In this issue...

Completion Rate of 3HP - Page 1
Consensus Statement - Page 2
We can wipe out tuberculosis - Page 3
HNTC Highlights - Page 4
Resources - Page 4
Training Calendar - Page 5
TBit: Recently Published - Page 5
HNTC Contact Information - Page 6

Completion Rate and Side-Effect Profile of Three-Month Isoniazid and Rifapentine Treatment for Latent Tuberculosis Infection in an Urban County Jail

Maria Juarez-Reyes,1 Mark Gallivan,2 Alexander Chyorny,3 Linda O’Keeffe,3 and Neha S. Shah2,4

1Stanford University, School of Medicine, 2California Department of Public Health, Richmond, and 3Custody Health Services, Santa Clara Valley Medical Center, San Jose, California; 4Centers for Disease Control and Prevention, Atlanta, Georgia

Full article available at http://ofid.oxfordjournals.org/content/3/1/ofv220

SUMMARY

In an urban jail population, 3 months of isoniazid and rifapentine (3HP) was associated with an 85% latent tuberculosis infection treatment completion rate compared with 18% in a standard 9-month isoniazid treatment group. Among the 91 patients who started 3HP therapy, there were 2 treatment discontinuations from adverse drug reactions.

Keywords. correctional healthcare; prevention; tuberculosis.

The estimated prevalence of active tuberculosis (TB) among inmates in correctional facilities is 4 to 17 times greater than the general US population, and over 7% of inmates have latent TB infection (LTBI) [1]. In 2012, there were more than 9900 active TB cases reported in the United States, and 4% of cases occurred among incarcerated persons [2]. Because many TB outbreaks have been reported in correctional facilities [3, 4], treatment of LTBI in correctional settings is a priority.

Implementing a 9-month isoniazid (9H) regimen for LTBI in jails is challenging due to short durations of incarceration. Historically, 9H treatment completion rates in correctional settings have been low, between 31% and 37% [5, 6]. In addition, patient education and monetary incentives to increase postincarceration LTBI treatment completion have been ineffective [7].
Consensus statement on the use of Cepheid Xpert MTB/RIF® assay in making decisions to discontinue airborne infection isolation in healthcare settings.

A national workgroup has issued recommendations on how to use GeneXpert in decision-making on airborne infection isolation in healthcare settings. The recommendations are provided in the consensus statement (click here to access statement). This workgroup features several members from the Heartland Region: Phil Griffin, BBA, CPM, TB Controller for the Kansas Department of Health and Environment; Ken C. Jost, Jr., M(ASCP), TB Applications Scientist for the Texas Department of State Health Services, Association of Public Health Laboratories; and Quratulain Kizilbash, MD, MPH, Staff Physician for the Texas Center for Infectious Disease, Assistant Professor in Internal Medicine for UT Health Northeast, Tyler, Adjunct Professor in Infectious Diseases at UTHSCSA and Medical Consultant for Heartland.

Purpose

The purpose of this consensus statement is to provide guidance for clinicians, nurses, and hospital infection preventionists on the use of the FDA-approved Cepheid Xpert MTB/RIF® (Xpert) Nucleic Acid Amplification (NAA) test when making decisions to discontinue airborne infection isolation (A.I.I.) for persons with suspected infectious pulmonary tuberculosis (TB).

- It is important to note that the process described herein is not to be used alone to rule out TB; Xpert negative or acid-fast bacilli (AFB) smear-negative sputum may contain viable organisms and represent infectious tuberculosis.
- Furthermore, NAA testing should not be used to monitor response to treatment or to release a newly confirmed TB patient from A.I.I.

Note: FDA-approved labeling (and this document) applies for this instrument and this purpose only.

Background

In February 2015, the U.S. Food & Drug Administration (FDA) approved a change in the package insert for the Xpert to reflect expanded claims related to A.I.I. According to this change, negative results using this assay on “either one or two sputum specimens” can be used as an alternative to examination of serial acid-fast stained sputum smears to aid in the decision to discontinue A.I.I. for patients with suspected pulmonary TB. This label change and its subsequent announcement, however, lack detail. Concerns that various interpretations of this change will result in premature discharge from A.I.I. prompted the creation of this document.

This statement does not represent an endorsement of Xpert or of any other specific product; it provides consensus guidance from a group of experts in tuberculosis convened by the National TB Controllers Association (NTCA) and the Association of Public Health Laboratories (APHL) for the use of Xpert in making decisions to discontinue A.I.I. for suspected infectious TB as now indicated by its revised FDA-approved labeling. Members of the work group represent the TB Laboratory (APHL and private/commercial laboratories), TB Controllers (NTCA and its TB nursing, clinician, and epidemiology sections) and Hospital Infection Preventionists and Respiratory Therapy experts. Work group members are listed in Appendix IV at the end of the document.

Traditionally, algorithms for removing patients from A.I.I. have been based on sputum AFB smear results. The FDA approval for this label change was based on reported improved sensitivity and specificity of Xpert versus sputum AFB smear in early detection of culture-confirmed pulmonary TB in adults. The results of a study that has since been published demonstrated that negative Xpert results from 1 or 2 sputum specimens are highly predictive of the results of 2 or 3 AFB sputum smears being negative. When compared with the results of 2 or 3 serial sputum AFB smears, one Xpert result detected 97% of patients who were AFB smear-positive and culture confirmed with M. tuberculosis disease. Two serial Xpert tests detected 100% of AFB smear-positive, culture-positive patients.2,3,4
Background (continued)

Other published studies using the Xpert and other NAA systems also suggest these assays may be useful in predicting infectiousness:

- In 2008, 3 serially obtained sputum specimens from 493 patients with suspected TB admitted to A.I.I. (74% HIV+) were tested using the Amplified M. tuberculosis Direct test by Hologic Gen-Probe (MTD) and a laboratory-developed (“in house”) polymerase chain reaction (PCR) platform. Campos et al5 reported that the 1st sputum specimen PCR test detected 100% of all AFB smear positive patients, even if the 1st specimen was AFB smear negative. The MTD and PCR assays also were more sensitive than the AFB smear in culture-positive patients (87% versus 76%).

- In a prospective study of 139 patients admitted to rule out TB (30% HIV+),6 serial sputum AFB smear microscopy and a single concentrated sputum Xpert had identical sensitivity (89%) and similar specificity (99%) referenced to culture positivity.

- In another study of 207 admissions to A.I.I. (23% HIV+),7 Xpert detected 5 of 6 culture-confirmed cases on the initial submitted specimen; the sixth culture-positive case was detected on a second specimen. Sensitivity again was similar for Xpert and AFB smear: 93%.

Finally, although not focused on the assay’s ability to predict infectiousness, another study has suggested that the use of NAA could provide cost savings by reducing patient time in A.I.I. and length of hospital stay.8

For the rest of the statement, please follow the link below.

---

We can wipe out tuberculosis

Ed Zuroweste, MD

Ed Zuroweste, who consulted for the World Health Organization during the Ebola outbreak and runs tuberculosis clinics in Pennsylvania, is chief medical officer of Migrant Clinicians Network, based in Austin. He can be contacted at ezuroweste@migrantclinician.org.


Earlier this month, California quietly ended Ebola monitoring for travelers arriving from West Africa after Liberia declared itself Ebola-free, following similar declarations in Sierra Leone and Guinea. Though Sierra Leone announced last week that it had identified one new case, the global community has declared an end to the West African Ebola outbreak.

Ebola has been snuffed out because of a swift and well-funded worldwide public health response. Like California, many states and nations imposed strong monitoring. Others fought the disease at its source; clinicians from many countries, like me, went to Africa to help build infrastructure and train clinicians. While the 11,315 reported deaths have shattered communities, the response prevented a much larger crisis.

Imagine if we repeated this level of worldwide action with tuberculosis.
HNTC Highlights

CDC U.S. TB Elimination Champions from the Heartland Region; for more information please follow this link:
http://www.cdc.gov/tb/worldtbday/supportingtbcontrol.htm

Diana Fortune, RN, BSN, New Mexico Department of Health won the Carol Pozsik TB Nursing Award, which honors exemplary care, service, dedication, or leadership in the field of public health TB nursing. She received the award during the 2016 NTCA and IUATLD-NAR conference in Denver, Colorado.

Diana Fortune, RN, BSN

Resources

TB Education and Training Network
http://www.cdc.gov/tb/education/Tbetrn/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 you would like published, please send them to Alysa.Wayne@uthct.edu****

****Back to Top****
## 2016 HNTC Training Calendar

<table>
<thead>
<tr>
<th>Date(s)</th>
<th>Course</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>August 10</td>
<td>Train the Trainer for TB Programs</td>
<td>San Antonio, Texas</td>
</tr>
<tr>
<td>September 7-9</td>
<td>TB Nurse Case Management</td>
<td>San Antonio, Texas</td>
</tr>
<tr>
<td>October 14</td>
<td>Bi-State Infectious Disease Conference</td>
<td>St. Louis, Missouri</td>
</tr>
<tr>
<td>October 11-14</td>
<td>TB Intensive</td>
<td>San Antonio, Texas</td>
</tr>
<tr>
<td>November 14</td>
<td>Effect of Co-morbidities on TB Nurse Case</td>
<td>Webinar</td>
</tr>
<tr>
<td></td>
<td>Management Part 4: Diabetes</td>
<td></td>
</tr>
<tr>
<td>November 15-17</td>
<td>Four Corners Conference</td>
<td>Flagstaff, Arizona</td>
</tr>
<tr>
<td>December 1</td>
<td>Effect of Co-morbidities on TB Nurse Case</td>
<td>Webinar</td>
</tr>
<tr>
<td></td>
<td>Management Part 5: HIV/AIDS</td>
<td></td>
</tr>
<tr>
<td>Enduring</td>
<td>The Impact of Substance Abuse &amp; Mental Illness in Developing HIV&amp;TB</td>
<td>E-learning</td>
</tr>
</tbody>
</table>

**The calendar will be updated in every newsletter as well as on the website to show trainings that have been confirmed**

Please visit our website: [http://www.heartlandntbc.org/training/calendar.php](http://www.heartlandntbc.org/training/calendar.php) to find detailed information concerning registration and participation.

Proposed topics are subject to change; check website for the latest updates.

Products from the Heartland National TB Center are available for download at [http://www.heartlandntbc.org/products/](http://www.heartlandntbc.org/products/)

---

### TBit: Recently Published

**Drug-Resistant Tuberculosis: A Survival Guide for Clinicians**
Edited by Lisa Chen, MD and Gisela F. Schecter, MD, MPH

**The Adverse Reactions chapter was co-authored by Drs. Barbara Seaworth and David Griffith.**

Curry International Tuberculosis Center/UCSF is pleased to announce the fully revised and updated 3rd edition of one of its most popular publications. Co-produced with the California Department of Public Health, Tuberculosis Control Branch (CDPH), the *Guide* is designed for any clinician who participates in the management of patients with drug-resistant TB.

The 10 chapters and 4 appendices cover major topics pertaining to epidemiology, diagnosis, laboratory issues, treatment, medications, pediatrics, co-morbidities and special situations, monitoring and case management, adverse reactions, and treatment of contacts. A distinguished group of 16 authors representing experts from public health and academia contributed to the writing, and a national panel of 34 peer reviewers provided commentary.

*Online version of Drug-Resistant TB: A Survival Guide for Clinicians, 3rd edition; number of print copies are available to order from the Curry Center. Curry International Tuberculosis Center [website](http://www.heartlandntbc.org/products/)*
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.state.tx.us

Medical Consultant
Lisa Y. Armitige, MD, PhD
(210) 531-4548
lisa.armitige@dshs.state.tx.us

Nurse Consultant/Educator
Catalina Navarro, RN, BSN
(210) 531-4569
catalina.navarro@uthct.edu

Nurse Consultant/Educator
Debbie Onofre, RN, BSN
(210) 531-4539
debbie.onofre@uthct.edu

Assistant Medical Director
David Griffith, MD
(903) 877-7267
david.griffith@uthct.edu

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

Training Specialist II
Josie Gonzalez, BS, CHW
(210) 531-4545
Josefa.gonzalez@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.