Lead and Healthy Homes Division

June 30, 2023

2022 Childhood Lead Surveillance Report

Indiana Department of Health

Section 1: Table of Contents

Section 2: Executive Summary

INTRODUCTION

The Lead and Healthy Homes Division (LHHD) at the Indiana Department of Health (IDOH) is pleased to present the 2022 Childhood Lead Surveillance Report, highlighting lead poisoning and exposure prevention activities across Indiana. Information contained in this report was compiled by the LHHD in compliance with IC 16-41-39.4-5. This report provides a description of the trends in blood lead testing and elevated blood lead levels (EBLLs) in Indiana, as well as data pertaining to environmental investigations and lead risk assessments performed for children with EBLLs. It also highlights a variety of actions taken by IDOH to increase testing rates, provide education on lead sources and impacts, support affected families, and improve Indiana's ability to manage lead exposure within the residential environment.

Recognizing that lead exposure can lead to negative health outcomes for any child, and that there are no safe levels of lead in a child's body, the IDOH LHHD collaborated with public health partners and legislators to work toward expanding case management services and testing requirements to more Indiana children. Through these efforts, two major goals were accomplished in 2022. The EBLL threshold was lowered from 10 µg/dL to 3.5 µg/dL, offering opportunities for families to receive case management services and education at lower blood lead levels than in previous years. Families of children who test at levels between 3.5 µg/dL and 4.9 µg/dL will receive educational resources, and children who test at levels at or above 5.0 µg/dL will be enrolled in case management. Universal screening also was introduced in 2022 and took effect beginning in 2023, expanding blood lead screening requirements to all Indiana children, when prior requirements exclusively covered children enrolled in Medicaid.

The changes above were further supported by legislators and IDOH leadership in their decision to utilize $8.5 million of funds authorized under the 2021 House Enrolled Act 1007 for lead. These funds were largely earmarked to support the costs that local health departments are incurring in providing case management and risk assessment to families of children with elevated blood lead levels. $1.8 million of the $8.5 million was set aside to support a lead public awareness campaign, including a call to action for parents via the www.IndianaLeadFree.com paid media campaign (https://www.youtube.com/watch?v=MMN10GKze_M&t=2s) and a neighborhood outreach program in 10 communities identified as some of the highest risk for lead exposure.

In 2022, 66,916 Indiana children received a blood lead test, and 869 (1.30%) of these children received a confirmed EBLL at or above 3.5 µg/dL. A total of 563 children who received a confirmed EBLL were enrolled in case management. Additionally, 749 lead risk assessments were completed in Indiana, 232 of which were completed in homes with a child who received a confirmed EBLL.

In continued efforts to increase the awareness of lead exposure along with testing and reporting guidelines, the LHHD provided training and education to local health departments, healthcare providers, and other public health partners around the state. Through a variety of additional partnerships, the division was able to expand blood lead test reporting capabilities and secure funding to help both the state and local jurisdictions administer case management and environmental risk assessment services, an effort aimed at reducing the financial strain of lowering the EBLL threshold. Encouraged by the progress made in 2022, the IDOH LHHD will continue to make strides in reducing the burden of lead exposure in Indiana, creating a safer place for families to live, learn, work, and play.

WHY LEAD IS A HEALTH CONCERN

Childhood lead poisoning is a preventable, serious environmental health problem. There is no safe level of lead in a child's body. Lead is a naturally occurring toxic metal found in the Earth's crust. Its widespread use, since the time of the Romans, has resulted in extensive environmental contamination, human exposure, and significant public health problems in many parts of the world, including in Indiana. Lead has been used as an additive in many products. Sources of lead exposure can include residential paint that was manufactured before 1978, water from lead pipes, soil near busy roads, factories and outside of homes painted with lead-based paint, some imported candies, toys and jewelry, and certain jobs and hobbies. The most common source of exposure to lead for children in Indiana comes from lead-based paint and dust. Intact and undamaged lead-based paint may not be a problem, but all paint will deteriorate eventually. Once the paint begins to peel, chip and crack, it forms a microscopic lead dust that becomes hazardous.

Lead usually enters the body through inhalation and ingestion. Breathing in or swallowing lead dust, paint chips, contaminated soil, and contaminated water are just some of the ways that lead can enter the body. Lead poisoning can affect anyone, but babies and children under the age of 7 are most at risk because their bodies are still growing and developing and they more easily access leaded surfaces, such as floors or windowsills, that adults don't. A 2007 study found that children touch surfaces 83 times per hour and put objects or hands in their mouth 21 times per hour.[1]

Childrens' bodies absorb lead at rates nearly four times greater than adult bodies.[2] Exposure to lead can damage many parts of a child's body, including their brain, nervous system, blood, digestive organs and more. Lead poisoning can also lead to severe health, learning and behavioral problems, including brain damage, IQ loss, developmental delays, and long-term intellectual deficits. Exposure at even low levels results in the larger incremental IQ loss when compared to higher intervals. Most significantly, the impacts and damage that are caused by lead poisoning cannot be reversed. However, there are medical treatments and other interventions that can be used to reduce the amount of lead in the child's body if exposure has already occurred.

---

[1] Ko, S., Schaefer, P., Vicario, C. *et al.* Relationships of video assessments of touching and mouthing behaviors during outdoor play in urban residential yards to parental perceptions of child behaviors and blood lead levels. *J Expo Sci Environ Epidemiol* **17**, 47–57 (2007). https://doi.org/10.1038/sj.jes.7500519

[2] Ziegler EE, Edwards BB, Jensen RL, Mahaffey KR, Fomon SJ. Absorption and retention of lead by infants. Pediatr Res. 1978;12(1):29–34. [PubMed] [Google Scholar]

Protecting children from exposure to lead is important to lifelong good health. The most important step that parents, healthcare providers, and others can take to keep children safe is to prevent lead exposure before it occurs.

RECENT HISTORY OF THE DIVISION

Since 2017, Indiana's childhood lead program has been housed in the Indiana Department of Health's Lead and Healthy Homes Division. The LHHD's primary goals are to track the prevalence of lead exposure in children throughout Indiana, identify policy, program and funding changes which support lead elimination, and support local health departments (LHDs) in taking the necessary steps to minimize that exposure and the resulting health risks. This is done through proactive screening, treatment, case management, and remediation of lead hazards.

The LHHD is primarily funded by federal grants from the Centers for Disease Control and Prevention (CDC) and the U.S. Environmental Protection Agency (EPA). CDC funding has been used to support maintenance of a case management system and surveillance system, while EPA funding has supported ongoing lead training, licensing, inspection, and enforcement efforts. In 2022, the division entered its second year of multi-year awards with both the EPA and CDC. The IDOH also utilized funding provided through the Indiana Family and Social Services Administration's Office of Medicaid Policy and Planning for a health services initiative under the Hoosier Healthwise Children's Health Insurance Program (CHIP), which provided lead abatement in the homes of children receiving Medicaid.

In July of 2022, Indiana took a significant step to improve care for children exposed to lead by lowering the elevated blood lead threshold from 10 µg/dL to 3.5 µg/dL, in alignment with the blood lead reference values set by the CDC in 2021. This change is part of continued statewide efforts to increase lead testing and reduce the risk of lead exposure among Indiana children. Under the new guidance, families of children who receive a blood lead level between 3.5 and 4.9 µg/dL will receive education about the risks of lead exposure and recommendations for testing other children living in the same household. Children with a confirmed EBLL of 5 µg/dL or above will be enrolled in case management. Defining the EBLL and case management thresholds at different values ensures that more Indiana children receive protective services without overburdening the state and local support systems.

In addition to recalibrating the EBLL threshold, Indiana also had the opportunity in 2022 to work with stakeholders and state legislators to help sharpen our focus on who is affected by lead exposure. Legislators recognized that early childhood exposure to lead remains a

significant, solvable problem for Indiana residents and that historical lead testing rates didn't give an accurate representation of the risk to all Hoosiers. The questionnaire that Indiana had historically used for determining whether a child should be tested simply wasn't working. In response, legislators, with support from industry partners (including the Indiana State Medical Association, Indiana Chapter of the American Academy of Pediatrics, and Indiana Association of Family Physicians) implemented House Enrolled Act 1313, which requires healthcare providers to confirm that children under age 7 have been tested for lead and, if not, to offer this testing to the parent or guardian of that child. This new standard, signed into law in March 2022, took effect in January 2023 and should significantly increase testing rates across the state and allow IDOH to focus efforts and resources to those communities and individuals most significantly impacted by lead.

INDIANA STATUTE AND RECCOMENDATIONS

Although people of all ages can be affected by exposure to lead, children under the age of 7 years are especially at risk because they are still growing, and their brains are still developing. Children at higher risk for lead exposure tend to live in households in which residents are:

- Lower income
- Racial or ethnic minority groups
- Recent immigrants (especially those from Central America, South America, North Africa, and the Middle East, where lead can be prevalent in spices, cosmetics, jewelry, ceramics, and medicine)
- Residing in properties built before 1978
- Residing in older, poorly maintained properties
- Have parents or household members who work in industries that deal with lead (i.e., battery manufacturing and recycling, auto repair, or construction)

In Indiana, blood lead testing is most often conducted by family physicians and pediatricians, either in-office or through a referral to a testing laboratory. Testing is also routinely conducted by LHDs through clinical services offered in-office and remotely. Less frequently, testing is also performed by nurses and medical staff through organizations like the Indiana Women, Infants, and Children (WIC) program and Head Start through private funding.

To aid in effective case coordination and surveillance, 410 IAC 29 mandates reporting, monitoring, and prevention of lead poisoning in Indiana, including the reference value levels observed to initiate public health action by the state. As part of this reporting, Indiana requires that accurate and complete data accompany any blood lead sample submitted for analysis. That data must include:

- With respect to the individual whose blood is examined:
    - Full name
    - Date of birth
    - Gender
    - Full address, including street address, city, and ZIP code
    - County of residence
    - Race and ethnicity
    - Parent or guardian's name and phone number, where applicable
    - Any other information that is required to be included to qualify to receive federal funding

- With respect to the examination:
    - Date
    - Type of blood test performed (venous or capillary)
    - Normal limits for the test (interpreted as elevated or non-elevated)
    - Test results
    - Interpretation of test results by the person who examined the specimen for the presence of lead

All blood samples analyzed for the presence of lead are required to be reported to the IDOH within one week of analysis. The IDOH provides lead screening requirements and medical management recommendations to providers, which, through 2022, required children insured through Medicaid to receive a blood lead test at 12 and 24 months of age, or as soon as possible before the age of 7 if not tested at 12 and 24 months. Starting in January 2023, universal testing will require healthcare providers to confirm that all children, regardless of Medicaid status, have been tested for lead. It also clarifies that testing should be done within 3 months of a child's 1st and 2nd birthdays in order to account for provider availability and appointment scheduling.

A blood lead test is considered confirmed with either a single venous blood test or two capillary blood tests (done within 6 months) with results $\geq$3.5 µg/dL. Current Indiana public health intervention and case management services start at 5.0 µg/dL. Because Indiana

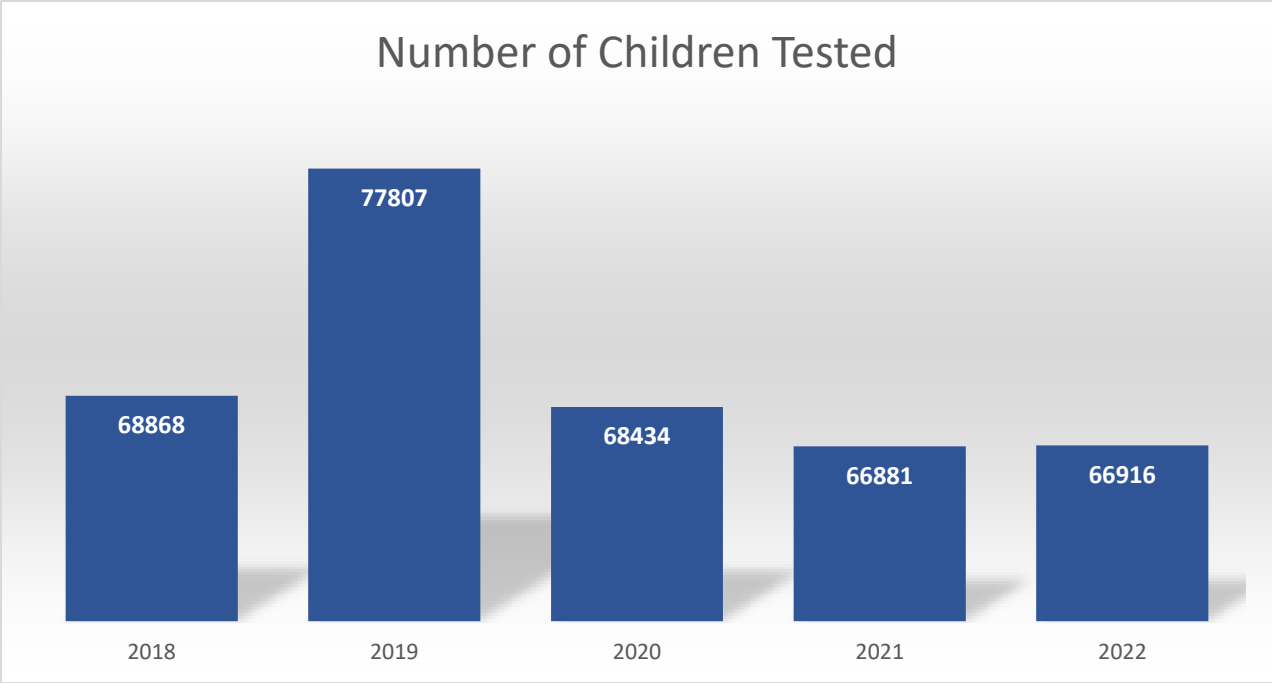
operates within the framework of county-level home rule, LHDs across Indiana are charged with providing case management services to children with identified blood lead levels. This support can range from education and provider notification at low levels to comprehensive case management, medical guidance, and home risk assessment at higher levels. Resources related to prevention, lead policy, abatement, and the health impacts of lead can be found on the Lead Information for Parents/Caregivers section of the IDOH website at https://www.in.gov/health/lead-and-healthy-homes-division/information-for-parentscare-givers/.

For additional information on lead case management, please see Title 410, section 29 of the Indiana Administrative Code. For additional info on requirements around blood lead reporting, please see the guide linked below: https://www.in.gov/health/lead-and-healthy-homes-division/information-for-healthcare-providers/#Reporting_Requirements.

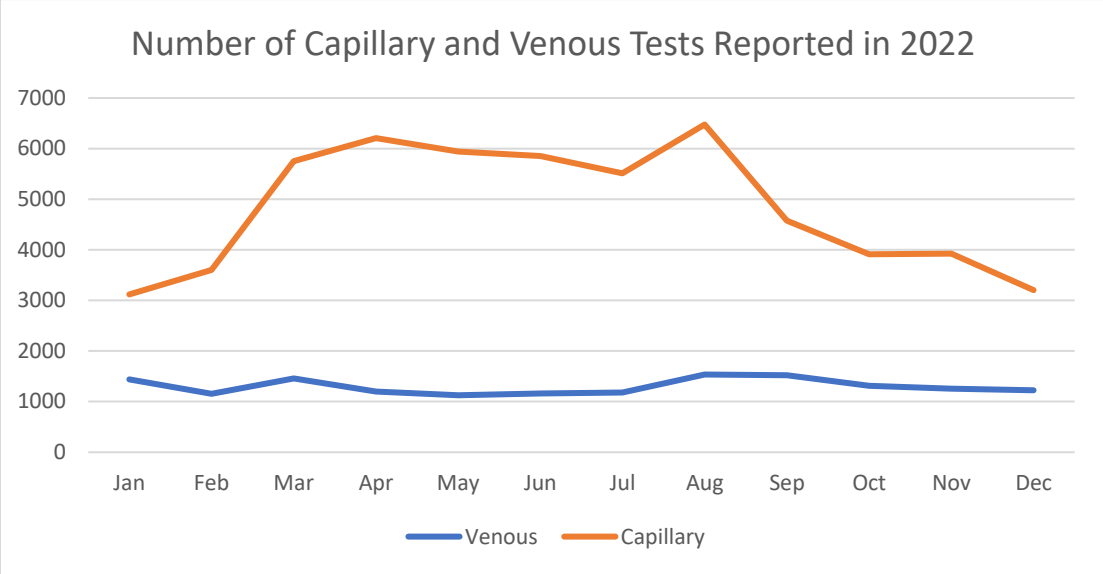
Section 4: 2022 Highlights

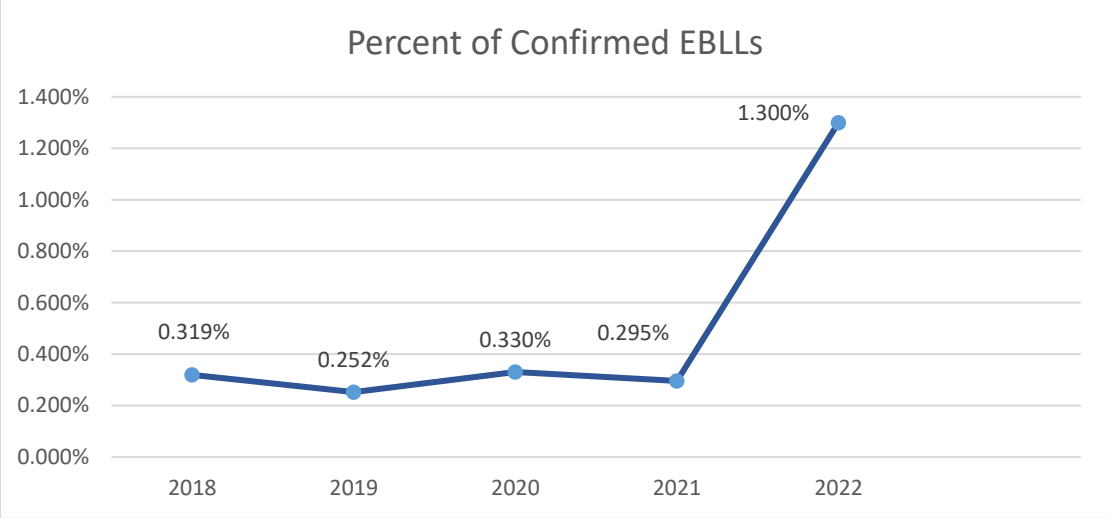
TESTING

In 2022, the IDOH received 73,626 lead test results for children younger than 7 years of age from medical providers, laboratories, and other public health partners. These results included tests from 66,916 unique children who were living in Indiana. Of those children, 3,379 (5.05%) had at least one elevated result, and 869 (1.30%) received a confirmed elevated result[3].



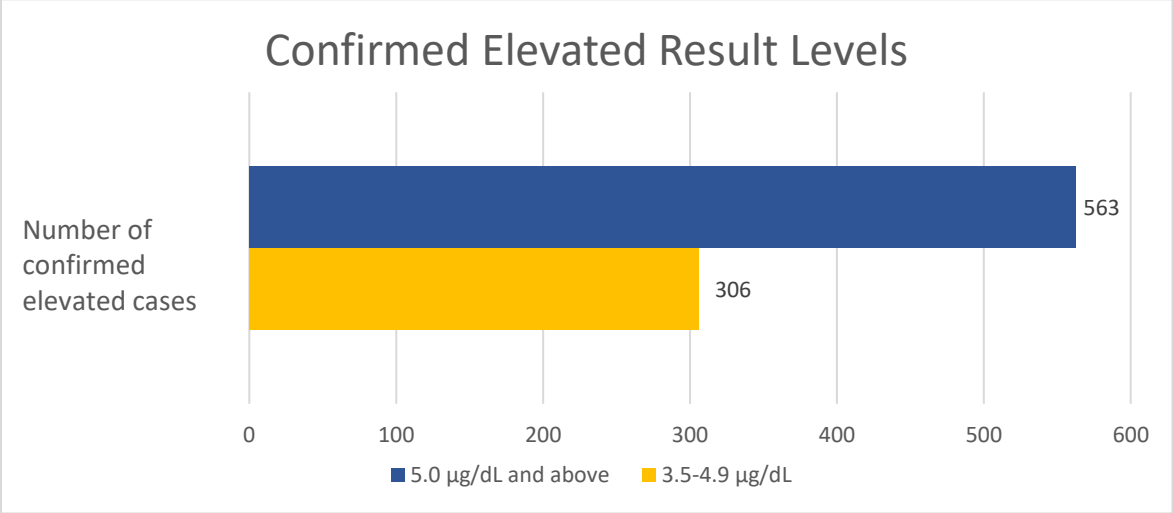
[3] The total number of tests received includes both venous and capillary tests and accounts for initial tests and follow-up tests done on children whose blood lead levels were elevated. According to Indiana statute, a child becomes a confirmed case when he or she receives at least one venous blood test or two capillary blood tests within a three-month period, with a blood lead result at or above 3.5 µg/dL. Data contained in this report is reflective of the level of elevation at the time of when the result was received.





In July of 2022, Indiana lowered its elevated blood lead threshold from 10 µg/dL to 3.5 µg/dL, in alignment with the blood lead reference values set by the CDC in 2021. The reduction in the blood lead threshold accounted for the majority of the increase found on the graph above. A total of 647 (74.5%) of the confirmed elevated cases were seen in children testing at blood lead levels between 3.5 and 9.9 µg/dL- levels, which did not meet the previous definition of elevated. A total of 222 (25.5%) of the 869 confirmed EBLL cases were seen in children testing at or above 10 µg/dL, making up 0.33% of the overall blood lead tests from 2022.

The bar graph below provides a breakdown of the confirmed elevated blood lead cases. Of the 869 total confirmed elevated blood lead results, 306 (35.2%) were between 3.5 and 4.9 µg/dL. Another 563 (64.8%) were at or above 5 µg/dL and were enrolled in case management.



The IDOH also collects demographic information on gender, race, and ethnicity with blood lead test results. Samples that contain "unknown" or blank fields are also collected by the IDOH. Gender is the most complete demographic variable, with race and ethnicity having 27.4% and 39.2% marked as unknown or blank. Among the 66,916 unique children who received blood lead tests in 2022, 51.5% were male and 48.3% were female (Table 1). Among those tested with a reported race, the most frequently reported races were White (35.5%), Black (25.4%), and American Indian (5.78%) (Table 2). Among ethnicities, 11.8% of tested children identified as Hispanic and 49.0% identified as non-Hispanic (Table 3).

Summary of Reported Demographics for Children Aged <7 Years
Blood Lead Tested and EBLL Cases Confirmed in 2022

Gender	Tested (%)	EBLL Cases	Percent EBLL
Female	32,334 (48.3%)	389	1.20%
Male	34,494 (51.5%)	479	1.40%

Unknown	88 (0.13%)	1	1.10%
Total	**66,916 (100%)**	**869**	**1.30%**

Table 1: Gender

Race	Tested (%)	EBLL Cases	Percent EBLL
American Indian	3,866 (5.78%)	26	0.67%
Asian/ Pacific	281 (0.42%)	5	1.78%
Black	17,029 (25.4%)	198	1.16%
White	23,785 (35.5%)	317	1.33%
Multiracial	721 (1.08%)	3	0.42%
Other	2,872 (4.29%)	65	2.26%
Unknown	18,362 (27.4%)	255	1.39%
Total	***66,916 (100%)***	***869***	***1.30%***

Table 2: Race

Ethnicity	Tested (%)	EBLL Cases	Percent EBLL
Hispanic	7,906 (11.8%)	116	1.47%
Non-Hispanic	32,806 (49.0%)	415	1.27%
Unknown	26,204 (39.2%)	338	1.29%
Total	**66,916 (100%)**	**869**	**1.30%**

Table 3: Ethnicity

Indiana did not see a significant change in the rates of children tested from 2021 to 2022 among demographic groups. As expected, the percentage of children with a confirmed EBLL in each demographic group increased from previous years, due to the reduction in the EBLL threshold.

Although Indiana's reported lead test results did not indicate significant differences in the rates of children with EBLLs between demographic groups, the large number of children with unknown race and ethnicity adds uncertainty to the race and ethnicity statistics. In an effort to close the gap on the unreported demographic data, the LHHD reached out to over 3,500 healthcare providers in 2022 to increase awareness of testing and reporting guidelines. Collaborative efforts will be on-going throughout 2023 as the division works to make continued improvements in the quality and completeness of the reported data.

EDUCATION

Protecting children from exposure to lead is important to lifelong good health. In support of the goal to eliminate the public health problem of childhood lead poisoning, effective education and outreach efforts are essential, and they continued to be a priority of the health education staff in 2022. As a result of the COVID-19 pandemic and related restrictions in 2020 and 2021, changes were made in the IDOH's provision of training and education opportunities to new LHD staff members who provide case management services to children with EBLLs. During that time, lead case management training sessions transitioned from in-person sessions to an online format through Indiana TRAIN (INTrain). In 2022, after the evaluation of the efficiency and the benefits of using this online format, it was decided that the case management training and education opportunities for new staff who had joined LHDs in a case manager role would continue to be provided in this online format. Online training allowed for LHD staff to receive their training and be prepared to provide the appropriate case management services and care to the children and families in their counties in a more timely fashion.

In addition to the training on the policies, practices and requirements of lead case management, an extensive training on the use of IDOH's NEDSS Base System (NBS) was also provided to new staff. The NBS Lead Case Management Module is the avenue for receiving and documenting all lead case management activities. Staff were provided real-time instruction in the use of the module, as well as ongoing education and technical assistance.

The efficiency and benefits of using the online format for this mandated training became especially evident, as 2022 saw a substantial increase in the turnover of existing staff and an

increase in the number of new staff assigned to provide lead case management services at the LHDs. The increase in new staff numbers was attributed to the new funding opportunity made available to LHDs through HEA 1007 funds, and the demand for additional staff to support services at the lowered EBLL threshold.

IDOH's health educator staff delivered training to LHD staff in 52 of Indiana's 92 counties in 2022. This was an 86% increase in the number of counties who had a change in case management staff relative to 2021.

In March 2022, IDOH also updated the *Childhood Blood Lead Medical Management Guidelines for Providers in Indiana* to healthcare providers, LHDs and other partners in the medical community. The guidelines provide physicians and other healthcare providers with a reference guide to help them identify lead toxicity, understand testing and screening guidance, and help them manage clinical interventions for children with an elevated blood lead level.

This work, coupled with continued improvements to the IDOH website, social media posts and updates, and the issuance of bulletins on emerging issues and updates over the course of the year, continued to reinforce Indiana's commitment to lead protection and response.

CASE SURVEILLANCE

Changes for lead case surveillance occurred statewide in 2022. In preparation for the lowering of the EBLL threshold and increased testing, IDOH hired eight new staff members to assist with lead case surveillance and risk assessments statewide. IDOH staff worked on the current lead surveillance system, NBS, to ensure all open case investigations were moving through case management in a timely fashion and to clean up/complete case records. The additional staff were able to aid local health departments with the influx of children projected to receive case management services due to the threshold lowering.

With universal screening starting in 2023, IDOH staff also partnered with local health departments to obtain information regarding blood lead testing in their locations. From this, an interactive map was developed and posted on the IDOH LHHD website displaying testing availability at local health departments across the state.

Through all this work, there were also efforts to ensure that existing systems functioned in the most efficient way possible. A prime example of this was the recognition that despite lead test results being available to providers through Indiana's Children and Hoosier Immunization Registry Program (CHIRP), there was no way to report lead results directly into that system. Through collaboration with its Immunization Division, IDOH was able to

add direct lead reporting functionality into CHIRP at the end of year. This improvement will allow physicians and nurses to enter results which may not have otherwise been reported and to enter results quickly and easily from point-of-care testing.

PARTNERSHIPS

The IDOH and the LHHD worked with many organizations, agencies, partners, and local health departments in efforts to increase the rates of blood lead testing, manage those with EBLLs, and address lead hazards in all forms. The LHHD continues partnerships with the IDOH's Refugee Health Program, Indiana Professional Licensing Agency, lead case training providers, Managed Care Entities, universities such as Notre Dame, IUPUI, Indiana University School of Medicine, Indiana State, and IU McKinney School of Law.

Below are some examples of new partners in 2022 that worked to support the division's efforts.

HUD (Housing & Urban Development) & OSHA (Occupational Safety & Health Administration): The IDOH partnered with HUD and OSHA to establish a data-sharing agreement to help identify hazards where people work and live in the state of Indiana.

IDOH Health Innovation Partnerships and Programs Division: In Fiscal Year 2021, the Indiana Legislature passed House Enrolled Act 1007 establishing the Health Issues & Challenges Grant Program under the direction of the Health Innovation Partnerships and Programs Division. The purpose of this funding is to distribute grants to local programs that are addressing emergent or prevalent public health issues in Indiana. The IDOH has identified lead poisoning prevention and improving the health of children with EBLLs as one of the primary areas of focus for these funds. In total, IDOH set aside $8.5 million toward childhood lead poisoning prevention in Indiana. Funding provided through this award will be used to help both the state and local jurisdictions successfully administer case management and environmental risk assessment services to families with children who have confirmed EBLL's. This one-time funding, part of Indiana's American Rescue Plan allocation, is targeted at supporting the additional costs associated with the EBLL threshold drop from 10 µg/dL to 3.5 µg/dL.

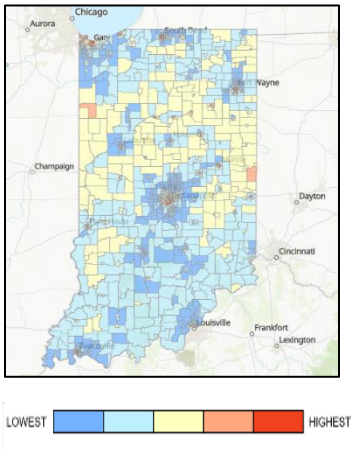
CHIRP (Children and Hoosier Immunization Registry Program): The LHHD partnered with the IDOH's Immunizations Division and the CHIRP/Immunization Support Team in 2022 to add Lead Enhancements to CHIRP. This enhancement was added to provide an additional avenue for BLL reporting for providers and local health departments when testing children for lead. The rollout of the lead enhancement in CHIRP was done in

conjunction with universal testing on January 1, 2023. The lead enhancement allows for reporters to add blood lead results, as well as review previous results for individual children if they have already been tested.

TARGET POPULATION IDENTIFICATION AND INTERVENTION

One of the key components to delivering effective lead education and intervention is knowing which populations are at the highest risk and providing those families resources to help mitigate those risks. In 2022, Indiana worked to provide resources on lead risk, identification and mitigation to both parents and providers through the Lead Protection Program, Lead Risk Map, and reports on testing for children insured through Medicaid.

The Lead Protection Program, supported by CHIP, entered its fifth year of operation in 2022. Over the course of the year, 48 families applied for the program, and a total of 27 homes were fully abated statewide. The program continues to grow into 2023, with a goal of abating 65 homes in 2023 and more in the years to follow.



The IDOH LHHD also completed an update to the Lead Risk Map. This interactive map provides an illustration of the estimated risk of lead exposure for children younger than 7 years of age in each Indiana census tract. Risk is determined by comparing historical EBLL levels with social, economic, and geographic datasets to find those which most closely match. Individuals can view the risk level for their census tract and review how various census data around home age, poverty rates, and minority population rates correlate to identified historical blood lead levels throughout the state. The Lead Risk Map can be found using the following link: https://www.in.gov/health/lead-and-healthy-homes-division/program-reports,-statistics-and-data/

Children who are insured by Medicaid are one of the groups considered most at-risk for lead exposure in Indiana. Children in the state who are insured through Medicaid are required to have their blood lead level tested at 12 and 24 months, or as soon as possible before the age of 6 if earlier testing was not done. A review of data provided in December 2022 showed that 38.1% of children under the age of 7 who were insured by Medicaid had a blood lead test billed to Medicaid. In 2023, the IDOH started a collaboration with Indiana Primary Care Learning Collaborative. With this collaboration, division staff conducted outreach directly to providers. This outreach allowed the IDOH to provide educational

materials on lead testing mandates, reporting mandates and specific data for each provider. This specific data included a Medicaid member-detailed listing, identifying which Medicaid members have had a blood lead test and which ones are yet to receive a blood lead test. To date, over 800 providers have been provided with educational materials and/or Medicaid member lists. Additionally, 56 provider offices have established correspondence with IDOH for continued education. Outreach efforts continuing into 2023 are aimed at establishing and maintaining collaborations to increase the rate of children being tested for lead.

ENVIRONMENTAL INVESTIGATIONS

The IDOH staff, city and county health departments, and private risk assessors completed 749 lead risk assessments in Indiana, a 31.9% increase from 2021. Of those, 232 risk assessments were completed in homes with a child who received a confirmed EBLL at 5 µg/dL and above. Table 4 represents the number of houses, out of the 749 assessed, with each type of hazard identified: dust, exterior lead-based paint, interior lead-based paint, soil, or other. The total number of hazards identified (1,158) is larger than the number of risk assessments conducted due to homes having multiple hazards.

Types of Lead Hazards	Number of Houses with Lead Hazards Identified
Dust	390
Exterior Paint	344
Interior Paint	312
Soil	94
Other	18

Table 4: Homes with Lead Hazards Identified

Indiana law requires that any person who engages in lead-based paint activities must first obtain a license from the IDOH for each activity. Indiana saw a 28% increase in the number of individuals licensed in 2022 when compared to 2021. For the year, the IDOH had 643 individual professional licenses, 119 of which were new licenses in the following disciplines: lead inspector, lead risk assessor, lead project supervisor, and lead worker licenses.

Indiana also requires that any lead abatement work be done by a certified lead contractor. Contractors must employ licensed staff and stand responsible for ensuring that abatement work meets the state standards for workmanship, safety, and cleanliness. At the end of 2022, Indiana licensed one new contractor and lost three contractors, ending the year with 43 active lead abatement contractors. As more children enter case management in the

coming years, the need for lead-based paint activities, as well as the demand for individuals who are licensed to engage in these activities, will grow.

Through funding received from the Environmental Protection Agency, Indiana continues to identify areas for improvement in program administration and licensing. To that end, the LHHD team has been focused on building out Standard Operating Procedures (SOPs) to address operational continuity risks and will review and edit those SOPs biennially.

Section 5: 2023 Goals

As we begin 2023, the IDOH seeks to improve its ability to identify and address lead hazards affecting Indiana children by working to complete the following initiatives:

- Expand lead screening requirements to all Indiana children, regardless of Medicaid status, by implementing and establishing data baselines for universal screening
- Launch a new LHHD website that focuses on providing information specific to stakeholders, including parents, providers, and LHDs
- Conduct a statewide lead education and outreach campaign, partnering with the NAACP and Hoosier Environmental Council to target at-risk communities in the state
- Employ mobile clinics to offer blood lead testing in daycares and at community events
- Improve data transparency and accessibility by developing a data dashboard for the LHHD website
- Publish maps that are interactive with Indiana Professional Licensing Agency data, assisting individuals with finding lead contractors
- Work with training providers to increase the frequency and geographic availability of lead risk assessor classes
- Add to the number of trained and licensed contractors and risk assessors
- Rebuild and refine the IDOH's risk assessment reporting portal, I-LEAD
- Offer lead resources, including license applications, data reporting applications, courses, brochures, and other printed materials, in multiple languages

Section 6: 2022 County Data

Data listed in the table below is broken down by county, with the following limitations:

- County results only include children whose test results identified a county.
- Children with and without a county listing are included in the State of Indiana totals.
- A test result is elevated in Indiana at or above 3.5 µg/dL.
- A child becomes a confirmed case when he or she receives either a single venous blood test or two consecutive capillary blood tests with an EBLL.
- The number of risk assessments and identified hazards is included by county. However, risk assessments can be conducted for children who do not have an EBLL, and the number of hazards identified may be larger than the number of risk assessments done due to homes having multiple lead hazards.
- Clearance exams are only conducted if lead hazards are identified during the risk assessment and if efforts have been made by the property owner to mitigate the issues. If no hazards are reported, Indiana law does not require a clearance exam.
- If fewer than five results for any given county data point were identified, the values were suppressed to maintain confidentiality. Suppressed values are identified with an asterisk (*).

County	Number of tests	Number of children tested	Number of confirmed cases (≥3.5 µg/dL)	Number of cases confirmed at ≥ 5 µg/dL	Number of risk assessments completed
Adams	160	158	*	*	*
Allen	4,043	3,794	70	49	35
Bartholomew	1,867	1,447	12	10	9
Benton	82	78	*	*	*
Blackford	95	90	*	*	*
Boone	574	529	7	6	*
Brown	110	94	*	*	*
Carroll	286	273	*	*	*
Cass	437	396	22	13	10
Clark	1,804	1,617	9	5	*
Clay	273	266	*	*	*
Clinton	453	400	16	8	10
Crawford	104	100	*	*	*
Daviess	212	196	6	5	*
Dearborn	255	242	*	*	*
Decatur	264	239	*	*	*
DeKalb	520	472	8	5	*
Delaware	796	748	15	11	8
Dubois	134	118	*	*	*
Elkhart	4,234	3,866	41	28	11
Fayette	425	383	9	6	*
Floyd	1,232	1,035	12	8	*
Fountain	159	152	*	*	*
Franklin	223	198	*	*	*
Fulton	144	127	*	*	*
Gibson	491	467	*	*	*

Grant	822	772	6	5	9
Greene	378	363	8	5	*
Hamilton	2407	2,252	7	*	*
Hancock	494	446	*	*	*
Harrison	420	375	*	*	*
Hendricks	926	868	5	*	5
Henry	215	203	*	*	*
Howard	924	898	5	*	9
Huntington	409	366	8	6	*
Jackson	775	672	*	*	*
Jasper	238	224	*	*	*
Jay	143	137	*	*	*
Jefferson	206	194	*	*	*
Jennings	287	247	*	*	*
Johnson	984	914	*	*	*
Knox	318	287	7	5	*
Kosciusko	692	588	12	7	*
LaGrange	158	135	*	*	*
Lake	3,464	3,309	72	48	57
LaPorte	387	370	14	8	15
Lawrence	532	514	*	*	*
Madison	1282	1172	13	8	8
Marion	13,884	12,045	118	73	211
Marshall	398	369	*	*	*
Martin	100	94	*	*	*
Miami	255	237	*	*	*
Monroe	1,450	1,428	5	*	*
Montgomery	441	402	6	*	*
Morgan	725	698	*	*	*

Newton	86	78	*	*	*
Noble	384	350	6	*	*
Ohio	18	18	*	*	*
Orange	185	174	*	*	*
Owen	259	249	*	*	*
Parke	99	95	*	*	*
Perry	176	172	*	*	*
Pike	61	61	*	*	*
Porter	901	872	*	*	*
Posey	239	219	*	*	*
Pulaski	90	82	*	*	*
Putnam	236	217	6	*	*
Randolph	244	221	*	*	*
Ripley	258	248	*	*	*
Rush	203	166	9	7	*
Scott	337	306	*	*	*
Shelby	594	487	6	5	*
Spencer	171	159	*	*	*
Starke	151	137	*	*	*
Steuben	184	175	*	*	*
St. Joseph	3,775	3,383	85	49	181
Steuben	1	1	*	*	*
Sullivan	212	202	5	*	*
Switzerland	52	47	5	*	*
Tippecanoe	2,126	2,050	16	9	5
Tipton	173	147	*	*	*
Union	79	72	*	*	*
Vanderburgh	2,765	2,492	35	22	19
Vermillion	165	158	*	*	*

Vigo	1,412	1,318	32	19	13
Wabash	328	306	5	*	*
Warren	91	80	5	5	*
Warrick	597	578	*	*	*
Washington	500	440	*	*	*
Wayne	1,059	900	33	21	23
Wells	228	220	*	*	*
White	356	336	5	*	*
Whitley	392	353	*	*	*
Blank	1,348	1,283	2	2	0
State Total	73,626	66,916	869	563	749

Section 7: Contact Information

CONTACT INFORMATION

Indiana Department of Health
Lead & Healthy Homes Division
2 N. Meridian St.
Indianapolis, IN 46204
Phone: 317-233-1325

https://www.in.gov/health/lead-and-healthy-homes-division/