

Lab-Oratory

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New Additions and Kudos!

From the Desk of the Director

Over the past several years, there have been numerous scares in the United States from potential laboratory exposures to novel influenza strains, anthrax, small pox and other select agents. Laboratories across the US have launched governance and safety reforms to achieve improved safety practices and conditions. Labs have enhanced biosafety training by updating their current curricula, revamped and implemented new and enhanced procedures for prompt reporting of laboratory incidents, and established new recognition programs for employees who demonstrate significant efforts to improved lab safety. However, reports have indicated that progress has been slowed by employee ambivalence on reporting, insufficient training programs, and concern regarding the possibility of retribution if staff report accidents or safety concerns.



*Scott J. Zimmerman,
DrPH, MPH, HCLD (ABB)
Laboratory Director*

The North Carolina State Laboratory (NCSLPH) has taken steps to improve laboratory safety, not only at the State Public Health Laboratory facility, but in the laboratory community across the entire state of North Carolina. A new Biosecurity Officer position was created last year using grant-funding from the Centers for Disease Control and Prevention (CDC). This position is intended to address deficiencies that were identified in many laboratories during the 2014-15 events surrounding laboratory testing of patient specimens suspected of Ebola virus infection. These deficiencies include lack of viable biosafety/biosecurity plans, outdated training, absent biosafety/biosecurity equipment, and outdated standard operating procedures for specimen

Cont. on page 2

MISSION STATEMENT

The State Laboratory of Public Health provides certain medical and environmental laboratory services (testing, consultation and training) to public and private health provider organizations responsible for the promotion, protection and assurance of the health of North Carolina citizens.

From the Desk of the Director cont. from page 1

testing. The NCSLPH Biosecurity Officer will help to assure NCSLPH biosafety guidelines for infectious diseases are updated and readily available; perform risk assessment(s) at NCSLPH to assure the lab can safely handle and dispose of specimens suspected of highly infectious agents; assist our clinical laboratory partners to perform their own risk assessments; implement mitigation strategies based upon public health lab and clinical laboratory risk assessments; provide training, including exercises and other educational activities, or assure access to such training for sentinel clinical laboratories to maintain competent staff knowledgeable in working with infectious organisms such as biothreat and other emerging pathogens of public health concern; and work with our clinical laboratory partners to

address gaps identified in their own risk assessments.

One way we can all work together to improve biosafety in our laboratories is by increasing our transparency. Transparency includes such things as sharing our work, our goals, the lessons learned, and our requirements through improved communication. However, transparency also includes something much more difficult. While it is hard to admit mistakes, if we tear down the walls that we build to protect ourselves, we can help one another avoid the pitfalls regarding gaps in laboratory safety. We can provide one another with opportunities for learning and remind lab leaders of the importance of laboratory safety. By encouraging our employees that prompt reporting of laboratory incidents is important, that

follow-up to incidents should include root-cause analysis and corrective action plans, and that admitting to mistakes will improve the working environment that we have chosen for our careers, we can collectively improve the safety practices and conditions of the labs we work in. I encourage all of you to devote a portion of your professional time to improving laboratory safety. In an era where we are uncertain from where or when the next threat will emerge, it is important to be prepared. It is vital that we see the world as it truly is, share lessons that we have learned, and develop plans for dealing with the imminent threat of new diseases and new infectious agents. ■

Dr. Scott J. Zimmerman, Director

Biosecurity Officer Brings New Role to State Lab

The CDC's Epidemiology and Laboratory Capacity (ELC) for Infectious Diseases Cooperative Agreement provides resources to U.S. Health Departments to prevent infectious disease threats by strengthening programs in epidemiology, laboratory, and health information systems at the local, state, and territorial levels. In 2015, in response to concerns about Ebola case management in the U.S., the CDC provided additional funding through the Domestic Ebola Supplement to the ELC. The goal of this program was to enhance biosafety practices in public health and ensure that public health personnel could safely face challenges associated with new and emerging pathogens. As part of this process, public health laboratories were able to hire biosafety/biosecurity officers to serve as subject matter experts and develop standard operating procedures, managing compliance with regulatory requirements, risk assessments, and biosafety/biosecurity trainings. These biosafety professionals were charged with assessing not only biosafety at the public health laboratories but also consulting with other public health groups to develop sustainable biosafety and training programs. In October of



Kristin Long serves as the State Lab's new Biosecurity Officer

2016, I joined the North Carolina State Laboratory of Public Health in the role of Biosecurity Officer.

I came to NCSLPH from UNC Chapel Hill where I managed a BSL3 arbovirus research program for ten years as an Assistant Research Professor. In

addition, I also completed a post-doc at UNC Chapel Hill working in a SARS research program. I received a PhD in Veterinary Biomedical Science and a B.S. in Microbiology, both from Oklahoma State University. I have a strong background in virology and immunology obtained by working in BSL3 laboratories; however, I'm still learning how different clinical microbiology is from academic research. This is a new area for me, and I'm enjoying learning about it and understanding risk management when working with unknowns.

Since joining NCSLPH in October, I've been primarily focused on reviewing protocols and ensuring compliance with the select agent program regulations. However, I am really looking forward to the opportunity to get out and about and interact with laboratories, health departments, and other public health groups in the state. In the meantime, if you have questions please feel free to reach out anytime.

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Hepatitis C Virus Testing: Uncovering the Silent Epidemic

Hepatitis C virus (HCV) infection affects over 3 million Americans and is the leading cause of death associated with liver disease in the United States. Although acute infection with HCV may naturally resolve on its own, up to 85% of infected persons will go on to develop chronic illness. A significant number of chronically infected individuals were born between 1945 and 1965, the so-called “baby boomer” generation. Many are unaware of their HCV infection status until later diagnosed with liver diseases such as cirrhosis or liver cancer. For these reasons, chronic HCV infection has been referred to as a silent epidemic. It has been estimated that 110,000 people are living with chronic HCV in North Carolina alone.

Another emerging epidemic of acute HCV infection has been linked to the rising incidence of injection drug use (IDU) in the United States, particularly among young people living in rural, resource-poor areas. Cases of acute HCV infection in North Carolina have increased almost four-fold since 2009, and rates continue to rise.

HCV infection results in inflammation of the liver, which can lead to scar tissue and prevent the liver from functioning normally. If left untreated, fibrosis, cirrhosis, and liver failure can occur. Newly approved antiviral drugs that are now being used to treat HCV infection are very effective and well-tolerated by the patient, resulting in high cure rates, but only those diagnosed with the virus can be connected to treatment.

In an effort to increase screening for HCV, the North Carolina Division of Public Health and the State Laboratory of Public Health (SLPH) are working together to expand HCV testing to vulnerable populations. Testing for HCV is now available at SLPH to all Local Health Departments and other approved testing sites. The criteria for HCV testing must be specific and limited to those who are at highest risk for HCV infection. At this time, this will only include people who currently inject drugs or have a history of injection drug use, people who are HIV positive, and baby boomers (people born between 1945 and 1965). Baby boomers only need to be tested once, unless the other risk factors mentioned above are also present.

SLPH follows the CDC-endorsed HCV testing algorithm, which starts with a screening immunoassay to detect antibodies to HCV. Patient samples that test Reactive (positive) on the screening assay are then tested for HCV RNA by a nucleic acid amplification assay (NAAT). If HCV RNA is detected in the sample, the patient is considered to have an active Hepatitis C infection. Samples that test as antibody positive, but RNA negative (Not Detected) would indicate that the patient is chronically infected with HCV. Current funding levels for HCV testing at SLPH is limited, but are expected to be able to support testing until the end of calendar year 2017, or for as long as resources are sufficient and testing demands do not exceed those available resources. For this reason, we ask that



Instrumentation used in the HCV screening immunoassay

Cont. on page 5

Bioterrorism Unit Welcomes New Manager

A big WELCOME to Dr. Susan Orton, the new manager of the Bioterrorism & Emerging Pathogens (BTEP) Unit at the NC State Laboratory of Public Health! Bioterrorism & Emerging Pathogens (BTEP) Unit at the NC State Laboratory of Public Health (NCSLPH)! On any given day, you can find Dr. Orton managing BTEP Unit staff, providing technical oversight and coordinating testing activities across multiple units for BTEP testing, and ensuring regulatory compliance by Public Health Emergency Preparedness staff who perform testing according to the CDC's Laboratory Response Network (LRN) protocols. Dr. Orton is also available to assist and provide consultation to all lab units as needed for new technology assessments, including implementation and quality monitoring. Dr. Orton possesses a wealth of knowledge in multiple areas of the laboratory; laboratory/business operations, CAP/CLIA/COLA/state regulations, biosafety/BSL3 procedures, Federal Select Agent Program regulations, QA principles and practices, assay and instrument verifications & validations, strategic planning/budgeting, laboratory design, and course development and teaching.



Dr. Orton

Dr. Orton began work for the NCSLPH as a temporary employee in the summer of 2016, providing consultation services in the areas of biosafety and compliance. During this time, Dr. Orton demonstrated invaluable leadership skills while evaluating biosafety work practices and CLIA compliance within several units. Dr. Orton is a board certified Medical Laboratory Immunologist with over thirty years of professional experience in clinical and research laboratory settings. She has over eight years of experience as a CLIA-qualified

high complexity Laboratory Director and Consultant. Her laboratory expertise covers serology, molecular diagnostics, flow cytometry, clinical chemistry and mass spectrometry, while her clinical expertise is primarily in clinical immunology and infectious diseases. She is a former faculty member within the Division of Clinical Laboratory Science at UNC School of Medicine, where she taught both undergraduate and graduate students immunology, molecular diagnostics regulatory compliance, and method validation.

Dr. Orton has a way of demonstrating professionalism and calm during critical situations, as well as everyday challenges. She is actively engaged with the members of her team, provides positive feedback and encouragement to staff, and is a true asset to the management team of the State Laboratory. With her leadership, the BTEP Unit will continue to provide rapid, high quality testing to detect high consequence public health threats and emerging infectious diseases to our partners across the state of North Carolina. ■

*Submitted by Kristi Jenkins,
Lab Improvement Consultant
BTEP Unit*

Hepatitis C Virus Testing: Uncovering the Silent Epidemic cont. from page 4

only patients who are Medicaid-eligible or uninsured be sent to the SLPH for testing; samples for clients who have private insurance or Medicare should be sent to laboratories authorized by these third-party payers. All samples submitted for testing must be accompanied by the DHHS T1535 HIV/HCV Testing Report Form, which is now posted on the SLPH website. Use of this form will allow submitters to request both HIV and HCV testing on a patient with the submission of a single serum sample.

Public health efforts to reduce the transmission and prevalence of HCV infection in North Carolina start with the ability to get more people tested. Patients who are at high risk of HCV who test positive can rapidly be linked to care and receive curative treatment, thereby helping to end the epidemic of both acute and chronic Hepatitis C infection. ■

Submitted by Myra Brinson, Virology/Serology Unit Manager

Changes and Improvements to Enhance Customer Service

The N.C. State Laboratory of Public Health (NCSLPH) is undergoing major changes with its laboratory computer system, and with it will come changes to the clinical specimen requisitions and web reporting.

Submission Form Changes

The new version of the laboratory information management system (LIMS) should be available sometime this summer. Many people at the State Lab have been working with the Abbott StarLIMS developers to reconfigure the system for our needs. Our printed reports will only have slight cosmetic changes; however, you will notice a major change in the appearance of our clinical specimen forms. These submission forms have been reformatted to standardize and match the metadata labels in the data entry tables. These forms will be available on July 1, 2017, and a notice will be sent out prior to this date. The HIV, HCV, and Blood Lead forms will not have significant changes. We also plan to add a new clerical step to help prevent data entry transcription errors. We will be performing “double-blind data entry” where several critical fields will be entered by two different people, and both submissions must match.

Web Portal for Accessing Reports

Another major change for our customers will be the new web portal for viewing and printing reports. The name of this new portal will be CELR (pronounced see-lar). CELR stands for clinical and environmental laboratory reporting. This new product will meet the current IT and HIPAA standards. A message will be posted on the current result portal

instructing users to go to a CELR user application link and apply for permission to see results. Once the user has applied, Customer Services will contact them, if needed, to verify which lab reports they need access to and to set permissions. If the user does not look up any results in 90 days, his account will automatically lock out, but a system administrator can reset it. If there is no use in a further 90 days, the account will be inactivated and the user will have to reapply. This new program asks for security questions, so if the user forgets his password, it can be reset without having to call the laboratory. More information will be coming soon.

NPI and Ordering Provider Full Name

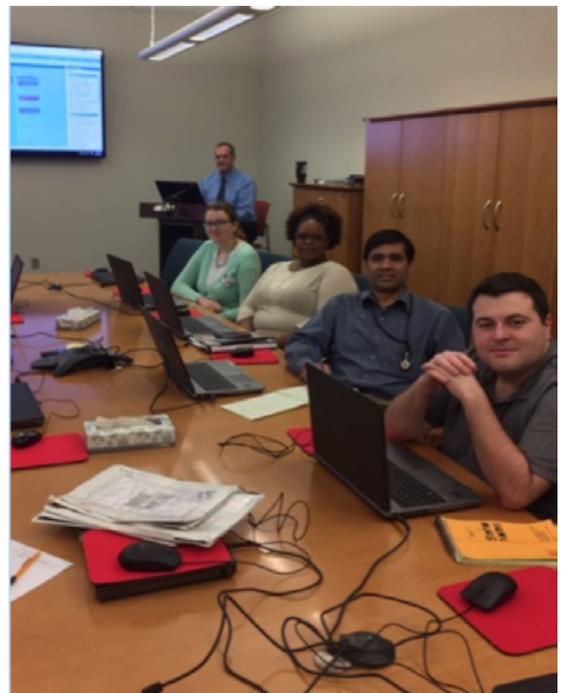
We continue to have problems getting clients to list the ordering provider’s first and last name and the provider’s National Provider Identifier (NPI) on our specimen forms. All clinical tests sent to the State Lab must be ordered by a doctor, nurse practitioner, or physician’s assistant. The name of the person ordering the test and their NPI must be listed on the specimen form. We cannot accept the facility or practice NPI. It is very helpful if you can list the first and last name of the provider so we can look up the NPI in a national database if the NPI number is missing or written incorrectly.

In addition to the regulatory requirement of listing the ordering provider, the lab cannot bill for a test without the NPI,

and our claims are denied when it is missing. As the laboratory is dependent on receipts, it is critical that we have successful processing of our submitted claims. We are currently contacting submitters to retrieve this missing information; it is a time-consuming and laborious undertaking. Please help us by submitting the NPI and full name of the ordering provider when you send us the sample for testing.

In summary, we hope the changes we are making with our LIMS system, specimen forms, and web reports will prepare us for when we are able to add electronic order entry and reporting. Stay tuned, there is a lot happening at the State Lab this summer! ■

*Submitted by Karen Sanderson,
QA Manager*



Hurricane Matthew Relief and Recovery

In October 2016 Hurricane Matthew dropped over 18 inches of rain on the eastern counties of our state. The hardest hit counties being: Cumberland, Nash, Robeson, Wayne, Johnston, Harnett, Lenoir, and Edgecombe. The rivers in the affected areas could not sustain the amount of rain that soaked the land and when they finally crested, some days later, thousands of NC families experienced massive flooding. For most of these families, Matthew was the second-time floodwaters destroyed their homes and businesses, following Hurricane Floyd in 1999. People lost most or all of their belongings. Homes, cars, and businesses all were destroyed. Our eastern families were lacking basic supplies for daily living. The North Carolina State Laboratory of Public Health, along with the Office of the Chief Medical Examiner, took up collections to donate to The Food Bank of Central and Eastern North Carolina to help alleviate some of our neighbor's burdens. DHHS officials encouraged and supported DHHS employees to use community service hours to help our citizens to the east.

When river water overtakes private wells and water treatment plants, the remaining tap water is no longer potable. Even while waters were still rising, the NCSLPH developed kits that were available to local health departments specifically for Hurricane Mathew testing, free of charge. The kits were used to test for microbial contamination of drinking water wells for the presence or absence of total coliforms and E.coli. In the first two weeks of the disaster, samples were brought to the



Assembling sample kits for Hurricane Matthew relief efforts.

lab by Emergency Management and Civil Air Patrol. During this time of emergency response, laboratory staff worked after-hours and weekends as needed to prepare kits and to receive and analyze samples. As of March 24, 2017, 294 well samples have been tested from 19 counties and the Lab is still receiving Hurricane Matthew samples. To date, we have contributed a total of 287 man hours and about 8% of State Lab staff have participated in Matthew related duties. ■

Submitted by Michele Sartin, Environmental Sciences

Newborn Screening Partnerships: Creating an Enhanced Beginning for Our Newborns

The newborn screening process, from birth to reporting results and follow-up for a potentially affected infant, is a partnership between many colleagues in government and the private sector. These participants seek to positively impact the health outcomes of our newborns. Many of these collaborations strive to improve the existing program, future enhancements, and research initiatives.

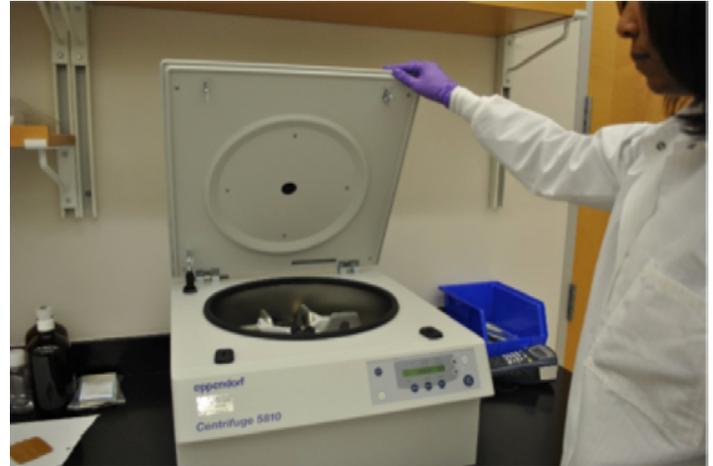
Newborn screening programs today are challenged with decreased funding and a need for increased efficiency. In addition, the grant-seeking process within state government is cumbersome and lengthy; often the NC State Laboratory of Public Health (NCSLPH) cannot meet the deadlines for grant applications. Innovative strategic plans are now combining the laboratory's capabilities with the advanced expertise of outside agencies.

The NCSLPH first sought to expand its capabilities in a partnership with Research Triangle Institute (RTI) International. As nonprofit research institute headquartered in the Research Triangle Park, RTI works with clients across the globe to offer independent research using leading-edge techniques.

In October of 2015, the North Carolina legislature passed the Baby Carlie Nugent Bill, named after a newborn with SCID, Severe Combined Immunodeficiency Disorder. Often known as "bubble boy disease," infants born with this genetic disorder have a compromised immune system which leaves them vulnerable to organisms and infections that can lead to death. This disorder was added

to the national Recommended Uniform Screening Panel (RUSP) in 2010.

In order to bring SCID screening to North Carolina, two grants were sought and awarded. The first is a cooperative agreement between NCSLPH and the federal Health Resources and Services Administration (HRSA) and is supported by the Association of Public Health Laboratories (APHL). This grant supports NBS programs with technical and financial resources to increase the number of newborns screened for SCID. The second grant, submitted by RTI, is a cooperative agreement through CDC to develop lab capability and capacity to conduct SCID screening and reporting. These grants have enabled NCSLPH to purchase instrumentation, develop and validate the SCID methodology, and conduct pilot screening for 40,000 newborns. During the pilot, only screen-positive results or unsatisfactory specimens will be reported. The SCID pilot project, while physically located



Medical Laboratory Specialist, Candace Leslie, screening for SCID

at NCSLPH, has been in development with Dr. Jennifer Taylor, Ph.D., a research scientist at RTI. At CDC, Dr. Taylor trained numerous states on SCID screening. At NCSLPH, she and the newborn screening staff are preparing to launch the pilot program on April 24. After a successful pilot program, SCID testing will be formally placed on the panel of disorders and results will appear on existing laboratory reports.

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New Leadership for Newborn Screening Unit

Please join us in welcoming Dr. Sara Beckloff to the North Carolina State Laboratory of Public Health (NCSLPH) as the Newborn Screening (NBS) Manager. Dr. Beckloff earned her Ph.D. in Chemistry from the University of Akron and was a Post-Doctoral Fellow at the Cleveland Clinic, receiving certification in Molecular Cardiology. Her resume includes a rich history in clinical analytical chemistry (conducting genomic, transcriptomic, proteomic, and metabolomic studies), strong project management experience, and demonstrated skill in CLIA regulatory compliance.

Her career in public health started at the Michigan Public Health Institute where she served as the Director for the



Dr. Sara Beckloff

Division of Chemistry and Toxicology. In this role, she had the responsibility of being the CLIA Director for the Newborn Screening Unit and the Chemical Terrorism Response Unit. Dr. Beckloff thinks that her work in public

health has been the most rewarding job she has ever had. Knowing that her actions have had such a positive impact on the health and wellbeing of others gives her the motivation to strive for excellence.

We strongly feel that her cutting-edge research, public health experience, and compassion for others will allow the NBS Unit to become a national model for the early detection of treatable conditions in newborn babies. She is very enthusiastic about continuing her public health career here at the NCSLPH and we are glad to welcome her as the newest member of the Laboratory Management Team. ■

*Submitted by Dr. Dee Pettit
NCSLPH Assistant Director*

Newborn Screening Partnerships: Creating an Enhanced Beginning for Our Newborns cont. from page 8

The logistics of the initial phases of new disorder addition have been enhanced by the ability of RTI to submit the volumes of paperwork necessary for grant applications and bring experienced researchers to NCSLPH to develop the testing method. As part of the pilot study, Dr. Taylor has trained NCSLPH newborn screening staff to perform the test and will offer expertise and consultation during the pilot for a smooth transition to statewide testing.

Using the successful partnership with RTI as a template, NCSLPH is conducting preliminary pilot studies with more disorders. As with SCID, the advance preparation to bring a new disorder on board involves determining methodology, purchasing equipment, validating methods, and training staff. Medical specialists in the disorders and follow-up genetic counselors are engaged to establish reporting protocols and abnormal result workflows. RTI and NCSLPH together are currently completing a pilot that screened over 60,000 newborns for mucopolysaccharidosis I (MPS I), a lysosomal storage disorder. Furthermore, they are preparing for a pilot that will screen 50,000 newborns for X-linked adrenoleukodystrophy (X-ALD), a perosomal storage disorder. MPS I, X-ALD, and Pompe are the most recent diseases added to the RUSP, a standardized recommended panel of disorders from the Secretary's Advisory Committee on Heritable Disorders in Newborns and Children. In January of 2017, the NC NBS Advisory Committee voted to recommend adding these disorders to the state's screening panel. The next step is legislative approval to add the disorders to the panel. At this time, the Haley Hayes Newborn Screening Bill is before the legislature, named for Haley Hayes who was born with Pompe disease.

The relationship between NCSLPH and RTI to develop and expand North Carolina's screening program has been a positive partnership, with more cooperation in the future to benefit the tiniest of patients. ■

Submitted by Ann Grush, and Drs. Jennifer Taylor, Lisa Gehlman and Sara Beckloff. Drs. Taylor and Gehlman are from RTI International and Dr. Beckloff and Ms. Grush are from the NC State Laboratory of Public Health.

Prenatal Lead Testing at NCSLPH

On July 19, 2016, The North Carolina State Laboratory of Public Health (NCSLPH) announced that it had established a Prenatal Lead Testing Program in partnership with local public health departments (LHDs) in North Carolina.

Recent National Health and Nutrition Examination Survey (NHANES) estimates suggest that almost 1% of women of childbearing age (15-44 years) have blood lead levels greater than or equal to 5 µg/dL (Centers for Disease Control and Prevention 2008, unpublished data). There is good evidence that maternal lead exposure during pregnancy can cause fetal lead exposure and can adversely affect both maternal and child health across a wide range of maternal exposure levels.(1)

Since the Centers for Disease Control and Prevention (CDC) does not recommend blood lead testing of all pregnant women in the United States, state or local public health departments should identify populations at increased risk for lead exposure and provide community specific risk factors to guide clinicians in determining the need for population-based blood lead testing. Routine blood lead testing of pregnant women is only recommended in clinical settings that serve populations with specific risk factors for lead exposure. Health care providers serving lower risk communities should consider the possibility of lead exposure in individual pregnant women by evaluating risk factors for exposure as part of a comprehensive occupational, environmental, and lifestyle health risk assessment of the pregnant woman, and perform blood lead testing if a single risk factor is identified.

The Women’s Health Branch has developed a Bilingual Lead Risk Questionnaire that can be found at this link: <http://whb.ncpublichealth.com/Forms/4116S-BilingualLeadandPregnancyRiskQ-20170210.pdf>

FOLLOW-UP TESTING IN THE PREGNANT WOMAN

Once a blood lead level ≥ 5 µg/dL has been identified, an important component in the management of lead exposed individuals is follow-up blood lead testing to assess trends. After the source of exposure has been identified and removed, it is expected that the BLL will decline. However, there is no clear formula to estimate the expected rate of decline of BLLs in exposed women or their offspring. Several factors play a role, including duration of the exposure, presence of physiological stressors affecting bone turnover rates, nutritional status, and medical and environmental interventions. Follow-up blood lead testing is indicated for pregnant women with a BLL ≥ 5 µg/dL according to the schedules in Table 5-3. At higher BLLs, a follow-up confirmatory BLL might be indicated earlier than on the schedule provided. Even a single BLL ≥ 5 µg/dL should prompt the asking of certain risk related questions as soon as possible. More information can be found at “Guidelines for the Identification and management of Lead Exposure in Pregnant and Lactating Women”:

<https://www.cdc.gov/nceh/lead/publications/leadandpregnancy2010.pdf>

Table 5-3. Frequency of Maternal Blood Lead Follow-up Testing During Pregnancy

Venous ^a Blood Lead Level (BLL; µg/dL)	Perform follow-up test(s) ^b
<5	None (no follow-up testing is indicated).
5-14	Within 1 month. Obtain a maternal BLL ^c or cord BLL at delivery.
15-24	Within 1 month and then every 2-3 months. Obtain a maternal BLL ^c or cord BLL at delivery. More-frequent testing may be indicated based on risk factor history.
25-44	Within 1-4 weeks and then every month. Obtain a maternal BLL ^c or cord BLL at delivery.
≥ 45	Within 24 hours and then at frequent intervals depending on clinical interventions and trend in BLLs. Consultation with a clinician experienced in the management of pregnant women with BLLs in this range is strongly advised. Obtain a maternal BLL or cord BLL at delivery.

^aVenous blood sample is recommended for maternal blood lead testing.

^bThe higher the BLL on the screening test, the more urgent the need for confirmatory testing.

^cIf possible, obtain a maternal BLL prior to delivery since BLLs tend to rise over the course of pregnancy.

Cont. on page 11

SPECIMEN SUBMITTAL

Please be advised that the specimen of choice for this testing is a venipuncture specimen (rather than fingerstick) collected in a lavender-top (EDTA) blood collection tube. The specimen must be accompanied by a completed Form DHHS 3707. Assure that the Prenatal box is checked appropriately and that you have included the ordering provider's name and NPI (National Provider Identifier) on the form. Form DHHS 3707 and packaging and shipping instructions can be found at the NCSLPH website:

<http://slph.ncpublichealth.com> ■

Submitted by Kate Mason, Supervisor, Hemachemistry Lab

1. Last Name	First Name	MI
2. Patient Number		
3. Date of Birth (MM/DD/YYYY)	Month	Day Year
4. Race	<input type="checkbox"/> American Indian or Alaska Native <input type="checkbox"/> Asian <input type="checkbox"/> Black/African American <input type="checkbox"/> Native Hawaiian/Other Pacific Islander <input type="checkbox"/> Unknown <input type="checkbox"/> White	
5. Ethnic Origin	<input type="checkbox"/> Hispanic Cuban <input type="checkbox"/> Hispanic Mexican American <input type="checkbox"/> Hispanic Other <input type="checkbox"/> Hispanic Puerto Rican <input type="checkbox"/> Not Hispanic/Latino <input type="checkbox"/> Unreported	
6. Gender	<input type="checkbox"/> Female <input type="checkbox"/> Male	
7. County of Residence		

N.C. Department of Health and Human Services
 Division of Public Health
 Women's and Children's Health Section
 Women's Health Branch

Bilingual Lead and Pregnancy Risk Questionnaire

Answer each question by checking the small "YES," "NO," or "UNSURE" box.
 Marque su respuesta a cada pregunta en la casilla indicada (Si, No, o No sabe).

If there is at least one "yes" box checked off, the patient should have a blood lead test. The patient's care should be managed according to CDC guidelines based on test results.

	YES	NO	UNSURE
1. Have you ever had a high blood lead level? <i>¿Ha tenido usted alguna vez niveles de plomo altos en la sangre?</i>	<input type="checkbox"/> Si	<input type="checkbox"/> No	<input type="checkbox"/> No sabe
2. Have you spent any time outside of the United States in the past 12 months? If yes: Where? <i>¿Ha estado usted fuera de los Estados Unidos en los pasados 12 meses? Si es Si ¿Dónde?</i>	<input type="checkbox"/> Si	<input type="checkbox"/> No	<input type="checkbox"/> No sabe
3. Do you use pottery, remedies, spices, foods, candies or make-up that are not sold in a regular drug store or are homemade, but are sent to you from another country? <i>¿Usa usted cerámica, remedios caseros, especias, comida, dulces o maquillaje que son hechos en casa, o que no son vendidos en una farmacia regular, o son enviados de otro país?</i>	<input type="checkbox"/> Si	<input type="checkbox"/> No	<input type="checkbox"/> No sabe
4. Sometimes pregnant women have the urge to eat nonfood items such as clay, soil, plaster, paint chips, or crushed pottery. Do you ever eat any of these things—even accidentally? <i>Algunas veces las mujeres embarazadas tienen el impulso de comer arcilla (barro), tierra, yeso, pedazos de pintura o de cerámica. ¿Ha comido usted alguna vez uno de estos, aunque sea por accidente?</i>	<input type="checkbox"/> Si	<input type="checkbox"/> No	<input type="checkbox"/> No sabe
5. a) Was your home built before 1978? b) This past year, have there been any renovations in your home that involved sanding or scraping? <i>a) ¿Fue su casa construida antes de 1978? b) ¿Ha habido una remodelación en su casa donde se raspó o lijó algo?</i>	YES a) <input type="checkbox"/> Si a) <input type="checkbox"/> b) <input type="checkbox"/>	NO a) <input type="checkbox"/> No a) <input type="checkbox"/> b) <input type="checkbox"/>	UNSURE a) <input type="checkbox"/> No sabe a) <input type="checkbox"/> b) <input type="checkbox"/>
6. Do you or others in your household have a job or a hobby that involves possible lead exposure, such as home renovation or working with stained glass, ceramics, jewelry, auto repair, battery manufacturing or firearms (projectiles, bullets or firing ranges)? <i>¿Usted o miembros de su familia tienen un trabajo o pasatiempo que implique la posible exposición a plomo, como son la renovación de casas o trabajos con vidrios de color, cerámica, joyería, reparación de vehículos o fabricación de baterías/pilas o armas de fuego (proyectiles, balas o campos de tiro)?</i>	<input type="checkbox"/> Si	<input type="checkbox"/> No	<input type="checkbox"/> No sabe

DHHS 4116S (02/2017)
 WHB Review (02/2020)

7. Based on the results of a laboratory test, have you been told there's lead in your home's water? <i>¿Con base en los resultados de una prueba de laboratorio, le han dicho que hay plomo en el agua de su casa?</i>	YES <input type="checkbox"/> Si	NO <input type="checkbox"/> No	UNSURE <input type="checkbox"/> No sabe
8. Have any of your children had an elevated blood lead level (>5 µg/dL)? <i>¿Alguno de sus hijos ha tenido un nivel alto de plomo en la sangre (>5 µg/dL)?</i>	YES <input type="checkbox"/> Si	NO <input type="checkbox"/> No	UNSURE <input type="checkbox"/> No sabe



DATE	TITLE	APPLICATION DEADLINE
June 15, 2017	Examination of a Stat Male Smear	May 15, 2017
July 12, 2017	Microscopy: Viewing & Reviewing	June 12, 2017
July 13, 2017	Examination of a Vaginal Wet Mount	June 13, 2017
July 25-27, 2017	Bacteriological Methods for the Analysis of Drinking Water	June 27, 2017
August 15-18, 2017	Process Control Chemistry	July 18, 2017
August 25, 2017	Policy/Procedure Writing	July 25, 2016
September 7, 2017	Packaging and Shipping Regulations	August 7, 2017
September 13-14, 2017	Lab Methods in the Diagnosis of Gonorrhea	August 14, 2017
September 15, 2017	Practical Approach to Lab Quality Assessment	August 15, 2017
September 21, 2017	Bioterrorism Preparedness for Clinical Laboratories	August 21, 2017

Disclaimer: These Workshops are not intended to replace formal education but to enhance skills and promote use of recommended standard techniques.

**For more information,
consult our website or contact Lab Improvement at 919-733-7186
<http://slph.ncpublichealth.com>**

New Additions and Kudos!

During recent months, the State Lab has had the privilege of welcoming many new employees. They bring unique talents and skills to all areas of the laboratory, and we are so excited they have joined us! We congratulate the following on their new positions:

Newborn Screening – Carolina Moreno, Adrienne Lockhart, Amanda Parrish, Dr. Sara Beckloff, Jennifer Garr, Jennifer Jones, Alexandra Marshall

Central Accessioning – Tamra Stump, Seham Aburahma, Christina Jenrette, Stacy Tarle

Pre-Analytical Services – Mabel Spells, Cekethia Singleton

Microbiology – Catherine Chappell

Virology/Serology – Rebecca Pelc, Kimberly Alston, Jenna Hunter, Ani Michael Raj, Laura Dow, Rowida Abdelgalel, Olusegun Awe

Lab Improvement – Aja Stanback, Heather Colvin

Administration – Kristin Long

Operations – Katina Holden, Fernando Lorente, Allen Hagwood

Bioterrorism and Emerging Pathogens – Susie Orton

Chemical Terrorism and Threat – Yiqun Emily Yu

Molecular – Nichole Page, Diane Sedano Castrejón

Retirement congratulations are extended to **Normita Webber** of the Virology/Serology Unit. Normita worked in the same department for 15 years while at NCSLPH. While she stated she will miss everyone here at the State Lab, she is excited about the next “adventure” in her life. She plans to travel, spend time with her family and her husband, who is also retired. We wish her many grand adventures in this next chapter of her life.

Kudos to Employees of the Quarter!

Tam Nguyen of the IT Support Team was selected as Employee of the Quarter for Fall 2016. Tam is recognized for his teamwork, service excellence, and significant contribution to morale and effectiveness at NCSLPH. For the past 3 years, Tam has almost single-handedly supported StarLIMS programming needs. His smiling personality, calm and pleasant attitude, and willingness to resolve problems have had a positive impact on laboratory operations and functionality of the laboratory’s information management system. Congratulations, Tam!

Harsukh Gevariya of the Newborn Screening (NBS) Unit was recognized as Employee of the Quarter for Winter 2016-2017. In his year and a half tenure with NCSLPH, Harsukh has demonstrated a competency, commitment and dedication above and beyond the expectation. He has engaged in countless initiatives that have improved operations, morale, and team building. He has a tremendously positive impact on laboratory operations and functionality of the NBS Laboratory. Harsukh has worked for the past 15 years with mass spectrometry in various disease areas. In his free time, he loves reading journal articles in his field of study, hiking and cooking. In his words, “A good chemist is almost always a good cook.” Congratulations, Harsukh!

Jenelle Jones of the Virology/Serology Unit was recognized as Employee of the Quarter for Spring 2017. Jenelle has worked in Virology/Serology for almost 10 years. She has been a proven team player as evidenced by her professionalism, helpful attitude, and dedication to peers and clients. She has been a member of the Happiness Committee and served in other organization functions. Jenelle has a tremendously positive impact and is a valued asset to the State Lab. Outside of work, Jenelle enjoys spending time with her family and shopping. Congratulations to Jenelle! ■

Compiled by: Angie Bradley, Laboratory Improvement

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