

The next ACET meeting would be held face-to-face on December 15-16, 2015 in Atlanta. The participants joined Ms. Cole in acknowledging Ms. Margie Scott-Cseh, the ACET Committee Management Specialist, for her continued leadership in organizing and planning the meetings.

With no further discussion or business brought before ACET, Ms. Cole adjourned the virtual meeting at 3:13 p.m. on June 2, 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



Attachment 1: *Participants' Directory*

ACET Members Present

Ms. Barbara Cole, Chair
Dr. Ana Alvarez
Dr. Lisa Armitige
Ms. Jennifer Cochran
Dr. Susan Dorman
Dr. Robert Horsburgh, Jr.
Dr. Eric Houpt
Dr. Michael Lauzardo
Dr. James Sunstrum

ACET Member Absent

Dr. David Warshauer

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

Ms. Marla Clifton
(Alternate for Dr. Gary Roselle)
U.S. Department of Veteran Affairs

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

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

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

Mr. Stephen Martin
National Institute for Occupational Safety
and Health

LCDR Tiffany Moore
(Alternate for Dr. Diana Elson)
U.S. Department of Homeland Security
Immigration and Customs Enforcement

Ms. Paula Quintana
(Alternate for Dr. Bruce San Filippo)
U.S. Section, U.S.-Mexico Border Health
Commission

Dr. Chana Rabiner
Substance Abuse and Mental Health
Administration

ACET Ex-Officio Members Absent

CDR Edward Chin
United States Marshals Service

Dr. Diana Elson
U.S. Department of Homeland Security
Immigration and Customs Enforcement

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

Dr. Susan Karol
Indian Health Service

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

Dr. Jay Butler
Association of State and Territorial Health
Officials

Dr. Ameer Patrawalla
American College of Chest Physicians

Dr. Randall Reves
International Union Against TB and Lung
Disease

**ACET Liaison Representatives
Absent**

Mr. David Bryden
RESULTS

Dr. Fran du Melle
American Thoracic Society

Dr. Mayleen Ekiek
Pacific Island Health Officers Association

Mr. Kenyon Farrow
Treatment Action Group

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

Dr. Howard Njoo
Public Health Agency of Canada

Dr. Jennifer Rakeman
Association of Public Health Laboratories

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

Dr. Susan Ray
Infectious Disease Society of America
Dr. Michael Tapper
Society for Healthcare Epidemiology of
America

Dr. Lornel Tompkins
National Medical Association

Dr. Tara Wildes
National Commission on Correctional
Health

ACET Designated Federal Officer

Dr. Hazel Dean
NCHHSTP Deputy Director

CDC Representatives

Ms. Leeanna Allen
Dr. Terence Chorba
Dr. Awal Khan
Dr. Philip LoBue
Ms. Lilia Manangan
Dr. Jonathan Mermin
Dr. John Parmer
Mr. Robert Pratt
Ms. Margie Scott-Cseh
Ms. Maria Sessions
Mr. Brian Sizemore
Dr. Wanda Walton

Members of the Public

Dr. Eric Brenner
Adjunct Associate Professor
Epidemiology and Biostatistics
University of South Carolina

Ms. Donna Wegener
National Tuberculosis Controllers
Association



Attachment 2: *Glossary of Acronyms*

3HP	Three-Month, Once-Weekly Isoniazid/Rifapentine
4R	4-Month Rifampin
ACET	Advisory Council for the Elimination of Tuberculosis
BARDA	Biomedical Advanced Research and Development Authority
BOP	Bureau of Prisons
BSC	Board of Scientific Counselors
CDC	Centers for Disease Control and Prevention
CoAg	Cooperative Agreement
CSTE	Council of State and Territorial Epidemiologists
DASH	Division of Adolescent and School Health
DGHT	Division of Global HIV/AIDS and Tuberculosis
DHAP	Division of HIV/AIDS Prevention
DOT	Directly Observed Therapy
DSTDP	Division of STD Prevention
DTBE	Division of Tuberculosis Elimination
DVH	Division of Viral Hepatitis
EMR	Electronic Medical Record
FBPs	Foreign-Born Persons
FOAs	Funding Opportunity Announcements
HCV	Hepatitis C Virus
HHS	U.S. Department of Health and Human Services
IGRA	Interferon Gamma Release Assay
INH	Isoniazid
IRPB	International Research and Programs Branch
LOTUS	Large Outbreaks of TB in the United States
LTBI; TBI	Latent TB Infection; TB Infection
<i>MMWR</i>	<i>Morbidity and Mortality Weekly Report</i>
MSM	Men Who Have Sex With Men
NCHHSTP	National Center for HIV/AIDS, Viral Hepatitis, STD and TB Prevention
NHANES	National Health and Nutrition Examination Survey

NTCA	National Tuberculosis Controllers Association
PPIO	Program and Performance Improvement Office
PWID	Persons Who Inject Drugs
TA	Technical Assistance
TB	Tuberculosis
TBESC	TB Epidemiologic Studies Consortium
TST	Tuberculin Skin Test
USPSTF	U.S. Preventive Services Task Force