# The DOT:

## Discussions on Tuberculosis

The Kentucky Tuberculosis Prevention and Control Program's Newsletter



#### Summer Edition | June 2022

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## Find the Super "T" Bug

The Super "T" Bug is the official mascot of the Kentucky TB Program, and he's hidden within this newsletter! (*Not including the image below, or on the "Contact Us" page [p.12]*). Once you've found him, email Charlie Rhea (<a href="mailto:charles.rhea@ky.gov">charles.rhea@ky.gov</a>)

with the Super "T" Bug's location. If you have the correct answer, you will be entered into a drawing for a prize. One winner per newsletter will be selected and awarded the prize.



Congratuations to **Susan Delph** from the Louisville-Metro Dept. for Public Health and Wellness for finding the Super "T" Bug and being drawn to win a gift card from the Winter 2021 edition of *The DOT*!

## Controller's Message

Greetings all,

As the KY TB Program begins to develop our required "2021

Annual Performance Report" for CDC, we devote much time for program evaluation to determine the need for changes to our program initiatives,



guidelines, data, budgets, training...etc. We also reflect on the programmatic questions and feedback we have received from you, our readers, throughout the year. The ideas for featured articles in our newsletters are a direct outcome from these evaluation efforts and a desire to assist our TB stakeholders in providing quality services. We hope *you* find our newsletter just as valuable to assist you with conducting your own quality improvement initiatives for TB policies and procedures.

Each year we celebrate World TB Day on March 24<sup>th</sup>. In this issue, we highlight photos from a new pilot program initiative that we hope to share statewide in 2023. Enjoy!

Emily Anderson, RN, BSN
Program Manager/TB Controller
EmilyA.Anderson@ky.gov



## **Nurse Consultant Column**

#### Discussion on Healthcare Workers who Test Positive for TB

As we continue to navigate through the COVID-19 pandemic, many of our hospitals and health care systems are beginning to return to normal operations. With this, the KY Tuberculosis Program is beginning to receive more questions regarding initial and annual tuberculosis (TB) Testing for healthcare workers. We want to provide an overview of what you should do at the time a positive test is received, and the annual screening process afterward.

At the time of initial emplyment testing or annual testing, if a healthcare worker tests positive for TB upon hire, or have documented conversion from a negative to a positive test by tuberculin skin test (TST) or blood assay for *M. tuberculosis* (BAMT), they should undergo the following steps for evaluation:

- Chest x-ray should be performed to determine if there is evidence of active TB disease.
- Clinical evaluation by a licensed physician, advanced practice registered nurse, or physician assistant, which should include an evaluation with the TB Risk Assessment.
- HIV testing, unless the healthcare worker opts out.

If healthcare worker is found to have negative (or normal) chest x-ray, and a negative TB Risk Assessment, the health care worker should be educated on their diagnosis and offered treatment for LTBI, unless contraindicated. [See <u>902 KAR 20:205</u>, section 7 for more information on healthcare worker testing and follow-up evaluation].

However, If chest x-ray is found to be positive (or abnormal), and/or the healthcare worker is found to have a positive TB Risk Assessment (i.e. sign/symptoms consistent with active TB, high risk for developing active TB, etc.), they should be treated as a TB "suspect", remain off work in home isolation, and reported to the local health department (LHD) where they reside within one (1) business day to coordinate further evaluation. [See <u>902 KAR 20:205</u>, section 8 for more information on healthcare workers suspected to have active TB disease; section 10 for details on LHD reporting].

**Annual screening**—healthcare workers with a documented history of a positive TB test (by TST or BAMT) must be evaluated each year by:

• TB Risk Assessment on or before the same month as the anniversary date of their last positive test and or risk assessment.

<u>Note</u>: Healthcare workers with a documented history of a positive TB test <u>should not</u> be subject to further annual testing or chest x-rays.

If the TB Risk Assessment is negative and no reported signs and symptoms consistent with TB, the healthcare worker will be considered negative. However, if they are found to have a positive TB Risk Assessment and/or reports signs and symptoms, then additional medical evaluation, including chest x-ray, will be requried. Additionally, this worker should be reported to the LHD where they reside as a TB "suspect" for further evaluation. [See 902 KAR 20:205, section 8 for more information on healthcare workers suspected to have active TB disease; section 10 for details on LHD reporting].

Additional information can be found in 902 KAR 20:205—Tuberculosis (TB) testing for health care workers



#### Remember!

When testing *anyone* for tuberculosis, a risk assessment should be conducted in addition to the test itself.



## **Nurse Consultant Column**

#### Ask the Nurse Consultant: Should I Follow-up my Positive TST with a BAMT?

**Question from the Field:** "We test all of our healthcare workers annually for tuberculosis (TB) with a tuberculin skin test (TST). Our policy is, If their TST is read/interpreted as positive, we then have that employee tested again for TB, but this time with an interferon gamma release assay (BAMT) test to confirm the positive result. Is this correct?"

Answer from the Nurse Consultant: No, it is <u>not</u> recommended that BAMT testing be used to confirm a positive TST result. In Kentucky, healthcare facilities are able to choose which method of TB testing they would like to use for their staff—both the BAMT and TST tests are acceptable and each have their advantages. However, it is not recommended that the BAMTs be used in addition to a TST as a confirmatory test.



If your facility is using TST testing, and an employee develops induration that is read/interpreted as a positive result, the result should be considered positive. Having employees sent for a confirmatory BAMT is not recommended as it is an unnecessary use of time and resources. Further, additional testing can lead to discordante results between the two tests, which would not eliminate the original positive result identified through the TST measurement.

The only time follow-up testing should be considered after a TST placement and reading/interpretation is if there is an issue with the test, placement of the test, or reading of the result.

To conclude, healthcare facilities have the ability to decide which TB test they would like to use for their employee annual testing—TST or BAMT. However, if your facility chooses to test your healthcare workers by TST, it is not recommended that those employees with positive results then be subjected to a follow-up BAMT test for confirmation. If a positive TST result is read/interpreted as positive, that employee's result should be considered positive, and then should proceed with additional clinical evaluation steps.



A TB Risk Assessment with symptoms screen should always accompany TB testing (TST or BAMT). The identified risk of the individual will determine positivity based upon the measurement of induration.

#### Sources:

https://www.questdiagnostics.com/healthcare-professionals/clinical-education-center/faq/faq204

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Michelle Stephens, RN
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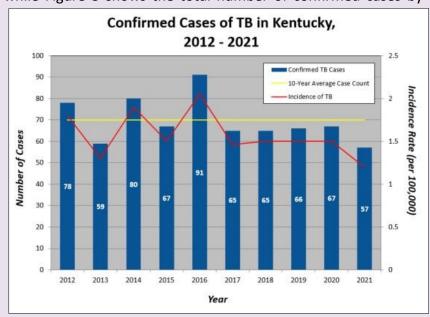
# **Epidemiology Editorial**

#### A Preview of Kentucky's 2021 Preliminary Tuberculosis (TB) Case Data

2021 was another unprecedented year for Kentucky's public health system as we navigated through the second year of the COVID-19 pandemic. For the Kentucky TB Program, we have attempted to pick-up the educational and outreach efforts we tabled in 2020. However, stretched staffing capacities throughout the state have continued to create challenges.

In 2021, Kentucky reported 57 confirmed cases of TB, an incidence rate is 1.2 cases per 100,000. This case count and incidence rate is below range expected when looking at data from the most recent 10-year period (2012-2021). During this time period, the average case count is 70 per year, with an average incidence rate of 1.5 per 100,000 (Figure 1). At 57 confirmed cases, not only is this lower than expected based on recent trends, but this is also an all-time state low for confirmed cases of TB. The previous low was reported in 2013 at 59 confirmed cases for 1.3 cases per 100,000.

Despite an all-time low number of case reported in 2021, the geographic distribution of cases followed the same pattern seen previously. Figure 2 shows the number of confirmed cases of TB by county, while Figure 3 shows the total number of confirmed cases by count over the last 5-year (2017-2021). As



expected, cases were asymmetrically distributed in 2021 across the state, and concentrationed in counties with large cities and more diverse populations. These areas include Jefferson, Fayette, Warren, Hardin, Daviess, Kenton, Boone, and counties. Campbell This asymmetric distribution of TB cases is a trend that is seen throughout most of the United States, even at a national level as states that have larger populations, or sprawling cities with diverse populations will have a higher burden of confirmed TB cases.

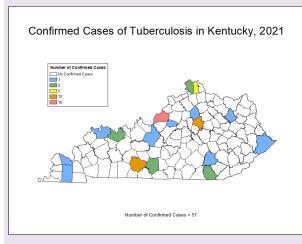
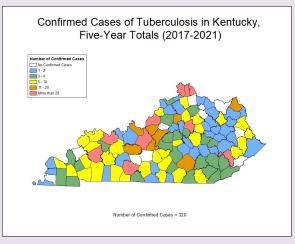


Figure 2. (Left) This map shows the number of confirmed cases of TB in each Kentucky county.

Figure 3. (Right) This map shows the number of confirmed and "suspected" cases of TB in each Kentucky county.



# **Epidemiology Editorial**

One area of interest this year was looking at how the COVID-19 pandemic may have impacted TB data. In the Centers for Disease Control and Prevention's Tuberculosis - United States, 2021 Morbidity and Mortality Weekly Report, it was reported that in 2021, 7,860 cases of TB were reported by the 50 United States and the District of Columbia. This comes after a stark decline in 2020 where 7,173 cases were reported. Although 2021 saw an increase in cases, it is still 12.6% lower than what was reported in 2019 at

8,900 cases.

Despite significant fluctuations were seen nationally, individual states observed unique patterns. In Kentucky, for example, we did not see a decline in cases from 2020 when we reported 67 cases. However, in 2021 we reported an all-time low for our state at 57 cases.

The reason for declining cases is not clear yet, but some

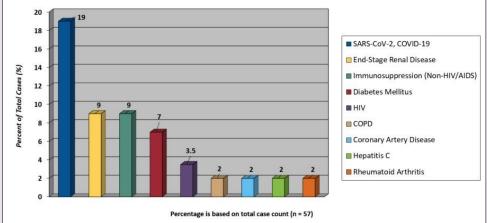


Figure 2. (Above) SARS-CoV-2 (COVID-19) coninfection was reported in 11 cases (19%) of TB cases in 2021 the hightest comorbidity reported.

hypotheses have been proposed. First, a true reduction in cases could be possible due to pandemic mitigation strategies - social distancing, mask wearing, and staying at home could have helped interrupt TB transmission. However, a second hypothesis suggests delayed and even misdiagnosis of TB, especially during the height of the COVID-19 pandemic.

Unfortunately, the COVID-19 pandemic's impact on TB will not fully be understood for several more years. Ongoing TB surveillance efforts will be even more important moving forward; nonetheless, we want to make every effort possible to avoid missed or delayed diagnoses. As a result, we encourage providers throughout Kentucky to continue to "think TB" and consider it in a patient's differential diagnosis if they present with prolonged cough (greater than two weeks), or TB symptoms such as unintentional weight loss or hemoptysis, especially among persons with epidemiological risk factors (i.e. birth/residence in a country with high TB incidence, history of living in a congregate settings are/or homeless shelters, or immunosuppression.)

#### Sources:

- Per 2009 CSTE case definition Tuberculosis (TB)—https://wwwn.cdc.gov/nndss/conditions/tuberculosis/case-definition/2009/
- Filandro, T (March 25, 2022) Tuberculosis United State, 2021 https://www.cdc.gov/mmwr/volumes/71/wr/mm7112a1.htm?s cid=mm7112a1 w

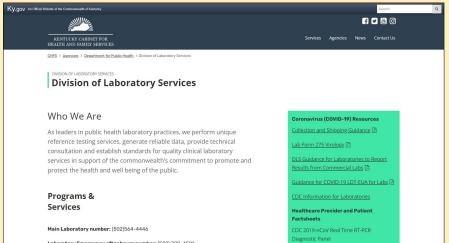
Charles H. Rhea, MPH TB Epidemiologist II Charles.Rhea@ky.gov



# **The Laboratory Report**

#### **Division of Laboratory Services Website Tour**

The Division of Laboratory Services (DLS) has an excellent <u>website</u> with great resources for our local health departments (LHD) tuberculosis (TB) programs and community medical facilties. For this newsletter, we wanted to highlight different areas of their webpage which might be helpful for our LHD and community providers and nurse working in TB.



To the left is a screen shot of the main landing page for the DLS website, you will find program and services and contact information for each area.

Scrolling down slightly, you will see information on the <u>Outreach System</u>. This system delivers electronic lab reports from testing done at DLS. This system reduces turnaround time, decreases risks for clerical errors, and conveniently alllows for submission of

test orders and retrieval of results. Note- urgent cases/results for TB , such as positive GeneXpert and AFB

cultures identified as *M. tubeculosis* are still be reported via phone and/or fax. However, access to the Outreach System is vital, espeically for LHD staff working within TB. In order to gain access, follow the instructions detailed under the "Sign up for Outreach"

section of the webpage.

Also important for LHD TB programs is the ability to order sputum collection kits from the DLS website.

You will see a link titled

LIS - Outreach

Access the Outreach System

If you have any questions or concerns please contact the Customer Call Center at (502) 564-4446, ext. 1 or via email.

Sign up for Outreach

Outreach electronically delivers lab requests and reports via the Internet to more than 1,500 registered and certified customers of the Division of Laboratory Service in the KY Department for Public Health. This service reduces turnaround time, decreases risks for clerical errors and conveniently allows submission of test orders and retrieval of results. Urgent cases will continue to be handled by telephone and fax. To maximize your practice, become a user and benefit from the Outreach System.

To register, complete and return to the lab a HIPAA form to the address on the User Request Form.

Directions to KY Public Health Lab

Requisition Form for Ordering Lab Kits w

Requestion Form for Ordering Lab Kits. It will open the file seen pictured (left). On this form, you will see an option to select the number of "TB Sputum Kits" you would like to order. This form is fillable on the computer and can be submitted to place an order either by email or fax. It is important LHD to have these kits on hand before a confirmed case of active TB, or a TB "suspect" is reported in your jurisdication. Case management details and instructions on how and when to collect sputum are details in the "Tuberculosis" section of the Kentucky Clinical Service Guide (CSG).

# **The Laboratory Report**

#### **Collection, Packaging, and Submission of Sputums**

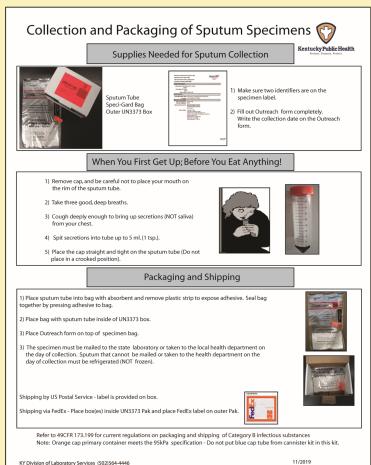
Finally, we would like to remind everyone on the best practices on how to collect and submit sputum specimens to the Kentucky Division of Laboratory Servives (DLS). For a quick reference guide, see the Collection and Packaging of Sputum Specimens flyer below (or <u>click here</u> to view/download a version of this flyer from the DLS website). This flyer contains a detailed step-by-step process of sputum collection, packaging, test ordering within the Outreach system, and shipping to DLS.

As a reminder, if you have any questions about submission of specimens through the FedEx account, please contact one of our DLS staff members (below) and they will be able to provide you with additional information.

Finally, DLS would like to remind everyone of a few important tips when it comes to proper submission of sputum specimens:

- Please ensure that there are two (2) patient identifiers (i.e. name and date of birth) on all sputum collection tubes.
- Ensure that sputum collection tube caps are
   on straight and tight to prevent leakage
   within the package. This could make the
   specimen unsalvageable once it arrives at DLS,
   delaying diagnostic testing for your patient.
- Be sure to ship all specimens as soon as possible, do not wait and batch ship multiple specimens together.

As always, if there are any questions about sputum collection, packaging, shipping, accessing the Outreach system, etc., do not hesitate to reach out to the TB lab DLS staff below.



If you have any questions for the TB lab, please contact:

Katelyn Cox, Laboratory Scientist II (502) 782-7205 | Katelyn.Cox@ky.gov

Rhonda Lucas, Bacteriology Supervisor

(502) 782-7731 | Rhonda.Lucas@ky.gov

Rachel Zinner, *Microbiology Branch Manager* (502) 782-7754 | Rachel.Zinner@ky.gov

# World TB Day 2022

Each year, March 24th is recognized as World TB Day in commemoration of the date in 1882 when Dr. Robert Koch announced his discovery of Mycobacterium tuberculosis, the bacillus that causes tuberculosis (TB).

Below is a summary of how our program observed World TB Day and promoted TB awareness.



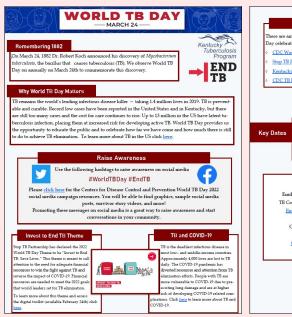
#### **Gubernatorial Proclamation**

Governor Andy Beshear proclaimed March to be Tuberculosis Awareness Month.

Historically, we have received this proclamation annually; however, for two years, during the height of the COVID-19 Pandemic, the Kentucky Tuberculosis Program did not seek this proclamation from the Governor in an effort to maintain focus on pandemic testing and reporting. This year, we felt it was appropriate to once again seek this out. Our program was so excited to receive the support of the Governor once again and we hope you share in our excitement.

## **World TB Day Digital Flyer**

We began developing a World TB Day flyer last year — when TB awareness and initiatives could only be done virtually. This informational flyer provides an overview of the importance of World TB Day and includes important educational and promotional resources. The flyer was submitted statewide to our public health and healthcare partners.

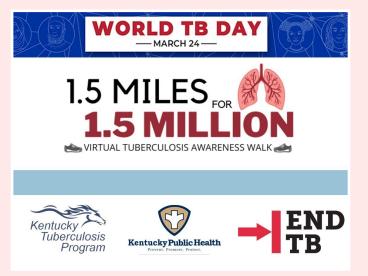




<u>Click here</u> to access TB Awareness Resources from the **Centers for Disease Control and Prevention**. Although World TB Day has passed, use of educational and promotional resources is encouraged through-out the year.

# World TB Day 2022

#### 1.5 Miles for 1.5 Million — Virtual TB Awareness Walk



We piloted a new and promising TB Awareness Initiative — a virtual TB Awareness Walk. A virtual walk allows for groups and individuals to walk any where, any time, at any place. The short distance, 1.5 miles, allows almost any one of any fitness level to participate while honoring those 1.5 million worldwide that lost their lives to TB in 2021. Wearing the promotional walking bib allows the community to know that participants were walking for a cause and prompted productive conversation. Special thanks to those who participated in the piloting of this initiative! We anticipate roll out for statewide participation for World TB Day 2023!

## **Featuring YOU!**















Special thanks to Lake Cumberland District Health Dept. for observing World TB Day and sharing your celebrations with us!

Thanks to all who helped us pilot 1.5 Miles for 1.5 Million! We're looking forward to next year!



State Veterinarian

Dr. Giesbrecht and Luna



State TB Program



Louisville TB Clinic Staff

# **Southeastern National Tuberculosis Center**

As many of our local health departments (LHD) and community providers are beginning to resume more normal activities, we want to take a moment to highlight the Southeastern National Tuberculosis Center (SNTC). <u>SNTC is one of four TB Centers of Excellence</u> in the U.S., and they serve the state of Kentucky.

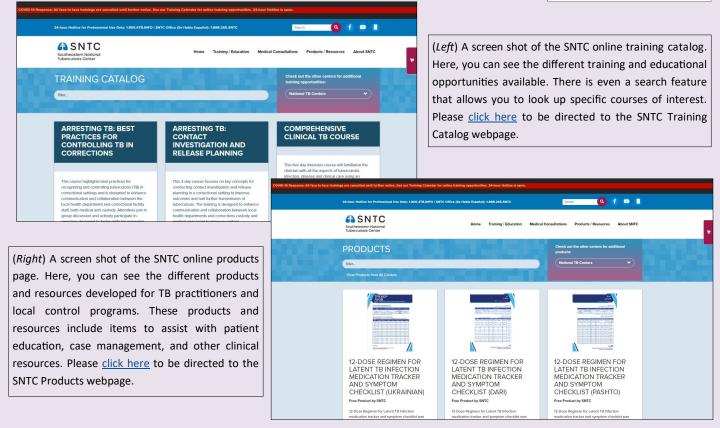
SNTC supports the education and training mission of TB programs throughout their region. They host a variety of self-paced and in-person virtual courses on TB. Additionally, they host webinar series to discuss current topics in TB, such as new treatment regimens, case discussions, and more. The Kentucky TB Program forwards all upcoming training and webinar opportunties to our stakeholders via listservs, but additional information on these



training and educational opportunites can be found here.

Further, SNTC also provides a variety of TB resources and products that help educate patients on TB and assist LHDs and community providers, such as quick-reference fact sheets, cultural snapshots to support the provider-foreign-born patient relationship, and more detailed manuals and books. Many of these items are avaliable for download <a href="https://example.com/here">here</a> and come in a variety of languages.





## **Southeastern National Tuberculosis Center**

Finally, SNTC also provides free expert TB clinical consultation through physicans, nurses, and phamacists. If a consult is needed, call the toll-free hotline at 1-800-4TB-INFO (1-800-482-4636). An operator will answer your call and your request will be sent to the appropriate SNTC consultant—urgent requests will be returned same day, while non-urgent will be returned at the lastest within one business day. It is important to note that this service is intended for licensed health care professionls as well as local and state TB program staff only. SNTC does not provide direct medical care, treatment planning, or medical treatment services to individuals. Click here to learn more about SNTC's Medical Consultation Services.

The Kentucky TB Program encourages all of our LHDs and community providers to reach out to SNTC for a consultation if you have any clinical concerns or questions, or need additional guidance on a patient who is a "suspected" or confirmed case of active TB disease. Further, we recommend reaching out to SNTC for a consult as soon as possible if you have an active TB case that meets one or more of the following crietria:

- Pediatic case (<5 years of age)
- Co-infected with HIV
- Any evidence of drug resistance (i.e. GeneXpert with Rifampin resistance)

The SNTC medical consultation hotline:

# 1-800-4TB-INFO

(1-800-482-4636)

This toll-free hotline is available 24-hours a day, 7 days a week.

This is free service to TB healthcare providers in the SNTC region for clinical expertise through physician, nurse, and pharmacist consultants.







SHARE • LEARN • CURE



# **Upcoming Trainings and Events**

#### **Fall Dates Pending**

#### Kentucky TB Program's TB Orientation 101 Course - Virtual

The Kentucky TB Program presents a two-day virtual, Zoombased training course for new local health department TB Nurse Case Managers. Pre-requisites required.

Please contact the Kentucky TB Program for more information. The dates of our Fall TB 101 Course are currently pending.

#### **Rolling Cohorts**

#### **SNTC's Nurse Case Management Courss**

SNTC presents the Nurse Case Management: Working Through the Process training. This is a self-paced course where learners receive a comprehensive overview of nurse case management for the TB patient. Learners are also assigned to a personal coach, who will be available virtually or live to provide assistance and answer questions.

The fall 2022 cohort is now full. Please contact the Kentucky TB Program if you are interested in joining the next cohort.

#### Postponed to 2023

# Kentucky's Fall TB Program Update —Virtual (Previously known as Update for Physicians and Clinicians)

Plan to join the Kentucky TB Program and SNTC as they present a virtual update on TB for all health care members who provide TB services.

Our next update has been postponed to 2023.

See the following pages for additional education opportunities and resources:

•	Drugs.com—web-based resource to search for drug-drug interactions	P. 15
•	Find TB Resources	P. 14
•	Patient Fact Sheet Series—Translated TB Information	P. 14
•	A Clinician's Guide to the TB Laboratory	P. 15
•	Cultural Competency and Tuberculosis Control—Country Guides	P. 15

For education and training questions, please contact

## Michelle Stephens—TB Education and Outreach Nurse

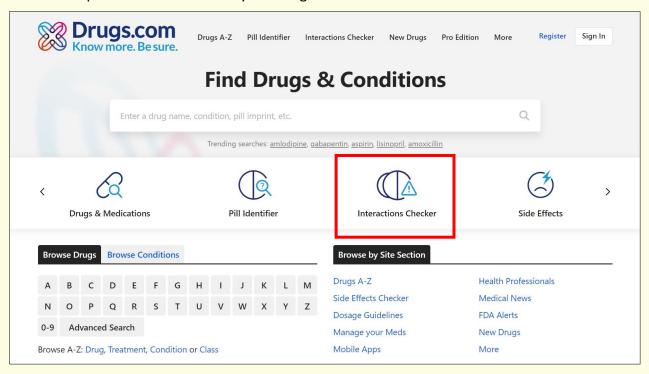
Michelle.Stephens@ky.gov or (502) 564-4276 ext. 4294

# **Resources for Providers & Nurse Case Managers**

#### **Resource for Drug-Drug Interactions**

For many of our patients with active tuberculosis (TB) disease and latent TB infection (LTBI), they are also managing comorbidities or conditions which require additional medical care and/or medication for management. As a result, it is important to know which medications your patient is currently taking and check for any drug-drug interactions that might be possible.

For this, the National TB Controllers Assocation's Nurse Coalition (NTNC) recently shared best practices from TB control programs across the country on how they check for drug-drug interactions. Many of those who responded shared that they use drugs.com interaction checker.



Above is a screen shot of the main landing page of drugs.com. Here, highlighted by the red box, you will see the interaction checker tool. Once you click on that, you will be redirected to the checker. You will start by entering a drug (in the example below, we are looking at Rifampin). From there, you will see a 'Check



A total of 531 drugs are known to interact with Rifadin (rifampin), categorized as 224 major

+ Enter a drug name

**Rifadin Interactions** 

Does Rifadin interact with my other drugs?

247 moderate, and 60 minor interactions

for Interactions' button just below the search line. By clicking on this, you will then be redirected to another webpage where you can either search for specific drugs you are interested in researching. You will also see a list of common drugs that had known interactions with the original drug you are searching for on the search engine.

We recommend that all providers and local nurse case managers check for drug-drug interactions between anti-TB or LTBI medications and other other drugs your patient may currently be taking.

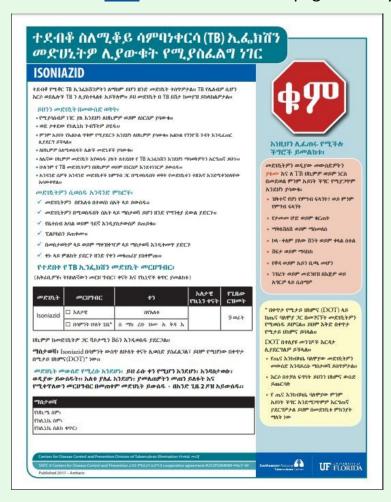
> We hope these reports will be helpful to our providers in their clinical decision making when prescribing a regimen for their TB or LTBI treatment.

> If you have any questions about active TB or LTBI treatment and/or drug-drug interactions, please reach out to the Kentucky TB (SNTC).

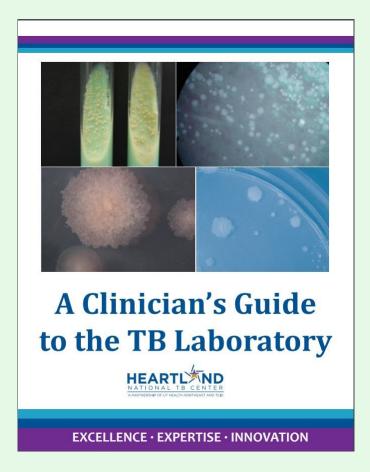
. View all 531 medications that may interact with Rifadin Program or consult with the Southeastern National TB Center



The Centers for Disease Control and Prevention has developed an online search engine called "Find TB Resources". This search engine identifies resources from across the internet (based on keyword, title, author, publisher, etc.) on any TB-related topic of interest. Click here for their online webpage where you can explore this resource.



Translated TB patient fact sheets are now available through the Southeastern National TB Center. Click <a href="here">here</a> for their online webpage where you can find this product.



Click here for the Clinician's Guide to the TB Laboratory resource on the Heartland National TB Center website. This resource provides basic information on the use of public health and clinical laboratories in the diagnosis and monitoring of patients with TB.

Cultural Competency guides are now available through the Southeastern TB Center. These guides National support the provider-foreign-born client relationship by giving countryspecific background information, epidemiological data, common misperceptions and beliefs about TB and HIV/AIDS. Click here for their online webpage where you can find these products.





## **Contact Us**

Currently, the team is working remotely due to COV1D-19 restrictions.

As a result, please copy <u>all</u> team members on all email requests to assure your need are met.

#### **Emily Anderson, RN, BSN**

TB Controller/Program Manager (502) 564-4276 ext. 4298 EmilyA.Anderson@ky.gov

#### Charles H. Rhea, MPH

Epidemiologist II (502) 564-4276 ext. 4293 charles.rhea@ky.gov

## Michelle Stephens, RN

Education and Outreach Coordinator (502) 564-4276 ext. 4294 michelle.stephens@ky.gov

## Gayle LaBreche, BS

CDC Public Health Associate (502) 564-4276 ext. 4296 gayle.labreche@ky.gov

# Get the BUGS before you give the DRUGS!