MURIEL BOWSER
MAYOR

OCT - 7 2016

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

Dear Chairman Mendelson:

RE: FY15 Childhood Lead Screening Report (Childhood Lead Poisoning Screening and Reporting Act of 2002, D.C. Law 14-190)

Pursuant to section 2003(g) of the Childhood Lead Poisoning Screening and Reporting Act of 2002 ("The Act") (D.C. Official Code § 7-871.03; 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 for childhood lead screening and reporting; and
(2) The incidence and prevalence rates of childhood lead poisoning in the District of Columbia.

Sincerely,

Muriel Bowser

Annual Report: FY15
Childhood Lead Screening Report

Lead and Healthy Housing Division
August 2016
FY15 Annual Report

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CONTENTS

OVERVIEW

The Department of Energy and Environment (the Department) is 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 (the Act). Section 2003(g) of 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 includes an update on actions identified and taken by the executive to improve compliance with the requirements of that section of the Act and the incidence and prevalence rates of childhood lead poisoning in the District of Columbia. This report relies on data from the two most recent Fiscal Years 2014 and 2015 (FY14 and FY15).

The Act's screening requirements are designed to identify children five (5) years old and under, whose blood lead level requires case management and medical follow-up, and to enable identification of homes that may contain sources of lead exposure such as lead-based paint hazards. The reporting requirements are designed to alert the Department of all children's lead screening results.

EXECUTIVE SUMMARY

During the two years covered by this report, screening results reported to the Department continue to reflect the same encouraging trend identified in the previously issued 2014 report, which covered the five Fiscal Years 2009 – 2013 (FY09 – FY13). The number of confirmed cases of children with a blood lead level exceeding the federal "reference value" of 5.0 micrograms of lead per deciliter of blood (µg/dL) remains fewer than 200 for the third consecutive year. Never before since the District began reliably tracking these data have so few children been identified with a blood lead level that triggers case management. Despite this good news, compliance with the District's universal screening requirements remains sub-optimal. While the data in this report reveal that some 90% of District children get screened at least once prior to turning three (3) years old, District law requires physicians to screen children twice before they turn 27 months of age, and the Department's data reveal relatively poor compliance with this mandate.[1]

[1] Note that District law does not require that all children less than six years old get tested, only that all children get tested twice before they turn 27 months of age. District regulations specify that a child must be tested "[a]t least twice [... before the child attains the age of six (6) years...] if a child over the age of twenty six (26) months has not previously been tested for [exposure to lead]." *(See 22 DCMR 7301.1(c))*

LEAD SCREENING RESULTS

During FY14, 16,238 District children less than six years of age had at least one blood lead test that was reported to the Department. Of these 16,238 children, 178 – approximately 1.10% – were identified as new confirmed cases of blood lead levels greater than or equal to the current reference value established by the US Centers for Disease Control and Prevention (CDC), of 5 micrograms of lead per deciliter of blood (µg/dL). Data from FY15 were similar: 15,449 District children five (5) years of age or less had at least one blood lead test that was reported to Department and, of these, 196 – approximately 1.27% - were identified as new confirmed cases of blood lead levels greater than or equal to 5 µg/dL. The slight increase in the number of cases from FY14 to FY15 was not statistically significant ($p > 0.05$). ***In both fiscal years, over 98% of children tested had blood lead levels below 5 µg/dL.*** These data are illustrated below in Charts 1 and 2.

Chart 1. Proportion of children with a blood lead level ≥ 5 µg/dL among all children under 6 years of age residing in the District of Columbia with at least one reported blood lead test in FY14.

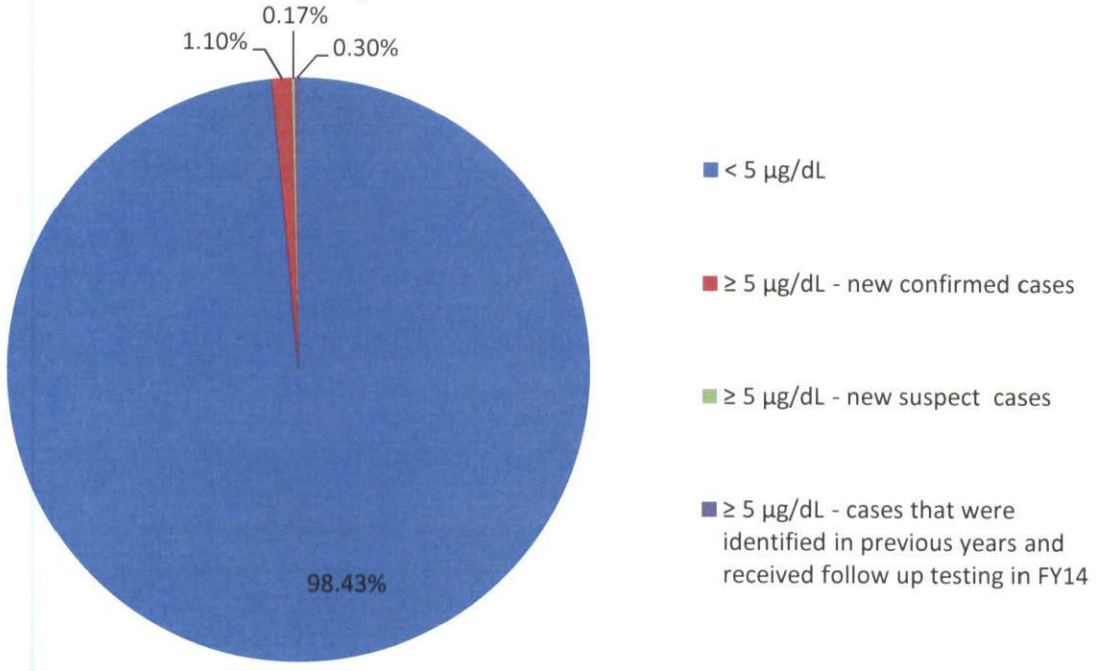
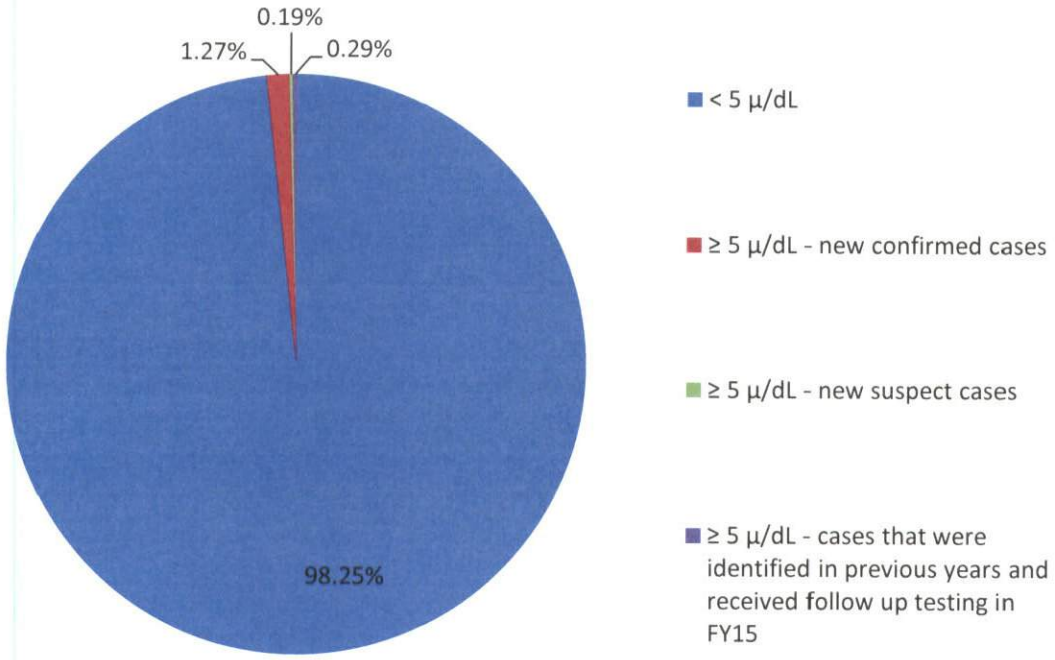
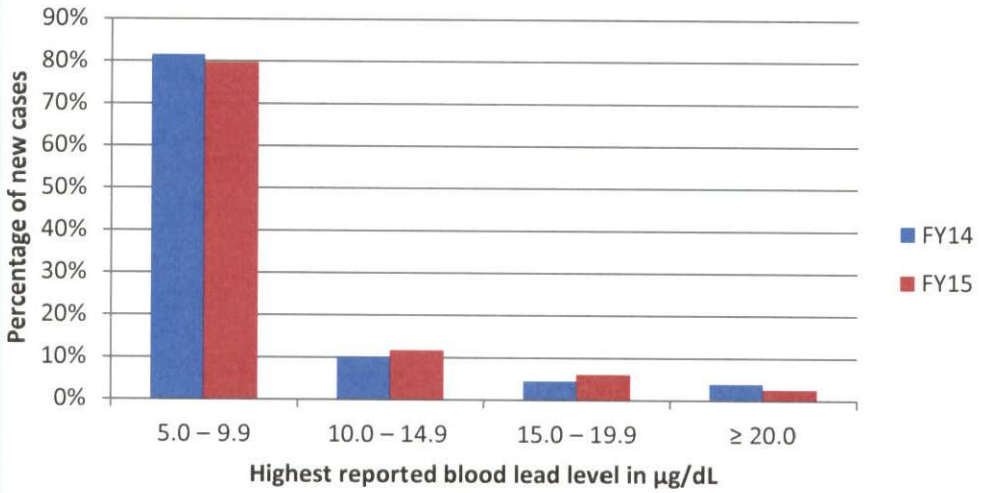


Chart 2. Proportion of children with a blood lead level ≥ 5 µ/dL among all children less than 6 years of age residing in the District of Columbia with at least one reported blood lead test in FY15



For those children who were identified as new confirmed cases, the Department examined the distribution of the highest blood lead levels reported for each case, since the higher the blood lead level, the greater the risk of serious health problems. As illustrated below in Chart 3, approximately 80% of new confirmed cases in both FY14 and FY15 had a peak blood lead level between 5.0 µg/dL and 9.9 µg/dL. For both years, the median peak blood lead level was 6.0 µg/dL.

Chart 3. Distribution of peak blood lead levels among new confirmed cases of blood lead levels ≥ 5 µg/dL involving District of Columbia children less than 6 years of age, FY14 and FY15.



In summary, these analyses illustrate that substantial gains continue to be made in preventing childhood lead poisoning in the District of Columbia. Reductions have been observed in both the number of cases and in peak blood lead levels among new confirmed cases over the past several years, suggesting diminishing exposure to lead and improved overall lead safety in the District. Despite this progress, blood lead levels equal to or greater than 5.0 µg/dL continue nevertheless to affect hundreds of children in the District of Columbia annually and remain an ongoing cause for concern.[2]

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

[2] The numbers reflected in this report are based on thousands of annually reported results; but each year, thousands of District children ages 5 years or less are not tested, and therefore these numbers do not fully capture and are likely to under-report the true extent of elevated blood lead levels in the District.

provider or facility, of the requirement for periodic blood tests for lead poisoning as provided in this [Act] and rules implementing this [Act].[3]

- Health care providers or facilities to perform a blood test for lead exposure as part of a well-child care visit on every child who resides in the District of Columbia, once between 6 months and 14 months of age, and a second time between ages 22 months and 26 months of age.[4]

- If a child's age exceeds 26 months, and a blood lead screening has not been performed, the child to be screened twice prior to the age of 6 years.[5]

B. Screening Compliance

To assess the extent of compliance with the requirement that every District resident be screened for lead twice before turning three (3) years of age, lead testing in two cohorts of children was examined: children who were 24 to 35 months of age as of July 1, 2014, and children who were 24 to 35 months of age as of July 1, 2015.[6] For each of these two cohorts, all lead tests that were received by the respective relevant date used to determine age were included in these analyses.

As shown below in Table 3, ***90% or more of District children who were 24 to 35 months of age in the years examined had received at least one blood lead test.*** The proportion of children who had received two (2) or more tests was much lower -- 39% in FY14 and 42% in FY15. ***The share of children who received testing at the intervals required by law (at both 6 to 14 months of age and at 22 to 26 months of age) was 27% in FY14 and 29% in FY15.***

In summary, these analyses indicate that while the proportion of the children in these two fiscal year cohorts who had received at least one blood lead test was quite high (at 90% or higher for each of the two fiscal years), compliance with the screening law's requirement of two tests at specific age intervals was poor.

[3] D.C. Code § 7-871.03(a)

[4] D.C. 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.

[5] D.C. Code § 7-871.03(b)

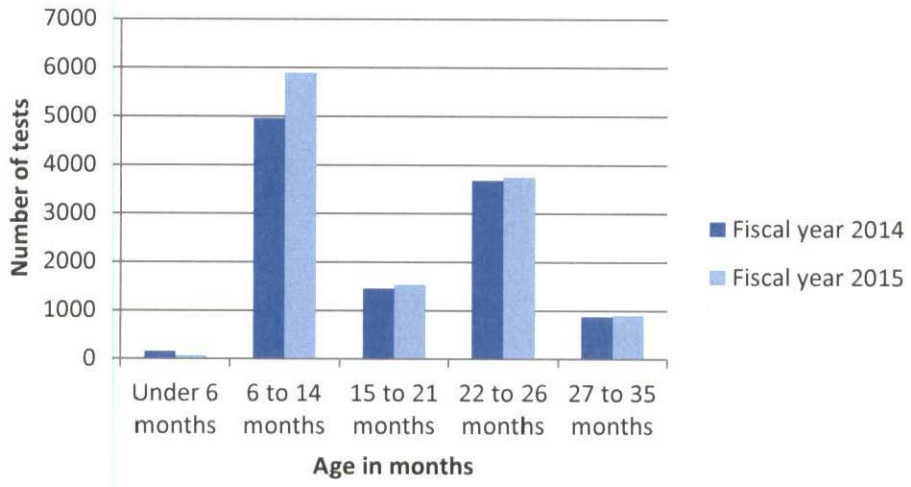
[6] These dates were chosen as they are the dates of the annual US Census population estimates, allowing for optimal alignment of the numerator (number of children in an age range who have ever been tested) with the denominator (estimated number of children in that age range living in the District).

Table 1. Share of District children 24-35 months of age who have ever received blood lead testing, by fiscal year.

Indicator	FY14		FY15	
	Number	Percentage	Number	Percentage
Children between 24 and 35 months old with least one reported blood lead test	7,516	90%	7,901	91%
Children between 24 and 35 months old with at least two reported blood lead tests	3,231	39%	3,699	42%
Children between 24 and 35 months old with at least two reported blood lead tests and who received testing at both 6-14 months of age and 22-26 months of age	2,262	27%	2,572	29%

The Department examined the timing of testing in children in both cohorts who had only one reported test. Results are detailed in Chart 4 below.

Chart 4. Timing of reported blood lead tests in District children 24-35 months of age, by age range and fiscal year.

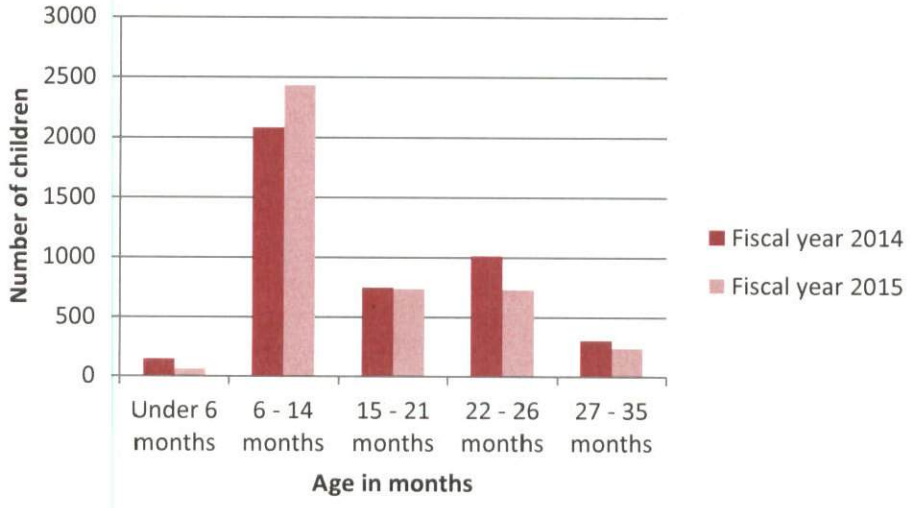


Currently, the District of Columbia is experiencing a population influx, with a net population increase of approximately 57,000 individuals between 2010 and 2014 per the US Census Bureau. While overall population trends are not necessarily reflected in each subset of that population, it was posited that the relatively high number of children in both 2014 and 2015 cohorts with only one blood lead test could possibly be due to an influx of children who already had one blood test completed in another jurisdiction of residence prior to becoming District residents.

If this were the case, one would expect to observe that the largest share of the children with only one reported test would have been tested between 22 and 35 months of age. However, as shown below in Chart 5, the largest share of children with only one blood lead test was tested between 6 and 14 months of age -- the time at which providers are required by law to perform the first test. If these observations were due to population movement, they would be more consistent with a net population loss of several thousand children between the ages of 1 and 2 each year – a hypothesis that is not supported by census data.

Accordingly, while available data do not allow us to definitively determine the role of population mobility, the most plausible interpretation is that the children with a single reported test received their first blood lead test per District law, but had not received their second test by the end of the period examined.

Chart 5. Age in months at time of blood lead testing among District children ages 24-35 months of age who have only one reported blood lead test, FY14 and FY15.



To assess whether providers who are testing children twice are doing so at the times required by law, the timing of testing in children with exactly two reported blood tests was explored for both 2014 and 2015 cohorts. This analysis therefore excluded children who were only tested once, eliminating questions around the role of population movement, and also excluded children who were tested more than twice, eliminating questions around the reason for the timing of the testing -- for example, additional testing triggered by concern about known risk factors for lead poisoning, diagnosis with a condition that is a co-morbidity of lead poisoning, or a previously identified elevated blood lead level. As shown below in Charts 6 and 7, the majority of tests in these children occurred at the times specified by law -- between 6-14 months and 22-26 months, respectively.

Chart 6. Age in months at time of first and second blood lead tests among District children ages 24-35 months of age with exactly two reported blood lead tests, FY14.

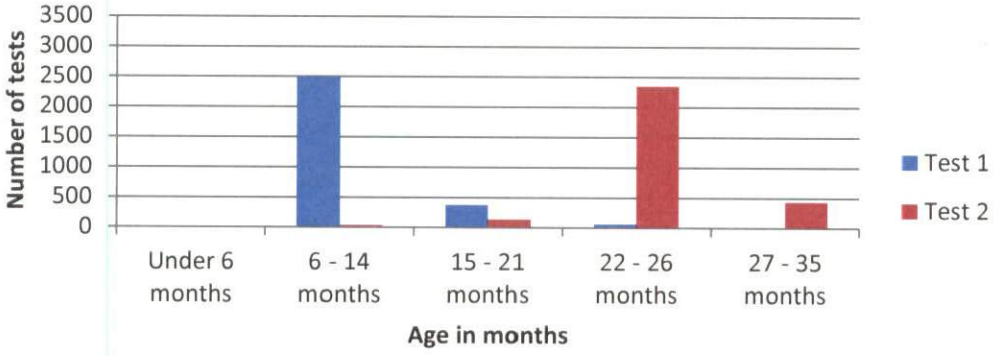
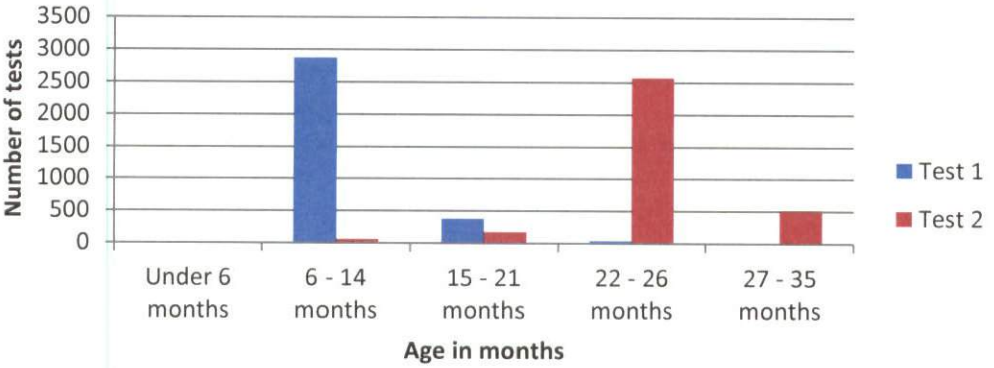


Chart 7. Age in months at time of first and second blood lead tests among District children ages 24-35 months of age with exactly two reported blood lead tests, FY15.



C. Actions Taken to Improve Compliance

Barriers may exist that make compliance with the District's screening requirements challenging. One possible barrier is missed well-child visits. Another, more frequently cited possible barrier is missed lab appointments, involving patients obtaining a prescription for a blood lead test at a laboratory, but then failing to follow through. While this phenomenon may play a role, the Department's analyses do not support the idea that missed lab appointments is the primary causal factor. If this were the case, one would expect that tests across all age ranges would be equally affected; yet, this was not observed. When examining in aggregate the children in both 2014 and 2015 cohorts with only one reported blood lead test, 56% were 6-14 months of age at the time of testing, while 21% were 22-26 months of age at the time of testing.

Overall, the Department's analyses suggest that ***providers serving District of Columbia children are exhibiting a relatively encouraging level of compliance with respect to performing the first required blood lead test, but relatively poor compliance with respect to the second required blood lead test.*** Missed lab appointments and missed well-child visits may well be factors. It is likewise possible that some of the youngest children in each of the two cohorts had not yet had their 24-month well-child appointment within the period studied, thereby possibly accounting in part for the relatively poor apparent rate of compliance with the second required test. Finally, the possibility that providers are simply not ordering a second blood lead screening with the same frequency and timeliness with which they are ordering the first one cannot be excluded.

1. Increased Outreach to Providers/Facilities

The Department and its sister agencies have developed 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.

In the fall of 2015, the Department joined with the Department of Health Care Finance (DHCF) to institute a formal Lead Partnership that provides the two agencies a means by which to discuss and carry out collaborative strategies aimed to improve compliance with the District's screening requirements. The Department and DCHF annually send a letter to providers on lead screening requirements under Medicaid and District law. In addition, this partnership with DHCF has enabled the Department to obtain a copy of a report conducted by

the Court Monitor in the *Salazar v. District of Columbia* Consent Decree. This analysis carried out by the Court Monitor who is a senior health services researcher at Mathematica Policy Research, Inc.is a study of lead screening for two groups of children enrolled in the District's Medicaid program to assess ways to improve lead screening rates. The analysis is also focused in part on using the District's lead screening data involving Medicaid-enrolled children to determine the compliance rate with the District's lead screening requirements of the District's medical practices that serve the Medicaid population.

Based on data in the analysis, , the Department has embarked on an initiative to provide outreach to the pediatric providers with the lowest rates of compliance with the District's screening requirements. This outreach work is being conducted by one of the Department's partners, the Mid-Atlantic Center for Children's Health and the Environment (MACCHE). MACCHE is one of the country's 10 Pediatric Environmental Health Specialty Units, regional outreach and education organizations focused on ensuring pediatricians receive information relevant to their practices on children's environmental health issues like lead poisoning.

On the Department's behalf, MACCHE is tasked with reaching out to a dozen of the medical practices with the lowest compliance rates identified by Mathematica, in addition to other pediatric practices serving District residents. They then educate them on the District's specific lead screening requirements, and they include an important heads-up to these practices that under the law, the Department has the legal authority to impose fines on them for non-compliance with these requirements.[7] The Department's strategy is to work with DHCF to monitor these practices over time to determine whether their rate of compliance is improving or not. In cases where no or insufficient progress is being made, the Department intends to pursue an aggressive enforcement policy that includes the imposition of fines.

2. Increased Outreach to Communities

The Department continues to capitalize on outreach opportunities, where Department staff can stress the need for children to be screened at the appropriate times prior to reaching three years of age and even offer free Department-conducted screening to the public. The Department does this work while participating at various community outreach opportunities District-wide. In addition, beginning in FY15, the Department is conducting and has committed to continue to annually conduct outreach at four major annual health fairs, each one sponsored by one of the District's four Medicaid Managed Care Organizations, each one attracting hundreds of District residents.

[7] D.C. Code § 7-871.05

During FY14, DC Public Schools (DCPS) and the Department developed a multi-year data-sharing agreement that uses data from the District's Universal Health Forms to identify students who lack blood lead test results. Since that time, the Department has been using DCPS data to identify schools with the greatest number of students who do not have a documented lead test, with a particular focus on schools located in census tracts where the Department's surveillance data show screening rates need improvement. This has allowed the Department to provide opportunities for targeted testing of children onsite at these schools.

In FY15, the Department received a grant from the US Centers for Disease Control and Prevention (CDC), to focus on ensuring District children are screened for lead. During FY15, the Department issued grants from this CDC funding to three organizations: one (MACCHE) was issued a Department grant to conduct outreach to medical practices about the District's lead screening requirements (described above), and two others, Lead-Safe DC and the Ethiopian Community Center, to assist the Department in promoting the importance of lead screening for all District children less than six (6) years old.

- Lead-Safe DC (LSDC) is the District-based office of the National Nursing Centers Consortium. Pursuant to the terms of the Department's grant, LSDC reached 141 families and educated them as to the importance of getting their children lead-tested. Some of these educational activities took place at health fairs where Department staff was present to screen children, including the following:

    - June 13, 2015: Health Services for Children with Special Needs (HSCSN) Community Health Expo at Michigan Park (1731 Bunker Hill Road, NE)
    - August 8, 2015: Trusted Health Plan Back to School Health Fair, United Medical Center (1310 Southern Avenue, SE)
    - August 29, 2015: Family Day Celebration at Garfield Park (148 F Street, SE)

  LSDC's outreach efforts resulted in at least 83 children getting screened.

- The Ethiopian Community Center (ECC) serves the District's Amharic-speaking population. Pursuant to the terms of the Department's grant, ECC arranged for education about lead safety and about the District's lead screening requirements for 99 individuals whose primary language was either Amharic or Spanish, at English as a Second Language (ESL) classes conducted on April 25, 2015, and on September 26, 2015. ECC organized an additional presentation on these topics before an audience of approximately 200 individuals whose primary language was Amharic, at the DSK Mariam Church (1350 Buchanan Street, NW), on April 26, 2015.

Additional community outreach performed by ECC on the Department's behalf occurred as follows:

- July 31, 2015: Workshop on lead for 8 parents of young children attending ECC's summer program
- August 9 and 16, 2015: Radio announcements in Amharic about the importance of lead screening on Addis Dimts Ethiopian Radio
- August 23, 2015: Radio interview in Amharic featuring the ECC Executive Director, on the importance of lead screening and lead safety, on Addis Dimts Ethiopian Radio
- August 29, 2015: About 150 individuals received ECC handouts regarding lead safety tips and the need for screening at the Back to School Community Health and Resource Fair, held at the Raymond Recreation Center (3725 10th Street, NW)
- September 16 and 17, 2015: Presentation in Amharic by the ECC Executive Director on the importance of lead screening for at least 15 parents of young children, at two (2) Open House events at The Bridges Academy (6119 Georgia Avenue, NW)

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.[8]

- Health care providers or facilities to forward all elevated blood lead level results immediately to the child's parent or guardian.[9]

- 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.[10]

B. Reporting and Actions Taken to Improve Compliance

During FY14 and FY15, laboratories appeared by and large to comply with the District's blood lead test reporting requirements. The Department's expanding

[8] D.C. Code § 7-871.03(c)
[9] D.C. Code § 7-871.03(d)
[10] D.C. Code § 7-871.03(d)

data partnership with DHCF and its new data collaboration with the District of Columbia Public Schools (DCPS) Office of Early Childhood Education, both underway in FY15, are likely to provide further information on reporting compliance, during FY16.

The Department has no evidence that health care providers and facilities are failing to comply with the requirements related to reporting test results to parents/guardians of children less than six years old, and anecdotally at the very least, widespread compliance with these requirements does indeed seem to be occurring. Similarly, the Department has no evidence that health care providers and facilities are failing to comply with parent/guardian requests for written details regarding their child's blood lead test and test result.

CONCLUSION

Data from FY14 and FY15 indicate that a full 90% of the District's children are being screened at least once prior to age three years. However, the data also show that there is sub-optimal compliance with the District's requirement that all children get screened twice prior to turning 3 years of age, and even less compliance with the District's requirement that these 2 tests occur at the specific age ranges of 6-14 months of age and 22-26 months of age.

Overall, the data, as demonstrated in Chart 8 below, continue to provide reassurance that District children are being decreasingly exposed to lead, compared to available data from several years ago. While compliance with the District's screening requirements continues to need improvement, Department efforts are underway, in close collaboration with DHCF, DCPS, and Department grantees, which should result in positive strides and progress on this front.

Chart 8. Number of confirmed reported cases of blood lead levels ≥ 5 µg/dL in children less than 6 years of age and residing in the District of Columbia, FY09-FY15.