

PUBLIC HEALTH LABORATORY NEWSLETTER

TN Reportable Disease List

Laboratories play a valuable role in disease reporting and surveillance in Tennessee. Reporting requirements apply to all labs located within TN, as well as those that test residents of TN, including laboratories located within healthcare facilities.

The [List for Laboratories](#) provides a legend for both the timeline to report, as well as when a specimen or isolate submission is required or requested.

Cases must be reported regardless of whether a specimen or isolate is required or requested. Cases may be reported manually by submitting form [PH-1600](#) to TDH or County Health Department or electronically. For more information regarding how to report a laboratory result, please visit: <https://www.tn.gov/health/cedep/laboratory-reporting.html>

*Isolate submission is not a substitute for case reporting.
Cases must be reported even when a specimen is submitted.*

The [TN Reportable Disease List](#) is updated annually and is effective on January 1 each year. For 2022, the Detailed Laboratory Guidance document was updated with the following changes:

- Coronavirus disease caused by SARS CoV-2 is reportable by both healthcare providers and laboratories.
- Reporting timeline changes for the following conditions:
 - Campylobacteriosis, Cholera, Cyclosporiasis, *Escherichia coli*: Shiga-Toxin Producing, Salmonellosis: Non-Typhoid, Salmonellosis: Typhoid Fever, Shigellosis, Yersiniosis, Vibriosis (non-cholera *Vibrio* species)
 - Updated or clarified language for lab guidance for the following conditions:
 - Carbapenem-resistant *Acinetobacter*, *Candida auris*, Extended spectrum Beta Lactamase-Producing *Escherichia coli*, Meningitis, *Staphylococcus aureus*: All vancomycin non-susceptible, *Streptococcus pneumoniae* Invasive disease, Group A *Streptococcus* Invasive Disease, Vancomycin-Resistant *Enterococcus* Invasive Disease, HIV/AIDS, *Haemophilus influenzae* Invasive Disease, Meningococcal Disease (*Neisseria meningitidis*), *Chlamydia*
- Additional pathogens/organisms for the following conditions:
 - Lyme Disease, Viral Hemorrhagic Fevers
- Change to names for the following conditions:
 - Carbapenem-resistant Enterobacteriaceae, *Klebsiella*

Please refer to the [TDH Specimen Submission tool](#) for general specimen submission guidance. For details on specimen submission for specific tests, please refer to the [TDH Laboratory Directory of Services](#).

Dr. Kara Levinson selected as Director of TN Public Health Laboratory

Kara Levinson, PhD, MPH, D(ABMM) was selected to be the Director of the Tennessee Public Health Laboratory in May of 2022. She replaces Dr. Richard Steece following his retirement in April. Dr. Levinson has served as Deputy Director of the TN Public Health Laboratory since February of 2020.



Spotlight on Safety: Select Agents and Federal Reporting Requirements

Submitted by: Rolinda Bailey MT(ASCP) | Safety Officer and Responsible Official

Select agents are defined as infectious substances or toxins deemed most likely to be used in a biological terrorism threat. These agents are found in nature and may infect humans who are exposed. The Federal Select Agent Program and the Laboratory Response Network facilitate the testing and tracking of select agents and infections due to a select agent. Sentinel laboratories, who are on the frontlines, as they are involved with initial testing and patient diagnosis. If a select agent cannot be ruled out by the sentinel lab, the specimen is referred to the LRN Reference Laboratory for confirmation. In TN, the LRN Reference Laboratories are located at TN Public Health Laboratories. If confirmed as a select agent, there are specific reporting requirements for both the sentinel laboratory and the LRN Reference Laboratory. Reporting to the Select Agent Program is time-sensitive and all confirmed select agents must be destroyed within a specific time period.

- Form 4A sections A and B are completed by the LRN Reference Laboratory.
- Form 4A sections C and D are completed and submitted by the sentinel laboratory.
- Form 3 is required when an occupational exposure has or is expected and must be completed by the facility in which the exposure occurred.

The Bioterrorism Coordinator and Responsible Officials based at TN Public Health Laboratories are available to assist sentinel laboratories with guidance if a select agent is suspected, cannot be ruled out or confirmed.

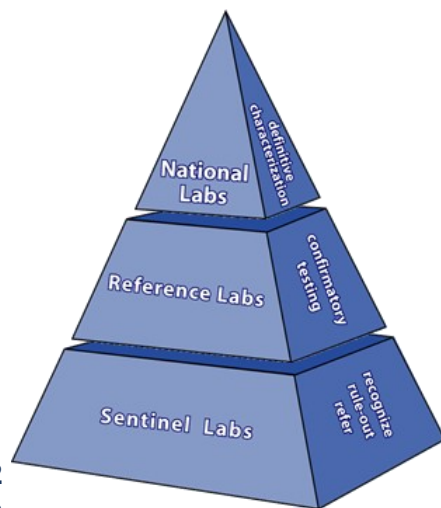
Contacts for the Nashville LRN Laboratory:

Renee Johnson, Bioterrorism Coordinator (615) 406-3792
Rolinda Bailey, Responsible Official (615) 262-6318

Contacts for the Knoxville LRN Laboratory:

Katie Jones, Bioterrorism Coordinator (865) 242-2774
Barbara Frei, Responsible Official (865) 577-3879

Extensive information and reporting forms may be found at the following website:
www.selectagents.gov.



Bio-Threat Rule Out or Refer Training Opportunity



Sentinel Laboratory Rule Out or Refer Training is offered periodically by the TN Public Health Laboratory. The next full-day Bio-Threat Preparedness Rule Out Refer classes will be offered in November. We encourage facilities consider sending members of their microbiology staff to this valuable training. For more details on this training opportunity, see page 5 or visit the lab training webpage at: <https://www.tn.gov/health/health-program-areas/lab/lab-education.html>

The Tennessee Department of Health's New Online Newborn Screening Dried Bloodspot Dashboard

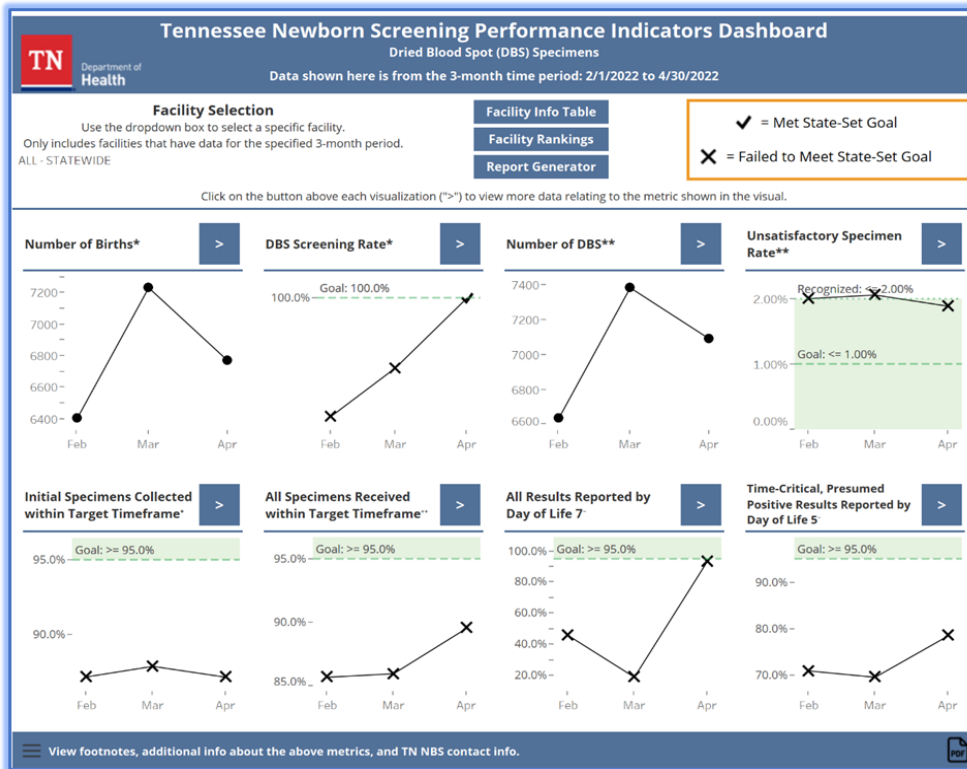
PURPOSES

- To serve as a tool for facilities to monitor their newborn screening performance.
- To promote transparency of newborn screening performance data.



FEATURES

- Snapshot of recent performance for state or individual facilities.
- Deeper dives into individual metrics.
- Adjustable date range to view trends by month, quarter or year.
- Rankings to see how individual facilities stack up to each other.
- Comparisons between facilities of similar size or area.
- Visuals can be exported to PDF for sharing or printing.



Scan Me!

<https://www.tn.gov/health/health-program-areas/newborn-screening/newborn-screening/newborn-screening-dashboard.html>

Phenylketonuria

Submitted by: Victoria Arnish | PH Laboratory Scientist 2, Newborn Screening

Phenylketonuria, or PKU, is a rare genetic disorder in which the phenylalanine hydroxylase gene is missing or altered.

Phenylalanine hydroxylase is an enzyme found in the liver that is responsible for breaking down the amino acid phenylalanine in the body. When there is an excess of phenylalanine in the blood, it can cause damage to the brain as well as other health problems. An individual with untreated PKU may exhibit musty odor in breath or urine, neurological problems, skin rashes, lighter hair, skin, or eye color, hyperactivity, delayed development, behavioral, emotional and social problems, or mental health disorders¹. Newborns in all 50 states are tested for Phenylketonuria and in many countries around the world. The prevalence of PKU in the US is about 1 in every 10,000 to 15,000 newborns².

PKU is an autosomal recessive disorder, therefore, an

individual must inherit an abnormal gene from each parent. In PKU, there can be many mutation variants in the PAH gene (over 300), resulting in varying degrees of enzyme activity. In classic PKU, the most severe form of the disease, the PAH gene is missing completely or is severely reduced³. There are also mild or moderate forms where the PAH enzyme has some function, so the phenylalanine levels in the body may not be as high.

While there is no cure for PKU, if the disorder is detected early enough, treatments including a special diet can be implemented to help prevent future cognitive problems. Phenylalanine is found in protein-rich food (for example meat, milk, fish and cheese) and the artificial sweetener, aspartame. When an individual is diagnosed with PKU, they must follow a diet that limits phenylalanine. Infants must be given a formula that is

phenylalanine-free. Studies have shown that if a child is started on a low phenylalanine diet before the age of 3 months, they do well and can have a normal IQ³. Children and adults usually work with a nutritionist to learn how to live with a low phenylalanine diet. Since individuals are eating a limited protein diet, they may need a special formula supplement that provides all other essential amino acids but does not contain phenylalanine. There are also two enzyme therapy drugs that can be used along with diet changes³. Monthly blood tests are recommended for people with PKU to help monitor their phenylalanine blood levels throughout their life⁴. The TN Public Health Laboratory frequently receives these in the Newborn Screening Laboratory to test for the levels of phenylalanine and the phenylalanine/tyrosine ratio in the blood using tandem mass spectrometer instruments.



Photo: iStock.com/isayildiz

PKU FACTS

Newborn screening began when Dr. Robert Guthrie developed a blood test to detect PKU in newborns in 1963 and the state of Tennessee started screening newborns for PKU in 1968⁵.

*Phenylalanine is a precursor to tyrosine.
Tyrosine is a precursor to melanin.*

References

1. <https://www.mayoclinic.org/diseases-conditions/phenylketonuria/symptoms-causes/syc-20376302#:~:text=Overview,needed%20to%20break%20down%20phenylalanine>
2. <https://www.babysfirsttest.org/newborn-screening/conditions/classic-phenylketonuria-pku>
3. <https://rarediseases.org/rare-diseases/phenylketonuria/>
4. <https://depts.washington.edu/pku/resources/essentials.html#:~:text=family%20planning%20option.-,How%20is%20PKU%20monitored%3F,1%20and%2010%20mg%2FDL>
5. [https://www.tn.gov/content/dam/tn/health/program-areas/newborn-screening/Tennessee Newborn Screening Program Information Toolkit.pdf](https://www.tn.gov/content/dam/tn/health/program-areas/newborn-screening/Tennessee%20Newborn%20Screening%20Program%20Information%20Toolkit.pdf)

Training News

Upcoming Workshops

Bio-Threat Preparedness: Rule Out or Refer Workshops

This free, intermediate-level workshop focuses on practical methods that clinical microbiology laboratories can use to remain alert for the agents of bioterrorism. Participants will learn about surveillance and evaluation procedures that can be integrated into the routine work of the clinical microbiology lab. Procedures for the referral of suspect cases will also be discussed. In this hands-on course, following appropriate safety precautions, participants will examine actual cultures and organisms in a laboratory setting.

Dates:

- [Thursday, November 3](#)
- [Friday, November 4](#)

Location/Times: Workshops will be held in Nashville, TN from 7:30 a.m.—4:15 p.m. (Central)

Registration: Pre-registration is required. Click on the dates above to complete the online registration form.

Continuing Education: TDH Division of Laboratory Services is approved as a provider of continuing education programs in the clinical laboratory sciences by the ASCLS P.A.C.E.[®] Program. 7.5 contact hours will be awarded to participants who successfully complete the program.

For a complete listing of upcoming TDH DLS training opportunities, please visit the TDH Laboratory Services Training and Workshops webpage:

<https://www.tn.gov/health/health-program-areas/lab/lab-education.html>

Dr. Marc Rumpler appointed to CMS Advisory Panel

Marc Rumpler, MS, PhD, DABCC, FAACC, NRCC, DLM(ASCP)^{CM} has been appointed by the Administrator of the Center for Medicare and Medicaid Services to the CMS Medicare Advisory Panel on Clinical Diagnostic Laboratory Tests. The function of the 15 -member panel is to advise the Secretary of the Department of Health and Human Services and the CMS Administrator on payment rates, coverage determinations and/or payment processes for clinical lab tests. His three-year appointment began on April 1, 2022.

Dr. Richard Steece Receives the APHL Lifetime Achievement Award

Dr. Richard Steece, former Director of the TN Public Health Laboratory, was awarded the Association of Public Health Laboratories Lifetime Achievement Award due to his significant contributions to public health. The Lifetime Achievement Award is given out annually to a recipient that has made outstanding achievements in the field of laboratory science. He was nominated by his colleagues at the TN Public Health Lab and received the award during the APHL Annual Conference held in May. Congratulations Dr. Steece!

EMPLOYEE NEWS

Welcome New Employees!

Lina AlHadi
Admin Assistant 2
Laboratory Support Services

Alese Smith
PH Laboratory Technician 1
Laboratory Support Services

Jennifer Romanowich
PH Laboratory Scientist 1
Special Microbiology

Philip Price
Admin Services Assistant 3
Administration/HR

Macharia Kirk
PH Laboratory Scientist 2
Newborn Screening

Kimberly Edwards
Procurement Officer 1
Administration

Elora Fullerton
Procurement Officer 1
Administration

Elisebeth Trelfa
PH Laboratory Technician 3
Knoxville Regional Lab

Jordan Hawley
PH Laboratory Technician 1
Newborn Screening

Alison Bowman
PH Laboratory Scientist 1
Newborn Screening

Jared Jones
PH Laboratory Technician 2
Environmental Chemistry

Promotions

Amanda Evans
PH Laboratory Scientist 3
Environmental Chemistry

Ariana Allgood
PH Laboratory Scientist 3
Enteric Microbiology

Kristin Dunaway
PH Laboratory Manager 1
Environmental Microbiology

Dr. Brandy Cartmell
PH Administrator 3
Administration

Julie Viruez
PH Laboratory Manager 2
Enteric Microbiology

Kala Priester
PH Laboratory Technician 3
Laboratory Support Services

Dr. Kara Levinson
PH Laboratory Director
Administration

Kristy Hite
PH Laboratory Technician 3
Newborn Screening

Erica Terrell
PH Laboratory Manager 1
General Bacteriology

Retirements

Dr. Richard Steece
8 years of Service
PH Laboratory Director
Administration

Barbara Gail Dewberry
22 years of Service
PH Laboratory Scientist 2
Knoxville Regional Lab

Parvin Arjmandi
30 years of Service
PH Laboratory Manager 2
Enteric Microbiology

Interested in a Public Health Lab Career?

Visit <https://www.tn.gov/health/health-program-areas/lab/lab-services-careers.html> for current employment opportunities!

The Mission of Laboratory Services is to provide quality testing services through innovation, collaboration, and education that protects and improves the health of all.



Department of Health, Authorization No. 343472,
December 2021. This public document was
promulgated at a cost of \$0.00 per copy.

TN

Department of
Health

Tennessee Department of Health
Division of Laboratory Services

630 Hart Lane | Nashville, TN, 37243

T: 615-262-6300 | F: 615-262-6393 | <https://www.tn.gov/health/health-program-areas/lab.html>