



MURIEL BOWSER
MAYOR

May 21, 2020

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

Dear Chairman Mendelson:

Enclosed for consideration by the Council of the District of Columbia is the "Childhood Lead Screening Report FY 2016, FY 2017, and FY 2018" as required by the Childhood Lead Poisoning Screening and Reporting Act of 2002 (Act). This report documents blood lead level (BLL) results from Fiscal Years (FY) 2016, 2017, and 2018 as reported to the District's Department of Energy and Environment (DOEE). Thank you for your consideration.

Sincerely,

A handwritten signature in black ink, appearing to read "Muriel E. Bowser", written in a cursive style.

Muriel E. Bowser

Enclosures

Childhood Lead Screening Report FY 2016, FY 2017, and FY 2018

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Executive Summary

District of Columbia (District) law requires health care providers and health care facilities to screen children for lead once between six months and 14 months of age,¹ and a second time between the ages of 22 and 26 months.² If those milestones are not met, a child over the age of 26 months must be tested at least twice before the child attains the age of six years and the tests must be conducted at least 12 months apart or according to a schedule determined appropriate by the health care provider or health care facility.³ This report documents blood lead level (BLL) results from Fiscal Years 2016, 2017, and 2018 as reported to the District's Department of Energy and Environment (DOEE).¹

The United States Centers for Disease Control and Prevention (CDC) has determined there is no safe level of lead in the blood.⁴ Exposure to lead increases a child's risk for: damage to the brain and nervous system, learning and behavioral problems (such as reduced intelligence quotients), slowed growth and development, and hearing and speech problems.⁵ The CDC has established 5 micrograms of lead per deciliter (5 µg/dL) of blood or more as a reference level to identify a child with an elevated BLL.⁶

During FY 2016, 17,345 children under the age of six had at least one blood lead level test reported to DOEE. Of this number, 17,177 (99.03%) had a BLL less than the reference level of 5 µg/dL and 150 (0.87%) had a BLL equal to or greater than (\geq) the reference level of 5 µg/dL, of which 109 (0.63%) were identified as a newly confirmed (incident) case.

During FY 2017, 17,306 children under the age of six had at least one blood lead test reported to DOEE. Of this number, 17,133 (99.00%) had a BLL less than the reference level of 5 µg/dL and 151 (0.88%) had a BLL \geq 5 µg/dL, of which 118 (0.69%) were identified as a newly confirmed (incident) case.

During FY 2018, 15,577 children under the age of six had at least one blood lead test reported to DOEE. Of this number, 15,434 (99.08%) had a BLL less than the reference level of 5 µg/dL, and 126 (0.81%) had a BLL \geq 5 µg/dL, of which 97 (0.63%) were identified as a newly confirmed (incident) case.

Based on DOEE's analysis of the data from FY 2016 to FY 2018, the following key findings are notable:

- 99% or greater of all children tested were below the federal reference level of 5 µg/dL. That percentage is less than the optimal (i.e., 100%) but indicates 1% or less of cases are above the reference level.
- During the three-year reporting period, only 0.64% were newly confirmed (i.e. incident) cases of individuals above the federal reference level of 5 µg/dL;
- The percentage of District children tested who had a BLL of equal to or greater than 5 µg/dL remained relatively static over the three fiscal years;
- Two cohorts of children were tracked in FY 2016 and FY 2017 to determine the

percentage of children who received their required first test on time and received their required second test at the required time.¹ The FY 2016 cohort's second-test compliance rate was 55%. The FY 2017 cohort's second-test compliance rate was 53%. DOEE does not have verifiable data as to why there was a decline in compliance;

- The number of false-positive cases (defined as a child with one capillary test ≥ 5 $\mu\text{g/dL}$ followed by a capillary or venous test that was < 5 $\mu\text{g/dL}$) has increased from 32 (0.18%) in FY 2016, to 54 (0.31%) in FY 2017, and to 66 (0.42%) in FY 2018. It is not possible to know the exact cause(s) for the increase. Possible causes may be improper sample collection, lack of standardized protocols for sample collection, machine malfunction, or the sample site not properly prepared; and
- A records review of data from FY 2016 to FY 2018 revealed the following two issues: (1) some laboratories do not report accurately as to whether tests are capillary or venous; and (2) home visits are often difficult to schedule.

To address these findings and increase program effectiveness, the following recommendations were developed:

1. Expand outreach to health care providers, health care facilities, and parents to increase the percentage of children who receive the required first and second lead tests during the required timeframes of six to 14 months, and 22 to 26 months of age. DOEE will accomplish this through the use of multiple sub-grantees targeting the wards and ethnicities documented to have some of the lowest compliance rates. DOEE will also collaborate with other District governmental agencies to promote knowledge of the dangers of lead poisoning. In addition, if a child is found not to have met the testing milestones, the parents/caregiver will be contacted to inform them of the regulation.
2. Expand primary prevention (defined as intervening before negative health effects occur) outreach efforts to future and new parents to make them aware of common sources of lead contamination. The effort would educate parents of the youngest children with the goal of addressing as many potential sources before the child is born or before crawling occurs. DOEE will collaborate with health care professionals to encourage dissemination of information about ways to prevent lead poisoning. DOEE will also establish a capacity-building infrastructure to engage multi-sector partners and other stakeholders to target high-risk areas and populations promoting primary prevention.
3. Continue to develop a pilot program with the District chapter of the American Academy of Pediatrics for a text messaging application to remind parents of required lead testing. Once in operation, parents will have the opportunity to receive a text message close to a child's first and second birthdays, coinciding with well-child

¹ Children within the FY 2018 Cohort did not meet the age requirement of the second test as of the writing of this report.

visits, emphasizing the need for required lead tests.

4. Continue to work with the District of Columbia Housing Authority (DCHA) to identify housing units owned and financially assisted by DCHA where DOEE records indicate a child with an elevated BLL resides. DOEE provides information where known elevated BLL children reside, as well as information on risk assessment and identified hazards of DCHA public housing units owned and managed by DCHA to enable DCHA to come up with focused corrective actions.⁷ DOEE provides similar information to private housing providers. DOEE also inspects housing units where children with elevated BLLs reside and attempts to determine root causes for high blood lead levels.
5. Work with federal or District agencies to secure funding for relocation of families when lead-paint abatement or renovations occur. These funds would be limited to families who do not have personal funding to self-relocate.
6. Work with health care providers and facilities to standardize the lead test reporting form to aid in the accurate and legible submission of blood test results to DOEE.
7. Improve methods/ways to follow up with parents/caregivers to alert them of elevated blood lead levels (EBLL), and to encourage parents and caregivers to schedule home visits with case managers/lead inspectors to determine if lead hazard(s) likely exist in the residence.
8. Continue to work with sister agencies, non-profit, and faith-based organizations to increase capacity and outreach to non-English speaking communities, as well as target additional outreach to wards/geographic areas having the highest rate of reported EBLL.

Regulatory Requirements

The Mayor has designated DOEE as the agency responsible for oversight of the District's lead screening and reporting requirements under the Childhood Lead Poisoning Screening and Reporting Act of 2002 (Act).⁸ Section 2003(g) of the Act (D.C. Code § 7-871.03(g)) requires the Mayor to issue a report summarizing and analyzing the lead screening results obtained under the Act.⁹ Consistent with the requirements of the Act, this report summarizes and analyzes the incident and prevalence of childhood lead poisoning in the District and includes information on actions taken and planned by the executive to improve compliance with the requirements of the Act.

The Act's¹⁰ screening requirements have been designed to: (1) identify children six years old and younger whose BLL requires case management and medical follow-up; and (2) enable identification of homes that may contain sources of lead exposure, such as lead-based paint hazards. The reporting requirements have been designed to alert DOEE to all children's lead screening results.

Screening Requirements

The Act¹¹ requires the following:

Each health care provider or health care facility shall, as part of well-child visit, perform a BLL screening test on every child who resides in the District and who is served by the provider or facility, unless parental consent is withheld or an identical test was performed not more than 12 months before the well-child visit. The schedule of required BLL screening tests is:

- Once between the ages of six and 14 months;
- Once between the ages of 22 and 26 months;
- At least twice if a child over the age of 26 months has not previously been tested for BLL. The tests for children over the age of 26 months shall be conducted before the child attains the age of six years and shall be conducted at least 12 months apart, or according to a schedule determined appropriate by the health care provider or health care facility.¹²

Methodology

The Mayor delegated to DOEE the responsibility to receive BLL reports from health care providers and health care facilities concerning children younger than six years of age who resided in the District at the time of the testing.² DOEE then analyzes the reported data separately for each fiscal year. The critical assessment was to determine if the BLL exceeded the reference level established by the CDC of 5µg/dL.

This report summarizes and analyzes the FY 2016 to FY 2018 data for:

- Elevated BLL rates (number and proportion of tested children that were confirmed cases);
- The distributions of elevated BLLs by ranges of µg/dL; and
- The frequency of incident and prevalent cases.

To determine the percentage of children with BLLs of 5 µg/dL or greater (EBLLs), DOEE compared the number of all District children less than six years old who had a blood lead test during the fiscal year, to the number of reported incident (i.e., new) cases. Individual specimens were identified both by whether it was the child's initial test or subsequent test, and by the child's age at the time of the test. The analytical procedures utilized Statistical Analysis Software (SAS) 9.4 and Excel software.

² BLLs are subsequently uploaded into the CDC's Healthy Homes and Lead Poisoning Surveillance System (HHLPSS) database.

Information as to whether the blood draw was a capillary or a venous specimen was often missing on the laboratory report. DOEE contacted the laboratory for that distinction.

The following are definitions of case counts in this report:

Incident (newly confirmed) case:

A child younger than six years of age with no prior BLL $\geq 5 \mu\text{g/dL}$ for whom: (1) one BLL result performed on venous blood was found to be $\geq 5 \mu\text{g/dL}$; (2) one capillary and one venous test within 12 weeks were found to be $\geq 5 \mu\text{g/dL}$; or (3) two capillary tests not performed on the same day but within 12 weeks were found to be $\geq 5 \mu\text{g/dL}$.¹³

False-positive case:

A child with one capillary test $\geq 5 \mu\text{g/dL}$ followed by a venous test that was $< 5 \mu\text{g/dL}$.

Prevalent case:

A child was a confirmed case in a previous fiscal year and continued to have a tested BLL $\geq 5 \mu\text{g/dL}$ in the following fiscal year.

Non-confirmed case:

A child with one capillary blood test $\geq 5 \mu\text{g/dL}$ for whom no venous or capillary test occurred within the following 12 weeks.

Lead Screening Results

Figure 1 represents key lead screening results of the three fiscal years covered in this report and Figures 2, 3, and 4 show the results in pie charts. The data illustrates 1% or less of all children have BLLs at or above the reference value of $5\mu\text{g/dL}$.

Figure 1: Case detection and proportions of BLL for FY 2016, FY 2017, and FY 2018

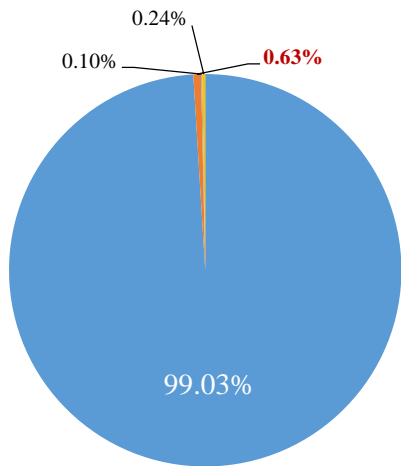
Measure		Number			Percentages of Tested Children		
Fiscal Year		FY 2016	FY 2017	FY 2018	FY 2016	FY 2017	FY 2018
Tested Children*		17,345	17,306	15,577	17,345	17,306	15,577
Results $< 5\mu\text{g/dL}$ **		17,177	17,133	15,434	99.03%	99.00%	99.08%
Results $\geq 5\mu\text{g/dL}$	Incident	109	118	97	0.63%	0.68%	0.62%
	Non-confirmed	18	22	17	0.10%	0.13%	0.11%
	Prevalent	41	33	29	0.24%	0.19%	0.19%

*These numbers represent the total number of children tested (i.e., incident + false positive + non-confirmed + prevalent + results $< 5 \mu\text{g/dL}$).

**The total number included results originally identified as $\geq 5\mu\text{g/dL}$, but were subsequently determined to be false positives. There were 32 false positives in FY2016, 54 false positives in FY2017, and 60 false positives in FY2018.

Figure 2:

Summary of cases in FY 2016



■ < 5 µg/dL - Under Reference Value 99.03%

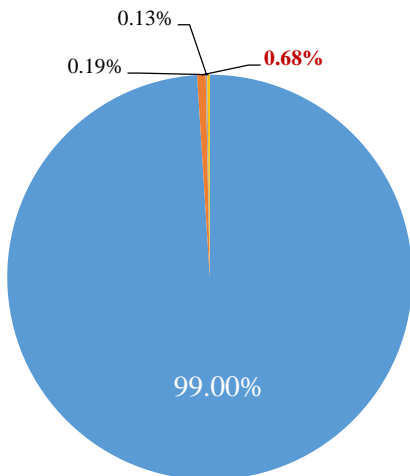
■ ≥ 5 µg/dL - Incident 0.63%

■ ≥ 5 µg/dL - Non Confirmed 0.10%

■ ≥ 5 µg/dL - Prevalent 0.24%

Figure 3:

Summary of cases in FY 2017



■ < 5 µg/dL - Under Reference Value 99.00%

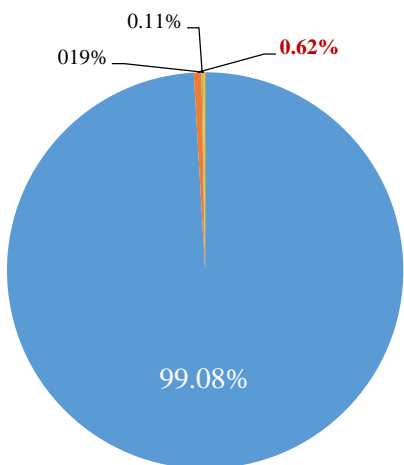
■ ≥ 5 µg/dL - Incident 0.68%

■ ≥ 5 µg/dL - Non Confirmed 0.13%

■ ≥ 5 µg/dL - Prevalent 0.19%

Figure 4:

Summary of cases in FY 2018



■ < 5 µg/dL - Under Reference Value 99.08%

■ ≥ 5 µg/dL - Incident 0.62%

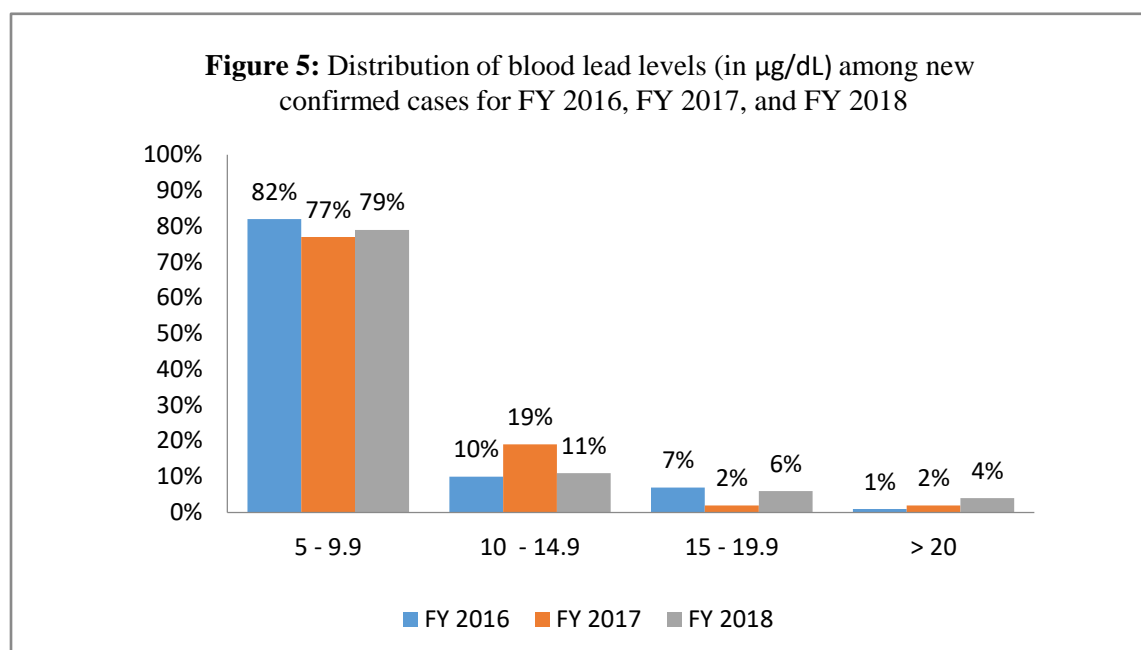
■ ≥ 5 µg/dL - Non Confirmed 0.11%

■ ≥ 5 µg/dL - Prevalent 0.19%

Elevated Blood Lead Levels

The prior section provided the number of BLL tests and overall results of BLL tests during FY 2016 to FY2018. This section summarizes and analyzes the FY 2016 to FY 2018 results where there was a $BLL \geq 5\mu\text{g/dL}$. Health risks from elevated BLLs increase as the level of lead in the blood increases.¹⁴

For children identified as newly confirmed cases, DOEE examined the distribution of blood lead levels reported for each case. Figure 5 illustrates that, when averaged over the three-year reporting period, 79.33% of newly confirmed cases were between 5 and 9.9 $\mu\text{g/dL}$.



Note: The total number of children tested in FY 2016, FY 2017, and FY 2018 were 17,345, 17,306, and 15,577 respectively.

It is not possible to determine the specific cause(s) of EBLL. However, the age of housing stock, poverty, and low income are often noted as contributing factors to EBLLs in relevant research and literature. The American Community Survey¹⁵ (ACS) estimates the District has a total of 308,161 housing units, of which approximately 80% were built before 1978, the year lead-based paint ceased to be produced.

Pre-1978 housing is spread throughout the District; however, the new confirmed (incident) cases of lead poisoning are not evenly distributed geographically. GIS mapping data, compiled by DOEE, revealed heavy case clustering along the Georgia Avenue corridor in Wards 1 and 4, followed by Wards 5 and 6. The Georgia Avenue corridor is an area where some of the District's most vulnerable residents reside. These neighborhoods have long been home to the District's immigrant and refugee populations, with high concentrations of individuals whose native language is not English. ACS, based on data from 2011 to 2015, documented the highest percentage of homes where English is not the primary language spoken within the household

were in Wards 1 and 4.¹⁶ There is no documented evidence directly linking elevated BLL to the age or type of housing, or its location despite the contributing factors stated above.

Screening Compliance

The screening requirements in the District are that each resident under age six receive an initial lead screening between six and 14 months old and a second screening between 22 and 26 months of age – with a fallback goal of two tests before six years in situations where the primary goal of testing twice before the 26th month birthday has not been met.¹⁷ Blood lead results, age, date of testing, addresses and other relevant information of children tested are documented in the HHLPS database.

To assess the extent of compliance with the requirement that every District resident be screened for lead twice before turning 26 months of age, DOEE took the following steps:

Population estimate: DOEE estimated the number of children between six and 14 months of age residing in the District as of September 30, 2016, and as of September 30, 2017.

Test data and compliance rates: DOEE compiled and analyzed the number of BLL tests performed each year by age range and sequence of test (first test or second or later test) and compiled and analyzed compliance rates.

Identification and tracking of cohorts: DOEE identified the specific children who were between six and 14 months of age as of September 30, 2016, who had received their initial test during that age period (the “2016 Cohort”) and between six and 14 months of age as of September 30, 2017, who had received their initial test during that age period (the “2017 Cohort”). For each of the cohorts, all lead tests received during the compliance periods were used in the analyses.³

Tracking of cohorts: DOEE tracked the 2016 Cohort and 2017 Cohort to determine how many of the children within the cohorts had their second test within the 22-26 month period.

³ While FY 2018 data is included in this report, a cohort of children who were six to 14 months of age as of September 30, 2018, was not included; this cohort will meet requirement for such an analysis after the time period for receiving their second test between 22 and 26 months of age by May 31, 2020. Therefore, this cohort will be included in FY 2020 Report.

Population Estimate

The population estimates provide the basis for calculating overall BLL test compliance rates. The approach used to estimate the District’s child count was the annual live birth counts of 9,858

for calendar year 2016, and 9,560 for calendar year 2017.¹⁹ As of the writing of this report, data for 2018 was not available. The average of 9,858 (FY 2016) and 9,560 (FY 2017) is 9,709 and is the number used below for FY 2018.

It is estimated assuming the same level of births occurred during the initial portion of calendar year 2018, approximately 7,281 DC residents ($9,709 \times 9/12 \sim 7,281$) were between the ages of six and 14 months and approximately 4,045 DC residents ($9,709 \times 5/12 \sim 4,045$) were between the ages of 22 to 26 months for the reporting period. Child population by single age estimates provided by the U.S. Census Bureau (Kids Count) were also used to make closer estimates of these two testing periods which lead to estimates of 7,300 for the nine month reporting period, and 4,000 for the five month reporting period.²⁰ There is no scientific method to account for in and out-migration.

Estimating the number of childbirths in a fiscal year and tracking compliance is difficult because a child's compliance period for testing may encompass three fiscal years. For example, if a child is born in September 2017, he or she is counted in the number of births for FY17. The child's first required test, at six to 14 months, would be due from March 2018 (FY18) to November 2018 (FY19). The child's second required test, at 22 to 26 months, would be due from July 2019 (FY19) to November 2019 (FY20). The multiple fiscal years have an impact on the child's compliance for a given FY. If the child has the initial test between March and September 2018, the child is in compliance for FY18. If the child has the second test in October or November 2019 (i.e. FY20), the child is not in compliance for all of FY19. To that end, the denominator in the examples appearing in the following section represent only the number of children in the specific time interval, not the number of children born in a FY. Higher compliance with the first required test (six to 14 months of age) may be attributed to a nine-month compliance period versus only five months (i.e. 22 to 26 months) for the second required test.

Also, the estimated number of children requiring Lead tests will fluctuate as an unknown number of children move into and out of the District. There is no requirement for parents/caregivers to notify DOEE if a child moves into, or out of, the District.

[Number of Tests Conducted; Compliance Rates](#)

Figures 6, 7, and 8 show the number of BLL tests conducted each fiscal year, by age of the tested child and by the sequence number of the test for the child (i.e., first test or second or later test), in FY2016, FY2017, and FY2018, respectively. The raw compliance rates are described after each of these three Figures. It should be noted the number of children receiving either their first or second test is less than the total estimated number of children because not all children receive the required tests within the required age intervals. Compliance rates are clarified when the FY 2016 and FY 2017 Cohorts are discussed later in this report.

Figure 6: Number of children who received first and second or later blood tests in FY 2016 by age in months

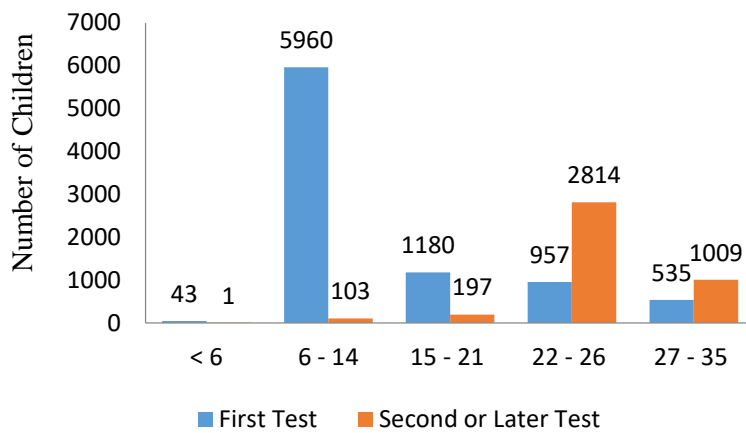


Figure 6 illustrates the distribution of children who received at least one blood test in FY 2016 by age interval at the time of testing and by test sequence (i.e., first test or second or later test). In FY 2016, children aged six to 14 months who had their first BLL test (n = 5,960) accounted for 81.85% of the estimated 7,394 children aged six to 14 months. Children aged 22 to 26 months who had their second test in that age interval (n = 2,814) accounted for 74.62% of the estimated 4,107 children aged 22 to 26 months.

Figure 7: Number of children who received first and second or later blood tests in FY 2017 by age in months

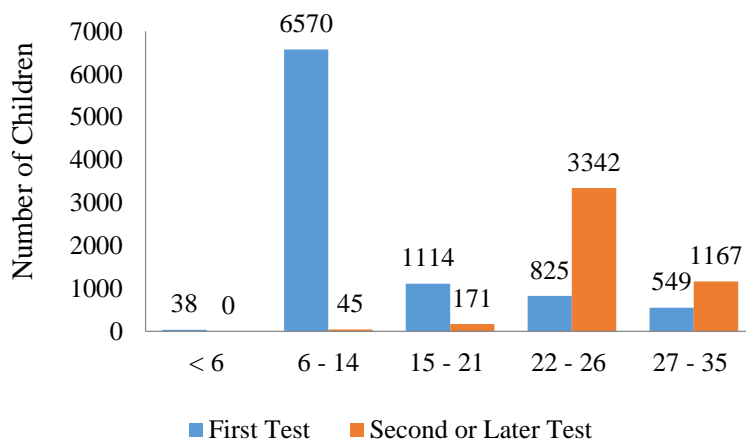


Figure 7 illustrates the distribution of children who received at least one blood tests in FY 2017 by age interval at the time of testing and by test sequence (i.e., first test or second or later test). In FY 2017, children aged six to 14 months who had their first BLL test (n = 6,570) accounted for 91.62% of the estimated 7,170 children aged six to 14 months. Children aged 22 to 26 months who had their second test in that age interval (n = 3,342) accounted for 83.91% of the estimated 3,983 children aged 22 to 26 months.

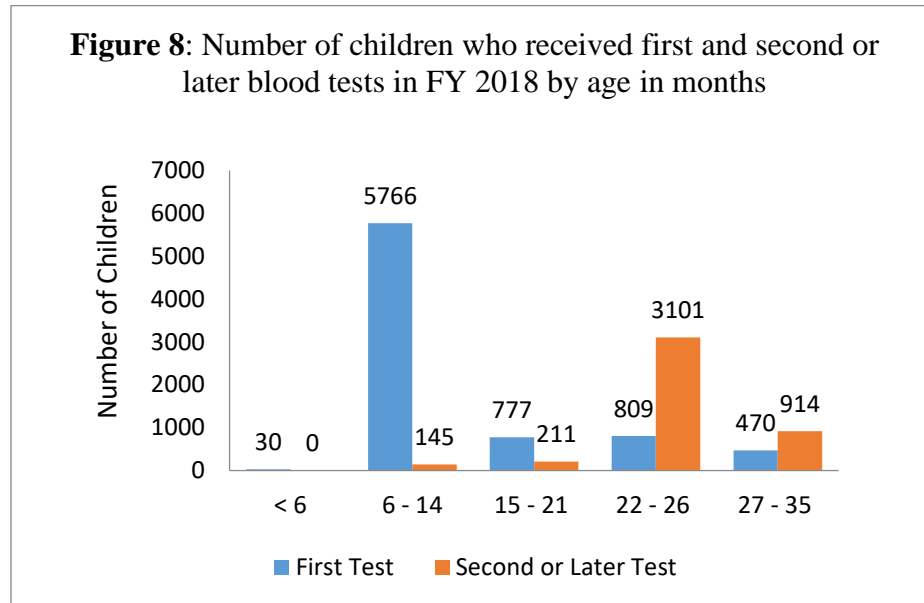
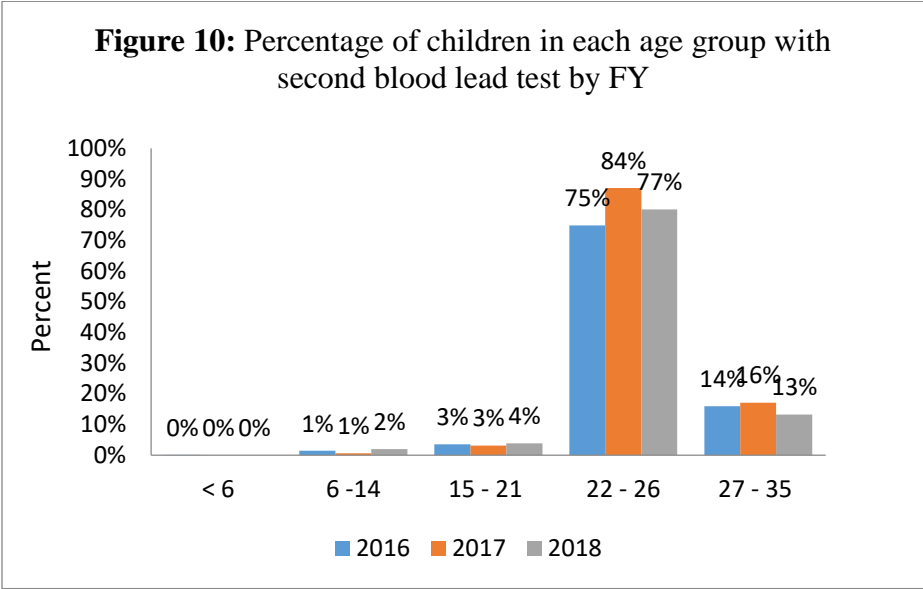
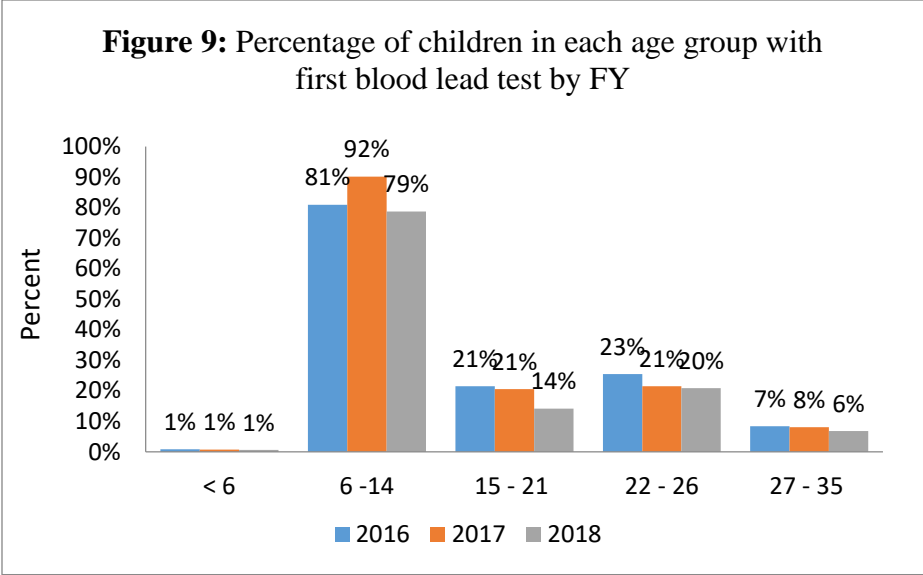


Figure 8 illustrates the distribution of children who received at least one blood test in FY 2018 by age interval at the time of testing and by test sequence (i.e., first test or second or later test). In FY 2018, children aged six to 14 months who had their first BLL test (n = 5,766) accounted for 78.98% of the estimated 7,281 children aged six to 14 months. Children aged 22 to 26 months who had their second test in that age interval (n = 3,101) accounted for 76.66% of the estimated 4,045 children aged 22 to 26 months.

Figures 9 and 10 show that the highest percentages of first and second BLL tests were performed in these required time frames for each fiscal year. Neither of the figures reflects the same group of children referenced in the Cohort section of this report. Percentages of all first BLL tests, shown in Figure 10 that occurred when children were between six and 14 months old were 81.85%, 91.62%, and 78.98% for FY 2016, FY 2017, and FY 2018, respectively. Figure 11 illustrates percentages of all second BLL tests that occurred while the child was between 22 and 26 months were 74.62%, 83.91%, and 76.66% for FY 2016, FY 2017, and FY 2018, respectively.



The percentages of tests from FY 2016 to FY 2018 are less than the optimal 100% for the first and second tests due in part to a substantial proportion of the tests not being conducted in the designated timeframes. See Figure 11 below.

Figure 11: Summary of data from FY 2016 to FY 2018

	Total number of children born	Number of children tested	Number of children expected to be tested*	Percent of children tested
FY 2016				
	9,858			
6 to 14 months		5,960	7,394	81.85
22 to 26 months		2,814	4,107	74.62
FY 2017				
	9,560			
6 to 14 months		6,570	7,170	91.62
22 to 26 months		3,342	3,983	83.91
FY 2018				
	9,709			
6 to 14 months		5,766	7,281	78.98
22 to 26 months		3,101	4,045	76.66

*Actual number of children expected if the compliance rate was 100%.

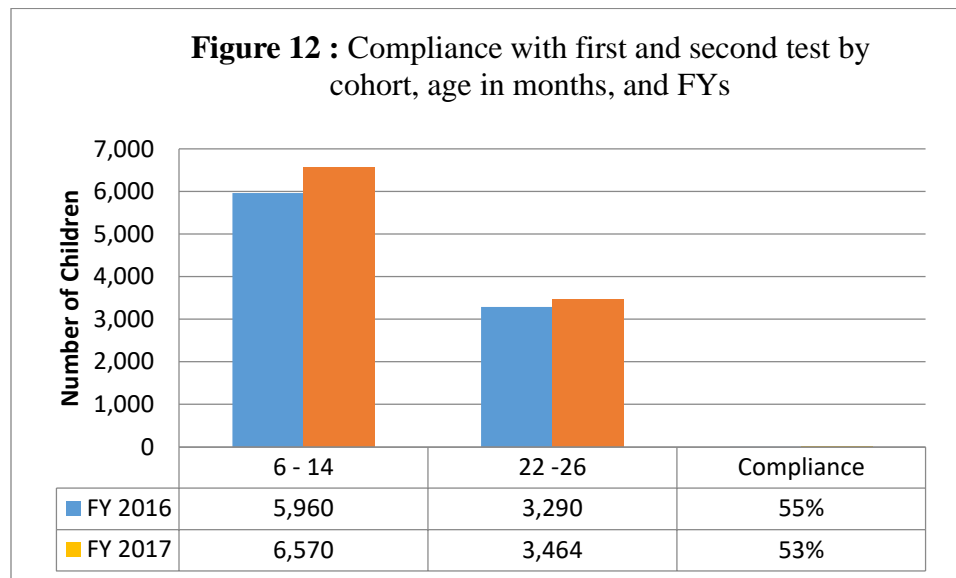
It is important to note that the population estimates did not account for in-migration or out-migration, because it was not possible to estimate in-migration and out-migration in each fiscal year based on the available data. Because migration numbers are not accounted for in the population estimates, the compliance rates do not account for this factor. If in actuality out-migration was greater than in-migration, then the percentages in Figure 11 underestimate the compliance rates. For example, for each 1% of the fiscal year population estimate by which out-migration exceeds in-migration, the compliance rate would increase by ~2.7 percentage points. Thus, if a net 5% of children out-migrate each fiscal year, the compliance rates in FY16 would have increased by ~13%.

[Tracking of Cohorts from First to Second Test; Second-Test Compliance Rate of Cohorts](#)

To further examine the BLL test compliance rate, DOEE tracked specific cohorts of children. DOEE identified the specific children who were between six and 14 months of age as of September 30, 2016, who had received their initial test during that age period (the “2016 Cohort”) and between six and 14 months of age as of September 30, 2017, who had received their initial test during that age period (the “2017 Cohort”). DOEE then tracked the specific children in the cohorts to determine whether they received their second test during the required 22 to 26 month period.

As shown in Figure 12 the second-test compliance rate for the 2016 Cohort (the percentage of those children between six and 14 months of age as of September 30, 2016, who received one test between 6 to 14 months of age and at thereafter received their second test between 22 and 26 months of age) was 55%; the second-test compliance rate for the 2017 Cohort was 53%. While the number of tested children at the intervals required by law increased from the 2016 Cohort to the 2017 Cohort (because of the higher first-test compliance rate among the 2017 Cohort), the

second-test compliance rate decreased in the FY 2017 Cohort compared to the FY 2016 Cohort from 55% to 53%. The second-test compliance rate decrease of two percent is statistically significant with $p = 0, 0133$ (CI 95%, and $p < 0.05$).



It is important to note that the second-test compliance rates do not account for out-migration of children in each of the cohorts, since specific rates of out-migration are not available to DOEE. The second-test cohort compliance rates are therefore almost certainly underestimates since some level of out-migration is almost certain. By way of example, for each 1% of children in the FY2016 Cohort who out-migrated from each cohort before their second test age range, the compliance rate would have increased by three percentage points.

Overall Compliance Rate

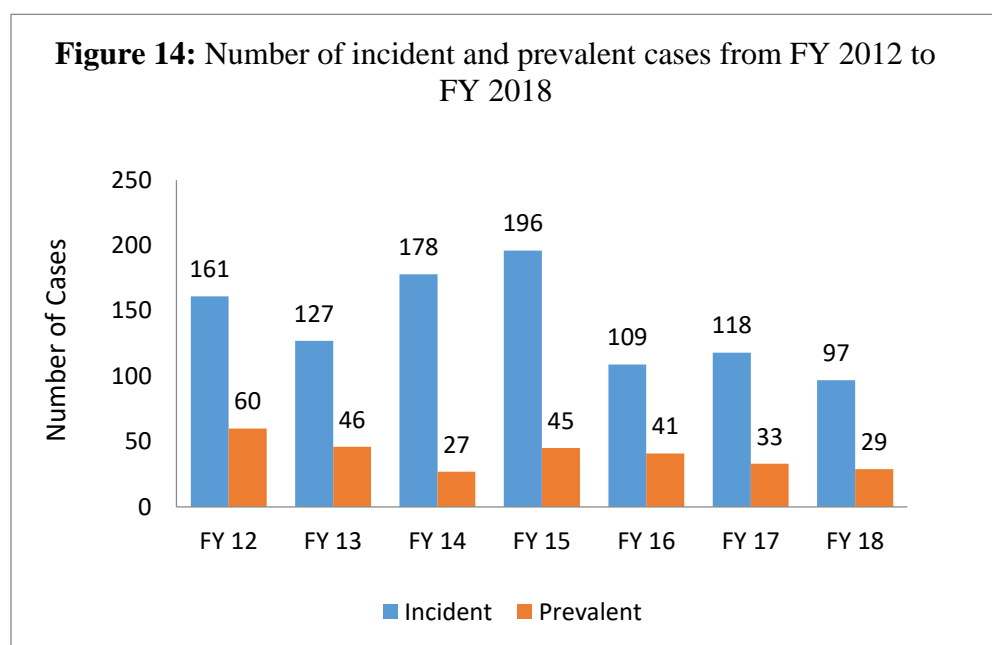
Based on the data above, DOEE determined the overall compliance rate—that is, the percent of children who both received their first test during the age range of 6 to 14 months and their second test during the age range of 22 to 26 months is shown in Figure 13.

Figure 13: Cohort Compliance

	Estimated population	Percent of children tested during 6-14 months as of end of fiscal year	Percent of cohort who received second test during 22-26 months	Overall compliance (both tests timely completed)
FY16 Cohort	9,858	5,960	3,290	55
FY17 Cohort	9,560	6,570	3,464	53

Trends in Incident and Prevalent Cases

The District’s lead surveillance program has collected data on children with identified BLLs since 1993. Figure 14 shows the trend in case identification, for incident and prevalent cases, from FY 2012 to FY 2018. The number of confirmed cases (i.e., the sum of incident and prevalence cases) in the program has dropped from 221 cases in FY 2012 to 126 cases in FY 2018. The number of confirmed cases remain less than 1% of District children with newly confirmed (i.e., incident) elevated blood lead levels above the reference level of 5µg/dL in the past three consecutive fiscal years.



Outreach

DOEE conducts outreach such as communicating lead facts to residents and contractors at community events, health fairs, housing expos, home shows, local fairs, and transportation hubs.

In FY 2018, DOEE expanded its outreach activities in an effort to help increase the number of children screened at the required timeframes, via several platforms as outlined below:

1. The District of Columbia Childhood Lead Poisoning Prevention Program awarded a grant to the District of Columbia chapter of the American Academy of Pediatrics for a pilot project titled “Improving Lead Screening in the District through Innovation, Education, Collaboration and Expertise.” The award facilitates the development and piloting of a text message reminder program to improve lead screening rates among children under two years of age who reside in the District.
2. DOEE signed a Memorandum of Agreement (MOA)²¹ with DCHA to share lead data to help prevent lead poisoning of residents of DCHA housing and to help protect residents

of publicly subsidized housing from lead hazards. The MOA will also assist DOEE in its goal of ensuring District children receive BLL screenings required by District law. The objectives of this MOA are:

- a. to provide DCHA with data on lead hazards identified by DOEE in DCHA properties and the addresses of DCHA properties where at least one child has a confirmed elevated BLL;
- b. to provide information to residents and owners of DCHA properties on BLL screening requirements and lead poisoning prevention; and
- c. to perform risk assessments on DCHA properties to assist DCHA in its compliance with 24 C.F.R Part 35.²²

Conclusion and Recommendations

Analyses of the FY 2016 to FY 2018 data presented in this report documents the following:

1. The percentage of incident (i.e., newly confirmed) cases in FY 2016, FY 2017, and FY 2018 remained less than 1%, and varied from 0.63% to 0.68%, to 0.62% respectively.
2. An average of 79.33% of children with confirmed EBLL had results between 5.0 and 9.9 µg/dL, 13.02% were between 10 and 14.9 µg/dL, 5.04% were between 15 and 19.9 µg/dL and 1.89% were above 20 µg/dL.
3. The number of children tested in FY 2018 was lower than in FY 2017 and FY 2016.
4. The number of incident cases in FY 2018 was 97, the lowest number of incident cases recorded in the past seven fiscal years.
5. 84.15% of children in the six to 14 months age interval received their first BLL test and 78.40% of children received their second BLL test within the preferred period of 22 to 26 months. These percentages do not reflect the cohorts of children tested at the required periods. Compliance to both tests measured by cohorts was 53% in FY 2016 and 55% for the 2017 cohort.

Data in this report illustrates there are multiple areas for improvement, with an ultimate goal to reduce the number of incident cases to zero. As stated previously, the CDC determined there is no safe level of lead in blood.²³ The following recommendations are presented to lower the number of elevated BLL children in the District:

1. Expand outreach to health care providers, health care facilities, and parents in order to increase the percentage of children who receive the required first and second lead tests during the required timeframes of six to 14 months, and 22 to 26 months of age. DOEE will accomplish this through the use of multiple sub-grantees targeting the wards and ethnicities documented to have some of the lowest compliance rates. Also, if a child is found not to have met the testing milestones, the parents/caregiver will be

contacted to inform them of the regulation. DOEE will also collaborate with other District government agencies to promote knowledge of the dangers of lead poisoning.

2. Expand primary prevention (defined as intervening before negative health effects occur) outreach efforts to future and new parents to make them aware of common sources of lead contamination. The effort would educate parents of the youngest children with the goal of addressing as many potential sources before the child is born or before crawling occurs. DOEE will collaborate with health care professionals to encourage dissemination of information about ways to prevent lead poisoning. DOEE will also establish a capacity-building infrastructure to engage multi-sector partners and other stakeholders to target high-risk areas and populations promoting primary prevention.
3. Continue to develop a pilot program with the District chapter of the American Academy of Pediatrics for a text messaging application to remind parents of required lead testing. Once in operation, parents will have the opportunity to receive a text message close to a child's first and second birthdays, coinciding with well-child visits, emphasizing the need for required lead tests.
4. Continue to work with the District of Columbia Housing Authority (DCHA) to identify housing units owned and financially assisted by DCHA where DOEE records indicate a child with an elevated BLL resides. DOEE provides information where known elevated BLL children reside, as well as information on risk assessment and identified hazards of DCHA public housing units owned and managed by DCHA to enable DCHA to come up with focused corrective actions.²⁴ DOEE provides similar information to private housing providers. DOEE also inspects housing units where children with elevated BLLs reside and attempts to determine root causes for high blood lead levels.
5. Work with federal or District agencies to secure funding for relocation of families when lead-paint abatement or renovations occur. These funds would be limited to families who do not have personal funding to self-relocate.
6. Work with health care providers and facilities to standardize the lead test reporting form to aid in the accurate and legible submission of blood test results to DOEE.
7. Improve methods/ways to follow up with parents/caregivers to alert them of EBLL and to encourage parents and caregivers to schedule home visits to determine if lead hazard(s) exist in the residence.
8. Continue to work with sister agencies, non-profit, and faith-based organizations to increase capacity and outreach to non-English speaking communities, as well as target additional outreach to wards/geographic areas having the highest rate of reported EBLL.

Endnotes

1. D.C. Official Code § 7-871.03, available at <https://code.dccouncil.us/dc/council/code/sections/7-871.03.html>; 22-BDCMR § B-7301.1
2. D.C. Official Code § 7-871.03, available at <https://code.dccouncil.us/dc/council/code/sections/7-871.03.html>; 22-BDCMR § B-7301.1
3. D.C. Official Code § 7-871.03, available at <https://code.dccouncil.us/dc/council/code/sections/7-871.03.html>; 22-B DCMR § B-7301.1
4. CDC website, available at <https://www.cdc.gov/nceh/lead/data/index.htm>
5. CDC website, available at <https://www.cdc.gov/nceh/lead/data/index.htm>
6. CDC website, available at <https://www.cdc.gov/nceh/lead/data/index.htm>
7. Memorandum of Agreement between the District of Columbia Housing Authority and the District of Columbia Department of Energy and Environment, dated May 2018.
8. D.C. Official Code § 7-871.03, available at <https://code.dccouncil.us/dc/council/code/sections/7-871.03.html>; 22-BDCMR § B-7301.1
9. D.C. Official Code § 7-871.03, available at <https://code.dccouncil.us/dc/council/code/sections/7-871.03.html>; 22-BDCMR § B-7301.1
10. D.C. Official Code § 7-871.03, available at <https://code.dccouncil.us/dc/council/code/sections/7-871.03.html>; 22-BDCMR § B-7301.1
11. D.C. Official Code § 7-871.03, available at <https://code.dccouncil.us/dc/council/code/sections/7-871.03.html>; 22-BDCMR § B-7301.1
12. D.C. Official Code § 7-871.03, available at <https://code.dccouncil.us/dc/council/code/sections/7-871.03.html>; 22-BDCMR § B-7301.1
13. CDC website, available at <https://www.cdc.gov/nceh/lead/data/index.htm>
14. CDC website, available at <https://www.cdc.gov/nceh/lead/data/index.htm>
15. American Community Survey data available at <https://www.census.gov/programs-surveys/acs>
16. American Community Survey data available at <https://www.census.gov/programs-surveys/acs>
17. American Community Survey data available at https://planning.dc.gov/sites/default/files/dc/sites/op/page_content/attachments/Key%20Indicators%202011-2015_0.pdf
18. D.C. Official Code § 7-871.03, available at <https://code.dccouncil.us/dc/council/code/sections/7-871.03.html>; 22-BDCMR § B-7301.1
19. DC Department of Health data available at <https://dchealth.dc.gov/>
20. Kids Count data available at <https://datacenter.kidscount.org/data/tables/100-child-population-by-single-age?loc=10&loct=3#detailed/3/any/false/37,871,870,573,869,36,868,867,133,38/42,43,4>

[4,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61/418](#)

21. Memorandum of Agreement between the District of Columbia Housing Authority and the District of Columbia Department of Energy and Environment, dated May 2018.
22. Memorandum of Agreement between the District of Columbia Housing Authority and the District of Columbia Department of Energy and Environment, dated May 2018
23. CDC website, available at <https://www.cdc.gov/nceh/lead/prevention/blood-lead-levels.htm>
24. Memorandum of Agreement between the District of Columbia Housing Authority and the District of Columbia Department of Energy and Environment, dated May 2018.

ⁱThe District's fiscal year starts October 1 and ends September 30.