



Insider News

Lead and Healthy Homes
Division Newsletter
April 2019



Indiana State
Department of Health

Childhood Lead Exposure Associated With Adult Mental Health Symptoms

A recent study published online on Jan. 23 in [JAMA Psychiatry](#) examined the key question: Is childhood lead exposure associated with the risk of mental illness or difficult personality traits in adulthood?

Little research has been done to follow-up on lead exposed children on a long-term basis to determine whether early behavior problems persist or evolve into adult mental health concerns. Aaron Reuben from Duke University and colleagues conducted a study of a cohort of individuals in New Zealand born between April 1972 and March 1973. Participants were followed to December 2012 when they were 38 years old.

The authors write, "Millions of adults now entering middle age were exposed to high levels of lead, a developmental neurotoxin, as children. Although

childhood lead exposure has been linked to disrupted behavior development, the long-term consequences for adult mental and behavioral health have not been fully characterized."

The primary outcome goal of the clinical participant interviews that were conducted was to assess the adult mental health disorder symptoms that may impair an individual's capacity to lead a happy, successful life. The Big Five Personality Inventory framework (assessing neuroticism, extraversion, openness to experience, agreeableness and conscientiousness) was used as the primary interview tool. Those interviews took place at 18, 21, 26, 32, and 38 years of age.

Overall, the authors found that higher blood lead levels in childhood were associated with greater psychopathology and difficult adult personality traits across the life course, as measured by each of the Big Five Personality Inventory elements. "The result suggest that early-life lead exposure in the era of leaded gasoline experienced by individuals who are

currently adults may have contributed to subtle, lifelong differences in emotion and behavior that are detectable at least up to 38 years of age."

Childhood lead exposure may have long-term consequences for adult mental health and personality.

Lead & Healthy Homes Website Highlight

New Training Opportunities in Southern Indiana... The LHHD has approved two new courses for [Derby City](#), a lead-based paint training provider located in southern Indiana. The two new courses are *Lead Abatement Supervisor Initial* and *Lead Worker Initial*. With the addition of the two courses, those who are located in the Southern part of the state will have the ability to have more access to lead-based paint training. More information is available [here](#).

Study: Lead & Other Metals in E-Cigarette Vapors

Scientists from Johns Hopkins Bloomberg School of Public Health published



their findings regarding the presence of lead and other metals in e-cigarette vapors in the February issue of *Environmental Health Perspectives*. The results of their study show that significant amounts of toxic metals, including lead, leak from some e-cigarette heating coils and are present in the aerosols inhaled by users. In the study, the e-cigarette devices of 56 users were sampled. Significant numbers of the devices generated aerosols with potentially unsafe levels of lead, chromium, manganese and/or nickel. Chronic inhalation of these metals has been linked to lung, liver, immune, cardiovascular and brain damage, and cancers. More information about the study can be found [here](#).

EPA: POU Drinking Water Filters

Point of use, or POU, drinking water filters are used to remove impurities from water at the point that it is actually being used. There is no mandatory federal requirement for the use of POU drinking water filters or for testing or third party certification under the Safe Drinking Water Act. Consumers can increase their level of confidence by purchasing filters that have been tested by an accredited third-party certification body or bodies for lead reduction. A new consumer tool provides the certification bodies' approved marks and the text that indicates a filter has been certified for the lead reduction capabilities. Information regarding the POU tool can be found [here](#).

State of the Division



Spring is finally arriving in Indiana and with it comes growth and change. We are also seeing evidence of growth and change in so many different ways in the work being accomplished both here in the Lead and Healthy Homes Division (LHHD), but also with our public health partners throughout the state.

A major focus over the past few months in the LHHD has been the development of a mechanism for tracking and documenting lead-related data in NBS, the new computer information system for managing reportable data recently implemented at ISDH. The new NBS Lead Page will function as a tool for centralizing all lead case management information and activities. Within the new system, both the LHHD and the local health department (LHD) staff will be able to track new cases, communicate more easily with one another, as well as ensure that all children with elevated blood lead levels currently receiving case management services are getting the follow-up care they need. We are still in the building stage of developing our new NBS page, which will include a small pilot project. Currently our projected launch date is the end of 2019 or early 2020.

The new quarter two and three lead comparison reports highlighting the differences between the lead test results billed to Medicaid with those results that have been reported to ISDH have been distributed to the LHDs and MCEs throughout the state. Quarter four reports are expected to be released in May. The results of the reports are encouraging, but continue to challenge us to work toward those goals of increasing our numbers for testing and reporting.

I am excited to share with you about the development of a new partnership and pilot with WIC that will be coming soon, bringing with it a lot of possibilities. The pilot will involve adding lead testing to the required check-up visit for 1-year-old children who are already being tested via a blood draw for hemoglobin levels. Discussions are underway, and we are hopeful that the pilot will begin this summer. The potential positive impact of this opportunity is great.

Lastly, I wanted to share the news about some staffing changes within the LHHD. Lauren Clark and Geri Anderson are both no longer in their positions at ISDH. On behalf of the LHHD, I would like to thank them both for all of their efforts and contributions to the division and the agency, and we wish them the very best in their future endeavors. We are beginning a search for individuals to fill the positions of Program Manager and Case Manager. If you are interested, or know of someone who may be, or if you have any questions, please contact myself, pkrievins@isdh.in.gov, or the Indiana state job bank, [Work for Indiana](#)

Thanks for all you do to keep your communities healthy.

Thanks,

Paul Krievins

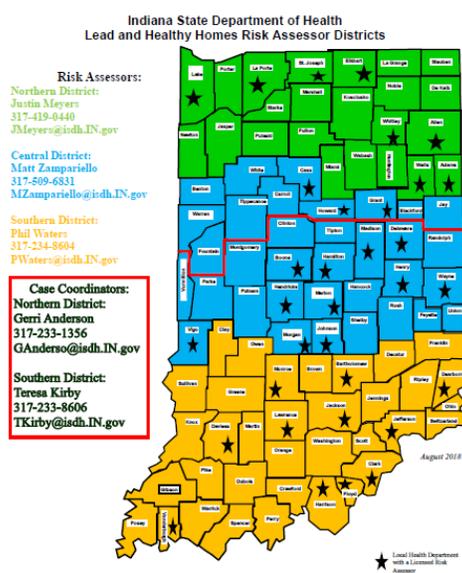
Lead and Health Homes Division Director

Medicaid Billing and Reimbursement

Do you currently bill Medicaid? Do you have a Licensed Risk Assessor on staff who handles the risk assessments of the homes of the children with elevated blood lead levels in your county? If you answered yes to both of these questions, and are not billing Medicaid for these assessments, then you are missing a financial opportunity! A review of Medicaid billing by ISDH has revealed that since the services provided by Licensed Risk Assessors became a reimbursable expense in March of 2017, only five (5) LHD's have billed Medicaid for this service. Medicaid pays \$282.85 for the initial risk assessment and \$101.32 for a follow-up visit for the services provided at the homes of children with blood lead levels $\geq 5 \mu\text{g/dL}$. More information about this reimbursement opportunity from Medicaid can be found [here](#).

New Online Lead Case Management Training Option

In Indiana, Article 29, Reporting, Monitoring, and Preventive Procedures for Lead Poisoning (410 IAC 29-1-5), requires that the person at the local health department level who is providing case management services to children with elevated blood lead levels must be trained by the ISDH within six months of hire to perform and provide those services. Face-to-face training is always the preferred method to accomplish this requirement and should be the first option, but occasionally timing or other situations may keep that from happening. For these situations, a new online case management training option titled "Lead Case Management Training – Indiana" is available on Indiana TRAIN, a free online comprehensive catalog of public health training opportunities. The new training consists of two modules comprised of narrated videos with accompanying PowerPoint slides and other documents, a post training assessment and an evaluation. Completing these modules and contact made with Sue Henry, ISDH LHHD health educator, at the conclusion of the training, will satisfy the training requirement listed above. Additional information about creating an Indiana Train account and accessing the training can be found on the ISDH [LHHD webpage](#).



Following the recent addition of Justin Meyers to the ISDH risk assessor staff, a change in the Lead and Healthy Homes Risk Assessor Districts has been put in place. As shown in the map above, the **Norther District Risk Assessor (in green)** is Justin Meyers, the **Central District Risk Assessor (in blue)** is Matt Zampariello, and the **Southern District Risk Assessor (in yellow)** is Phil Waters. The map can also be found on the ISDH [Lead and Healthy Homes Division webpage](#).

temporary password will be sent to you through email.

Q. How do I add new users?

A. Users need to call the help desk, 888-535-0011, and provide the site name, first and last name, email address and tests needed.

Q. I clicked "Save," why hasn't my test been sent yet?

A. Scroll up, and you should see a message in red showing you a field that is missing data or has an invalid value.

Q. My result disappeared! What happened?

A. To avoid flooding users with results, LimsNet shows only the most recent 30 days of results. To see more results, you must enter a value in the "From" date on the search screen.

Q. How do I turn on email notifications?

A. Go to "Personalized Settings" in the navigation bar and set email notifications to "Yes."

Q. What do the colors mean?

A. Green background = This sample has a result that has not yet been viewed in LimsNet. Red foreground = This sample has at least one non-negative result associated with it.

Any further LimsNet questions can be directed to limsappsupport@isdh.in.gov or 317-921-5506.

LimsNet FAQs

Q. I forgot my password.

A. Click "Forgot Your Password?" Then after entering your user ID and answering the secret question, a new



Risk Assessment Tip

New I-Lead Entry Guide

The I-Lead New Case Entry Guide is a new tool available to help lead inspectors and risk assessors enter inspection activity into I-Lead. As a reminder, **all** lead inspection activity **must** be entered into I-Lead within **five** days of report completion. If you do not have an I-Lead account, please email Abhishek Saini at asaini@isdh.in.gov.



CONTACT US

Indiana State Department of Health
Lead and Healthy Homes Division
317.232.1250
[Website found here](#)

Case Management Tip

Unexpected Sources

In Indiana, the primary sources for lead in houses are typically found in old paint in homes built before 1978, dust created from the opening and closing of doors and windows that have been painted with lead based paint, and soil that has been contaminated with lead based exterior paint, exhaust from vehicles, etc. Recently however, there are more and more examples of non-traditional and unexpected sources of lead hazards being discovered during home visits and inspections that remind us to be alert to the possibilities of unexpected sources.

Example 1: A home built in 2016. Two children with EBLLs (one in high teens, one in mid-20s). The family was discovered to shop at an Indian market. Several spice and food samples were analyzed at the state lab with the following results: poppy seeds 0.1 mg/kg, whole cinnamon .25 mg/kg, and star anise 1.73 mg/kg. The FDA has limited lead in candy to 0.1 mg/kg. The lead levels found in these products meet or exceed that limit. The family was advised to discontinue the use of these items in their children's food.

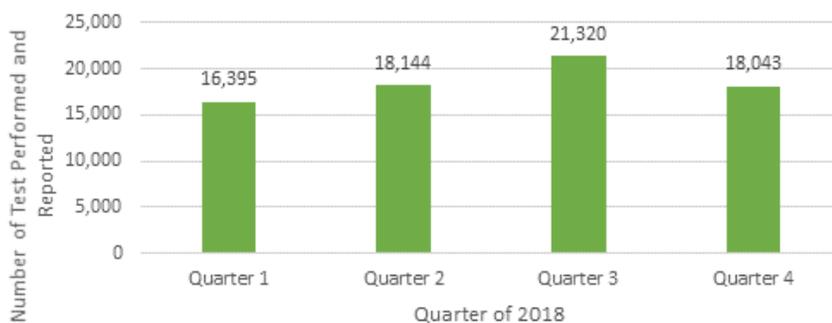
Example 2: A child with an EBLL in the high teens. The risk assessment found high lead dust levels on the floors in the home, but no deteriorated lead paint. However, after analysis, a paint chip taken from a primitive bench in the home was found to contain 29% lead. The acceptable level of lead in paint is 0.5%.

Example 3: A child with an EBLL in the high 20s, living in a home built in 1978. No lead paint was found in the home during the risk assessment. However, during the visit it was noted that an old barn door was being used as décor on a wall of the home, directly above the child's play area. The paint on the door was dry and brittle and would easily chip off and fall to the floor when touched. A sample of the barn door paint was analyzed and found to contain 24% lead. Dust found on floors, at or above 40 mcg/ft², is considered hazardous. The only lead dust found in the home was on the floor below the door in the child's play area, and was found to be at 2100 mcg/ft².

Again, don't forget to be alert for the unexpected possibilities during your home visits and throughout your case management.

Contact Teresa Kirby, tkirby@isdh.in.gov, 317-233-8606, or any LHHD staff for assistance.

Number of Blood Lead Test Performed and Reported to ISDH in 2018 by Quarter Performed



In 2018, 73,902 blood lead tests were performed and reported to ISDH for Indiana children younger than 7 years old. The third quarter, July 1-Sept. 30, had the most number of tests completed at 21,320 tests. The first quarter, Jan. 1-March 31, had the fewest number of tests completed at 16,395.