



MURIEL BOWSER
MAYOR

January 24, 2025

The Honorable Phil Mendelson
Chairman
Council of the District of Columbia
John A. Wilson Building
1350 Pennsylvania Avenue, NW, Suite 504
Washington, DC 20004

Dear Chairman Mendelson:

I hereby submit to the Council of the District of Columbia the enclosed *Childhood Lead Screening Report* for Fiscal Year (“FY”) 2023, which was prepared by the Department of Energy and Environment (“DOEE”) pursuant to section 2003(g) of the Childhood Lead Poisoning Screening and Reporting Act of 2002, effective October 1, 2002 (D.C. Law 14-190; D.C. Official Code § 7-871.03(g)).

This report documents blood lead level (“BLL”) results, as reported to DOEE, from testing completed during FY 2023. The Centers for Disease Control and Prevention considers an elevated BLL reference value to be 3.5 micrograms per deciliter ($\mu\text{g}/\text{dL}$). In FY 2023, 99% of children tested had a BLL below 3.5 $\mu\text{g}/\text{dL}$. Based on BLL testing trends during FY 2023 and existing risk factors for lead exposure, the primary recommendations of this report are to continue to expand outreach to families and healthcare providers, especially in wards with more risk factors; increase compliance with the requirement that every child be tested twice by the age of 26 months; and, implement strategies to decrease the presence of lead hazards in the home, including targeted prevention and intervention strategies.

My administration is available to discuss any questions you may have regarding this report. To facilitate a response to your questions, please contact Collin R. Burrell, Deputy Director, Environmental Services Administration, DOEE, at collin.burrell@dc.gov.

Sincerely,

A handwritten signature in black ink that reads "Muriel Bowser".

Muriel Bowser

Enclosure

District of Columbia Childhood Lead Screening Report Fiscal Year 2023

**Lead-Safe and Healthy Housing Division
Childhood Lead Poisoning Prevention Program**

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Glossary

BLL	Blood lead level, a measure of concentration of lead in blood
Capillary Test	A blood lead test using blood drawn via a finger or heel stick
DOEE	Department of Energy and Environment
EBLL	Elevated BLL. An EBLL is a single BLL result (capillary or venous) at or above the reference value of 3.5 µg/dL established by CDC in 2021
False Positive	A capillary test result ≥ 3.5 µg/dL followed by a venous test result < 3.5 µg/dL
Fiscal Year (FY)	October 1 to September 30 of the succeeding calendar year
GIS	Geographic Information System
HHL PSS	Healthy Homes and Lead Poisoning Surveillance System
Incident Case	A newly confirmed venous blood lead test result ≥ 3.5 µg/dL or two capillary blood lead test results ≥ 3.5 µg/dL drawn within 12 weeks of each other
Ongoing EBLL	A preexisting case where a confirmed BLL ≥ 3.5 µg/dL in a previous fiscal year is followed by a BLL test ≥ 3.5 µg/dL in another fiscal year
Prevalence	Includes all cases, both new (incidence) and preexisting (ongoing)
Screening Test	A blood lead test for a child without a previously confirmed EBLL. A child screened multiple times in a given year is counted only once for each year.
Confirmed EBLL case	Two capillary tests ≥ 3.5 µg/dL drawn less than 12 weeks apart or a Venous Test.
Unconfirmed EBLL or Case	A single capillary blood lead test ≥ 3.5 µg/dL, or two capillary tests ≥ 3.5 µg/dL drawn more than 12 weeks apart
µg/dL	Micrograms of lead per deciliter of whole blood
Venous Test	A blood lead test using blood drawn from a vein

Overview

There is no identified safe blood lead level (BLL).¹ Children less than six years old are especially vulnerable to lead poisoning and its harmful effects. Blood lead concentrations of children living in lead-contaminated environments typically increase beginning in late infancy, peaking at 18–36 months of age and declining slowly over the next few years.² Even low BLLs can damage the brain and nervous system, causing learning and behavior problems and a lower IQ.^{3,4} Higher BLLs may lead to hearing and speech problems, delayed growth, organ damage, and death.⁴

Childhood lead poisoning is preventable. However, persistent environmental lead hazards where children live, learn, and play remain a threat. Known risk factors include minority race/ethnicity, poverty, and housing age.⁵ Exposure to lead is most common when children ingest dust, paint chips, or soil contaminated by deteriorating paint in and around homes built before the 1978 ban on lead-based household paint.⁶ Exposure to lead may also occur when occupied homes known to have lead materials are being abated or renovated in the presence of the residents.⁷ Children are also exposed to lead that enters drinking water via lead pipes, solder, brass fixtures, or valves. Other potential lead exposures include imported candy, spices, cosmetics, toys and toy jewelry, pottery and ceramic cookware, and traditional home health remedies.⁶

Removing lead hazards from the environment is the most effective way to prevent the harmful long-term effects of childhood lead exposure.⁷ However, conducting blood lead screening tests, identifying high-risk populations, and ensuring effective follow-up and referrals to recommended medical, environmental, and social services for children with elevated BLLs and their families remain critical secondary prevention strategies.^{5,6}

Executive Summary

Pursuant to the Childhood Lead Poisoning Screening and Reporting Act of 2002 (the Act), DOEE is required to issue an annual report summarizing and analyzing the lead screening results obtained under the authority of the Act.⁸ This report provides an update on the incidence and prevalence of

¹ Centers for Disease Control and Prevention. (2021, October 28). *Updates to the blood lead reference value*. CDC. <https://www.cdc.gov/lead-prevention/php/news-features/updates-blood-lead-reference-value.html>

² Advisory Committee on Childhood Lead Poisoning Prevention. Centers for Disease Control and Prevention. (2007, November 2). *Interpreting and Managing Blood Lead Levels <10 µg/dL in Children and Reducing Childhood Exposures to Lead*. 56(RR08), 1-14;16. <https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5608a1.htm>.

³ Grosse, S. D., Matte, T. D., Schwartz, J., Jackson, R. J., & Brewer, R. F. (2002). The economic benefits of lead hazard control in U.S. housing. *Environmental Health Perspectives*, 110(9), 903-907.

⁴ Lanphear, B. P., Dietrich, K., Auinger, P., Cox, C., & Braun, J. (2005). Cognitive deficits associated with blood lead concentrations <10 µg/dL in U.S. children and adolescents. *Public Health Reports*, 120(6), 572-579.

⁵ Brown, M. J., Dietrich, K. N., Radcliffe, J., & Gwinn, M. (2016). Environmental disparities in the blood lead levels of young children in the United States. *Environmental Health Perspectives*, 124(8), 1301-1308.

⁶ Centers for Disease Control and Prevention. (2017). *Understanding and preventing lead exposure*. Retrieved from <https://www.cdc.gov/nceh/lead/>

⁷ Centers for Disease Control and Prevention. (2022, December 21). *About CDC's Childhood Lead Poisoning Prevention Program*. CDC. <https://www.cdc.gov/lead-prevention/about/index.html>

⁸ D.C. Official Code § 7-871.03(g).

childhood lead poisoning in the District for FY 2023 (October 1, 2022, through September 30, 2023). It also describes actions taken and planned to improve compliance with the Act and its implementing rules to ensure District children below age six are tested for lead in blood and that lead-exposed children receive medical case management and other follow-up treatment.

Children in this report are defined as individuals below age six residing in the District. For this report, a suspected or unconfirmed elevated BLL (EBLL) is one capillary blood lead test (finger prick) at or above the blood lead reference value of 3.5 µg/dL set by the Centers for Disease Control and Prevention (CDC).⁹ A confirmed EBLL case is one venous BLL test result ≥ 3.5 µg/dL or two capillary BLL test results ≥ 3.5 µg/dL drawn within 12 weeks of each other.

In FY 2023, 12,355 children were tested for lead poisoning. Of those tested, 12,209 children were not found to have EBLLs. There were 224 suspected cases reported in total, with 146 of them identified as confirmed cases.

Lead Screening Requirements

The Act and its implementing rules establish a universal blood lead screening mandate for children in the District. Each healthcare provider or healthcare facility (hereinafter, “provider”) is obligated to perform BLL screening for District children at ages 6–14 months and 22–26 months as part of a well-child visit unless parental consent is withheld or an identical test has already been performed within the preceding 12 months.¹⁰ If a child over the age of 26 months has not been tested, the child must be tested twice before the child reaches the age of six, at least 12 months apart or according to an appropriate schedule determined by the provider.¹⁰ Providers must also conduct BLL screening when a child is at risk for high-dose lead exposure based on living conditions, a parent’s occupational exposure to lead, a history of lead poisoning in siblings or playmates, or as indicated by the child’s behavior or development.

Lead Screening Surveillance

Laboratories must forward BLL test results to the Mayor for children younger than six who reside in the District at the time of testing.¹¹ DOEE receives the results on behalf of the Mayor. Laboratories include healthcare providers and facilities that use a point-of-care testing device to measure lead in capillary blood obtained from a finger or heel prick. DOEE hosts a secure site for laboratories to submit electronic test reports. DOEE processes and uploads the reported information into its Healthy Homes and Lead Poisoning Surveillance System (HHLPSS). DOEE monitors laboratory reporting to identify any uploading errors or reporting inconsistencies and promptly notifies laboratories to address any concerns.

Data Methods and Case Definition

⁹ Centers for Disease Control and Prevention. (n.d.). Recommended Actions Based on Blood Lead Level: Reference value. Retrieved from <https://www.cdc.gov/lead-prevention/hcp/clinical-guidance/index.html>.

¹⁰ Childhood Lead Poisoning Screening and Reporting Act of 2002, D.C. Official Code § 7-871.01 *et seq.*; D.C. Law 14-190.

¹¹ D.C. Official Code § 7-871.03(c)

To assess compliance with lead screening and reporting requirements under the District’s universal blood lead screening mandate, DOEE analyzed lead surveillance data from HHL PSS using Statistical Analysis Software 9.4, Excel, ArcGIS, Tableau, and other analytic tools. Case counts for FY 2023 are for children who were below six years (72 months) of age and residing in the District at the time of the BLL test.

This report summarizes the results of this analysis for the following measures in FY 2023:

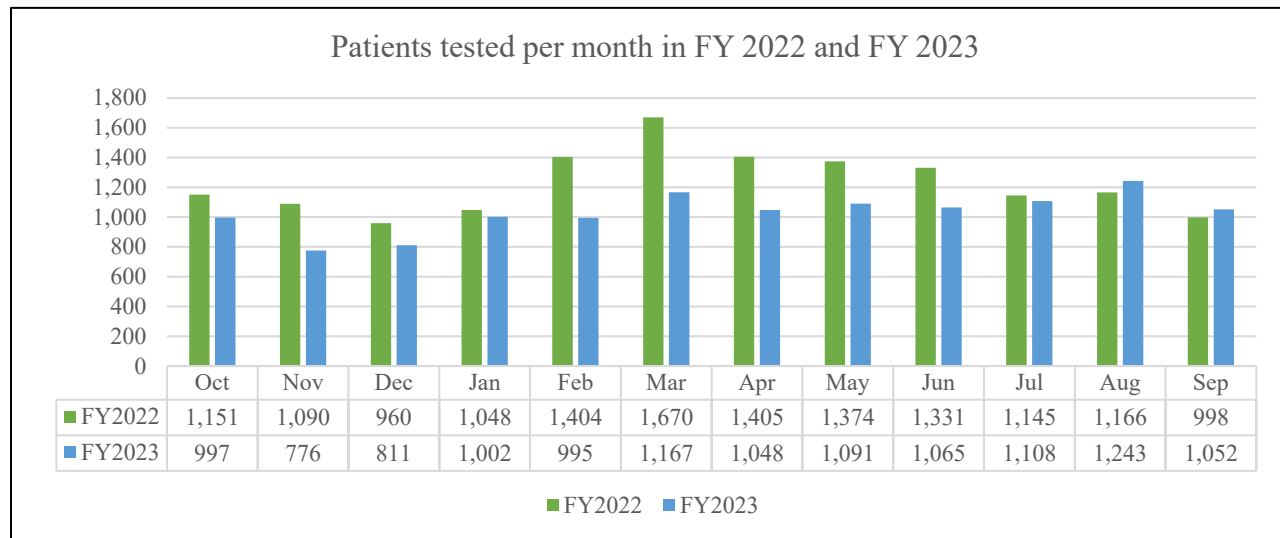
- The number of children tested at least once for blood lead,
- The number and percent of tested children with an EBLL (prevalence),
- The number and percent of tested children with a new EBLL (incidence),
- The distribution of confirmed EBLs by BLL range, and
- Geographic hotspot areas for lead exposure.

Blood Lead Level Testing Trends

Testing Trends

In FY 2023, BLL testing decreased significantly compared to FY 2022. Specifically, in FY 2023, 12,355 children were tested for blood lead, while in FY 2022 14,742 children were tested. This represents a year-over-year decrease of 2,387, or 16.2%. The monthly testing numbers are shown in Figure 1 below.

Figure 1: Comparison of patients tested in FY 2022 and FY 2023



The reasons for the substantial decrease in testing are not yet clear. Potential factors include challenges with physician follow-up protocols due to competing priorities or workflow issues. Patients may have faced barriers such as limited transportation, confusion about schedules, or a lack of awareness about follow-up testing. Community outreach impact may have declined due to ineffective or less effective communication strategies. Also, the number of children under six

residing in the District may have decreased. DOEE is actively researching these and other possible causes.

The testing decline serves as a base indicator for lead testing and community outreach moving forward. DOEE will expand community outreach to more areas within Washington, DC, highlighting specific wards that could have been affected, with a focus in underserved areas.

In FY 2023, DOEE recognized that while community outreach efforts were being conducted a more targeted approach was necessary to effectively reach specific populations and wards. The previous outreach efforts, which included engagement with physicians and communities, were not sufficiently tailored to the unique needs of certain populations (pregnant persons, immigrant populations, and transient families). This lack of specificity may have contributed to a decline in the overall number of patients being tested. DOEE's community outreach efforts, while ongoing, may require a more tailored effort to effectively engage specific high-risk groups such as pregnant individuals, immigrant communities, and transient families.

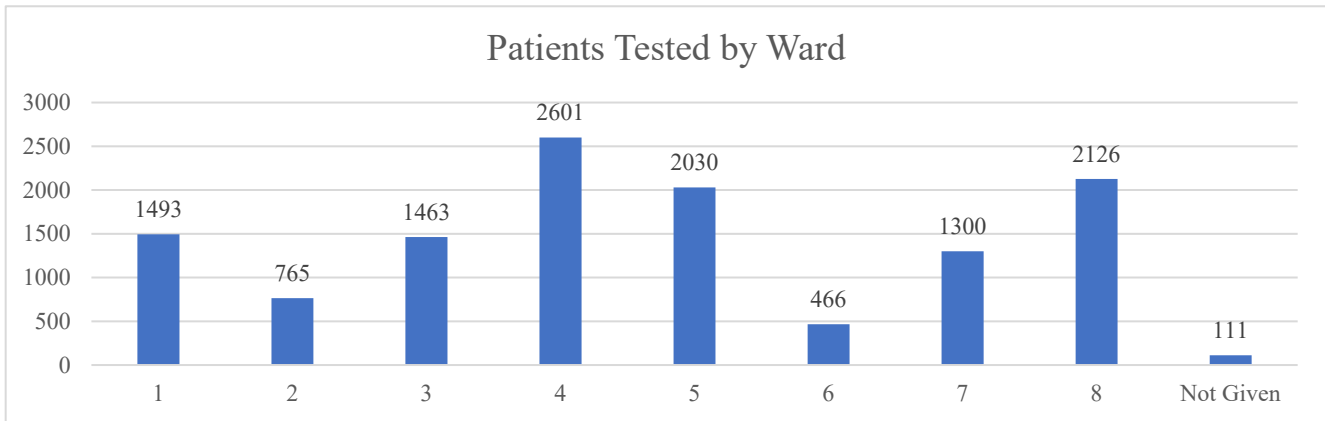
To address these issues moving forward, DOEE will enhance its outreach by leveraging data to better target interventions, expanding partnerships with local organizations, and improving public health campaigns to raise awareness about lead exposure risks. Strengthening physician training on follow-up protocols and simplifying access to testing will also be key strategies to increase participation and safeguard public health.

By increasing community outreach efforts and continuing education to physicians on the importance of follow-up testing, DOEE aimed to increase the testing total in FY 2024.

Patients Tested by Ward

The figure below presents the number of children tested for EBLs by ward. The highest number of tests administered were reported in Ward 4, with 2,601 children tested. The wards with the next highest number of tests were Ward 8 and Ward 5, with 2,126 and 2,030 tests respectively. The wards with the lowest number of tests were Ward 6 and Ward 2, with 466 and 765 tests respectively. Factors contributing to these variations could include socioeconomic status, availability of healthcare infrastructure, targeted public health initiatives, demographic differences (including the number of children under six residing in each ward), identification of high-risk areas for lead exposure, community engagement, and reliable access to care.

Figure 2: Patients tested by DC Ward in FY 2023



In FY 2024, DOEE will continue to foster strong community engagement and trust in health systems to help increase testing participation by leveraging data to target interventions more effectively and collaborating with local organizations and stakeholders. Additionally, DOEE aims to enhance public health initiatives to raise awareness about lead poisoning risks, particularly in high-risk areas identified in previous data.

Lead Screening Results

Of the 12,355 children below six tested for lead exposure in FY 2023, 12,209 (99%) had a BLL below the CDC reference value of 3.5 µg/dL (Table 1). This analysis excludes duplicate test results.

Table 1: Case detection among all District children screened for blood lead, FY 2023

Testing information FY 2023	All tests administered n = 17,100	Percentage of all tests administered
*Number of tests administered < 6 years of age	17,100	Null
Number of children tested < 6 years of age	12,355	100%
Not elevated (< 3.5 µg/dL)	12,209	99%
Total amount of children tested ≥3.5 µg/dL in FY 2023	224	100%
Confirmed to have an EBLL	146	65%
Ongoing Cases (Cases whose BLL stayed ≥3.5 µg/dL by the end of 2023)	111	50%
Incident Cases (New cases)	67	30%
*Number of tests administered by healthcare facilities – This accounts for patients that had multiple tests in a year.		

Number of Children Tested with an EBLL

A total of 224 children were tested to have a BLL above the CDC reference value of 3.5 µg/dL during FY 2023. Of these, 146 cases were confirmed through either two consecutive capillary tests showing elevated levels or a single venous test, which is typically more reliable. At the end of the fiscal year, 111 cases remained active, meaning these children still have BLLs above the reference

value and are receiving ongoing case management to address their exposure. Additionally, 67 new cases, or incident cases (child newly diagnosed with an EBLL who was previously not known to be affected), were also identified within the fiscal year.

Distribution of Confirmed BLL Cases

The risk of harmful health effects increases as the concentration of lead in the blood rises.^{4,11} As stated earlier in this report, studies have shown that even low levels of lead in the blood can have harmful effects on a child’s development.^{4,11} Higher levels (10 µg/dL, 20 µg/dL) of lead in the blood can cause more severe health problems, such as organ damage and death.¹² To prevent lead exposure and reduce the risk of long-term and potentially permanent health problems in children, DOEE monitors the distribution of BLLs among EBLL cases in the District. This information, in turn, helps target prevention efforts and interventions to areas or groups of children where the risk of lead exposure is highest.

Figure 3: EBLL (≥ 3.5 µg/dL) distribution among all children under six years of age residing in the District of Columbia with at least one reported blood lead test in FY23

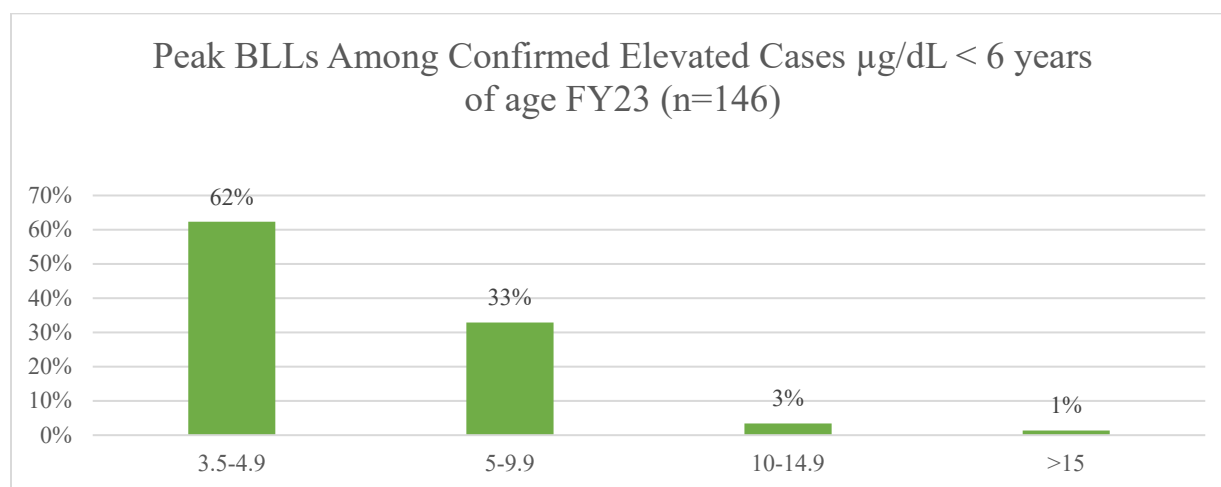


Figure 3 shows the distribution of peak BLLs among the 146 children who had at least one confirmed lead level ≥ 3.5 µg/dL in FY 2023. The data indicates that more than half of the children (62%) had peak BLLs ranging from 3.5 µg/dL to 4.9 µg/dL. Another 33% had peak BLLs ranging from 5 µg/dL to 9.9 µg/dL. A proportion of children had peak BLLs in the range of 10 µg/dL -14.9 µg/dL (3%), and ≥ 15 µg/dL (1%).

⁴ Lanphear, B. P., Dietrich, K., Auinger, P., Cox, C., & Braun, J. (2005). Cognitive deficits associated with blood lead concentrations <10 µg/dL in US children and adolescents. *Public Health Reports*, 120(6), 572-579.

¹¹ Grosse, S. D., Matte, T. D., Schwartz, J., Jackson, R. J., & Sharrett, A. R. (2002). Cumulative lead dose and cognitive function in elderly men: The Veterans Affairs Normative Aging Study. *Environmental Health Perspectives*, 110(3), 543-548.

¹² Needleman, H. L., Gatsonis, C. A., Kennedy, D., et al. (2002). The long-term effects of exposure to low doses of lead in childhood: An 11-year follow-up report. *The New England Journal of Medicine*, 346(22), 1621-1627.

Figure 4: Newly confirmed case distribution among all children residing in the District of Columbia with at least one reported blood lead test in FY 2023

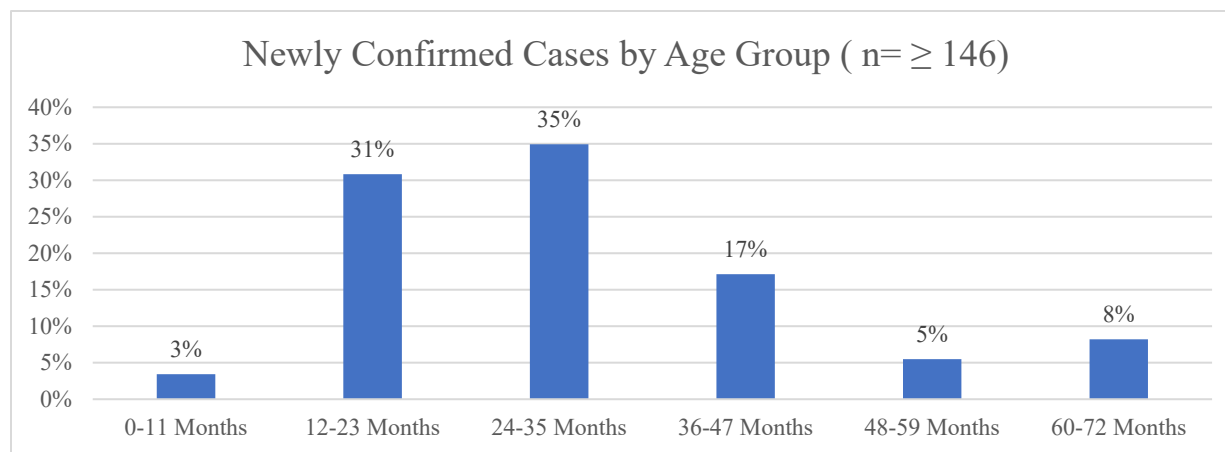


Figure 4 indicates that among the 146 confirmed cases, children in the 12-23 month and 24-35 month age groups are reporting the highest elevated levels. This could be the result of patients moving into the city and getting their first blood lead test at an older age or parents electing to get their child’s blood lead test later on, due to any potential patient access limitations.

Table 2: Elevated blood lead cases by zip code and ward. ≥ 3.5 µg/dL (N = 146) in FY 2023

Zip code	Ward	Number of cases >3.5ug/dL	Percent of cases >3.5ug/dL
20001	Ward 6	4	2.7%
20002	Ward 5	13	8.9%
20003	Ward 6	4	2.7%
20007	Ward 2	3	2.0%
20008	Ward 3	5	3.4%
20009	Ward 1	8	5.5%
20010	Ward 1	8	5.5%
20011	Ward 4	45	30.8%
20012	Ward 4	5	3.4%
20015	Ward 3	1	0.7%
20016	Ward 3	3	2.1%
20017	Ward 5	4	2.7%
20018	Ward 5	7	4.8%
20019	Ward 7	10	6.7%
20020	Ward 8	16	10.9%
20024	Ward 6	1	0.7%
20032	Ward 8	9	6.2%

The data in Table 2 presents the number of children who tested ≥ 3.5 µg/dL by zip code. The percentage shows the distribution of counts across the zip codes in relation to a total of 146 instances. Zip code 20011 holds the highest proportion at 30.82%, indicating a significant concentration of instances. Zip codes 20020 and 20032 also shows notable figures with a combined share of 17.12%. Other areas, such as zip codes in Ward 5 and Ward 6, have moderate contributions, while smaller percentages are observed in zip codes like 20015 (Ward 3) and 20024 (Ward 6), each at 0.68%.

These findings offer valuable insights into the geographical distribution of EBLs and can serve as a foundation for targeted interventions. In the future, the Lead-Safe and Healthy Housing Division plans to develop these

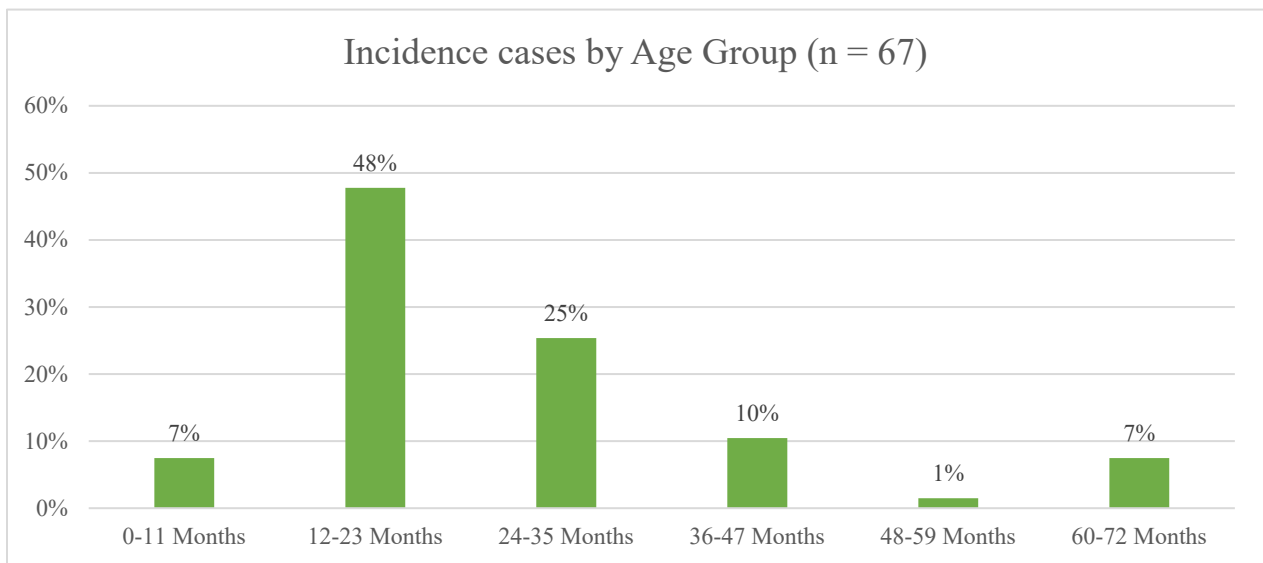
findings by conducting further analysis and implementing targeted prevention and intervention

strategies. It is important to note, however, that the number of residents varies widely across zip codes, so differences in the number and percent of cases may not necessarily reflect high or low concentrations of cases relative to population.

Incident Cases

This section focuses on the distribution of newly confirmed EBLL cases (n=67) by age group and considers follow-up blood lead test results. These findings highlight the importance of follow-up testing and interventions for children with EBLs.

Figure 5: Newly confirmed case distribution among all children residing in the District of Columbia with at least one reported blood lead test in FY 2023



The higher number of patients identified in the 12-23- and 24-35-month ranges can likely be attributed to the time frame that children usually come into the physician’s office to be tested for an EBLL (i.e., 6-14 months for the first test and 22-26 months for the second test). Children being tested during this time frame allows faster detection of possible lead exposure and quicker identification for any possible sources.

Figure 6: Newly confirmed cases with a BLL \geq 3.5 $\mu\text{g}/\text{dL}$ among all children under six years of age residing in the District of Columbia with at least one reported blood lead test in FY 2023

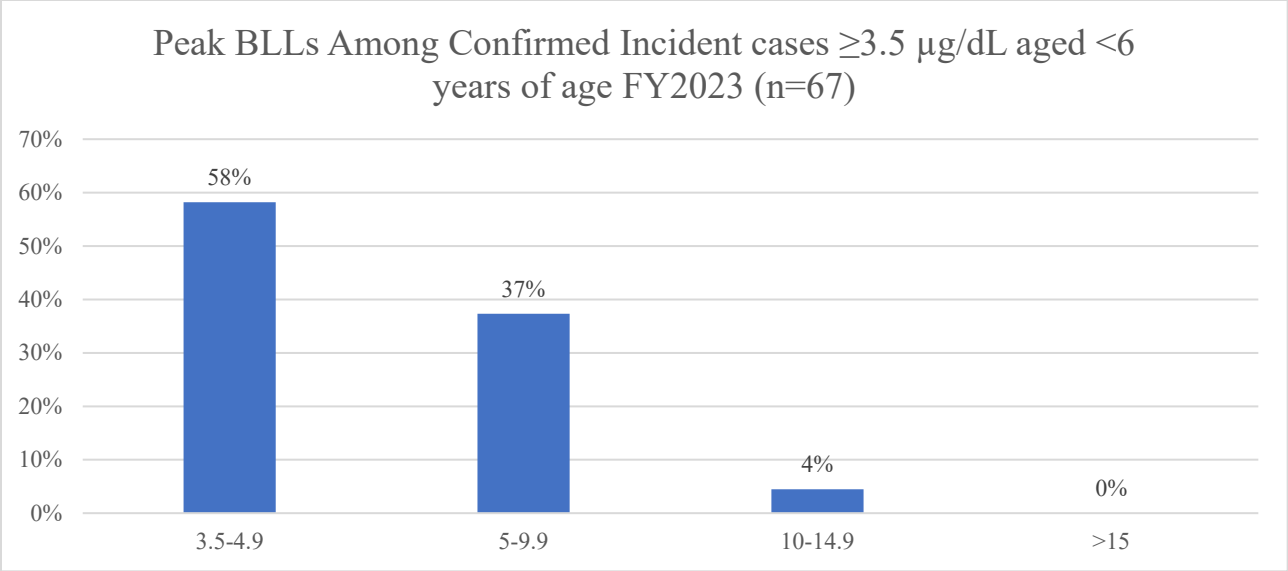
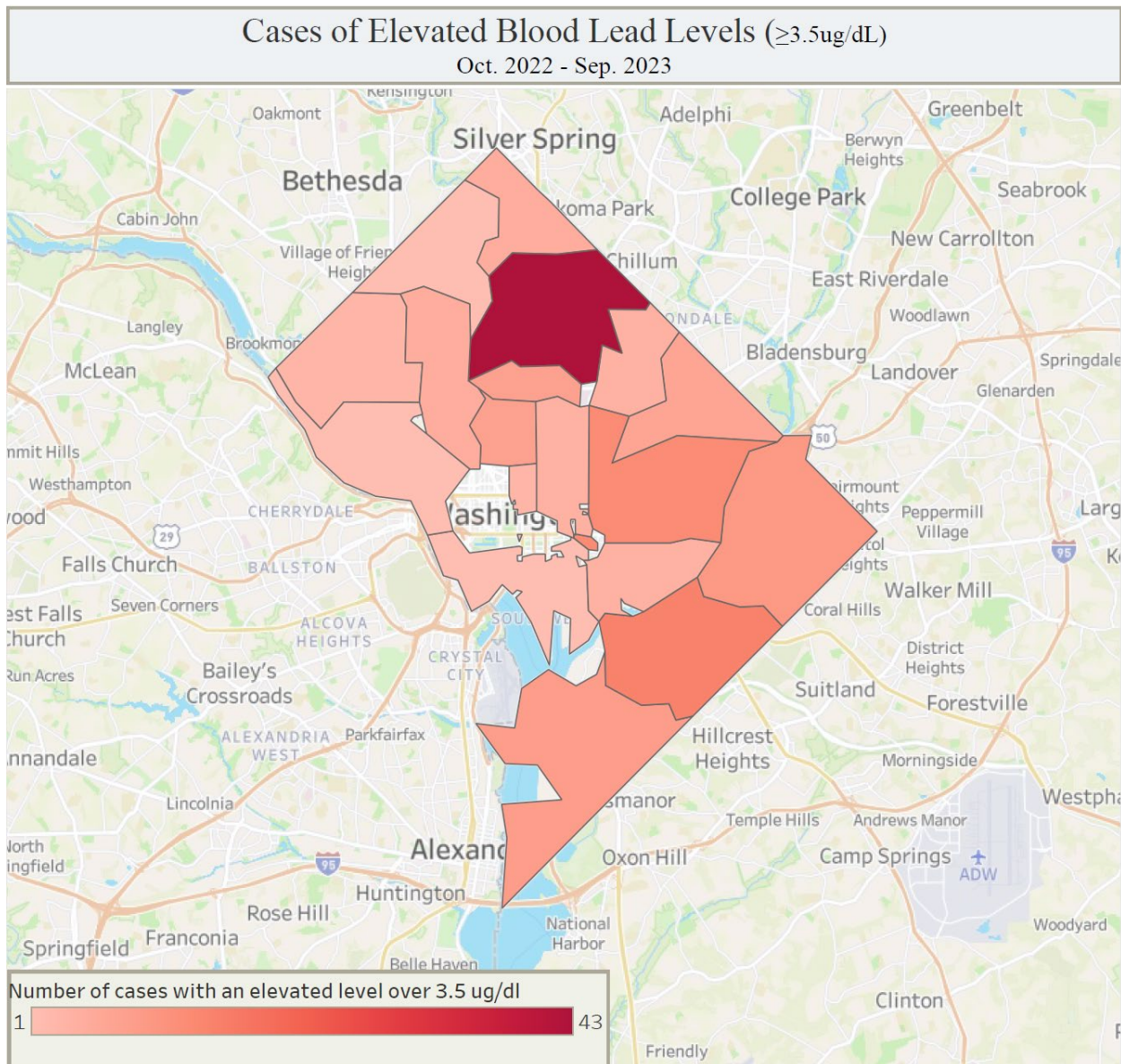


Figure 6 displays the distribution of peak BLL in the 67 newly confirmed incident cases in FY 2023. Based on this data, we can infer that out of the 67 incident cases, high levels of lead poisoning is not common in the District. To ensure that this stays the case DOEE will focus on the testing and identification of exposure sources in the following fiscal year.

EBLL Map

Figure 7: Hotspots for new confirmed EBLL cases $\geq 3.5 \mu\text{g/dL}$ among District children under six years of age, FY 2023



With a widespread distribution of pre-1978 housing, the District is a high-risk jurisdiction for residential lead hazards.

The United States Census bureau states that almost two thirds (63%) of owner-occupied units and one-third (34%) of renter-occupied units in the District were built before 1950.¹³ The District also exceeds fifty states in the portion of housing (34%) built in 1939 or earlier, with 9 in 10 homes built during this time period likely to have had lead-based paint.¹³

Geographic information system (GIS) mapping of case data for FY 2023 reveals case clustering along the Georgia Avenue corridor in Wards 1 and 4, with additional clustering in Ward 6 (Figure 7). The Georgia Avenue corridor is home to some of the District's most vulnerable residents,

¹³ US Census Bureau. (n.d.). American FactFinder - Results. Retrieved from <https://data.census.gov/>

including Latin American and African-born District immigrant and refugee populations. Case clusters are also visible east of the Anacostia River in parts of Wards 7 and 8 in areas with predominantly African American residents, many of whom live in poverty.

Wards 5 and 8 also appear to have a larger proportion of cases than the size of their respective child populations would warrant. Together, Wards 1, 4, 5, 6, and 8 accounted for more than 80% of the BLLs equal to or greater than the CDC reference value of 3.5 µg/dL in FY 2023.

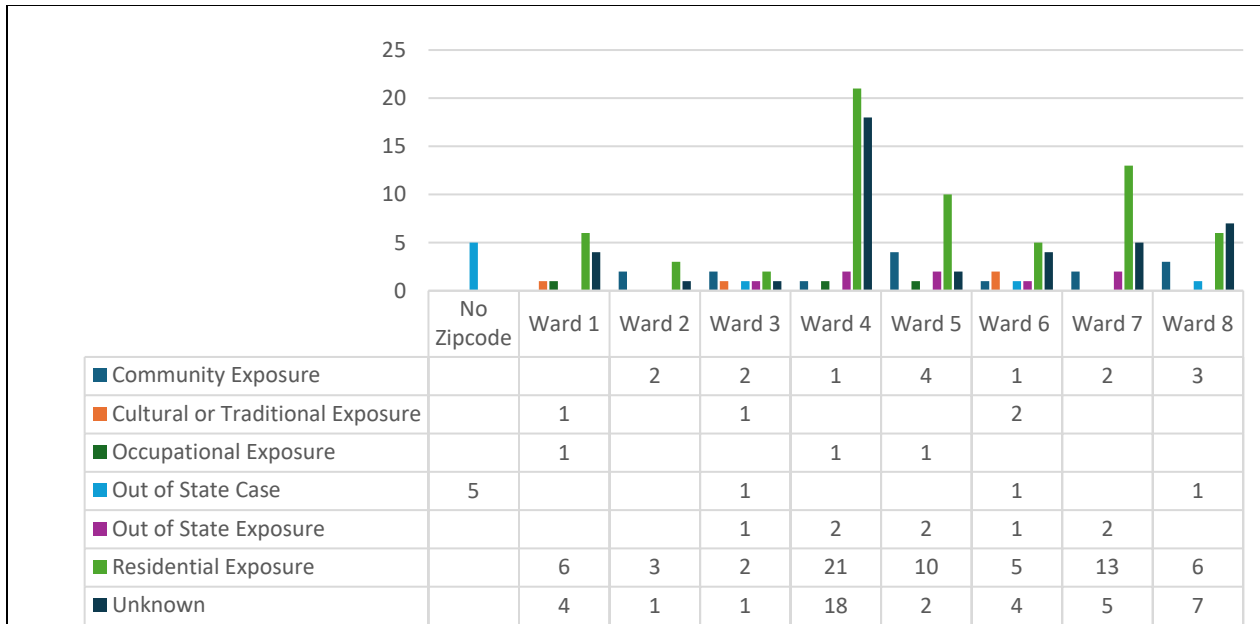
Self-Reported Exposure Sources

This section presents a detailed breakdown of the self-reported exposure sources for patients (Figure 8). DOEE staff have categorized the most frequently reported sources of lead exposure to enhance surveillance and understand patterns within the community.

The exposure sources include residential exposure, which involves hazards associated with lead-based paint in the patient's home, such as chipping or peeling paint, dust from lead-based paint, and contaminated soil. Occupational exposure covers hazards related to lead-based paint in the workplace of a parent or caregiver, such as construction sites or factories. Community exposure accounts for hazards linked to lead-based paint in the patient's neighborhood, including public housing renovations, water pipe removal and lead in drinking water. Additionally, cultural or traditional exposure includes hazards from cultural settings, like ceramics or pottery painted with lead-based paint. Out of state exposure refers to potential sources encountered while traveling outside Washington, DC, and food exposure includes lead contamination in certain foods identified by the CDC or FDA.

Figure 8 below illustrates the distribution of lead exposure cases across various wards in Washington, DC, categorized by the type of exposure. Ward 4 exhibits the highest number of cases across multiple categories, with significant counts in residential exposure (21 cases), unknown exposure (18 cases), and a few cases each in community exposure, cultural or traditional exposure, occupational exposure, out of state exposure. Residential exposure is also notably high in Ward 5 (10 cases) and Ward 7 (13 cases), indicating that lead exposure from home environments is a significant issue. Cultural or traditional exposure is notable but isn't as predominant as other sources. The presence of a high number of unknown exposure cases in Wards 4, 7 and 8 highlights the need for further investigation to identify specific sources of lead exposure.

Figure 8: Self-reported exposure sources from confirmed BLL cases in the District



Lead Screening Compliance

The District of Columbia mandates that all children undergo two blood lead tests by the age of 26 months. If a child has not been previously tested or there is concern of lead exposure, additional testing is required up to six years of age. This report examines compliance with these regulations for children born between October 1, 2021, and September 30, 2023, and receiving their first test between the ages 0-12 months, based on data from the DC Vital Records Department. The analysis focuses on testing conducted between October 1, 2022, and September 30, 2023.

Compliance Results

In FY 2023, 32 percent of children aged 2 years and under received at least one blood lead test, a low level in itself and a substantial decline from the 55 percent compliance level in FY 2022. Population data indicates that 11,778 children under the age of 2 were residing in the District during FY 2023. Of these children, only 3,765 were tested at least once for blood lead between the ages of 0-12 months resulting in a 32 percent compliance rate. The majority of patients that received their first blood lead test were between the ages of 12-24 months.

The data reveals that while some children are being tested, a large portion could either miss the initial blood lead test or fail to complete the required second test by the mandated age. More public health interventions, including increased community outreach activities to communities where these patients live, will need to be enhanced in the next fiscal year.

Lead Reporting Compliance

The District requires laboratories to report all BLL test results for District children to DOEE's Childhood Lead Poisoning Prevention Program within one week of analysis. DOEE has interpreted the term laboratory to include point-of-care testing performed by providers and non-laboratory

facilities to ensure a complete dataset of lead testing in the District. All EBLL test results ≥ 10 $\mu\text{g}/\text{dL}$ must be reported immediately. Health care providers and facilities must report EBLs to DOEE within 72 hours of laboratory notification of the test result. For children with confirmed EBLs, health care providers or facilities must provide medical case management and treatment, follow-up BLL testing, lead awareness and poisoning education, and appropriate referrals for social and environmental services.

The District also requires:

- Laboratories that perform or analyze blood lead tests for District-residing children to forward all test results to DOEE and the health care provider or facility where the blood sample was taken.
- Health care providers or facilities to forward all EBLL results immediately to the child's parent or guardian; and
- Health care providers or facilities to provide written evidence of testing for lead poisoning that includes the date of the test and the test results upon request of the child's parent or guardian.

Holistic Approach to Addressing Lead Contamination

The District acknowledges the significance of primary prevention, early intervention, and testing young children for lead poisoning. DOEE has five branches within the Lead Safe and Healthy Housing Division and other administrations working collaboratively to address lead issues in the District. Below is a synopsis of each program's involvement.

The Healthy Housing (HH) Branch is responsible for receiving all lead tests for children under six years of age in the District. The results primarily arrive at the HH Branch electronically and are reviewed manually to detect any inconsistencies. If inconsistencies are detected, the reporting lab is contacted for clarification. If DOEE personnel determine that a child has been poisoned by lead, DOEE's public health analysts work with health care providers and parents or guardians to ensure they are knowledgeable about the services DOEE and sister agencies have available to combat lead poisoning. The public health analysts provide ongoing case coordination, education, and support as needed through calls, texts, emails, home visits, and referrals to additional services. A few key services performed by our public health analysts include:

- Confirmatory blood lead tests: DOEE's public health analysts make initial calls to parents or caregivers in all cases at or above the reference level of $3.5 \mu\text{g}/\text{dL}$. For unconfirmed cases (i.e., those where EBLL reports are from only one capillary result), public health analysts encourage confirmatory venous testing for the child if the test has not already been scheduled or performed.
- Repeat blood lead tests: DOEE's public health analysts use HHLPSS to track compliance with the recommended schedule of repeated blood lead tests for EBLL cases. Routinely, public health analysts remind parents/guardians and physicians about when the child's next follow-up blood lead test is due.

- In-home risk assessments: DOEE's public health analysts routinely refer children with BLLs at or above the reference level of 3.5 µg/dL to DOEE's Lead Compliance and Enforcement Branch (discussed more in the following section). If warranted or beneficial to District residents, DOEE refers both confirmed cases and lead enforcement cases to available resources for home remediation repair, including the Department of Housing and Community Development and District of Columbia Housing Authority.

Initial visits to homes with confirmed cases typically included a public health analyst and lead risk assessor from the Lead Compliance and Enforcement Branch. The public health analyst administers the lead questionnaire to investigate potential lead exposures in and around the home. The lead risk assessor conducts an environmental investigation that includes use of an X-Ray Fluorescence (XRF) Analyzer and collection of dust, water, bare soil, food, spices, makeup, medicine, and other samples.

The Lead Compliance and Enforcement Branch (LCEB) ensures compliance with the Lead-Hazard Prevention and Elimination Act and implementing regulations.

This branch works directly with homeowners, residents, and property managers when the HH Branch identifies an EBLL child. The LCEB collaborates with the HH Branch on many in-home visits to determine if any potential sources of lead contamination exist in the house. LCEB activities include:

- Conducting lead risk assessments (i.e., testing of chipping or peeling paint and water for lead) to confirm the presence or absence of lead-based paint hazards in homes identified with children under the age of 6.
- Engaging with clients often monthly until compliance is reached. This includes education regarding temporary measures such as cleaning and creating barriers between the child and the hazard.
- When a lead permit is required, ensuring all hazards are addressed according to DOEE regulations.
- Conducting audits of permits, certified professionals, property managers, and accredited training providers to ensure compliance with regulatory requirements.
- Reviewing clearance reports to ensure all components are properly addressed.

DOEE-certified lead risk assessors conduct a lead risk assessment, which includes a visual assessment, XRF testing, dust/soil sampling, and photographs in the home to identify the cause of lead poisoning. When a lead-based paint hazard is identified, DOEE requires its elimination by issuing the property owner or manager an Order to Eliminate Lead-Based Paint Hazards, or in the case of owner-occupied homes, a Notice of Lead-Based Paint Hazards to address the identified hazards. DOEE will issue a notice or order as appropriate and notify the property owner about DOEE's regulatory requirements.

The LCEB is partially funded by a grant from the U.S. Environmental Protection Agency to implement professional certifications, accreditations, and permitting operations. The LCEB certifies individuals to work in the District and provides quality control by monitoring the activities and work product of a subset of these certified professionals. The total number of certified individuals and business entities is broken down as follows:

Table 3: Lead Compliance Certifications

Discipline	Total Number Certified in the District at the end of FY 2021	Total Number Certified in the District at the end of FY 2022	Total Number Certified in the District at the end of FY 2023
Certified Worker	464	529	510
Certified Inspector	46	52	49
Certified Risk Assessor	109	115	106
Certified Supervisor	79	95	91
Certified Project Designers	3	2	1
Certified Business Entity	175	216	250
Certified Dust Sampling Technicians	26	22	16

DOEE-certified lead risk assessors hold multiple outreach and education sessions throughout the year, where they provide information related to lead permit requests, obtaining lead certification, lead training courses, and risk assessment and clearance examination procedures. These sessions provide beneficial information to clients before conducting any lead-related work.

Outreach is vital to preventing EBLL cases by bringing awareness to contractors and property owners about lead hazards and remediation strategies using lead-safe work practices. In FY 2023, the LCEB engaged four accredited training providers, conducted inspections, and issued 184 lead abatement permits for lead activities in dwelling units, child-occupied facilities, and commercial properties.

Figure 9: Distribution of lead-based paint hazards across wards

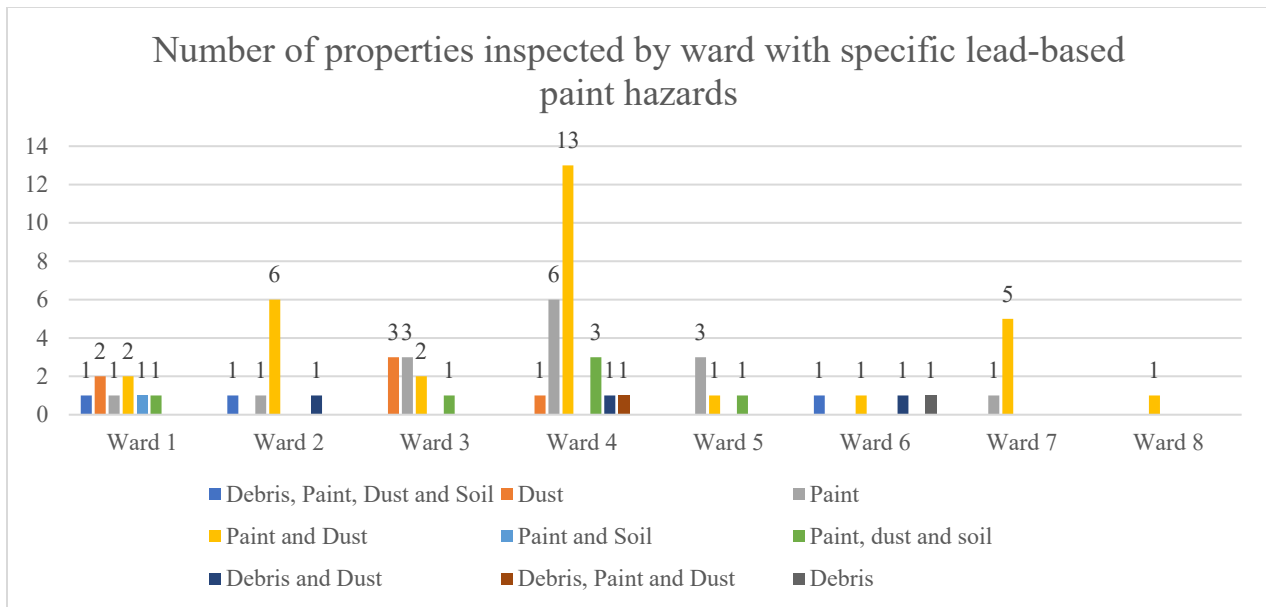


Figure 9 shows the lead-based paint hazards discovered during inspections across Wards 1 to 8. Ward 4 exhibits the highest count with 25 instances spanning Dust, Paint, "Paint and Dust", "Paint, Dust and Soil", "Debris and Dust" and "Debris, Paint and Dust". Based on this data, DOEE will launch targeted outreach efforts, especially in Ward 4 due to its higher hazard frequency. Efforts in Wards 6, 7, and 8 should focus on handling Paint and "Paint and Dust" hazards, while Wards 1, 2, 3, and 5 need a more comprehensive approach due to their varied hazard types. By prioritizing these areas and strategies, DOEE hopes to efficiently reduce the risks associated with lead-based paint.

The Licensing and Certification Branch addresses lead in drinking water in a licensed child development facility (CDF). The program was established pursuant to the Childhood Lead Exposure Prevention Amendment Act of 2017 (Act).¹² The District is committed to addressing lead in drinking water at recreation facilities, public and charter schools, and CDFs. The law mandates that the Department of General Services sample and test public schools and recreation facilities. Charter schools are responsible for sampling and testing at their own facilities, while DOEE focuses its efforts on CDFs.

The Act defines a drinking water source as "a source of water from which a person can reasonably be expected to consume or cook with the water originating from the source." Specific to CDFs, the law requires each CDF to locate all drinking water sources, install and maintain filters for reducing lead at all drinking water sources, and post conspicuous signs on water sources that are not drinking water sources. Water from sources marked as non-drinking water sources should not be used for cooking or consumption. All CDF drinking water sources must be tested for lead annually and if a test result indicates a lead concentration above 5 parts per billion (ppb), the drinking water source must be shut off within 24 hours after receiving the test result. Then, the CDF must determine the proper remediation steps and notify parents and guardians of children at the CDF of the test results and remediation steps.

¹² D.C. Official Code § 38-821.01 *et seq.*; D.C. Law 22-21.

In calendar year 2023, DOEE inspectors collected 1,556 drinking water samples from 121 CDFs, including 1,374 samples from 87 child development centers, 70 samples from 15 child development homes, and 118 samples from 19 child development expanded homes. Ward 4 had the most facilities sampled in 2023. Of the samples collected, eleven (11) child development facilities had at least one water source with a lead concentration exceeding 5 ppb.

Implementing a lead filtration program is important to OSSE and DOEE's shared commitments to ensure that children and staff at childcare facilities in the District are not exposed to unsafe levels of lead from drinking water sources. Since the implementation of the Act, CDFs have installed lead filters, tested for lead in drinking water, and implemented any necessary corrective actions. In the future, more webinars will take place for "Lead in Water" compliance education for all CDFs. This ensures that all facilities understand the current requirements every year and allows for continued updates. OSSE and DOEE will continue to work collaboratively to improve the implementation and monitoring of water sources in CDFs to ensure that children, and staff, at childcare facilities in the District are not overburdened or exposed to unsafe levels of lead from drinking water sources.

The Lead Reduction Program (LRP) began in FY 2021 based on funding DOEE received from the U.S. Department of Housing and Urban Development to assist eligible households with lead-based paint hazard reduction and Healthy Homes measures. The primary purpose of the LRP is to protect the maximum number of young children under the age of six years old from lead poisoning in the District. To be eligible, the household must meet income requirements and the property must have been built before 1978. Priority for this program is given to households with children under the age of six. Once DOEE receives a complete application with required documentation and verifies that a household is eligible for LRP, they are assigned to an LRP subgrantee. The process includes:

- The subgrantee coordinates with contractors to complete a Lead Inspection and Risk Assessment (LIRA) to identify lead-based paint and health or safety hazards.
- If lead-based hazards are discovered during the LIRA, the subgrantee schedules a home inspection to create a scope of work and assigns it to a contractor.
- Once the scope of work is assigned, the subgrantee communicates the next steps and oversees the project timeline to completion (Note: In a case-by-case review some inhabitants may be required to relocate to a temporary lead-free facility during this phase with a maximum of 10 days.)
- All projects are required to pass a lead clearance test before the household can reoccupy the dwelling.

The Lead Pipe Replacement Assistance Program (LPRAP) assists property owners by paying a portion or all of the costs to complete the replacement of a partial lead service line. Residential service lines with lead, galvanized, or brass pipes in private space and non-lead pipes in public space qualify for LPRAP. Eligible property owners who meet income guidelines qualify for

income-eligible assistance, which pays 100 percent of the costs for private service line replacement. Property owners who exceed income guidelines qualify for standard assistance, which pays 50 percent of the costs for replacement up to \$2,500 from DOEE. Costs above \$2,500 were previously the homeowner’s responsibility; these costs are currently covered by DC Water using Bipartisan Infrastructure Law funding. After a homeowner submits a complete application, DOEE will process the application.

If the applicant is approved:

- DOEE will notify the homeowner of the assistance level for which they have been approved and send the homeowner DC Water’s Contractor List;
- The homeowner will choose a contractor from the Contractor List to perform the replacement;
- The chosen contractor will submit a Cost Proposal Form, with the homeowner’s signature, to DC Water for review; and
- Once DC Water recommends approval for the Cost Proposal, DOEE will send the homeowner a Benefit Confirmation Letter detailing the next steps.

Recommendations

Based on the findings of this report, below are key recommended strategies and activities to improve future childhood lead screening, surveillance, and prevention in the District of Columbia.

Action	Description	Agencies	Completion Date
Increasing BLL screening for children under the age of 26 months	Implement preventive measures based on the FY 2023 Compliance analysis. The compliance analysis helped identify patients that are eligible for testing within the District. Areas with a high population of eligible children can be targeted for outreach.	DOEE	9/30/2025
	Extend monitoring and outreach to other potential hotspots based on data trends from FY 2023 to further target patients who have not been tested or had a necessary follow up.	DOEE	9/30/2024
Continuous updating of the lead registry	Develop an annual review process for the lead registry to ensure data accuracy and relevance. Integrate the lead registry with other relevant healthcare databases for comprehensive review and analysis.	DOEE and hired contractor, Chesapeake Regional Information System for our Patients (CRISP)	9/30/2025

Improve linkages to recommended services for children with EBLLs	Based on the surveillance model findings, develop targeted interventions for Wards 1 and 4 due to the high volume of children with an EBLL.	DOEE	Ongoing
	Expand collaboration with other agencies, including housing and health, for a multi-pronged approach to lead mitigation, including food sources.	DOEE and partner government agencies	9/30/2025
Community outreach supported by DOEE	Continue to use outreach methods to identify at-risk populations. Implement two outreach projects that target areas with low testing and high exposure sources identified in this report.	DOEE	9/30/2025
Compliance	Conduct regular compliance audits to ensure that all blood lead data is uploaded to HHLPPSS or shared with DOEE, and that primary interventions are successful.	DOEE	9/30/2025