

# TBeat

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### Update of Recommendations for Use of Once-Weekly Isoniazid-Rifapentine Regimen to Treat Latent *Mycobacterium tuberculosis* Infection

Andrey S. Borisov, MD<sup>1</sup>; Sapna Bamrah Morris, MD<sup>1</sup>; Gibril J. Njie, MPH<sup>1</sup>; Carla A. Winston, PhD<sup>1</sup>; Deron Burton, MD<sup>1</sup>; Stefan Goldberg, MD<sup>1</sup>; Rachel Yelk Woodruff, MPH<sup>1</sup>; Leeanna Allen, MPH<sup>1</sup>; Philip LoBue, MD<sup>1</sup>; Andrew Vernon, MD<sup>1</sup> (<u>View author affiliations</u>)

#### - SUMMARY

Treatment of latent tuberculosis infection (LTBI) is critical to the control and elimination of tuberculosis disease (TB) in the United States. In 2011, CDC recommended a short-course combination regimen of once-weekly isoniazid and rifapentine for 12 weeks (3HP) by directly observed therapy (DOT) for treatment of LTBI, with limitations for use in children aged <12 years and persons with human immunodeficiency virus (HIV) infection (1). CDC identified the use of 3HP in those populations, as well as self-administration of the 3HP regimen, as areas to address in updated recommendations. In 2017, a CDC Work Group conducted a systematic review and meta-analyses of the 3HP regimen using methods adapted from the Guide to Community Preventive Services. In total, 19 articles representing 15 unique studies were included in the meta-analysis, which determined that 3HP is as safe and effective as other recommended LTBI regimens and achieves substantially higher treatment completion rates. In July 2017, the Work Group presented the meta-analysis findings to a group of TB experts, and in December 2017, CDC solicited input from the Advisory Council for the Elimination of Tuberculosis (ACET) and members of the public for incorporation into the final recommendations. CDC continues to recommend 3HP for treatment of LTBI in adults and now recommends use of 3HP 1) in persons with LTBI aged 2–17 years; 2) in persons with LTBI who have HIV infection, including acquired immunodeficiency syndrome (AIDS), and are taking antiretroviral medications with acceptable drug-drug interactions with rifapentine; and 3) by DOT or self-administered therapy (SAT) in persons aged ≥2 years.



#### **Recommendations continued**

### Systematic Review

A CDC Work Group including epidemiologists, health scientists, physicians from CDC's Tuberculosis Elimination program, and a CDC library specialist, was convened to conduct the systematic literature review using methods adapted from the Guide to Community Preventive Services (2,3). The library specialist used a systematic search strategy to identify and retrieve intervention studies on the use of 3HP to treat LTBI that were published from January 2006 through June 2017 and indexed in the MEDLINE, Embase, CINAHL, Cochrane Library, Scopus, and Clinicaltrials.gov databases. To identify missed studies, reference lists from included articles were reviewed, and CDC's TB experts were consulted. This review included English language articles that met the following criteria: 1) the study design was randomized controlled trial, quasi-experimental, observational cohort, or other design with a concurrent comparison group; 2) the target population included, but was not restricted to, persons aged ≥12 years, children aged 2–11 years, or persons with HIV infection; and 3) outcomes reported were prevention of TB disease, treatment completion, adverse events while on 3HP, discontinuation as a result of adverse events while on 3HP, or death while on 3HP.

For complete Morbidity and Mortality Weekly Report (MMWR) please visit: https://www.cdc.gov/mmwr/volumes/67/wr/mm6725a5.htm?s\_cid=mm6725a5\_w

### **Toxic Treatments: Choosing Between Deafness and Death**

By David McKenzie and Brent Swails, CNN; June 18, 2018

Full video available at: https://www.cnn.com/2018/06/18/health/drug-resistant-tuberculosis-deafness-intl/index.html

KwaZulu-Natal, South Africa (CNN) - The terror crept over Khumbulani Shandu. Lying in his hospital bed, he knew that something was very wrong. The world was rapidly closing off to him. He could hear muffled, indistinct sounds coming from doctors at the hospital in KwaZulu-Natal, South Africa, but he couldn't quite make out what they were saying. Just 14 years old, Khumbulani was rapidly going deaf. "I just couldn't understand the sound. I just couldn't understand. It was the most difficult thing in my life," he said. Then, the sound all but stopped. Khumbulani had contracted tuberculosis from his father at their rural homestead in 2016. But first-line drugs didn't work, and he embarked on



Photo Credit: Brent Swalis, CNN

the painful and difficult treatment for drug-resistant TB. For months, his doctors prescribed a highly toxic injectable antibiotic called kanamycin along with a cocktail of other drugs to attack Khumbulani's infection. But the injectable that was meant to cure him had made him deaf.

# Heartland and Regional Highlights 2018 CDC U.S. TB Elimination Champions

Read more at: https://www.cdc.gov/tb/worldtbday/championnomination.htm

**Dr. Barbara Seaworth** has worked tirelessly to improve care and prevention efforts for MDR-TB along the Texas-Mexico border, seeking ways to collaborate with health workers on both sides of the border, always with a focus on the well-being of her patients and their families. In an effort to extend the impact of her work, she has become engaged in advocacy efforts. Many organizations have recognized Dr. Seaworth's outstanding contributions to TB elimination, and she is a regular member of national and international expert panels. Her efforts have brought much needed attention to the problems and difficulties posed by MDR-TB therapy for both providers and patients, and have highlighted the unaddressed challenges of MDR-TB prevention. Dr. Seaworth is a true example of how hard work and dedication matter, and can help efforts to achieve TB elimination.





**Dr. Juzar Ali,** Medical Director of the Louisiana State University Health Sciences Center (LSUHSC)-Wetmore Foundation Program for Mycobacterial Diseases, in New Orleans along with his team, (Nicole Lapinel, MD; Margarita Silio, MD; Maureen Vincent CLSS; Chris Brown; and Malcolm Light) have collaborated with the local hospital and community systems to ensure streamlined care of adult and pediatric TB patients. These programmatic improvements have led to better coordination of care of TB patients to and from hospitals, emergency rooms, primary care clinics and homeless shelters. They have also started a Video Direct Observed therapy (VDOT) pilot program for patients with latent TB infection. Further, they have reached out to primary care clinics and established a working relationship with the community outreach team of Tulane and LSU medical students volunteering in the homeless shelters.

**Preston Witt** is the Chief Services Officer for Harmony House. Preston oversees services at Langston House, a joint-ventured facility between the City of Houston TB program and Harmony House Inc. Langston House houses infectious or displaced TB patients during their infectious period. It is one of the few facilities of its kind operating within the United States. Preston Witt is the Chief Services Officer for Harmony House. Preston oversees services at Langston House, a joint-ventured facility between the City of Houston TB program and Harmony House, a facility between the City of Houston TB program and Harmony House Inc. Langston House houses infectious or displaced TB patients during their infectious period. It is one of the few facilities of its kind operating their infectious period. It is one of the few facilities of its kind operating their infectious period. It is one of the few facilities of its kind operating their infectious period. It is one of the few facilities of its kind operating within the United States.





Breathe Easy South Texas (BEST) represents a partnership between the Texas Department of State Health Services (DSHS), the San Antonio Metropolitan Health District (SAMHD), UT Health at San Antonio, UT Tyler, and the Heartland National TB Center. Together, these key partners are working to grow a network of urban and suburban/rural clinics/organizations that will incorporate the identification and treatment of latent TB infection in populations at increased risk for latent TB infection into their practices. The uniqueness of this project includes both a rural as well as an urban component. Back

# Heartland and Regional Highlights 2018 CDC U.S. TB Elimination Champions, cont.



In 2016, Texas ranked fourth in the nation for tuberculosis (TB) disease burden, with 1,250 cases of active TB disease (4.5 per 100,000 population). Harris County, Texas jurisdiction (not including City of Houston) had a TB case rate of 4.4 per 100,000 population, over 65% higher than the national rate (2.9 per 100,000 population). Harris County Public Health (HCPH) implemented Video Directly Observed Therapy (VDOT), an innovative asynchronous smart phone-based approach that allows patients to record TB medication doses remotely.

## **TB Unsung Hero Award**

Dorothy Rodriguez won the TB Unsung Hero Award from the National TB Controller's Association (NTCA)! The NTCA was created in 1995 to bring together the leaders of tuberculosis control programs in all states and territories, as well as many counties and city health departments that organize their own TB control activities. This national award recognizes those within TB programs who are working on the front lines, regardless of their professional training, who daily dedicate themselves to quality patient care and protecting our public's health. The individuals eligible for nomination for this award conduct contact investigations, educate the community about TB, provide DOT services, build relationships of trust and respect with those they serve and are the heart and soul of the health department. This exemplifies Dorothy and the work she performs for Williamson County. The enthusiasm and effort Dorothy puts into her work as a TB Prevention Specialist/Contact Investigator has benefited our program, clients and community immeasurably. She is dedicated to quality client care and is passionate about protecting and improving the health of our community. We're blessed to have this TB hero as part of our team. Congratulations, Dorothy!



2018





### Health Care Heroes Dinner Honoree



Dr. Barbara Seaworth, Recognized by the San Antonio Business Journal for her local, national, and international work in tuberculosis.



2018 HNTC Training Calendar		
Date(s)	Course	Location
July 9	TB Nurse Case Study: Multi Drug Resistant TB	Online
July 13	Screening for TB Infection	Dallas, Texas
July 16	TB Nurse Case Study: Pediatric TB	Online
July 20	Screening for TB Infection	San Antonio, Texas
July 23	TB Nurse Case Study: Hepatotoxicity in TB Treatment	Online
July 25	TST Practicum Train the Trainer	Midland, Texas
July 26	Screening for TB Infection	Midland, Texas
July 30	TB Nurse Case Study: TB and Biologics	Online
August 2	TST Practicum Train the Trainer	Harlingen, Texas
August 3	Screening for TB Infection	Harlingen, Texas
August 6	TB Nurse Case Study: Positive Tuberculin Skin Test and Pregnancy	Online

\*\*This calendar is not inclusive of all available courses. Please refer to the website for any future trainings and detailed information. Courses listed are still open for registration.\*\* Please visit our website: <u>http://www.heartlandntbc.org/training/calendar.php</u> Proposed topics are subject to change; check website for the latest updates.

### Resources

**TB Education and Training Network** 

http://www.cdc.gov/tb/education/Tbetn/default.htm

**National TB Controllers Association** 

http://www.tbcontrollers.org

Find TB Resources

www.findtbresources.org

Tuberculosis Epidemiologic Studies Consortium (TBESC)

http://www.cdc.gov/tb/topic/research/TBESC/default.htm

Regional Training and Medical Consultation Centers' TB Training and Education Products

https://sntc.medicine.ufl.edu/rtmccproducts.aspx

Program Collaboration and Service Integration (PCSI)

http://www.cdc.gov/nchhstp/programintegration/Default.htm

Centers for Disease Control and Prevention, Division of Tuberculosis Elimination

http://cdc.gov/tb/

\*\*\*\*If your organization has any additional links for TB resources that you would like published, please send them to Alysia.Wayne@uthct.edu\*\*\*\*

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### **Heartland National TB Center Staff**

2303 Southeast Military Drive, San Antonio, Texas 78223 Tel: 800-TEX-LUNG (839-5864); Fax: 210-531-4590

www.heartlandntbc.org

**Medical Director** Barbara Seaworth, MD (210) 531-4541

barbara.seaworth@dshs.texas.gov

Medical Consultant Lisa Y. Armitige, MD, PhD (210) 531-4548 lisa.armitige@dshs.texas.gov

Nurse Consultant/Educator Catalina Navarro, RN, BSN (210) 531-4569

catalina.navarro@uthct.edu

Nurse Consultant/Educator Debbie Onofre-Davila, RN, MSN (210) 531-4539 debbie.onofre@uthct.edu Assistant Medical Director David Griffith, MD (903) 877-7267 <u>david.griffith@uthct.edu</u>

Director of Education & Training Jessica Quintero, M.Ed. (210) 531-4568 jessica.quintero@uthct.edu

> Training Specialist II Delfina Sanchez, MA (210) 531-4528 delfina.sanchez@uthct.edu



Executive Director Stephanie Ott, CPM (210) 531-4542 Stephanie.ott@uthct.edu

Program Specialist Alysia Wayne (210) 531-4540 alysia.wayne@uthct.edu

Web Site Content Coordinator

Edgar Salinas, BBA (210) 531-4520

edgar.salinas@uthct.edu

The MISSION of the Heartland National TB Center is to build capacity with our partners. We will share expertise in the treatment and prevention of tuberculosis by: developing and implementing cutting-edge trainings, delivering expert medical consultation, providing technical assistance, and designing innovative educational and consultative products.

The VISION of Heartland National TB Center is to provide *excellence*, *expertise*, *innovation* in training, medical consultation, and product development to reduce the impact of tuberculosis in our region.

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