



OFFICE OF THE  
SECRETARY  
2015 OCT 26 PM 5:07

MURIEL BOWSER  
MAYOR

OCT 26 2015

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

**RE: FY14 Childhood Lead Screening Report (Childhood Lead Poisoning Screening and Reporting Act of 2002, D.C. Law 14-190)**

Dear Chairman Mendelson:

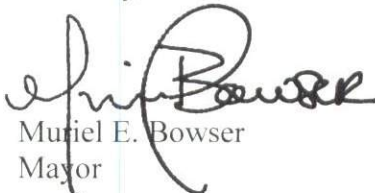
Pursuant to section 2003(g) of the Childhood Lead Poisoning Screening and Reporting Act of 2002 ("The Act"), D.C. Law 14-190, the Department of Energy and Environment ("the Department") is pleased to submit the enclosed report summarizing and analyzing the lead screening results obtained under the authority of the Act.

Consistent with the requirements of the Act, this report also includes recommendations based on or pertaining to:

- (1) The extent of compliance with the requirements of this section; and
- (2) The incidence and prevalence rates of childhood lead poisoning in the District of Columbia

Please feel free to contact me or Department Director Tommy Wells at 202-535-2500 if you have any questions regarding this report.

Sincerely,

  
Muriel E. Bowser  
Mayor

# **Annual Report: Fiscal Year 2014 Childhood Lead Screening Report**

Lead and Healthy Housing Division  
August 2015  
Fiscal Year 2014 Annual Report

Department of Energy and Environment  
1200 First Street NE, Suite 500, Washington, DC 20002  
Phone: (202) 535-2600 • [doee.dc.gov](http://doee.dc.gov)  
[Facebook.com/doee\\_dc](https://www.facebook.com/doee_dc) • [Twitter: @DOEE\\_DC](https://twitter.com/DOEE_DC)

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## OVERVIEW

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)) ("the Act") requires the Mayor to issue a report summarizing and analyzing the lead screening results obtained under the authority of the Act. Consistent with the requirements of the Act, this report also identifies actions taken by the Mayor to improve compliance with the requirements of the Act and the incidence and prevalence rates of childhood lead poisoning in the District of Columbia. This report relies on data compiled over the past five (5) years (Fiscal Year 2009 through Fiscal Year 013).

## EXECUTIVE SUMMARY

The District of Columbia Department of Energy and Environment (the "Department") is the agency responsible for oversight of the District's lead screening and reporting requirements the Act. The Act's screening requirements are designed to identify children less than six (6) years old whose blood lead levels require case management and medical follow-up, and enable identification of homes that may contain sources of lead exposure such as lead-based paint hazards. The reporting requirements are designed to alert parents and guardians of screened children, and the Department of all children's lead screening results.

The Department, in partnership with the Department of Housing and Community Development, the Department of Health Care Finance ("DHCF"), the Department of Health ("DOH"), the Department of Consumer and Regulatory Affairs, the U.S. Centers for Disease Control and Prevention ("CDC"), the U.S. Environmental Protection Agency, and numerous local community organizations, has overseen, during the five-year period covered by this report, a 60% decrease in the number of children identified with a blood lead level equal to or greater than the current federal "reference value"<sup>1</sup> of five (5) micrograms of lead per deciliter of blood ( $\mu\text{g}/\text{dL}$ ). During this same five-year period, lab reporting numbers have remained stable, with the Department receiving more than 20,000 blood lead test results each year, annually involving 15,250 - 16,300 children less than six (6) years of age.<sup>2</sup>

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<sup>1</sup> The "reference value" is the threshold designated by the CDC as the marker for children whose lead exposure requires case management follow-up.

<sup>2</sup> During this five-year period, the number of children less than six years old living in the District ranged from about 38,500 to 47,500 individuals, according to the US Census Bureau. Note that District law does not require that all children less than six years old get tested, only that all children get tested twice by the time they are two years old (by 27 months of age). District regulations specify that a child must be tested "[a]t least twice [... before the child

## LEAD SCREENING RESULTS

### A. Adopting a Reference Value

There is no safe level for lead in a person's blood.<sup>3</sup> In 2012, CDC concurred or concurred in principle with 3 key recommendations from its Advisory Committee on Childhood Lead Poisoning Prevention (ACLPP), including the recommendation to abandon the term "threshold of concern" on the premise that any amount of lead in a person's blood is "of concern." The other ACLPP recommendation accepted by CDC was adoption of a "reference value" that reflects the threshold at which a child's blood lead level exceeds that of the vast majority of the nation's children. The reference value is determined by calculating the 97.5<sup>th</sup> percentile of blood lead levels recorded for children between one (1) and six (6) years old, in the periodically administered National Health And Nutrition Examination Survey (NHANES), and establishing that blood lead level as the "reference value" indicating an "unusual" exposure (chronic or acute) to lead. The reference value represents the 2.5% of children with the highest blood lead levels in the nation. CDC states that these blood lead levels are those that should require case management, including the identification of the potential source(s) of lead exposure involved in a given case. On May 16, 2012, CDC established the reference value as five (5) µg/dL.<sup>4</sup>

In the District of Columbia, the Department houses the District's Childhood Lead Poisoning Prevention Program, responsible for recording and monitoring the blood lead test results of all children who reside in the District. Test results are reported to the Department electronically and are recorded in a secure, web-based portal supported by the CDC. In 2013, the Department adopted the federal reference value of five (5) µg/dL, which effectively replaced the District's previous Action Level of ten (10) µg/dL, as a trigger for case management, including an investigation to identify potential sources of lead exposure.

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attains the age of six (6) years...) if a child over the age of twenty six (26) months has not previously been tested for [blood lead level]." (See 22 DCMR 7301.1(c))

<sup>3</sup> "No safe blood lead level in children has been identified." From CDC's website, last viewed 7-17-15 (cdc.gov/lead); "[...] existing data indicate that there is no evidence of a threshold for the adverse consequences of lead exposure." Lanphear BP, Hornung R, Khoury J, Yolton K, Baghurst P, Bellinger DC, Canfield RL, Dietrich KN, Bornschein R, Greene T, Rothenberg SJ, Needleman HL, et al. 2005 *Environ Health Perspect* 113:899

<sup>4</sup> The Centers for Disease Control lowered the reference value on May 16, 2012, revising it to reflect the most recent 97.5<sup>th</sup> percentile.

## B. Lead Screening Results

Table 1 below categorizes results for District residents who were younger than 72 months of age (less than six years old) at the time of blood lead level testing, during Fiscal Years 2009 through 2013.

**Table 1. Reported Blood Lead Level Results for Children Less Than 72 Months of Age, District of Columbia, Fiscal Years 2009 - 2013<sup>1</sup>**

	FY09	FY10	FY11	FY12	FY13
<b>Total Children Screened</b>	15,440	15,913	15,266	16,871	15,309
<b>0-4.9 µg/dL</b>	14,986	15,502	14,936	16,604	15,128
<b>5-9.9 µg/dL</b>	390	336	292	225	156
<b>10- 14.9 µg/dL</b>	38	54	28	26	15
<b>15- 19.9 µg/dL</b>	10	8	5	6	7
<b>20 µg/dL and up</b>	16	13	5	10	3

<sup>1</sup>Reflects first reported blood lead test for child per Fiscal Year

These results indicate:

- Overall, childhood blood lead levels during this 5-year period reveal a pattern of declining exposure to lead in the District of Columbia. Results equal to or greater than 5 µg/dL went from 454 children in FY09 (2.9% of all children screened) to 411 children in FY10 (2.6% of all children screened), to 330 children in FY11 (2.2% of all children screened), to 267 children in FY12 (1.6% of all children screened), and to 181 children in FY13 (1.2% of all children screened).
- The declining trend is also evident in higher blood lead levels (equal to or greater than 10 µg/dL), which affected more than 60 children during both FY09 and FY10, and decreased to 25 during FY13.
- Blood lead levels equal to or greater than 5 µg/dL continue to affect hundreds of children in the District of Columbia annually and remain an ongoing cause of concern.<sup>5</sup>

<sup>5</sup> The numbers reflected in this report are based on thousands of annually reported results; but each year, thousands more are not tested, and therefore do not fully capture these numbers are likely to under-report the true extent of elevated blood lead levels in the District

## **SCREENING REQUIREMENTS COMPLIANCE**

### **A. Screening Requirements**

The Act requires:

- Health care providers or facilities to inform the parent or guardian of every child under the age of 6 years in the District of Columbia, served by the provider or facility, of the requirement for periodic blood tests for lead poisoning as provided in this [Act] and rules implementing this [Act].<sup>6</sup>
- Health care providers or facilities to perform a blood test for lead poisoning on every child who resides in the District of Columbia as part of a well-child care visit, once between 6 months and 14 months of age, and a second time between ages 22 months and 26 months of age.<sup>7</sup>
- If a child's age exceeds 26 months, and a blood lead screening has not been performed, the child shall be screened twice prior to the age of 6 years.<sup>8</sup>

### **B. Compliance Results**

During Fiscal Year 2012, the Department conducted research using focus groups, to determine knowledge of screening requirements by parents and guardians of young children in the District. The focus group results indicate that pediatricians and pediatrician practices serving District residents could improve in informing their patients about the District's lead screening requirements. Five focus groups were held, each consisting of between 8-10 parents.

The focus groups demonstrated that more than half of parent participants indicated that they were not aware of the need for two lead tests, nor could they identify reasons for doing so. Moreover, several of the parents and guardians in the focus groups were unaware of the District's lead screening requirements, or at best had forgotten ever having been told or informed about them.

A more reliable data point is the extent of compliance with the requirement that every District resident is screened for lead twice by twenty six (26) months of

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<sup>6</sup> D.C. Official Code § 7-871.03(a)

<sup>7</sup> D.C. Official Code § 7-871.03(b) but this requirement does not apply if a parent withholds consent or an identical test has already been performed within the previous 12 months.

<sup>8</sup> D.C. Official Code § 7-871.03(b)

age.<sup>9</sup> Available data require us to analyze compliance in the following age groups:

- number of children screened through age 23 months,
- number of children screened between ages 24 and 35 months, and
- number of children who were screened between 36 months and 71 months of age.

According to available data (see Table 2), among those tested who are less than 72 months of age, roughly 6,500 – 7,500 children are less than two years old, and about 4,000 – 4,500 are two years of age (24 through 35 months). Children 36 through 71 months of age account for the remaining 4,000 – 5,000 children tested annually.

**Table 2. Number of Children Less Than 6 Years of Age With At Least One Reported Blood Lead Test Result, District of Columbia, Fiscal Years 2009 - 2013<sup>10</sup>**

Age Group (in months)	FY09	FY10	FY11	FY12	FY13
<b>0 - 23 months</b>	<b>6,554</b> (61% of estimated 10,786 children 0-23 months)	<b>6,778</b> (64% of estimated 10,620 children 0-23 months)	<b>6,686</b> (55% of estimated 12,095 children 0-23 months)	<b>7,041</b> (53% of estimated 13,279 children 0-23 months)	<b>6,804</b> (51% of estimated 13,235 children 0-23 months)
<b>24 - 35 months</b>	<b>3,983</b> (60% of estimated 6,593 children)	<b>4,183</b> (63% of estimated 6,670 children)	<b>4,036</b> (61% of estimated 6,622 children)	<b>4,374</b> (57% of estimated 7,689 children)	<b>4,460</b> (51% of estimated 8,726 children)
<b>36 - 71 months</b>	<b>4,841</b>	<b>4,922</b>	<b>4,521</b>	<b>4,894</b>	<b>3,968</b>

All population estimates calculated using single age population estimates from "National Kids Count."

<sup>9</sup> This includes the corollary that should a child exceed 26 months of age and not yet be screened once for lead exposure, such child must be screened twice before the age of six (6) years of age.

<sup>10</sup> Table 2 does not purport to fully reflect the extent of compliance with the District's screening requirement that children must be tested between 6 and 14 months of age and again between 22 and 26 months of age. Instead, this table divides District children with reported blood lead tests into three age groups.



The first row in Table 2 captures the number of children who received a blood lead test prior to turning two years old. This suggests that an estimated 51% to 64% of District children were screened at least once by age 24 months during the past five fiscal years. The District screened roughly the same proportion of two-year-olds (51% - 63%). Between half and two-thirds of the District's two-year-olds are screened for lead exposure annually, as is the case for about the same proportion of children less than two years of age living in the District of Columbia.

The Department also identified the census tracts where data indicate the largest screening gaps. As shown on the map below, this includes three census tracts in Ward 7, two census tracts in Ward 6 and two in Ward 3, and one census tract in each of Wards 2, 5, and 8.

**Proportion of children less than five years of age with blood lead level testing, by census tract – District of Columbia, 2013**

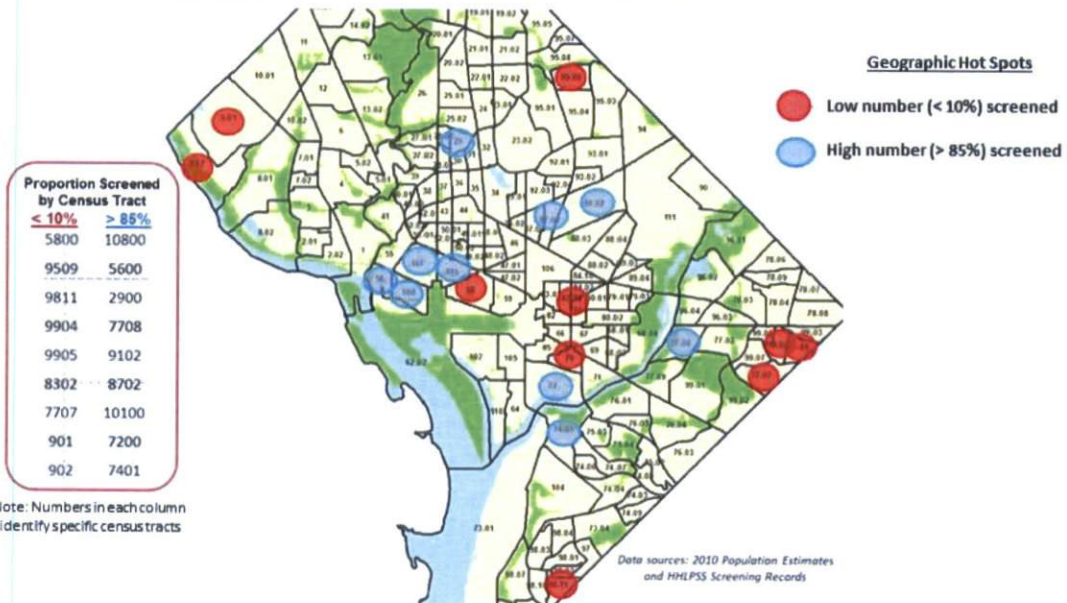


Table 3 (below) provides information on the proportion of children less than three years (36 months) of age who were screened once, and the proportion of children less than three years of age who were screened twice or more.<sup>11</sup> District

<sup>11</sup> Determined by analyzing all reported blood lead results for children aged 6 through 35 months during the indicated fiscal year.

law requires at least two blood lead tests for every child prior to the child turning three years old. Data suggest that a majority of District children (at least 75% of the population of children less than 3 years of age during the past three fiscal years) received at least one blood lead test during this key period. The proportion of children with two or more blood lead tests before 3 years of age is lower (62% - 68%). While these figures indicate a gap in compliance with the District's universal screening requirement, they also indicate that the majority of District residents are screened twice prior to three years of age.

**Table 3. Blood Lead Testing Of Children Less Than 3 Years Old (36 Months), By Birth Cohort, District of Columbia**

	FISCAL YEAR 2011	FISCAL YEAR 2012	FISCAL YEAR 2013
<b>Date of Birth Range</b> (Children Ages 6 through 35 Months Old)	10/1/07 – 3/31/11	10/1/08 – 3/31/12	10/1/09 – 3/31/13
<u>Estimated</u> District Population of Children Ages 6 - 35 Months Old During Fiscal Year	18,717	20,968	21,961
Children with At Least One Lead Test Reported by Age 36 Months	16,330 (includes 134 tested prior to 6 months of age)	15,645 (includes 435 tested prior to 6 months of age)	16,441 (includes 462 tested prior to 6 months of age)
Proportion of Population 6-36 Months Old During Fiscal Year with At Least One Lead Test Reported	<b>87%</b>	<b>75%</b>	<b>75%</b>
<u>Estimated</u> District Population of Children Ages 15 – 35 Months Old During Fiscal Year	12,347	14,288	15,236
Children 15-35 Months Old During Fiscal Year with At Least Two Lead Tests Reported by Age 36 Months	8,426 (includes 407 tested twice prior to 15 months of age)	8,931 (includes 406 tested twice prior to 15 months of age)	9,421 (includes 374 tested twice prior to 15 months of age)
Proportion of Population 15-36 Months Old with At Least Two Lead Tests Reported During Fiscal Year	<b>68%</b>	<b>63%</b>	<b>62%</b>

## **C. Actions Taken to Improve Compliance**

### **1. Increased Outreach to Providers/Facilities**

The Department and our sister agencies are developing an enhanced interagency approach to ensure covered medical professionals understand their lead screening obligations, alert parents/guardians to the District's screening requirements, and screen children at the appropriate times.

The Department, along with DHCF, developed a data sharing agreement that has allowed us to identify Medicaid providers that screen children at lower rates. This will facilitate targeted outreach and compliance efforts. Lead screening is a required component of a child's well-child visit under Medicaid's Early and Periodic Screening, Diagnostic, and Treatment services benefit. DHCF is working with their Medicaid Managed Care Organizations (MCOs) to provide outreach to non-compliant pediatricians and ensure compliance with the District's lead screening laws.

The DOH licenses all physicians practicing medicine in the District of Columbia. The Department is evaluating the feasibility of broad outreach to all licensed District physicians. Since 2010, DOH, DHCF, and the Department have sent a joint letter to licensed District physicians, reminding them of the District's lead screening requirements.<sup>12</sup>

The Department currently uses a compliance assistance approach and relies on a warning letter to medical practices that could improve their screening rates. The Department has the authority to assess penalties and fines and considering the efficacy of more aggressive enforcement.<sup>13</sup>

### **2. Increased Outreach to Communities**

The Department is examining the feasibility of targeted screening initiatives to under-screened communities.

DC Public Schools (DCPS) and the Department developed a data-sharing agreement to use Universal Health Forms to identify students with missing blood lead level data. The Department will then correlate the absence of testing data with the address of the student to identify census data tracts in which students have lower testing rates. The Department will then use this information to

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<sup>12</sup> The latest letter was sent in October 2014. Available online at

<http://dhcf.dc.gov/sites/default/files/dc/sites/dhcf/publication/attachments/Transmittal%2014-31.pdf>

<sup>13</sup> D.C. Official Code § 7-871.05.

perform targeted testing of the children at their schools, prioritizing children in the census data tracts with lower testing levels.

DHCF, with data supplied by MCOs, will provide the Department with a list of District children who require and have not been provided a lead screening test. This would facilitate targeted Department outreach because between 65-70% of the District's children younger than six receive their health insurance coverage through Medicaid.<sup>14</sup>

The US Department of Health and Human Services provides annual funds to DOH for execution of a wide range of duties under an annual Maternal and Child Health grant, known as Title V. One of the express duties of Title V grant recipients is to focus on special needs populations, including children exposed to lead. In Fiscal Year 2012, DOH awarded \$200,000 in Title V funds to the Department to increase the District's lead screening rate. The Department used those funds to study screening non-compliance and concluded that a targeted ad campaign aimed at parents to the dangers of lead exposure was the best available method to improve screening rates. The education campaign, "Every Child, Twice by Two," consisted of ads on radio, television, movie trailer spots, Metro bus stops and Metro buses in every Ward. This campaign resulted in a 5% increase in the number of children screened during September, the most impacted month. Medicaid MCOs will incorporate the language from this campaign in their updated materials.

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<sup>14</sup> DHCF Data Snapshot February 2014, available online at [http://dhcf.dc.gov/sites/default/files/dc/sites/dhcf/publication/attachments/Childrens%20coverage%20snapshot\\_021814%20%281%29.pdf](http://dhcf.dc.gov/sites/default/files/dc/sites/dhcf/publication/attachments/Childrens%20coverage%20snapshot_021814%20%281%29.pdf).

## REPORTING REQUIREMENTS COMPLIANCE

### A. Reporting Requirements

The Act requires:

- Labs that perform or analyze blood lead tests involving children who reside in the District to forward all test results to the health care provider or facility where the blood sample was taken, and to the Department.<sup>15</sup>
- Health care providers or facilities to forward all elevated blood lead level results immediately to the child's parent or guardian.<sup>16</sup>
- 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.<sup>17</sup>

### B. Reporting and Actions Taken to Improve Compliance

In 2012, the Department requested the data libraries of laboratories that report blood lead test results. The Department conducted a comparative analysis of Department data and laboratory records which indicated no instances of missing data. In 2013, the Department analyzed testing report rates for laboratories by comparing their annual submission totals for the prior three years. The data yielded consistent results, without any significant decline in test reports from any laboratory.<sup>18</sup> Taken together, these results indicate that the large blood lead testing laboratories adhere to the Act's reporting requirements. While this is an inferential conclusion, the Department continues to research additional best practices to confirm laboratory compliance.

Several smaller District facilities use portable blood lead testing equipment. The Department corresponded with the manufacturer to identify the facilities and provided additional information on the reporting requirements. The Department also worked with the equipment manufacturer to develop and distribute District-specific reporting software for small facilities. Our 2014 analysis of Managed

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<sup>15</sup> D.C. Official Code § 7-871.03(c).

<sup>16</sup> D.C. Official Code § 7-871.03(d).

<sup>17</sup> D.C. Official Code § 7-871.03(d).

<sup>18</sup> The analysis took into account changes in laboratory contracts with healthcare providers and mergers between laboratories that could increase or decrease screening result submission rates. When accounting for shifting business relationships, no laboratory experienced a reporting total reduction greater than 3% District-wide and 5% in any Ward.

Care Organization (MCO) data indicated some data integrity shortcomings.<sup>19</sup> Approximately ten (10) percent (roughly 2,500) of the DHCF results spanning the last eight years of data reports were not immediately located in the Department's database.

Laboratories comply with the District's blood lead test reporting requirements. The Department's expanding data partnership with DHCF and our new data collaboration with the DCPS Office of Early Childhood Education, both underway in Fiscal Year 2015, will provide further information on reporting compliance.

Data also indicates that health care providers and facilities comply with the reporting requirements to parents/guardians of children less than six years old. Similarly, the Department has no evidence that health care providers and facilities are not complying with parent/guardian requests for written details regarding their child's blood lead test and test result.

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<sup>19</sup> This includes spelling variations within first or last names, or other errors such as an incorrectly entered birth date.

**INCIDENCE AND PREVALENCE RATE DATA**

This section provides information on the incidence<sup>20</sup> of District children with a reported blood lead level at or above the federal reference value,<sup>21</sup> and information on the prevalence<sup>22</sup> of District children with a reported blood lead level at or above reference value.

**Table 4. Number of Children Less Than 72 Months of Age With a Reported Blood Lead Test Result  $\geq 5\mu\text{g/dL}$ , Fiscal Years 2009 - 2013**

	<b>FY09</b>	<b>FY10</b>	<b>FY11</b>	<b>FY12</b>	<b>FY13</b>
<b>BLL <math>\geq 5\mu\text{g/dL}</math>, <u>Incidence</u></b>	<b>454</b> (of 15,440 tested)	<b>411</b> (of 15,913 tested)	<b>330</b> (of 15,266 tested)	<b>267</b> (of 16,871 tested)	<b>181</b> (of 15,309 tested)
<b>Incidence Proportion</b>	2.9%	2.6%	2.2%	1.6%	1.2%
<b>BLL <math>\geq 5\mu\text{g/dL}</math>, <u>Prevalence</u></b>	567	532	438	332	239
<b>Prevalence Proportion</b>	3.66%	3.27%	2.77%	2.06%	1.57%

The incidence of reported elevated blood lead levels has declined year to year among District residents less than six (6) years of age. The incidence proportion of elevated blood lead levels in the District has also declined over the past five fiscal years.<sup>23</sup>

<sup>20</sup> Incidence is a public health term used to indicate new confirmed cases.

<sup>21</sup> 5 micrograms of lead per deciliter of blood ( $5\mu\text{g/dL}$ ).

<sup>22</sup> Prevalence is a public health term used to indicate the number of existing confirmed cases.

<sup>23</sup> A decline from 2.9% of those tested during FY09 to 1.2% of those tested during FY13.

## **CONCLUSION**

Data from Fiscal Year 2009 to Fiscal Year 2013 indicate that a majority of the District's children are being screened at least once prior to age three years. Greater compliance by pediatricians with screening requirements could increase the number of children being screened at age-appropriate times. Overall, based on the data gleaned from those children who are being screened; it appears that District children are being decreasingly exposed to lead over time. In Fiscal Year 2013, the District saw a 30% decline in the number of children found with an elevated blood lead level as compared to FY12. The number of children found with an elevated blood lead level in Fiscal Year 2012 represented a 20% decline from the number identified in Fiscal Year 2011. That pattern repeats back to Fiscal Year 2009. Compliance with the District's childhood screening requirements needs to improve, but the data indicate that the District may well be on track to become the nation's first major urban jurisdiction to eradicate childhood lead poisoning.