

TB NOTES



TB Notes 1, 2021

Notes from the Director

Dear Colleague,

Last week, we recognized [World TB Day](#) on March 24th to commemorate the date Dr. Robert Koch announced his discovery of the bacillus that causes tuberculosis (TB). World TB Day activities looked different this year, due to the impact of the [COVID-19 pandemic](#), but it remained an opportunity to increase awareness about TB disease and the need to find, treat, and prevent this devastating disease.

Many of our TB colleagues across the country and around the world also continue to address public health needs in the response to the COVID-19 pandemic. I am inspired by the stories of [CDC's 2021 U.S. TB Elimination Champions](#), and want to thank them, as well as all of the public health and medical professionals who are on the frontlines responding to the COVID-19 pandemic while continuing to work towards TB elimination. As the response to COVID-19 continues, it is important for TB programs to continue to maintain essential services of TB prevention and control. I encourage you to visit CDC's [TB and Public Health Emergencies](#) and [COVID-19](#) websites for information and resources.



On March 25, 2021, CDC published [provisional 2020 U.S. TB surveillance data](#). Provisional data show a dramatic decline in reported TB cases among U.S.-born and non-U.S.-born individuals in 2020. The decline is likely due to multiple factors related to the COVID-19 pandemic, and raises concerns about missed or delayed TB disease diagnoses. Healthcare providers should consider TB testing for patients with signs and symptoms consistent with TB disease (e.g. cough, fever, night sweats, and weight loss), and people should be encouraged to seek medical care if needed.

CDC released new videos as part of the ongoing TB Personal Stories series to raise awareness about TB in the United States. Hearing experiences from TB survivors can be a helpful motivational tool that TB programs and healthcare providers can use to encourage patients to complete treatment for TB disease. I would like to thank the TB survivors, [We Are TB](#), [The National TB Controllers Association](#), state and local TB programs, and [Stop TB USA](#) for their participation in this important project. You can view the video, print, and social media content for each story by visiting [CDC's TB Personal Stories website](#).

CDC and our domestic and global partners remain committed in our efforts to eliminate TB, even as the COVID-19 pandemic continues to create challenges for our communities, public health departments, and healthcare facilities. Thank you for your continued efforts towards our goal of TB elimination.

Philip LoBue, MD, FACP, FCCP
Director

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

Communications, Education, and Behavioral Studies Branch

World TB Day Activities

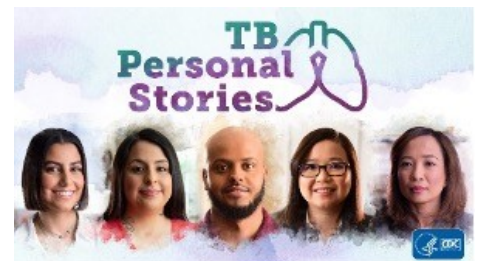
Due to the COVID-19 pandemic, CDC's World TB Day 2021 activities were different from previous years. This year, CDC focused on a virtual strategy to safely commemorate World TB Day. We look forward to the future when we can again commemorate World TB Day together in person!

Dear Colleague Letter from CDC Director, Rochelle P. Walensky, MD MPH

On World TB Day, CDC Director Dr. Rochelle Walensky released a [Dear Colleague Letter](#) that highlighted the dedication of TB programs, public health departments, and healthcare facilities to prevent and treat TB during the COVID-19 pandemic. Dr. Walensky recognized the continued work and commitment by CDC and its partners, both domestically and globally, to eliminate TB in the United States and around the world.

TB Personal Stories

CDC's Division of Tuberculosis Elimination is proud to highlight new personal stories of TB survivors and family of survivors who bravely shared their experiences battling latent TB infection and TB disease. These new videos are part of the ongoing [TB Personal Stories](#) series to help raise awareness about TB in the United States. These survivor stories highlight the importance of latent TB infection testing and treatment.



CDC would like to express our thanks to [We Are TB](#), [The National TB Controllers Association](#), state and local TB programs, and [Stop TB USA](#) for their contributions to this project.

CDC U.S. TB Elimination Champions Project

The [2021 CDC U.S. TB Elimination Champions Project](#) marked the 6th year of recognizing the continued hard work and dedication from those working to end TB in their communities.

This year, CDC recognized organizations and individuals who have adapted to the shift in public health activities, developed innovative strategies to continue preventing and controlling TB in the United States, and played an important role in the COVID-19 response while continuing TB elimination activities.

Congratulations and thank you to the 2021 U.S. TB Elimination Champions!



- [Breathe Easy South Texas \(B.E.S.T\) Project – San Antonio, Texas](#)
- [Gerald Barnett, Contact Investigation/Special Populations Supervisor, Dallas County Health and Human Services, Texas](#)
- [Otto F.W. Boneta, MD, MPH, Tuberculosis Elimination Program Physician, Texas Department of State Health Services](#)
- [Tuberculosis Control Branch, California Department of Public Health- Richmond, CA](#)
- [Chima Mbakwem- TB/Hansen's Diseases Program Manager, Guam Department of Public Health and Social Services](#)
- [Division of Tuberculosis Elimination Cooperative Agreement Awardee Mycobacteriology Public Health Laboratorians](#)
- [Harris County Public Health Tuberculosis Elimination Program, Texas](#)
- [Housing for Health, Los Angeles County Department of Health Services](#)
- [Jefferson County Department of Health TB Program, Alabama](#)
- [Michele Koenig, RN – Training Specialist and Nurse Consultant, Southeastern National TB Center at the University of Florida](#)
- [Tenzin Kunor, multidrug-resistant TB Survivor and member of We are TB](#)
- [Michael Lauzardo, MD, MSc – Director and Principal Investigator, Medical Consultant for Florida State Department of Health, Division of TB Elimination, Southeastern National TB Center at the University of Florida and the Florida Department of Health](#)
- [Scott Lindquist, MD, MPH- Communicable Disease Epidemiologist, Washington State Department of Health](#)
- [New York City Bureau of Tuberculosis Control Telehealth Team, New York City, New York](#)
- [San Diego County TB Elimination Initiative, County of San Diego, Health and Human Services Agency, Public Health Services](#)
- [TB Nurses in the United States, All Public Health Departments](#)
- [TB Program Evaluation Network Steering Committee Members- CDC, Atlanta, GA](#)
- [Texas Department of State Health Services Region 4/5 North Tuberculosis Elimination Team, Tyler, TX](#)
- [Texas TB Programs Supporting TB Services along the Texas/Mexico Border: Harlingen, TX](#)

CDC.gov World TB Day Feature Article

CDC.gov published a [Feature article](#) co-authored by the Division of Tuberculosis Elimination and the Division of Global HIV and Tuberculosis to highlight progress in the United States and around the world to end TB. The article highlights the impact of COVID-19 on TB elimination and the need for better diagnostics, shorter treatment regimens, and strong domestic and global partnerships to accelerate progress toward the elimination of TB disease. CDC and our domestic and global partners remain committed in our efforts to end this devastating disease, even as the COVID-19 pandemic has created unprecedented challenges for our communities, public health departments, and healthcare facilities.


World TB Day News and Events Timeline

To highlight World TB Day activities happening across the country, CDC created a 2021 World TB Day News & Events Timeline. Many of our partners held their activities virtually due to the COVID-19 response. Thank you to everyone who shared a World TB Day activity – there were 11 different events featured on the website! Learn more about the events that occurred across the United States on the [News and Events Timeline webpage](#).

World TB Day Digital Media Toolkit

This year, CDC created a [World TB Day digital toolkit](#) designed to help plan communication activities to inform and educate partners, stakeholders, and media about TB-related problems and solutions, and the importance of supporting TB control and prevention efforts. The digital media toolkit included sample messaging, resources, and virtual events.

Updated resource: *The Core Curriculum on Tuberculosis: What the Clinician Should Know*

On March 19, 2021, CDC released an updated edition of the [Core Curriculum on Tuberculosis: What the Clinician Should Know](#)  [PDF – 6.65 MB]. This 2021 edition is an update to the 2013 edition and contains updated information about the treatment of latent TB infection and TB disease, based on the latest available guidance. The Core Curriculum resource is intended for use as a reference manual for clinicians caring for persons with or at high risk for TB disease or latent TB infection. The curriculum is designed in a self-study format so that each person can work at his or her own pace to learn more about latent TB infection and TB disease. [Continuing education \(CE\) credits](#) for this course are offered free of charge. To learn more, visit the [CDC website](#).

Surveillance, Epidemiology, & Outbreak Investigations Branch

Provisional TB Surveillance Data for 2020 Show a Dramatic Decline in Reported TB Cases in the United States

On March 25, 2021, DTBE published [provisional 2020 U.S. TB data](#) in *Morbidity and Mortality Weekly Report*. Data reported to CDC's national TB surveillance system show a dramatic decline among U.S.-born and non-U.S.-born individuals. This decline is likely due to multiple factors related to the COVID-19 pandemic, and raises concerns about missed or delayed TB disease diagnoses.

The number of TB disease cases in the United States has fallen steadily since 1993, thanks to the dedicated work of TB programs to detect, treat, and prevent TB disease. Since 2010, TB incidence has decreased by an average of 2%–3% annually. However, provisional data show a **20% reduction** in the number of reported cases of TB disease in the United States in **2020 (7,163 cases)** compared with **2019 (8,909 cases)**. The incidence rate of TB disease in the United States in 2020 was **2.2 per 100,000 persons** compared with **2.7 per 100,000 persons** in 2019.

The decline in reported TB cases is much larger than has been observed in recent years and is likely due multiple factors related to the COVID-19 pandemic that have led to both an under-ascertainment of cases and a true decline in TB disease incidence. While COVID-19 pandemic mitigation efforts and reduced travel might have contributed to the decline, the size of the decrease across different groups raises concerns about missed or delayed TB disease diagnoses. CDC is conducting supplemental analyses to further examine the causes of the steep decline in cases.

Timely TB diagnoses save lives and prevent the spread of TB disease. CDC encourages healthcare providers to consider TB disease when evaluating patients with signs and symptoms consistent with TB disease, especially when SARS-CoV-2 diagnostic tests are negative. People with signs and symptoms of TB disease (e.g. cough, fever, night sweats, and weight loss) should seek medical care.

Submitted by Molly Deutsch-Feldman, PhD, EIS Officer


Preliminary study results show clinicians favor short-course treatment regimens for latent TB infection

Healthcare providers in clinics affiliated with local TB programs are moving towards selecting shorter-term regimens for treatment of latent TB infection, according to preliminary results of a CDC-funded study. The finding is an encouraging indicator of progress in the effort to improve treatment completion for latent TB infection.

More than 80% of people who develop TB disease in the United States each year get sick from longstanding, untreated latent TB infection. CDC estimates that **up to 13 million people in the United States** [🔗](#) have latent TB infection. These people are infected with *Mycobacterium tuberculosis* but do not have TB disease, have neither signs nor symptoms of TB disease, and cannot spread *M. tuberculosis* to others. However, about 5%-10% of infected people will develop TB disease over their lifetime if not treated for latent TB infection. Healthcare providers can accelerate progress toward TB elimination by identifying and treating people with latent TB infection, thereby preventing TB disease.

In 2020, CDC and the National Tuberculosis Controllers Association (NTCA) published "[Guidelines for the Treatment of Latent Tuberculosis Infection](#)" in CDC's Morbidity and Mortality Weekly Report Recommendations and Reports that preferentially recommend short-course, rifamycin-based, 3- or 4-month latent TB infection treatment regimens over 6- or 9-month isoniazid monotherapy. Studies have shown that the shorter treatment regimens have similar efficacy, better tolerability, and are more likely to be completed than 6 or 9 months of isoniazid. However, little information is available on how clinicians have responded to the changes in the recommendations and if they have moved toward prescription of shorter regimens. Information on clinicians' responses to shorter treatment regimens is important to policymakers, program evaluators, and public health leaders as they work to improve testing and treatment of latent TB infection.

To assess how clinicians have responded to the changes in the recommendations, researchers analyzed data from the CDC-funded [TB Epidemiologic Studies Consortium \(TBESC\)](#), a partnership of 10 academic institutions and public health departments in 11 U.S. states. From September 2012- May 2017, TBESC led a study to describe and compare the ability of three diagnostic tests – TB skin test (TST) and two interferon gamma release assays (IGRAs) – to predict

progression to TB disease. Extensive treatment information was collected for study participants who had at least one positive test result and were offered and accepted latent TB infection treatment. From the subgroup of 4,068 participants who had detailed treatment information available, study results revealed that clinicians' preferences for the two short-course regimens in standard use at the time of the study increased from 53% in 2013 to 73% in late 2016. The two short-course regimens in standard use at the time of the study were [three months of once-weekly isoniazid plus rifapentine \(3HP\)](#) and [four months of daily rifampin](#)  [PDF – 406KB] (4R). The results of the study demonstrate that more clinicians are recommending short-course treatment options for latent TB infection. CDC continues to develop messages to inform healthcare providers, TB programs, and the public about treatment options for latent TB infection.

Submitted by Pei-Jean Feng, MPH, Epidemiologist

Field Services Branch

TB Tests and COVID-19 Vaccines

COVID-19 vaccination is an important tool to help stop the pandemic, and as the [U.S. COVID-19 vaccination program](#) continues, some may have questions about the interaction between COVID-19 vaccines and [tests used for tuberculosis \(TB\) infection](#).

The COVID-19 vaccine should not be delayed because of testing for TB infection. TB skin tests and TB blood tests are not expected to affect the safety or the effectiveness of the COVID-19 vaccine. Visit [Interim Clinical Considerations for Use of COVID-19 Vaccines Currently Authorized in the United States](#) for more information.

Submitted by John Jereb, MD, Medical Officer

Field Services Branch Welcomes New Deputy Branch Chief

On March 14, 2021, Martha Boisseau joined the Field Services Branch as the new Deputy Branch Chief. Martha has over 15 years of experience in management at CDC. She has served as Division Deputy for the Division of Health Education and Promotion at ATSDR, Deputy Branch Chief for the Maternal and Infant Health Branch in the Division of Reproductive Health (DRH), and most recently was the Lead for Health Equity for DRH. She has worked at the federal, local, state, hospital, and non-profit/advocacy arenas in cooperative agreements, grants, and contracts. Martha holds a Bachelor of Science degree in Community Health Education from Virginia Tech and a Master of Public Health degree in Health Behavior and Health Education from the University of North Carolina at Chapel Hill. We are thrilled to welcome Martha to DTBE.



Submitted by Terry Chorba, MD, DSc, Branch Chief

Data Management, Statistics, and Evaluation Branch

Division of Tuberculosis Elimination staff have begun piloting a tool to assess the costs of electronically directly observed therapy (eDOT). In particular, the Excel-based tool evaluates the cost of video directly observed therapy (video DOT), estimates the resources needed to start a video DOT program, and allows for comparison to telemedicine reimbursement rates. Currently, two jurisdictions are in the initial stages of piloting the tool: Los Angeles and Kentucky.

With the video DOT costing tool, programs do not need to go through a large data collection and analysis process to evaluate their cost. Instead, the basic information required to use the tool are (1) the number of patients who use video DOT, (2) the expected cost of the video DOT software platform, and (3) whether or not the program will be providing smartphones for patients. The tool uses data previously collected during a three-site evaluation to estimate costs (Beeler Asay et. al., 2020). The three-site evaluation found that video DOT was preferred to traditional forms of DOT (Field and Clinic) from the health department and patient cost perspective. However, video DOT costs varied by site, and lower-incidence sites had greater costs per session. The video DOT costing tool will allow sites to compare their costs with the published evaluation.

If your state or jurisdiction is interested in piloting the video DOT costing tool, please contact Garrett Asay (hrp9@cdc.gov) or Eva Trinh (nyv8@cdc.gov).

Submitted by Garrett Asay, PhD, Economist, and Eva Trinh PhD, MPH, MA, Program Evaluation Consultant

Garrett R. Beeler Asay et al. "[Cost of Tuberculosis Therapy Directly Observed on Video for Health Departments and Patients in New York City; San Francisco, California; and Rhode Island \(2017–2018\)](#)", American Journal of Public Health 110, no. 11 (November 1, 2020): pp. 1696-1703.

Laboratory Branch

The DTBE Laboratory Branch is pleased to announce the upcoming release of updated online interactive training modules for the Association of Public Health Laboratories (APHL) "Essentials for the Mycobacteriology Laboratory: Promoting Quality Practices" training curriculum. Content for each of the thirteen modules was developed collaboratively with input from CDC and APHL members and has now been updated with knowledge check questions added for most modules. Previously, modules were housed on the APHL website. With the addition of an APHL Learning Management System, modules will now reside within the management system allowing continuing education credits to be received and course certificates to be printed. To access the APHL Mycobacteriology Laboratory Training Curriculum, visit <https://www.aphl.org/training/Pages/Training-Portal.aspx>.

Submitted by Stephanie Johnston, MS Laboratory Capacity Team Lead

Highlights from Partners

The Union North America Region (NAR) Conference Updates

This February, DTBE staff attended the virtual 25th Annual Conference of The Union North America Region. This three-day scientific conference brings together national and international experts of national and international to focus on topics of importance to public and respiratory health with emphasis on TB and lung disease.

Highlights from the conference include DTBE staff providing oral presentations, below:

- Molly Deutsch Feldman, Sandy Price, Robert Pratt R, Maryam Haddad, and Julie Self presented “How is the COVID-19 pandemic affecting tuberculosis surveillance in the United States?”
- Beverly Metchock and Angela Starks served as discussants at the post-graduate course entitled “How Can the Laboratory Aid in the Patient-Centered Diagnosis and Management of TB?”, a case-based learning session held on February 24, 2021.

NSTC/NTCA Release *Testing and Treatment of Latent Tuberculosis Infection in the United States: Clinical Recommendations*

The National Society of Tuberculosis Clinicians (NSTC), a section of the National Tuberculosis Controllers Association (NTCA), released [Testing and Treatment of Latent Tuberculosis Infection in the United States: Clinical Recommendations](#). Led by NSTC members Drs. Marcos Burgos and Charlie Crane, a national group of TB experts developed these patient-centered and practical state-of-the-art recommendations as a companion reference to support health care providers in implementing the 2020 latent TB infection treatment recommendations, “Guidelines for the Treatment of Latent Tuberculosis Infection: Recommendations from the National Tuberculosis Controllers Association and CDC.”

The Clinical Recommendations are written for health care providers in both the public and private sectors and the authors include clinicians and nurses with experience in TB from multiple perspectives: professional roles in patient care, public health, and scientific research and locations with different epidemiology and public health infrastructure and resources. Their medical background, clinical experience, and research based the recommendations on the best available knowledge, whether research- or expert opinion-based.

The *Clinical Recommendations* will be a living document that resides on the [NTCA website](#) and will be updated as the TB community learns more about LTBI testing and treatment. Learn more in the [press release](#) published on February 5, 2021.


Submitted by the National Tuberculosis Controllers Association

TB Community Engagement Network is now the TB Elimination Alliance

The TB Elimination Alliance (TEA), formerly known as the TB Community Engagement Network, is a CDC-funded initiative to work more closely with state and local TB control programs, as well as community-based organizations and community health centers. The initiative is spearheaded by the Association of Asian Pacific Community Health Organizations, Asian & Pacific Islander American Health Forum, Hepatitis B Foundation, and Stop TB USA. TEA’s mission is to cultivate a national partnership of community leaders dedicated to eliminating TB disease and latent TB infection inequities among Asian American, Native Hawaiian, and Pacific Islander populations through education, raising awareness, and innovation. TEA’s vision is to create healthy communities free of TB.


TEA was formally launched in July 2020, and members include 14 organizations spanning from Hawaii to Washington D.C. Members include community-based organizations, community health centers, local coalitions, health agencies, and academic institutions that serve patients with limited English proficiency, immigrants, refugees, those with limited or no health coverage, and those at-risk for other infectious diseases. Members deliver culturally and linguistically appropriate services to serve vulnerable and marginalized communities. Collectively, the members represent a workforce of more than 2,000 clinicians, non-clinical providers (e.g., Community Health Workers), public health administrators, and volunteers.



TEA's goals are to conduct outreach to underserved Asian American, Native Hawaiian, and Pacific Islander communities with the highest TB burden, increase awareness and understanding of culturally and linguistically appropriate latent TB infection/TB disease testing and treatment strategies, share resources and best practices among providers, and develop partnerships to scale existing initiatives. To date, TEA has hosted several trainings, including an inaugural virtual TB Summit in November 2020, and implemented a Mini-Grants program for community-based organizations and community health centers to innovate in TB elimination.


To learn more about TEA and collaboration opportunities, please contact tb-cen@aapcho.org or visit www.tbeliminationalliance.org .



COVID-19 Resources and Information for TB Programs



DTBE-authored COVID-19 Publications

da Silva JF, Hernandez-Romieu AC, Browning SD, Bruce BB, Natarajan P, **Morris SB**, Gold JAW, **Neblett Fanfair R**, **Rogers-Brown J**, Rossow J, Szablewski CM, Oosmanally N, D'Angelo MT, Drenzek C, Murphy DJ, Hollberg J, Blum JM, Jansen R, Wright DW, Sewell W, Owens J, Lefkove B, Brown FW, **Burton DC**, Uyeki TM, **Patel PR**, Jackson BR, Wong KK. [COVID-19 clinical phenotypes: presentation and temporal progression of disease in a cohort of hospitalized adults in Georgia, United States](#) . *Open Forum Infect Dis.* 2020;8:ofaa596.

Lewis NM, Duca LM, Marcenac P, Dietrich EA, Gregory CJ, Fields VL, Banks MM, Rispens JR, Hall A, Harcourt JL, Tamin A, Willardson S, Kiphibane T, Christensen K, Dunn AC, Tate JE, **Nabity S**, Matanock AM, Kirking HL. [Characteristics and timing of initial virus shedding in severe acute respiratory syndrome coronavirus 2, Utah, USA](#)  [PDF – 1.89MB] . *Emerg Infect Dis.* 2021;27:352–9.

Szablewski CM, Chang KT, **McDaniel CJ**, Chu VT, Yousaf AR, **Schwartz NG**, Brown M, **Winglee K**, Paul P, Cui Z, Slayton RB, Tong S, Li Y, Uehara A, Zhang J, Sharkey SM; Camp Outbreak Field Investigation Team, Kirking HL, Tate JE, Dirlikov E, Fry AM, Hall AJ, Rose DA, Villanueva J, Drenzek C, **Stewart RJ**, Lanzieri TM; Camp Outbreak Field Investigation Team. [SARS-CoV-2 transmission dynamics in a sleep-away camp](#) . *Pediatrics.* 2021:e2020046524. Epub ahead of print.



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Tobolowsky FA, Bardossy AC, Currie DW, **Schwartz NG**, Zacks RLT, Chow EJ, Dyal JW, Ali H, Kay M, Duchin JS, Brostrom-Smith C, Clark S, Sykes K, Jernigan JA, Honein MA, Clark TA, Stone ND, Reddy SC, Rao AK. [Signs, symptoms, and comorbidities associated with poor outcomes among residents of a skilled nursing facility with SARS-CoV-2 infection—King County, Washington](#)  [PDF – 428KB] . *J Am Med Dir Assoc*. 2021:S1525–8610(21)00121–3. Epub ahead of print.



New CDC Publications



New CDC Publications



Armstrong GL, MacCannell DR, Taylor J, Carleton HA, Neuhaus EB, Bradbury RS, **Posey JE**, Gwinn M. Pathogen genomics in public health [Note]. *Obstet Gynecol Surv*. 2020;75:275–6.



Bonney W, Price SF, Abhyankar S, Merrick R, Hampole V, Halse TA, DiDonato C, **Dalton T, Metchock B, Starks AM, Miramontes R**. [Towards unified data exchange formats for reporting molecular drug susceptibility testing](#)  [PDF – 655KB] . *Online J Public Health Inform*. 2020;12:e14.



Cegielski JP, Udwadia ZF, Viiklepp P, Yim JJ, Menzies D. [Reply to van Deun and Decroo](#) . *Clin Infect Dis*. 2020:ciaa1875. Epub ahead of print.



DeGruy K, **Klein K**, Rey Z, Hall P, Kim A, Alexander H. [Development of dried tube specimens for Xpert MTB/RIF proficiency testing](#)  [PDF – 854KB] . *Afr J Lab Med*. 2020;9:1166.

Haley CA, Macias P, Jasuja S, Jones BA, Rowlinson MC, Jaimon R, Onderko P, Darnall E, Gomez ME, Peloquin C, Ashkin D, **Goswami ND**. [Novel 6-month treatment for drug-resistant tuberculosis, United States](#)  [PDF – 616KB] . *Emerg Infect Dis*. 2021;27:332–4.

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McDowell A, Haas M, Seaworth B, Wilson JW, Patrawalla A, Haley C, Lauzardo M, de Bruyn M, **Goswami ND**. [Linezolid use for the treatment of multidrug-resistant tuberculosis, TB centers of excellence, United States, 2013–2018](#)  [PDF – 630KB] . *J Clin Tuberc Other Mycobact Dis*. 2020;22:100201.

Weiner M, Gelfond J, Johnson-Pais TL, Engle M, Johnson JL, **Whitworth WC, Bliven-Sizemore E**, Nsubuga P, Dorman SE, Savic R; Pharmacokinetics/Pharmacodynamics Group of Tuberculosis Trials Consortium. [Decreased plasma rifapentine concentrations associated with AADAC single nucleotide polymorphism in adults with tuberculosis](#)  [PDF – 249KB] . *J Antimicrob Chemother*. 2020:dkaa490. Epub ahead of print.

Zhang N, Savic RM, Boeree MJ, Peloquin C, Weiner M, Heinrich N, **Bliven-Sizemore E**, Phillips PP, Hoelscher M, **Whitworth W, Morlock G, Posey J**, Stout JE, Mac Kenzie W, Aarnoutse R, Dooley KE; Tuberculosis Trials Consortium (TBTC) and Pan African Consortium for the Evaluation of Antituberculosis Antibiotics (PanACEA) Networks. [Optimising pyrazinamide for the treatment of tuberculosis](#)  [PDF – 2.4MB] . *Eur Respir J*. 2021:2002013. Epub ahead of print.

TB Notes Subscription and Article Submission Process

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