



Public Health Laboratory Newsletter

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Inside This Issue:

2021 Reportable Disease Guidance	1
Spinal Muscular Atrophy – One Year Later	1,3
Spotlight on Safety	2
Mycobacterium Susceptibility Testing Update	4
Training News	4-5
Employee News	6

2021 Reportable Disease Updates

The disease, events and conditions reportable to Tennessee Department of Health by laboratories for 2021, including laboratories in healthcare facilities, are provided in the 2021 [List of Reportable Diseases in Tennessee: For Laboratories](#). The list and detailed laboratory guidance for 2021 became effective on January 1, 2021 and are now available at <https://www.tn.gov/health/cedep/reportable-diseases.html>.

Laboratory specific changes for 2021 include the following:

- Colistin-resistant gram-negative bacteria are not explicitly reportable but are now contained under the general heading of pan-unsusceptible organisms.
- Coronavirus disease caused by SARS CoV-2 laboratory criteria have been added to the detailed laboratory guidance. These were previously maintained in stand-alone reporting documents.

The Detailed Laboratory Guidance document provides additional details regarding the reportable tests and results, specimen source, and specimen/isolate submission to the Tennessee Department of Health Laboratory. Additional details have been added to the [Detailed Laboratory Guidance](#) for 2021:

- Laboratory Tests and Results to Report to Public Health for the following pathogens:
 - Enterobacterales previously called Enterobacteriaceae family
 - Enterococcus species
 - Meningitis, Other Bacterial
 - Poliovirus—Now immediately notifiable

Spinal Muscular Atrophy – One Year Later

On July 2, 2018, Spinal Muscular Atrophy was the latest disorder added to the Recommended Uniform Screening Panel. The national recommendations are made by the Advisory Committee on Heritable Disorders in Newborns and Children. This committee works together to make recommendations for states to screen as part of their state universal newborn screening program. However, State’s Newborn Screening programs may differ. Tennessee became the 17th state to start the screening for Spinal Muscular Atrophy according to the Centers for Disease Control and Prevention

The Tennessee Department of Health Division of Laboratory Services Newborn Screening Section started validation for SMA in September 2019. Three new real-time quantitative polymerase chain reaction, also known as qPCR instruments were purchased, along with a

(Continued on page 3)

SPOTLIGHT ON SAFETY



FOMITES and the Diagnostic Laboratory

Where are fomites located? *Everywhere*

What is a fomite? *Inanimate objects that may carry and spread disease and infectious agents.*

Can I catch a fomite? *No, but you can catch a microbe that is on it.*

What are some examples of a fomite? *A phone, a stapler, a door handle, a lab cart, an elevator button.*

Fomites are objects that are not inherently biohazardous but have been exposed to microorganisms and may be capable of transmitting infection.

Think of a coworker that has been infected with a virus but isn't showing any signs or symptoms. They suddenly sneeze into their hand, and before washing their hands, they open a door. If you touch the door handle, you may have just been exposed to the virus they are carrying.

So remember.....

- Don't touch your face
- Change lab coats on a regular basis
- Change gloves on a regular basis or when you think they have become dirty
- Don't wear dirty gloves while using a clean computer or touching anything clean
- Don't sneeze into your hand
- Clean your workspace on a regular basis
- Don't wipe your nose with your hand or fingers
- Wash your hands

Be Aware of Fomites

*Submitted by Tracy Minster, MLS (ASCP)^{cm}
Assistant Safety Officer*

Laboratory Biosafety Guidance Available to All

Biosafety in Microbiology and Biomedical Laboratories, 6th edition was recently published. The BMBL is a tool for assessing and mitigating risk in laboratories. The BMBL continues to be a guide to best biosafety practices for safe work in laboratories. Although it is not a regulatory document, it is the most revered guide for laboratory safety in the United States. Please note the new addition of an appendix devoted to clinical laboratories!

The entire publication may be downloaded free of charge at:

<https://www.cdc.gov/labs/pdf/CDC-BiosafetyMicrobiologicalBiomedicalLaboratories-2020-P.pdf>

*Submitted by Rolinda Eddings, MT(ASCP)
Safety Officer*

Spinal Muscular Atrophy – One Year Later *(Continued from page 1)*

semi-automatic pipettor, as well the reagents and consumables. Training on the use of the instrumentation, as well as extensive training at the CDC in Atlanta, Georgia, was necessary. During validation, there were two infants that were presumed as SMA babies. The specimens were sent for confirmatory testing (since the State Laboratory had not concluded their validation studies) and the two specimens were confirmed. SMA is classified as a progressing neuromuscular disorder that destroys muscle-controlling nerve cells, therefore time is of the essence for medical intervention. One of the infants initially identified during validation received the 2.1 million-dollar lifesaving gene therapy called Zolgensma® (onasemnogene abeparvovec-xioi), as they were classified as having the most severe diagnosis, SMA Type 1. More about her one-in-ten-thousand story from Le Bonheur Children's Hospital listed below. The other infant received the intrathecal treatment, called Spinraza® (nusinersen), as they were classified as having SMA Type 2.

On February 1, 2020, the State of Tennessee's Newborn Screening Department in Nashville, TN, officially kicked off their qPCR testing platform for the screening of SMA for Tennessee newborns. This was an exciting challenge for everyone involved as it is essential to identify those infants affected by SMA as soon as possible. To date, a total of six patients have been identified – four confirmed SMA Type 1 and two confirmed SMA Type 2.

The goal of Newborn Screening is to identify those with the deletion of the SMN1 gene from chromosome 5 through means of genetic testing. SMA is a genetic neuromuscular disorder that affects approximately 1:10,000 persons in the United States and about 1:50 Americans is a genetic carrier. According to CureSMA.Org, in Tennessee, there are about 257 individuals living with SMA, an estimated seven babies born with SMA, and approximately 135,400 SMA carriers. SMA is a progressive disease and degeneration of the nerve cells in the spinal ventral horn is dependent on the type of SMA. There are four types of SMA with Type 1 being the most prevalent (60%) and most severe. Type 1 can be fatal early on in life, by the age of two if not diagnosed and treated. Type 2 is typically diagnosed after 6 months of age, but infants have a delay or fail to meet motor milestone markers within the first year of life and are confined to a wheelchair.

With SMA being implemented as the 71st screening test on the State of Tennessee's Newborn Screening Panel, Tennessee is the second leading state in most newborn metabolic and genetic disorders tested (behind Missouri with 76 screening tests.) The NBS Laboratory in Nashville is a state-of-the-art laboratory staffed seven days a week with skilled scientists trained across a variety of testing platforms to test these disorders in Tennessee babies. Many of these scientists have proven their dedication and passion in helping to save the lives of these babies regardless of inclement weather, terrorist attacks on our city and pandemics. The NBS staff of Tennessee is a public health asset here to screen Tennessee babies for diseases like the number one genetic disease that causes death in the newborn population: Spinal Muscular Atrophy.

*Submitted by Blanca A. Martinez, BSBIO, MLS(ASCP)^{cm}
PH Laboratory Manager I | Newborn Screening*

References:

- <https://www.hrsa.gov/sites/default/files/hrsa/advisory-committees/heritable-disorders/rusp/rusp-uniform-screening-panel.pdf>
- <https://www.lebonheur.org/publications/brain-waves/dravet-on-trial/one-in-ten-thousand>
- <https://www.babysfirsttest.org/>
- <https://babysfirsttest.org/newborn-screening/states/tennessee>
- <https://www.curesma.org/about-sma/>
- https://www.curesma.org/wp-content/uploads/2020/08/SMA-State-Fact-Sheet_Aug2020_TN_v2.pdf
- https://www.zolgensma.com/?gclid=EAlalQobChMlhMWz05yX7wIVB-TICh2peQxDEAAAYASAAEgLJu_D_BwE
- <https://www.spinraza.com/>



INTERESTED IN A CAREER AT THE PUBLIC HEALTH LABORATORY?

Visit <https://www.tn.gov/careers.html> to view available positions for
PH Laboratory Scientists, PH Laboratory Managers,
PH Laboratory Technicians and Clinical Application Coordinators!

Mycobacterium Susceptibility Testing Update

Recently, we have learned that the Hologic AccuProbe culture identification tests are on backorder as a result of a shortage in the supply chain system. This shortage is primarily impacting the identification of *Mycobacterium tuberculosis* and other nontuberculosis mycobacteria. AccuProbe is one of the primary or secondary identification methods for various *Mycobacterium* species, including *Mycobacterium tuberculosis*, from culture used by many clinical, commercial and public health laboratories in the United States. Shortage of these tests could result in increased turnaround time for the identification of *Mycobacterium tuberculosis*, some nontuberculous mycobacteria and dimorphic fungi from culture.

The Tennessee Public Health Laboratory does not perform susceptibility testing on nontuberculosis *Mycobacteria*. It is recommended that your facility continue to send those isolates to your laboratory of choice. While the state laboratory can perform identification on suspected *Mycobacteria* isolates during this time, we will not be able to honor request to forward any identified nontuberculous mycobacteria to another facility for additional sensitivity testing. As always, timely submission of suspected *Mycobacterium tuberculosis* isolates to the state laboratory for identification and susceptibility testing is highly encouraged.

Please note that this is a separate issue from the potential future discontinuation of AccuProbe products as stated by Hologic several weeks ago. With this shortage and the potential discontinuation of the product line entirely, it is recommended that laboratories investigate or bring on alternative methods for identification of mycobacterium.

Submitted by Dorothy Baynham MT(ASCP) | Manager
Special Microbiology

TRAINING NEWS

Many TDH Laboratory Services workshops will be virtual in 2021.

Announcements will be posted on the [Laboratory Training and Workshop webpage](#) as these opportunities become available!

TRAINING PARTNER RESOURCES

APHL/CDC TRAINING: BIOTHREAT RULE OUT OR REFER

CDC, in collaboration with APHL and the State Hygienic Laboratory at the University of Iowa, has developed a set of virtual knowledge exercises (VKEs) on Biothreat Rule Out or Refer. The VKEs are interactive web-based exercises designed for clinical and veterinary diagnostic laboratorians performing microbiology testing to build and enhance skills in biothreat agent recognition. VKEs do not replace proficiency testing, but serve as a supportive exercise. For more information, visit:

<https://www.cdc.gov/labtraining/training-courses/biothreat-rule-out-refer-virtual-knowledge-exercise/index.html>

CDC LABORATORY TRAINING: LABORATORY JOB AIDS

Free job aids intended to assist clinical and public health laboratory professionals with diagnostic testing, preparedness, core science, informatics, quality, safety and packing and shipping.

<https://www.cdc.gov/labtraining/jobaids.html>



Continuing Education Contact Hours for drinking water and wastewater operators may be available for participation (application pending).



Virtual Workshop Schedule:

Pre-Workshop
Meeting
April 28, 2021
12:00 PM – 2:00 PM
(CT)

Workshop Day 1
May 19, 2021
12:00 PM – 4:00 PM
(CT)

Workshop Day 2
May 21, 2021
12:00 PM – 4:00 PM
(CT)

Registration for the
WLA workshop is
FREE. Space is
limited to 30 seats!

Registration
Deadline
Extended
through
April 8, 2021!



WATER LABORATORY ALLIANCE (WLA) WORKSHOP: Water Sector Emergency Response Planning

The State of Tennessee (Department of Health, Department of Environment and Conservation, and the Tennessee Emergency Management Agency) and the U.S. Environmental Protection Agency are hosting a virtual workshop designed for the Water Sector and Laboratories to enhance their preparedness to respond to an all-hazard water contamination incident that requires analytical support.

WORKSHOP OBJECTIVE: Participating organizations will develop a roadmap that will guide the revision (or creation) of their emergency response plans that includes analytical support considerations.

ROADMAP DEVELOPMENT WILL BE ACCOMPLISHED THROUGH:

- Gathering and reviewing plans and documents in advance of the workshop.
- Learning about EPA water-security resources through participation in an interactive tabletop exercise with a water contamination incident scenario.
- Networking and learning from fellow colleagues in the Water Sector through small group breakout sessions, individual brainstorming sessions and facilitated large-group discussions.

WHO SHOULD ATTEND? Representatives of drinking water and wastewater utilities, state and local drinking water laboratories, state and local governments, and emergency managers.

REGISTER at: <https://www.eventbrite.com/e/wla-workshop-water-sector-emergency-response-planning-tickets-143203580765>

FOR MORE INFORMATION

- For additional information on this workshop, please contact Marc Rumpler at Marc.Rumpler@tn.gov.
- For additional information on the EPA Water Laboratory Alliance, please contact EPA at wla@epa.gov.

EMPLOYEE NEWS

Welcome New Employees!

DECEMBER 2020

Liam Hansen-Thiim
*PH Laboratory Tech 1
Newborn Screening*

Brenda Hurlbut
*PH Laboratory Tech 1
Newborn Screening*

Aida Trinidad
*PH Laboratory Scientist 1
Newborn Screening*

Retirements

Vicki Lambert
*PH Laboratory Manager 2
17 years of service*

Promotions

DECEMBER 2020

Jeff Smith
*PH Laboratory Scientist 2
Knoxville Regional Laboratory*

JANUARY 2021

Robin Rasnic
*PH Laboratory Manager 3
General Bacteriology/Enterics*

David Bryant
*PH Laboratory Technician 3
Media Prep*

Albert Burks
*PH Laboratory Manager 3
ARLN*

Asimwe Baggett
*PH Laboratory Manager 1
Serology*

FEBRUARY 2021

Chanice Wilkes
*PH Laboratory Scientist 2
Molecular Biology*

Katie Jones
*PH Laboratory Manager 2
Knoxville Regional Laboratory*

Sheila Speakman
*Admin Services Assistant 4
Administration*

Amanda Uhis
*PH Laboratory Scientist 3
Serology*

MARCH 2021

Jeannette Dill
*PH Laboratory Manager 2
Molecular Biology*

Brielle Davis
*PH Laboratory Scientist 2
Bacteriology*

Zach Perry
*PH Laboratory Manager 1
ARLN*

Erica Terrell
*PH Laboratory Scientist 3
Bacteriology*

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Division of Laboratory Services**

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

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



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