



# 2015 Data Report on Childhood Lead Testing and Elevated Blood Lead Levels: Michigan

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## **Executive Summary**

This is the 12<sup>th</sup> annual statistical summary of clinical laboratory reports of children tested for lead in Michigan. Data for this report cover tests conducted in the calendar year 2015, and comparison data are provided for the previous 17 years. Note: This report does not present an analysis of blood lead data on children in Flint beyond that which is presented for the state as a whole, counties, and by zip code. For more information about Flint blood lead data and related information, the reader is referred to the State of Michigan's Flint water response website (<a href="www.michigan.gov/flintwater">www.michigan.gov/flintwater</a>) and an article in *Morbidity and Mortality Weekly Report* (MMWR).<sup>1</sup>

#### **Key Findings:**

- In 2015, 140,857 children younger than six years of age had a blood lead test, or approximately 20% of the population in this age group.
  - o Among children age one and two, 86,437 were tested for lead, or approximately 37.9% of the population in this age group.
- Of 140,857 children under age six who were tested for lead, 4,791 (3.4%) had an elevated blood lead level (EBLL) of ≥5 micrograms of lead per deciliter of blood (μg/dL).
  - Of all 4,791 children with an EBLL, 2,495 (52.1%) had a confirmatory venous blood test ≥5 μg/dL.
- Lenawee County, Mason County, and Kent County ranked as the three counties with the highest percentage of children under age six with an EBLL, at 10.0%, 6.5%, and 6.2%, respectively.
- More children under age six were tested and had an EBLL in the City of Detroit than any county in Michigan; the 21,548 tested included 1,620 with EBLLs. Thirty-six percent of the estimated population of children under age six in Detroit were tested.
- In 2015, 59,361 children one and two years of age who were enrolled in Medicaid were tested for lead.
  - o Among children age one and two enrolled in Medicaid, 2,486 (4.2%) had an EBLL.

# Key recommendations and next steps for the MDHHS Childhood Lead Poisoning Prevention Program (CLPPP):

- Improving the completeness, accuracy, and timeliness of the surveillance system by implementing a
  modernized data management system and automating the process of receiving and compiling
  reports from laboratories.
- Partnering with other agencies to increase screening rates to increase the proportion of children with EBLLs based on capillary tests receiving a confirmatory venous test.
- Launching a new program to increase reimbursement to Local Health Departments for the provision of in-home nursing case management for Medicaid children with EBLLs, supported by training and technical assistance from MDHHS CLPPP.
- Collaborating with the MDHHS Lead Safe Home Program (LSHP), which is implementing a major expansion of environmental inspection services and financial support for home lead abatement.

# **Report Abbreviations**

**BLL: Blood Lead Level** 

CDC: Centers for Disease Control and Prevention CLPPP: Childhood Lead Poisoning Prevention Program

EBLL: Elevated Blood Lead Level (defined as  $\geq$  5 micrograms per deciliter ( $\mu$ g/dL) of blood)

LHD: Local Health Department LSHP: Lead Safe Home Program

MDHHS: Michigan Department of Health and Human Services

### 2015 Data Report on Childhood Lead Testing and Elevated Levels: Michigan

#### Introduction

The purpose of this report is to provide a summary of the blood lead data for 2015 for the public, public health professionals, and researchers to use in understanding the scope of blood lead testing and elevated blood lead levels throughout Michigan. Data tables in this report are available in Excel, upon request, from the MDHHS CLPPP.

#### Health Hazards of Lead

For more than 40 years, government, environmental advocates, parents, and the public have worked tirelessly to reduce and eliminate childhood lead poisoning hazards. These efforts have led to considerable gains such as elimination of lead in paint and gasoline in the 1970s as well as some consumer products; increased awareness of lead as an environmental hazard; and improvements in

guidance for blood lead testing and treatment of lead poisoned children.

Unfortunately, lead poisoning is far from being eliminated. Significant factors contributing to lead poisoning include living in homes built before 1978 (before the ban on the use of lead in paint), poverty, and children of some ethnic and racial groups.<sup>2-4</sup> The detrimental and long-lasting effects of lead are magnified in Michigan's urban areas, where aging housing stock and substandard living conditions increase risk of exposure.

Young children, wherever they live, are particularly vulnerable to lead poisoning because of their tendency to put contaminated hands and items such as toys into their

#### Health Hazards of Lead

Lead is a potent neurotoxin, and no safe blood lead level has been identified. In children, lead exposure can cause

- Learning problems
- Behavior problems, including hyperactivity
- Lower IQ
- Slowed growth and development
- Hearing and speech problems
- Anemia

mouths.<sup>2</sup> All Medicaid-enrolled children are considered to be at increased risk for lead exposure and poisoning, and Michigan Medicaid policy requires that all enrolled children be tested for lead exposure at 12 and 24 months of age, or between 36 and 72 months of age if not previously tested.<sup>5</sup> The Michigan Medicaid Program produces detailed monthly statistics on testing rates of Medicaid enrolled children by age groups and types of Medicaid enrollment (Managed Care, Fee-for-Service, and Medicaid/CSHCS Dual Eligibles).<sup>6</sup>

#### MDHHS Childhood Lead Poisoning Prevention Program

The Michigan Department of Health and Human Services (MDHHS) Childhood Lead Poisoning Prevention Program (CLPPP) began in 1992 through a grant from the federal Centers for Disease Control and Prevention (CDC). The program was formalized into state law in 1998, under Public Health Code MCL

333.5474, with the goal of preventing lead poisoning through targeted primary and secondary prevention aimed at high risk children and their families.

#### Blood Lead Testing and Surveillance

The MDHHS CLPPP blood lead surveillance program compiles blood lead test results for children under the age of 18 in the state of Michigan from clinical laboratory reports to the State.

Exposure to lead is measured by blood lead tests. A blood lead level (BLL) equal to or greater than 5 micrograms per deciliter of blood ( $\geq$ 5 µg/dL) is considered elevated by CDC. In 2012, the CDC's Advisory Committee on Childhood Lead Poisoning recommended changing the definition of elevated blood lead level (EBLL) from a BLL  $\geq$ 10 µg/dL to  $\geq$ 5 µg/dL, based on a report that even low levels of lead in blood

present health concerns, and that 2.5% of children in the U.S. have a BLL  $\geq$ 5  $\mu g/dL$ .<sup>4</sup>

The laboratory test for BLL is done on a venous blood sample or capillary blood, usually from a finger stick. Even though they are easier to conduct, elevated levels from capillary blood tests should be confirmed with a venous blood test because capillary tests can produce false positive results.

Under the Public Health Code, clinical laboratories and users of portable blood lead analyzers are required to submit all blood lead

laboratory test results within five days after test completion to the MDHHS CLPPP (R325.9081-9086).

### Significance of the Elevated Blood Lead Level (EBLL)

The EBLL is the level at which interventions should be initiated. Interventions include additional testing of the child, education of the caregivers, and assessment of the home for lead hazards.

The CLPPP maintains a public health surveillance database of all laboratory test results. Blood lead testing results include name, address, and demographic information about the person tested, contact information for the parent and the provider who ordered the test, the test result including the sample type, the date the blood sample was taken and the date the test analysis was completed. CLPPP compiles all the reports on a weekly cycle, including cleaning the data, and uploads the results into the data management system. Each week, an extract of the data is uploaded to a database in the MDHHS data warehouse where a computer algorithm generates a child ID, so that multiple tests of the same child are linked. This child ID is also used to link the results to the Medicaid data files and the state's immunization registry (the Michigan Care Improvement Registry, or MCIR).

Compiled data from CLPPP are made available to governmental agencies (including local health departments [LHDs], Medicaid, the Michigan State Housing Development Authority, the Michigan Lead Safe Home Program, and CDC), non-governmental organizations, researchers and the public. In addition, because the child's lead level is linked to MCIR, health care providers can simultaneously see their patient's lead level when the child's immunization record is opened in MCIR.

#### Uses of Surveillance Data

The surveillance data are used for a variety of purposes, including improving compliance with requirements and recommendations for testing of children, individual case management for children with elevated blood lead levels (EBLL), and identification of homes in need of inspections for lead hazards coupled with home lead abatement. Surveillance data are also used to identify areas of concern when unusual or unexpected increases in the numbers of cases of EBLL are seen, and to identify high risk groups for targeting a variety of interventions.

#### Improve screening and testing

To improve compliance with the lead testing requirements of Medicaid and recommendations for testing of high risk children, and to promote the importance of obtaining a confirmatory venous test for EBLLs from capillary tests:

- The lead testing status of children is provided to all Medicaid Managed Care Plans. This is done by matching Medicaid enrollment files with CLPPP's lead surveillance data files. Managed Care Plans use the data to contact their providers who are not compliant with Medicaid testing requirements.
- Monthly, CLPPP provides LHDs a list of children who are in Medicaid fee-for-service and their lead testing status so that LHDs can conduct follow-up with providers of children who are not in compliance with Medicaid testing requirements.
- CLPPP provides LHDs with a weekly list of all new blood lead tests, including whether they are venous or capillary, so that the LHDs can follow up with the families of children with capillary EBLLs to encourage them to see their provider to get a confirmatory venous test.

#### Conduct case management for children with elevated blood lead levels

LHDs use the weekly data reports from CLPPP to identify and follow up on children with EBLLs. Depending on resources, LHDs provide case management services to children with EBLLs and their families. Case management may include a home visit to make a visual assessment of lead hazards, an assessment of the child's growth and development, education of the caregivers on nutrition and cleaning, and referrals to other agencies for interventions. A nurse consultant at MDHHS supports case management activities at the LHDs through training and technical consultations. LHDs use a web-based application to track case management activities called the Healthy Homes Lead Poisoning Surveillance System (HHLPSS).

#### Identify homes with lead hazards

To ensure that families of children in lead contaminated homes have resources to remove lead hazards from the home, CLPPP provides information on all children with EBLLs to the MDHHS Lead Safe Home Program. This program provides assistance to low-to-moderate income families whose children have EBLLs and to families that live in potentially hazardous homes. The program provides resources to identify lead-based paint hazards and hire contractors that will safely remove these hazards.

#### Methods

#### **Data Sources**

Blood lead test results were extracted from the surveillance database that resides in the MDHHS data warehouse for tests conducted in 2015 of children under age 6. Data for a calendar year are never truly complete, but the 2015 data were considered complete as of the end of the second quarter of 2016 (May 31, 2016). Extracted data elements included child ID, blood lead level; blood sample type (venous, capillary, or unknown); age at the time of the test; Medicaid ID; and city, county, and zip code of residence at the time of the test. In addition, the number of children tested and number with EBLLs were obtained for previous years going back to 1998.

Each child was counted only once in a given year in this report. If a child had multiple tests in a year, the highest BLL obtained from a venous test was retained. If no venous test was performed, the highest BLL obtained from a capillary blood draw was retained. If the child had neither a venous or capillary test, the highest BLL obtained from an unknown sample type was retained. If the highest level was  $\geq 5 \, \mu g/dL$ , the child was counted as having an EBLL.

All test outcomes were categorized by sample type and BLL:

- Capillary, venous, or unknown sample type with LL < 5 μg/dL
- All capillary or unknown sample type tests ≥5 µg/dL
- Venous tests 5-14 μg/dL
- Venous tests ≥15 µg/dL

#### Analytical approach

The number and EBLL status of children were enumerated by age group, Medicaid enrollment status, counties, and zip codes. Data were analyzed for all children under age six and for children between one and two years of age. The latter group was examined because they are targeted by Medicaid for testing and represent the age group with the highest risk of EBLLs. For county-level testing results, two indicators of older housing were included: percent of housing constructed before 1978, when leaded paint was completely banned, and percent of pre-1950 housing, when homes had high levels of leaded paint.<sup>7</sup> The estimated population of children under age 6 in each county used to calculate testing rates was obtained from the U.S Census American Community Survey.<sup>8</sup> SAS® was used for data analysis.

If there were fewer than six counts in a given tabulation, the value was suppressed to maintain confidentiality. Further, to prevent back-calculation of the suppressed numbers using other numbers in the rows and/or columns of the data tables, some numbers greater than six were also suppressed. Tables without data suppression will be made available, in Excel or PDF, to local health departments upon request.

### **Results**

Figures and Tables are presented after the narrative, starting on p. 16.

#### Figure 1: Percent of Children under Age Six with EBLLs, State of Michigan, 1998-2015 (p. 16)

Since 1998, the percentage of children under age six with EBLLs has declined, and this trend continued in 2015. A total of 140,857 children under age six were tested in 2015, of which 4,791 (3.4%) had EBLLs.

# Figure 2: Number of Children under Age Six, Tested for Lead, 1998 – 2015, by Medicaid enrollment status (p. 17)

The total number of children under age six who were tested for blood lead rose from 73,643 in 1998, to a peak of 155,847 in 2010, and then steadily declined to 140,857 in 2015. Approximately 71.2% of the children tested in 2015 were enrolled in Medicaid in the calendar year. The proportion of tested children who were enrolled in Medicaid increased since 1998; the percent enrolled in Medicaid consistently remained between 70% and 76% since 2004.

# Figure 3: Number of Children Age One and Two, Tested for Lead, 1998 – 2015, by Medicaid enrollment status (p. 18)

In 2015, 61.4% (86,437) of the 140,857 children under age six were in the one and two age group, and 68.7% of these children were enrolled in Medicaid. The number of children tested more than doubled from 1998 to 2015. The proportion tested for blood lead who were enrolled in Medicaid rose from 50% in 1998 to a peak of 75.3% in 2010 and then declined to 68.7% in 2015.

# **Table 1: Blood Lead Levels for Children under Age Six by County, 2015** (p. 19) and **Table 2: Blood Lead Levels for Children Age One and Two by County, 2015** (p.23)

The numbers and percent of EBLLs, categorized by venous and capillary results, are listed in Table 1 for children under age six, and in Table 2 for children age one and two. County-level population and housing data are also included in the tables.

Overall, 20.1% (140,857) of all children under age six were tested in Michigan (Table 1), and the average percent of children tested by county was 18.4%. The percent of children tested ranged from 36.7% (Detroit) to 8.9% (Livingston County). The city of Detroit had the largest number of tested children (N= 21,548) and the highest percentage of older housing (57.9% built before 1950 and 93.2% built before 1978).

A total of 4,791 (3.4%) had EBLL, of which 52.1% (2,495) were based on venous blood samples.
 Detroit had the highest percent of EBLL based only on venous tests (6.1%), followed by Calhoun

- County (3.3%). Approximately 33.8% (1,620) of all children with EBLLs lived in Detroit. Of all EBLLs from a venous test, 53.1% (1,324) lived in Detroit.
- Two hundred and sixty-two (10.5%) of the 2,495 venous tests were 15  $\mu$ g/dL or greater, a level at which a home intervention should take place as soon as possible to identify and mitigate sources of lead exposure. More than half of these children (137 of 262, or 52.3%) were residents of the city of Detroit.

A total of 86,437 children age one and two were tested for EBLL in Michigan in 2015 (Table 2). The overall testing rate children age one and two was higher for this age group (37.9%) than for all children under age six (20.1%). Testing rates ranged from 68.5% (Baraga County) to 20.4% (Livingston County), and the average county testing rates for children in this age group (40.8%) was higher than the rates for all children under age six (18.4%).

- Overall, 2,996 (3.5%) of children in this age group had EBLL, which was similar to the percent for all children under age six (3.4%).
- The city of Detroit comprised 662 (46.0%) of the 1,438 EBLLs from a venous test among children age one and two, which was lower than the 53.1% of 2,495 EBLLs from a venous test among children under age six.

In 2015, nine children (data not presented) had a confirmed venous level of 45  $\mu$ g/dL or greater, a level requiring immediate medical attention and possible chelation therapy. Three of these children lived in the city of Detroit, two in Kent County, and one lived in Flint.

Table 3. Blood Lead Levels for Children under Age Six Enrolled in Medicaid by County, 2015 (p. 27) and Table 4. Blood Lead Levels for Children Age One and Two Enrolled in Medicaid by County, 2015 (p. 30)

(Note: The City of Detroit data are included in the data for Wayne County for Tables 3 and 4.)

For the 100,279 children under age six enrolled in Medicaid at any time in 2015 who were tested (Table 3), 4,020 (4.0%) had an EBLL and 2,140 (2.1%) had an EBLL from a venous test.

- The four counties with the highest percent EBLL were Lenawee (12.4%), Mason (8.1%), Kent (7.4%) and Jackson (6.3%).
- Over half of the 4,020 Medicaid children with an EBLL lived in Wayne County (42.1%) or Kent County (13.2%). The EBLL percentage for Wayne County, which includes Detroit, was less than these other counties (5.5%), but had the highest percentage of children with an EBLL from a confirmatory venous test, at 4.4% (1,345 of 30,764).

A total of 59,361 children age one and two enrolled in Medicaid were tested in 2015 (Table 4).

- The percentage of children age one and two with an EBLL (4.2%, or 2,486 of 59,361) and percentage with an EBLL from a venous test (2.1%).
  - o These levels were similar to the percentages for children under age six.

- Among all EBLLs for children age one and two years of age, 49.0% were from a venous test.
  - This level was similar to the 53.2% (2,140 of 4,020) of venous EBLLs among all EBLLs for children under age six.
- More than half of the 2,486 children age one and two enrolled in Medicaid and tested with an EBLL in 2015 lived in Wayne County (34.9%) or Kent County (16.7%). Wayne County also made up 55.8% of all children tested with an EBLL from a venous test in this age group in Medicaid.

Table 5. Blood Lead Levels for Children under Age Six by Zip Code, 2015 (sorted by zip code) (p. 34) and Table 6. Blood Lead Levels for Children under Age Six by Zip Code, 2015 (sorted by % EBLL) (p. 46)

These tables are made available for identifying small jurisdictions for additional investigation. Results should be interpreted with caution because the numbers are very small for most zip codes.

#### Conclusions and Recommendations

#### Childhood Blood Lead Levels in Michigan

The State of Michigan has made great strides in reducing the number of children with EBLLs while also increasing the number of children getting tested. Surveillance data from the MDHHS CLPPP have been essential in identifying problems, driving interventions, and documenting successes. Despite many successes, childhood lead poisoning remains a public health threat for many Michigan children.

In 2015, there were 4,791 children under the age of six with elevated blood lead levels, comprising 3.4% of all tested children. Detroit continued to bear the greatest burden of EBLLs in children. Detroit and other communities with a high percent of children living in poverty and with older housing continue to have a disproportionate number of children with elevated blood lead levels.

Of the 140,857 children under age six who were tested in 2015, 100,279 (71.2%) were enrolled in Medicaid.

#### Impact of the Flint Water Crisis

On April 25, 2014, the city of Flint changed its water supply from Lake Huron (supplied by the Detroit Water Authority) to the Flint River. This was done under the direction of state-appointed emergency management in an effort to save the city money. Water from the Flint River was very corrosive whereas water from the Detroit Water Authority had very low corrosivity. When the water supply was switched, corrosion inhibitors were not added, which allowed corrosive water to run through aging pipes and leach lead into the city's water supply.

Increased water lead levels and EBLLs in young children were observed in Flint<sup>10</sup> and confirmed by the State of Michigan in September 2015. In October 2015, the city of Flint's water supply was returned to water from the Detroit Water Authority. The public health emergency response brought local, state, and

federal resources together to coordinate a response that is expected to continue well into the future, with the common goal of protecting Michigan residents from lead exposure.

The MDHHS CLPPP program mounted an active response to the Flint water crisis by striving to increase the numbers of blood tests conducted for Flint residents, increase and support active case management in Flint and Genesee County, and increase home lead abatement through the Michigan Healthy Homes program. The CLPPP also provided numerous data and customized reports to government agencies, the media, the public and other community stakeholders, to support their activities in monitoring and responding to community needs and legislative actions.

In addition to activities by the MDHHS, other agencies within the State of Michigan have acted in response to the Flint Water Crisis with programs to increase water testing, removal of lead service lines from homes in the affected area, and other programs to reduce exposure to lead through water in Flint. Governor Rick Snyder created the Child Lead Poisoning Elimination Board in 2016 to address the need for coordinated efforts to design a long-term strategy for eliminating child lead poisoning in Michigan. <sup>11</sup> Its recommendations focus on the importance of eliminating sources of lead in the environment before children become lead poisoned.

#### Challenges

CLPPP has faced challenges to meeting the program goals in several areas. Each challenge, however, provides opportunities for improvement which are translated into key recommendations and next steps for the MDHHS Childhood Lead Poisoning Prevention Program (CLPPP). Some challenges include:

#### Surveillance

- The number and percentage of children with EBLLs are based only on the numbers of children tested, which may underestimate the true number of children with EBLLs because not all children are tested.
- Lead poisoning prevention has been underfunded and somewhat neglected since lead poisoning prevention initiatives significantly reduced levels of child EBLLs. The urgent need for expanded surveillance highlighted by the Flint Water Crisis has called attention to the need for more resources for surveillance data management and on-going epidemiologic analysis.

#### Case definition and data quality

- Inclusion of counts of EBLLs based on capillary test results without a confirmatory venous test
  may increase the count/percent of children with EBLLs because of the known problem of false
  positives with capillary tests. In 2015, nearly half of the 4,791 children under the age of six with
  EBLLs did not have a confirmatory venous test.
- The surveillance definition of EBLL varies from state to state, agency to agency (e.g., action levels for EBLL differ between HUD and CDC), and even within CDC, where two different definitions are used by two separate programs. These inconsistencies make it difficult to compare results between agencies. In this annual report, including the highest capillary test if

- there was no venous test may have identified more false positives but, on the balance, provides a more inclusive data with which to target interventions.
- The computer algorithm used to identify repeat tests of children is imperfect, due to differences in spelling of names, dates of birth and other information used to link tests to one child, thus it is possible that all test results of the same child may not have been linked to that child.

#### Case management and primary prevention

- Case management for children with EBLLs is complex and health departments do not have the resources needed to support their case management staff and activities.
- Because of the age of Michigan's housing stock, the number of children living in rental homes, and lack of funding for lead remediation, many Michigan children continue to be at risk of adverse health effects from exposure to lead. Primary prevention eliminating sources of lead in the environment is the most effective way to address the problem of elevated blood lead levels in children, <sup>12,13</sup> and the Child Lead Poisoning Elimination Board Report, issued to the public in November 2016, highlighted the critical importance of primary prevention. <sup>11</sup>

#### **Recommendations and Future Steps**

Based on the challenges outlined above, the following general recommendations and steps are planned:

- Improving the completeness, accuracy, and timeliness of the surveillance system, by implementing a
  modernized data management system and automating the process of receiving and compiling
  reports from laboratories
  - CLPPP, in partnership with the Michigan Public Health Institute, is completing development
    of "MiCLIPS", a web-based surveillance data application with significantly enhanced
    functionality which will replace the current data management system that has been used
    since 1998.
  - o CLPPP is now conducting regular analysis and dissemination of surveillance data, with the goal of identifying high-risk communities for targeted surveillance. These analyses include the identification of other factors (e.g., socioeconomic factors associated with EBLL) that can be used to identify potential EBLL cases and high-risk groups and to initiate investigation and follow-up by CLPPP and other health care partners.
- Partnering with other agencies to increase screening rates, and increase the proportions of children with EBLLs based on capillary tests receiving a confirmatory venous test
  - CLPPP is working with Medicaid, health care providers, and LHDs to stress the importance of the confirmatory venous blood tests.
  - The attention drawn to Michigan by the Flint Water Crisis dramatically increased the
    numbers of people (children and adults) tested in 2016. Recommendations by the Lead
    Poisoning Elimination Board include statewide universal blood lead testing at the ages of 912 months and again at 24-36 months to ensure that every child with an EBL receives

treatment, case management, and monitoring. <sup>10</sup> CLPPP will be developing strategies to address this recommendation.

- Launching a new program to increase reimbursement to Local Health Departments for the provision of in-home nursing case management to Medicaid children with EBLLs, supported by training and technical assistance from MDHHS CLPPP.
  - All local health departments are eligible to be reimbursed for in-home case management of Medicaid children with venous confirmed EBLLs starting January 1, 2017.
- Collaborating with the MDHHS Lead Safe Home Program (LSHP) as the LSHP implements a major expansion of their programs to offer environmental inspection services and financial support for home lead abatement.
  - Blood lead surveillance data will be critical in identifying a long-term statewide strategy to help prevent some of Michigan's most vulnerable residents from being exposed to lead from all sources, as recommended by the Governor's Lead Elimination Board.<sup>10</sup>

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Figure 1. Percentage of Tested Children under Age Six with Elevated Blood Lead Levels (EBLL) (≥5 μg/dL), 1998-2015

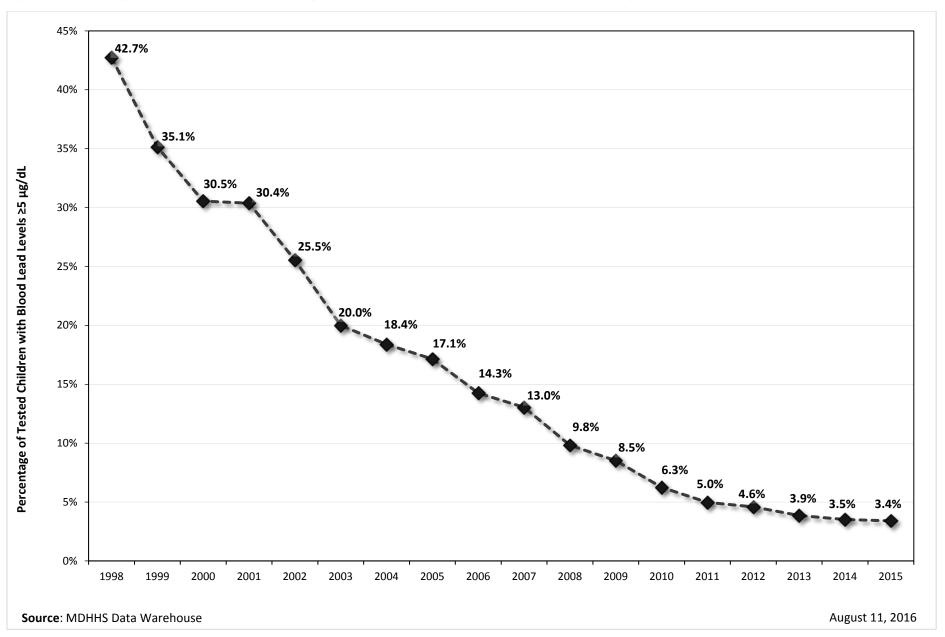


Figure 2. Number of Children under Age Six Tested for Lead by Medicaid Enrollment Status, 1998-2015

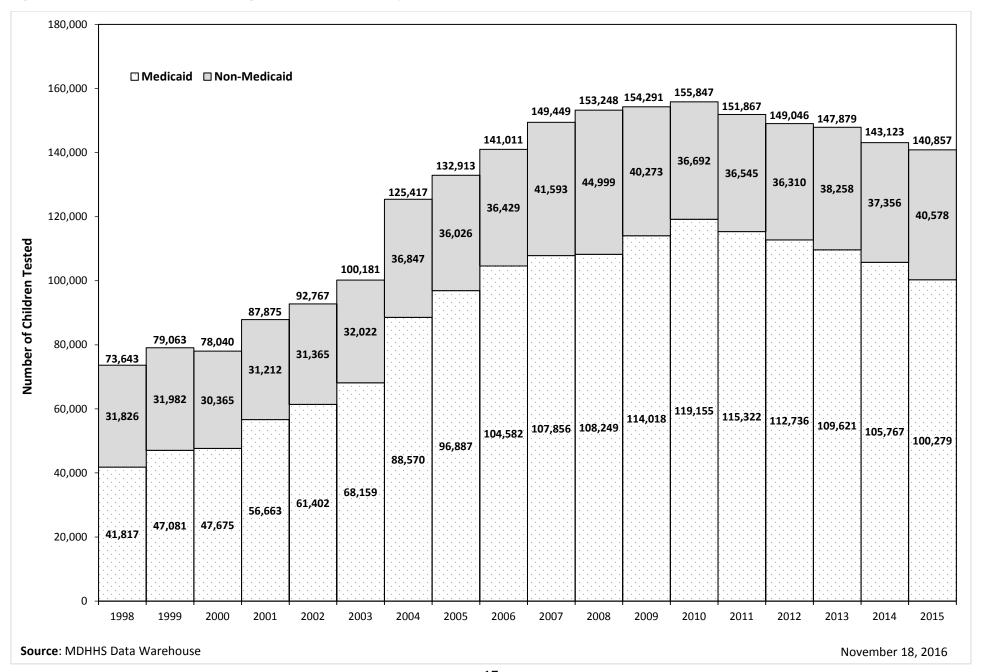


Figure 3. Number of Children Age One and Two Tested for Lead by Medicaid Enrollment Status, 1998-2015

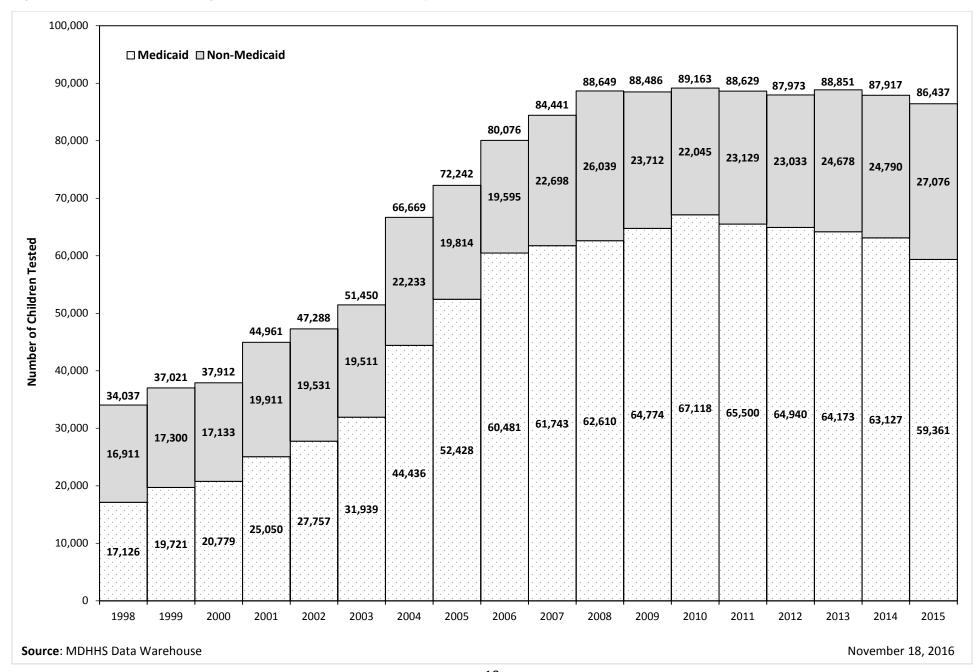


Table 1. Blood Lead Levels for Children under Age Six by County, 2015

CIIII	DDEN LINI		c	Children	Taskad	В	lood Lead L	evel (μg/dL)	‡	BLL ≥5 v	venous	BLL ≥5 v	•
CHII	LDREN UNI	DEK AGE	Ь	Children	Testea		≥5 µg/dL	5-14	≥15	sam	ples	capillary, sam	
County	% pre- 1950 housing	% pre- 1978 housing	Population	N	%	<5	Capillary, Unknown samples*	μg/dL Venous samples	μg/dL Venous samples	N	%	N	%
Alcona	15.0	61.5	421	51	12.1	48	**	0	0	0	0	**	**
Alger	25.7	64.1	438	66	15.1	62	**	**	0	**	**	**	**
Allegan	21.0	51.1	8,514	1,287	15.1	1,239	40	**	**	8	0.6	48	3.7
Alpena	23.5	71.6	1,700	258	15.2	256	**	0	0	0	0	**	**
Antrim	17.1	52.6	1,305	265	20.3	261	**	0	0	0	0	**	**
Arenac	16.9	58.2	799	209	26.2	207	**	**	0	**	**	**	**
Baraga	30.9	71.7	483	155	32.1	154	0	**	0	**	**	**	**
Barry	24.5	57.3	4,017	456	11.4	439	**	**	**	**	**	17	3.7
Bay	32.1	75.6	7,065	1,401	19.8	1,340	43	**	**	18	1.3	61	4.4
Benzie	17.1	46.3	922	264	28.6	262	**	**	0	**	**	**	**
Berrien	26.5	72.2	11,491	1,697	14.8	1,632	33	**	**	32	1.9	65	3.8
Branch	27.8	65.3	3,306	563	17.0	551	**	**	**	**	**	12	2.1
Calhoun	32.6	75.3	10,075	1,918	19.0	1,830	25	54	9	63	3.3	88	4.6
Cass	20.3	59.9	3,318	438	13.2	424	**	**	0	**	**	14	3.2
Charlevoix	19.8	54.4	1,615	265	16.4	263	**	**	0	**	**	**	**
Cheboygan	23.0	53.5	1,335	216	16.2	215	0	**	0	**	**	**	**
Chippewa	22.0	58.6	2,565	373	14.5	367	**	**	**	**	**	6	1.6
Clare	12.0	58.8	1,984	386	19.5	385	0	**	0	**	**	**	**
Clinton	22.1	52.8	4,835	644	13.3	634	**	**	**	**	**	10	1.6
Crawford	10.5	55.6	629	93	14.8	92	0	**	0	**	**	**	**
Delta	32.4	68.0	2,242	401	17.9	382	12	7	0	7	1.7	19	4.7
Dickinson	36.4	71.7	1,520	211	13.9	211	0	0	0	0	0	0	0
Eaton	20.1	56.4	7,374	995	13.5	964	16	15	0	15	1.5	31	3.1
Emmet	22.8	48.3	1,969	320	16.3	320	0	0	0	0	0	0	0
Genesee	19.9	68.0	30,963	6,983	22.6	6,823	77	74	9	83	1.2	160	2.3
Gladwin	12.0	49.5	1,540	303	19.7	301	**	**	0	**	**	**	**
Gogebic	46.4	76.7	781	174	22.3	166	**	**	0	**	**	8	4.6

Table 1. Blood Lead Levels for Children under Age Six by County, 2015  $\,$ 

	DEN LINI	DED ACE	c	Children.	Todad	В	lood Lead L	evel (μg/dL)	<b>‡</b>	BLL ≥5 v	venous	BLL ≥5 v	
CHILI	OREN UNI	DEK AGE	b	Children	Testea		≥5 µg/dL	5-14	≥15	sam	ples	capillary, sam	
County	% pre- 1950 housing	% pre- 1978 housing	Population	N	%	<5	Capillary, Unknown samples*	μg/dL Venous samples	μg/dL Venous samples	N	%	N	%
<b>Grand Traverse</b>	14.8	43.5	6,117	1,422	23.2	1,393	20	9	0	9	0.6	29	2.0
Gratiot	36.5	69.8	2,652	464	17.5	461	**	0	0	0	0	**	**
Hillsdale	34.5	63.2	3,153	791	25.1	768	16	**	**	7	0.9	23	2.9
Houghton	50.5	75.5	2,418	592	24.5	577	**	**	**	**	**	15	2.5
Huron	28.9	68.9	1,840	338	18.4	333	**	0	**	**	**	**	**
Ingham	23.9	68.2	19,732	4,741	24.0	4,616	61	**	**	64	1.3	125	2.6
Ionia	33.2	63.0	4,806	830	17.3	801	18	**	**	11	1.3	29	3.5
losco	17.7	65.6	1,232	253	20.5	243	**	**	**	**	**	10	4.0
Iron	43.3	72.1	603	108	17.9	107	**	0	0	0	0	**	**
Isabella	16.1	48.2	4,123	623	15.1	616	**	**	0	**	**	7	1.1
Jackson	30.2	67.9	11,225	2,941	26.2	2,790	103	**	**	48	1.6	151	5.1
Kalamazoo	22.0	62.6	18,545	3,383	18.2	3,268	80	**	**	35	1.0	115	3.4
Kalkaska	11.2	49.3	1,136	183	16.1	182	0	**	0	**	**	**	**
Kent	23.1	59.2	53,229	9,780	18.4	9,170	460	131	19	150	1.5	610	6.2
Keweenaw	44.5	77.6	108	23	21.3	23	0	0	0	0	0	0	0
Lake	11.3	52.6	555	115	20.7	114	**	0	0	0	0	**	**
Lapeer	19.6	52.9	5,481	847	15.5	825	**	0	**	**	**	22	2.6
Leelanau	16.0	46.5	1,043	237	22.7	230	**	**	0	**	**	7	3.0
Lenawee	30.9	67.2	6,641	1,044	15.7	940	79	**	**	25	2.4	104	10.0
Livingston	11.4	39.0	11,768	1,048	8.9	1,039	**	**	0	**	**	9	0.9
Luce	24.8	64.3	368	84	22.8	84	0	0	0	0	0	0	0
Mackinac	23.6	58.6	534	127	23.8	126	0	**	0	**	**	**	**
Macomb	9.1	59.1	56,493	10,430	18.5	10,316	80	**	**	34	0.3	114	1.1
Manistee	27.4	63.9	1,308	287	21.9	280	**	0	**	**	**	7	2.4
Marquette	29.0	69.4	4,159	435	10.5	423	**	**	0	**	**	12	2.8
Mason	27.4	64.6	1,915	447	23.3	418	**	**	0	**	**	29	6.5
Mecosta	17.6	53.4	2,519	278	11.0	276	**	0	0	0	0	**	**

Table 1. Blood Lead Levels for Children under Age Six by County, 2015

CIIII	DDEN LINI		c	Children	Tostod	В	lood Lead L	evel (μg/dL)	‡	BLL ≥5	venous	BLL ≥5 v	•
CHIL	DREN UNI	DEK AGE	b	Children	restea		≥5 µg/dL	5-14	≥15	sam	ples	capillary, sam	
County	% pre- 1950 housing	% pre- 1978 housing	Population	N	%	<5	Capillary, Unknown samples*	μg/dL Venous samples	μg/dL Venous samples	N	%	N	%
Menominee	31.1	73.2	1,383	254	18.4	241	**	**	**	**	**	13	5.1
Midland	14.2	58.7	5,411	493	9.1	486	**	**	0	**	**	7	1.4
Missaukee	17.4	56.2	1,082	119	11.0	117	**	**	0	**	**	**	**
Monroe	21.9	59.0	10,703	1,433	13.4	1,416	11	**	**	6	0.4	17	1.2
Montcalm	25.0	57.7	4,315	856	19.8	841	**	**	0	**	**	15	1.8
Montmorency	13.5	58.6	398	66	16.6	66	0	0	0	0	0	0	0
Muskegon	26.7	66.2	13,332	2,625	19.7	2,513	56	46	10	56	2.1	112	4.3
Newaygo	17.9	53.6	3,449	438	12.7	432	**	**	0	**	**	6	1.4
Oakland	14.1	60.5	82,220	14,806	18.0	14,602	94	100	10	110	0.7	204	1.4
Oceana	23.9	57.8	2,048	458	22.4	444	**	**	**	6	1.3	14	3.1
Ogemaw	15.5	61.6	1,329	176	13.2	176	0	0	0	0	0	0	0
Ontonagon	39.2	73.2	209	40	19.1	39	0	**	0	**	**	**	**
Osceola	18.7	56.6	1,698	271	16.0	268	**	0	0	0	0	**	**
Oscoda	13.0	62.1	473	94	19.9	94	0	0	0	0	0	0	0
Otsego	11.2	50.3	1,644	271	16.5	271	0	0	0	0	0	0	0
Ottawa	14.8	45.3	20,885	2,815	13.5	2,761	44	10	0	10	0.4	54	1.9
Presque Isle	22.0	66.3	622	91	14.6	90	**	0	0	0	0	**	**
Roscommon	9.8	58.7	1,080	190	17.6	189	**	0	0	0	0	**	**
Saginaw	26.3	73.1	13,953	3,332	23.9	3,227	85	**	**	20	0.6	105	3.2
Saint Clair	25.6	59.4	10,573	2,752	26.0	2,633	106	**	**	13	0.5	119	4.3
Saint Joseph	24.2	65.1	4,972	908	18.3	872	**	**	0	**	**	36	4.0
Sanilac	30.5	64.6	2,726	373	13.7	360	**	**	0	**	**	13	3.5
Schoolcraft	26.8	63.3	494	89	18.0	88	**	0	0	0	0	**	**
Shiawassee	30.4	68.2	4,608	1,324	28.7	1,266	49	9	0	9	0.7	58	4.4
Tuscola	30.0	67.4	3,415	791	23.2	785	**	**	0	**	**	6	0.8
Van Buren	22.7	58.1	5,611	783	14.0	753	19	11	0	11	1.4	30	3.8
Washtenaw	16.8	56.5	22,439	2,903	12.9	2,858	19	**	**	26	0.9	45	1.6

Table 1. Blood Lead Levels for Children under Age Six by County, 2015

CHILI	DEN HAH		•	Children	Tostod	В	lood Lead Le	evel (µg/dL)	‡	BLL ≥5 v	venous	BLL ≥5 v	•
CHILI	DREN UNI	DER AGE	0	Children	restea		≥5 µg/dL	5-14	≥15	sam	ples	capillary, ı samı	
County	% pre- 1950 housing	% pre- 1978 housing	Population	N	%	<5	Capillary, Unknown samples*	μg/dL Venous samples	μg/dL Venous samples	N	%	N	%
Wayne (excluding Detroit)	21.7	74.5	81,870	17,998	22.0	17,691	110	183	14	197	1.1	307	1.7
Wexford	21.4	53.7	2,552	317	12.4	312	**	**	0	**	**	**	**
<b>City of Detroit</b>	57.9	93.2	58,660	21,548	36.7	19,928	296	1,187	137	1,324	6.1	1,620	7.5
MICHIGAN	23.4	64.8	701,063	140,857	20.1	136,066	2,296	2,233	262	2,495	1.8	4,791	3.4

<sup>\*</sup> Twenty-nine children under six years of age had an elevated blood lead level (≥5 µg/dL) and were tested with unknown sample type.

**Source**: American Community Survey 2014 5-year estimates (population and pre-1950 housing data); U.S Census Bureau, Census 2010 (pre-1978 housing data); MDHHS Data Warehouse (children tested and BLL statistics)

<sup>\*\*</sup> Values less six (not including zero) were suppressed to maintain confidentiality. Some values six or greater may have been suppressed to prevent back-calculation.

<sup>‡</sup>Reflects each child's highest venous result, or if no venous, highest capillary result, or if no venous or capillary, highest unknown test type result

Table 2. Blood Lead Levels for Children Age One and Two by County, 2015

						В	lood Lead L	evel (μg/dL)	‡	BLL ≥5 '	venous	BLL ≥5 v	
CHILDREN (	ONE AND	TWO YEAI	RS OLD	Childrer	1 Tested		≥5 μg/dL	5-14	≥15	sam		capillary, ı samı	
County	% pre- 1950 housing	% pre- 1978 housing	Population	N	%	<5	Capillary, Unknown samples*	μg/dL Venous samples	μg/dL Venous samples	N	%	N	%
Alcona	15.0	61.5	134	44	32.8	41	**	0	0	0	0	**	**
Alger	25.7	64.1	137	55	40.1	51	**	**	0	**	**	**	**
Allegan	21.0	51.1	2,656	966	36.4	929	30	**	**	7	0.7	37	3.8
Alpena	23.5	71.6	535	218	40.7	216	**	0	0	0	0	**	**
Antrim	17.1	52.6	390	182	46.7	179	**	0	0	0	0	**	**
Arenac	16.9	58.2	226	153	67.7	151	**	**	0	**	**	**	**
Baraga	30.9	71.7	143	98	68.5	98	0	0	0	0	0	0	0
Barry	24.5	57.3	1,241	357	28.8	345	**	**	**	**	**	12	3.4
Bay	32.1	75.6	2,125	1,182	55.6	1,134	36	**	**	12	1.0	48	4.1
Benzie	17.1	46.3	307	180	58.6	180	0	0	0	0	0	0	0
Berrien	26.5	72.2	3,815	1,293	33.9	1,245	22	**	**	26	2.0	48	3.7
Branch	27.8	65.3	1,185	255	21.5	246	**	**	0	**	**	9	3.5
Calhoun	32.6	75.3	3,338	1,067	32.0	1,013	17	29	8	37	3.5	54	5.1
Cass	20.3	59.9	961	369	38.4	360	**	**	0	**	**	9	2.4
Charlevoix	19.8	54.4	487	188	38.6	186	**	**	0	**	**	**	**
Cheboygan	23.0	53.5	408	175	42.9	175	0	0	0	0	0	0	0
Chippewa	22.0	58.6	704	230	32.7	225	**	**	0	**	**	**	**
Clare	12.0	58.8	661	307	46.4	306	0	**	0	**	**	**	**
Clinton	22.1	52.8	1,690	364	21.5	359	**	**	0	**	**	**	**
Crawford	10.5	55.6	224	70	31.3	69	0	**	0	**	**	**	**
Delta	32.4	68	728	341	46.8	323	11	7	0	7	2.1	18	5.3
Dickinson	36.4	71.7	533	180	33.8	180	0	0	0	0	0	0	0
Eaton	20.1	56.4	2,305	610	26.5	585	11	14	0	14	2.3	25	4.1
Emmet	22.8	48.3	616	235	38.1	235	0	0	0	0	0	0	0
Genesee	19.9	68	9,867	4,196	42.5	4,090	56	**	**	50	1.2	106	2.5
Gladwin	12.0	49.5	499	215	43.1	213	**	**	0	**	**	**	**
Gogebic	46.4	76.7	237	115	48.5	108	**	**	0	**	**	7	6.1

Table 2. Blood Lead Levels for Children Age One and Two by County, 2015  $\,$ 

						В	lood Lead L	evel (μg/dL)	<sup>‡</sup>	BLL ≥5 v	anous –	BLL ≥5 v	enous,
CHILDREN (	ONE AND	TWO YEA	RS OLD	Childre	n Tested		≥5 μg/dL	5-14	≥15	samp		capillary, sam	
County	% pre- 1950 housing	% pre- 1978 housing	Population	N	%	<5	Capillary, Unknown samples*	μg/dL Venous samples	μg/dL Venous samples	N	%	N	%
<b>Grand Traverse</b>	14.8	43.5	2,013	937	46.5	918	13	6	0	6	0.6	19	2.0
Gratiot	36.5	69.8	818	280	34.2	279	**	0	0	0	0	**	**
Hillsdale	34.5	63.2	1,071	361	33.7	348	**	**	0	**	**	13	3.6
Houghton	50.5	75.5	749	471	62.9	461	0	**	**	10	2.1	10	2.1
Huron	28.9	68.9	590	217	36.8	213	**	0	**	**	**	**	**
Ingham	23.9	68.2	6,440	2,693	41.8	2,624	32	**	**	37	1.4	69	2.6
Ionia	33.2	63	1,492	641	43.0	620	15	**	**	6	0.9	21	3.3
losco	17.7	65.6	493	224	45.4	215	**	**	**	**	**	9	4.0
Iron	43.3	72.1	186	79	42.5	78	**	0	0	0	0	**	**
Isabella	16.1	48.2	1,337	453	33.9	447	**	**	0	**	**	6	1.3
Jackson	30.2	67.9	3,412	2,192	64.2	2,080	79	**	**	33	1.5	112	5.1
Kalamazoo	22.0	62.6	6,234	2,082	33.4	2,009	54	**	**	19	0.9	73	3.5
Kalkaska	11.2	49.3	367	101	27.5	101	0	0	0	0	0	0	0
Kent	23.1	59.2	17,888	7,767	43.4	7,283	371	100	13	113	1.5	484	6.2
Keweenaw	44.5	77.6	29	19	65.5	19	0	0	0	0	0	0	0
Lake	11.3	52.6	144	78	54.2	78	0	0	0	0	0	0	0
Lapeer	19.6	52.9	1,672	647	38.7	629	**	0	**	**	**	18	2.8
Leelanau	16.0	46.5	313	164	52.4	157	**	**	0	**	**	7	4.3
Lenawee	30.9	67.2	2,255	641	28.4	577	44	**	**	20	3.1	64	10.0
Livingston	11.4	39	3,689	751	20.4	744	**	**	0	**	**	7	0.9
Luce	24.8	64.3	102	68	66.7	68	0	0	0	0	0	0	0
Mackinac	23.6	58.6	182	109	59.9	108	0	**	0	**	**	**	**
Macomb	9.1	59.1	18,754	6,773	36.1	6,690	60	**	**	23	0.3	83	1.2
Manistee	27.4	63.9	376	236	62.8	230	**	0	**	**	**	6	2.5
Marquette	29.0	69.4	1,241	381	30.7	374	**	**	0	**	**	7	1.8
Mason	27.4	64.6	591	131	22.2	128	**	**	0	**	**	**	**
Mecosta	17.6	53.4	840	233	27.7	231	**	0	0	0	0	**	**

Table 2. Blood Lead Levels for Children Age One and Two by County, 2015

						В	lood Lead L	evel (μg/dL)	<sup>‡</sup>	BLL ≥5 venous		BLL ≥5 v	enous,
CHILDREN (	ONE AND	TWO YEAI	RS OLD	Childre	n Tested		≥5 μg/dL	5-14 μg/dL	≥15 µg/dL	samı		capillary, sam	
County	% pre- 1950 housing	% pre- 1978 housing	Population	N	%	<5	Capillary, Unknown samples*	Venous samples	Venous samples	N	%	N	%
Menominee	31.1	73.2	436	208	47.7	197	**	**	**	**	**	11	5.3
Midland	14.2	58.7	1,679	359	21.4	354	**	**	0	**	**	**	**
Missaukee	17.4	56.2	351	105	29.9	105	0	0	0	0	0	0	0
Monroe	21.9	59	3,208	990	30.9	976	8	**	**	6	0.6	14	1.4
Montcalm	25.0	57.7	1,411	539	38.2	526	**	**	0	**	**	13	2.4
Montmorency	13.5	58.6	127	48	37.8	48	0	0	0	0	0	0	0
Muskegon	26.7	66.2	4,150	1,551	37.4	1,480	35	29	7	36	2.3	71	4.6
Newaygo	17.9	53.6	1,097	367	33.5	361	**	**	0	**	**	6	1.6
Oakland	14.1	60.5	27,162	8,597	31.7	8,469	61	59	8	67	0.8	128	1.5
Oceana	23.9	57.8	604	218	36.1	215	**	**	0	**	**	**	**
Ogemaw	15.5	61.6	373	148	39.7	148	0	0	0	0	0	0	0
Ontonagon	39.2	73.2	59	35	59.3	34	0	**	0	**	**	**	**
Osceola	18.7	56.6	522	218	41.8	216	**	0	0	0	0	**	**
Oscoda	13.0	62.1	135	61	45.2	61	0	0	0	0	0	0	0
Otsego	11.2	50.3	488	165	33.8	165	0	0	0	0	0	0	0
Ottawa	14.8	45.3	7,054	2,369	33.6	2,321	40	8	0	8	0.3	48	2.0
Presque Isle	22.0	66.3	184	83	45.1	82	**	0	0	0	0	**	**
Roscommon	9.8	58.7	362	162	44.8	161	**	0	0	0	0	**	**
Saginaw	26.3	73.1	4,490	2,495	55.6	2,423	59	**	**	13	0.5	72	2.9
Saint Clair	25.6	59.4	3,146	1,422	45.2	1,359	54	**	**	9	0.6	63	4.4
Saint Joseph	24.2	65.1	1,568	603	38.5	576	**	**	0	**	**	27	4.5
Sanilac	30.5	64.6	871	215	24.7	209	**	**	0	**	**	6	2.8
Schoolcraft	26.8	63.3	139	73	52.5	72	**	0	0	0	0	**	**
Shiawassee	30.4	68.2	1,421	797	56.1	752	39	6	0	6	0.8	45	5.6
Tuscola	30.0	67.4	1,107	583	52.7	578	**	**	0	**	**	**	**
Van Buren	22.7	58.1	1,872	449	24.0	427	12	10	0	10	2.2	22	4.9
Washtenaw	16.8	56.5	7,337	2,000	27.3	1,968	11	21	0	21	1.1	32	1.6

Table 2. Blood Lead Levels for Children Age One and Two by County, 2015

						В	lood Lead L	evel (μg/dL)	) <sup>‡</sup>	BLL ≥5 v	/ADOUS	BLL ≥5 v	enous,
CHILDREN (	ONE AND	TWO YEA	RS OLD	Children	Tested		≥5 μg/dL	5-14	≥15	sam		capillary, ı samı	
County	% pre- 1950 housing	% pre- 1978 housing	Population	N	%	<5	Capillary, Unknown samples*	μg/dL Venous samples	μg/dL Venous samples	N	%	N	%
Wayne (excluding Detroit)	21.7	74.5	<sup>†</sup>	9,868		9,692	64	**	**	112	1.1	176	1.8
Wexford	21.4	53.7	814	260	31.9	257	**	**	0	**	**	**	**
<b>City of Detroit</b>	57.9	93.2	<sup>†</sup>	9,075		8,258	155	588	74	662	7.3	817	9.0
MICHIGAN	23.4	64.8	228,094	86,437	37.9	83,441	1,558	1,277	161	1,438	1.7	2,996	3.5

<sup>\*</sup> Twenty children 1 to 2 years of age had an elevated blood lead level (≥5 µg/dL) and were tested with unknown sample type.

**Source**: American Community Survey 2014 5-year estimates (pre-1950 housing data); U.S Census Bureau, Census 2010 (pre-1978 housing data); CDC National Center for Health Statistics 2015 Vintage bridged-race postcensal population estimates; MDHHS Data Warehouse (children tested and BLL statistics)

<sup>\*\*</sup> Values less six (not including zero) were suppressed to maintain confidentiality. Some values six or greater may have been suppressed to prevent back-calculation.

<sup>&</sup>lt;sup>‡</sup> Reflects each child's highest venous result, or if no venous, highest capillary result, or if no venous or capillary, highest unknown test type result

<sup>&</sup>lt;sup>†</sup> Population data are not available for the City of Detroit and Wayne County excluding Detroit

Table 3. Blood Lead Levels for Children under Age Six Enrolled in Medicaid† by County, 2015

CHILDREN UN	DER AGE SIX		Blood Lea	d Level (μg/dL) <sup>‡</sup>		<b>5</b> 11 <b>5</b>		BLL ≥5 venous, capillary,		
IN MED	ICAID <sup>†</sup>					BLL ≥5 v samp			n samples	
	Children	<5	≥5 µg/dL Capillary, Unknown samples*	5-14 μg/dL	≥15 µg/dL Venous	341119	103	diminor	ii sampies	
County	Tested		Unknown samples	Venous samples	samples	N	%	N	%	
Alcona	47	44	**	0	0	0	0	**	**	
Alger	54	51	**	**	0	**	**	**	**	
Allegan	885	850	**	**	**	**	**	35	4.0	
Alpena	226	225	**	0	0	0	0	**	**	
Antrim	207	204	**	0	0	0	0	**	**	
Arenac	171	169	**	**	0	**	**	**	**	
Baraga	119	118	0	**	0	**	**	**	**	
Barry	356	342	**	**	**	**	**	14	3.9	
Bay	1,034	977	39	**	**	18	1.7	57	5.5	
Benzie	168	166	**	**	0	**	**	**	**	
Berrien	1,480	1,422	30	**	**	28	1.9	58	3.9	
Branch	513	501	**	**	**	**	**	12	2.3	
Calhoun	1,329	1,257	18	45	9	54	4.1	72	5.4	
Cass	365	353	**	**	0	**	**	12	3.3	
Charlevoix	252	250	**	**	0	**	**	**	**	
Cheboygan	194	193	0	**	0	**	**	**	**	
Chippewa	267	262	**	**	**	**	**	**	**	
Clare	342	341	0	**	0	**	**	**	**	
Clinton	462	454	**	0	**	**	**	8	1.7	
Crawford	85	84	0	**	0	**	**	**	**	
Delta	373	354	12	7	0	7	1.9	19	5.1	
Dickinson	155	155	0	0	0	0	0	0	0	
Eaton	768	742	13	13	0	13	1.7	26	3.4	
Emmet	284	284	0	0	0	0	0	0	0	
Genesee	5,372	5,229	66	68	9	77	1.4	143	2.7	
Gladwin	264	262	**	**	0	**	**	**	**	
Gogebic	147	140	**	**	0	**	**	7	4.8	
<b>Grand Traverse</b>	684	668	9	7	0	7	1.0	16	2.3	
Gratiot	402	399	**	0	0	0	0	**	**	
Hillsdale	607	591	**	**	0	**	**	16	2.6	

Table 3. Blood Lead Levels for Children under Age Six Enrolled in Medicaid $^\dagger$  by County, 2015

CHILDREN UNI	DER AGE SIX		Blood Lea	d Level (μg/dL)‡						
IN MEDI	CAID <sup>†</sup>					BLL ≥5 ve			ous, capillary, n samples	
	Children	<5	≥5 µg/dL Capillary,	5-14 μg/dL	≥15 µg/dL Venous	samp	ies	unknow	n samples	
County	Tested		Unknown samples*	Venous samples	samples	N	%	N	%	
Houghton	368	354	**	**	**	**	**	14	3.8	
Huron	264	259	**	0	**	**	**	**	**	
Ingham	3,802	3,699	50	**	**	53	1.4	103	2.7	
Ionia	621	599	12	**	**	10	1.6	22	3.5	
losco	241	231	**	**	**	**	**	10	4.1	
Iron	98	97	**	0	0	0	0	**	**	
Isabella	409	405	**	**	0	**	**	**	**	
Jackson	1,983	1,858	85	**	**	40	2.0	125	6.3	
Kalamazoo	2,453	2,352	73	**	**	28	1.1	101	4.1	
Kalkaska	130	129	0	**	0	**	**	**	**	
Kent	7,185	6,654	397	118	16	134	1.9	531	7.4	
Keweenaw	17	17	0	0	0	0	0	0	0	
Lake	99	98	**	0	0	0	0	**	**	
Lapeer	619	602	**	0	**	**	**	17	2.7	
Leelanau	132	126	**	**	0	**	**	6	4.5	
Lenawee	678	594	62	**	**	22	3.2	84	12.4	
Livingston	662	657	**	**	0	**	**	**	**	
Luce	66	66	0	0	0	0	0	0	0	
Mackinac	98	97	0	**	0	**	**	**	**	
Macomb	6,601	6,526	53	**	**	22	0.3	75	1.1	
Manistee	201	195	**	0	**	**	**	6	3.0	
Marquette	358	349	**	**	0	**	**	9	2.5	
Mason	298	274	**	**	0	**	**	24	8.1	
Mecosta	234	232	**	0	0	0	0	**	**	
Menominee	175	166	**	**	**	**	**	9	5.1	
Midland	312	305	**	**	0	**	**	7	2.2	
Missaukee	112	111	0	**	0	**	**	**	**	
Monroe	807	795	**	**	**	**	**	12	1.5	
Montcalm	764	750	**	**	0	**	**	14	1.8	
Montmorency	61	61	0	0	0	0	0	0	0	
Muskegon	1,937	1,835	48	45	9	54	2.8	102	5.3	

Table 3. Blood Lead Levels for Children under Age Six Enrolled in Medicaid† by County, 2015

CHILDREN UNI			Blood Lea	d Level (μg/dL) <sup>‡</sup>		BLL ≥5 v	venous	BII >5 ven	ous, capillary,
IN MEDI	CAID'		≥5 µg/dL Capillary,	5-14 μg/dL	≥15 µg/dL Venous	sam			n samples
County	Children Tested	<5	Unknown samples*	Venous samples	samples	N	%	N	%
Newaygo	351	346	**	**	0	**	**	**	**
Oakland	6,971	6,862	49	**	**	60	0.9	109	1.6
Oceana	374	365	**	**	0	**	**	9	2.4
Ogemaw	151	151	0	0	0	0	0	0	0
Ontonagon	28	27	0	**	0	**	**	**	**
Osceola	243	240	**	0	0	0	0	**	**
Oscoda	86	86	0	0	0	0	0	0	0
Otsego	248	248	0	0	0	0	0	0	0
Ottawa	1,492	1,455	30	7	0	7	0.5	37	2.5
Presque Isle	83	82	**	0	0	0	0	**	**
Roscommon	177	176	**	0	0	0	0	**	**
Saginaw	2,462	2,375	69	**	**	18	0.7	87	3.5
Saint Clair	2,278	2,174	93	**	**	11	0.5	104	4.6
Saint Joseph	745	716	**	**	0	**	**	29	3.9
Sanilac	324	312	**	**	0	**	**	12	3.7
Schoolcraft	72	72	0	0	0	0	0	0	0
Shiawassee	923	875	42	6	0	6	0.7	48	5.2
Tuscola	606	600	**	**	0	**	**	6	1.0
Van Buren	587	558	19	10	0	10	1.7	29	4.9
Washtenaw	1,635	1,609	11	**	**	15	0.9	26	1.6
Wayne	30,764	29,072	347	1,208	137	1,345	4.4	1,692	5.5
Wexford	282	278	**	**	0	**	**	**	**
MICHIGAN	100,279	96,259	1,880	1,912	228	2,140	2.1	4,020	4.0

<sup>†</sup>A child enrolled in Medicaid at any time in the year is included in the definition of Medicaid enrollment.

**Source**: MDHHS Data Warehouse

<sup>\*</sup> Twenty children under 6 years of age had an elevated blood lead level (≥5 µg/dL) and were tested with unknown sample type.

<sup>\*\*</sup> Values less six (not including zero) were suppressed to maintain confidentiality. Some values six or greater may have been suppressed to prevent back-calculation.

<sup>&</sup>lt;sup>‡</sup>Reflects each child's highest venous result, or if no venous, highest capillary result, or if no venous or capillary, highest unknown test type result

Table 4. Blood Lead Levels for Children Age One and Two Enrolled in Medicaid† by County, 2015

CHILDREN ONE TO T	WO YEARS		Blood Lead L	evel (μg/dL) ‡					
OLD IN MEDIC	AID <sup>†</sup>	<5	≥5 µg/dL Capillary or	5-14 μg/dL	≥15 µg/dL	BLL ≥5 veno	us samples	BLL ≥5 venous unknown	
County	Children Tested	<5	Unknown samples*	Venous samples	Venous samples	N	%	N	%
Alcona	40	37	**	0	0	0	0	**	**
Alger	46	43	**	**	0	**	**	**	**
Allegan	645	618	**	**	**	**	**	27	4.2
Alpena	198	197	**	0	0	0	0	**	**
Antrim	148	145	**	0	0	0	0	**	**
Arenac	120	118	**	**	0	**	**	**	**
Baraga	77	77	0	0	0	0	0	0	0
Barry	280	271	**	**	**	7	2.5	9	3.2
Bay	845	801	32	**	**	12	1.4	44	5.2
Benzie	114	114	0	0	0	0	0	0	0
Berrien	1,143	1,100	21	**	**	22	1.9	43	3.8
Branch	227	218	**	**	0	**	**	9	4.0
Calhoun	696	650	13	25	8	33	4.7	46	6.6
Cass	306	298	**	**	0	**	**	8	2.6
Charlevoix	180	178	**	**	0	**	**	**	**
Cheboygan	163	163	0	0	0	0	0	0	0
Chippewa	170	166	**	**	0	**	**	**	**
Clare	281	280	0	**	0	**	**	**	**
Clinton	255	251	**	0	0	0	0	**	**
Crawford	66	65	0	**	0	**	**	**	**
Delta	323	305	11	7	0	7	2.2	18	5.6
Dickinson	129	129	0	0	0	0	0	0	0
Eaton	470	449	9	12	0	12	2.6	21	4.5
Emmet	212	212	0	0	0	0	0	0	0
Genesee	3,233	3,137	48	**	**	48	1.5	96	3.0
Gladwin	191	189	**	**	0	**	**	**	**
Gogebic	95	89	**	**	0	**	**	6	6.3

Table 4. Blood Lead Levels for Children Age One and Two Enrolled in Medicaid† by County, 2015

CHILDREN ONE TO	TWO YEARS		Blood Lead L	evel (μg/dL) <sup>‡</sup>					
OLD IN MEDIC		<5	≥5 µg/dL Capillary or	5-14 μg/dL Venous	≥15 µg/dL Venous	BLL ≥5 veno	us samples	BLL ≥5 venous unknown	s, capillary, or samples
County	Children Tested	,	Unknown samples*	samples	samples	N	%	N	%
<b>Grand Traverse</b>	442	430	**	**	0	**	**	12	2.7
Gratiot	242	241	**	0	0	0	0	**	**
Hillsdale	294	282	**	**	0	**	**	12	4.1
Houghton	270	261	0	**	**	9	3.3	9	3.3
Huron	163	159	**	0	**	**	**	**	**
Ingham	2,101	2,049	23	**	**	29	1.4	52	2.5
Ionia	464	450	**	**	**	**	**	14	3.0
losco	215	206	**	**	**	**	**	9	4.2
Iron	71	70	**	0	0	0	0	**	**
Isabella	310	306	**	**	0	**	**	**	**
Jackson	1,405	1,314	64	**	**	27	1.9	91	6.5
Kalamazoo	1,454	1,390	50	**	**	14	1.0	64	4.4
Kalkaska	73	73	0	0	0	0	0	0	0
Kent	5,593	5,179	315	88	11	99	1.8	414	7.4
Keweenaw	13	13	0	0	0	0	0	0	0
Lake	74	74	0	0	0	0	0	0	0
Lapeer	463	450	**	0	**	**	**	13	2.8
Leelanau	94	88	**	**	0	**	**	6	6.4
Lenawee	400	345	37	**	**	18	4.5	55	13.8
Livingston	501	497	**	**	0	**	**	**	**
Luce	56	56	0	0	0	0	0	0	0
Mackinac	83	82	0	**	0	**	**	**	**
Macomb	3,813	3,762	36	**	**	15	0.4	51	1.3
Manistee	158	153	**	0	**	**	**	**	**
Marquette	314	309	**	**	0	**	**	**	**
Mason	100	97	**	**	0	**	**	**	**
Mecosta	195	193	**	0	0	0	0	**	**

Table 4. Blood Lead Levels for Children Age One and Two Enrolled in Medicaid† by County, 2015

CHILDREN ONE TO T	WO YEARS		Blood Lead L	evel (μg/dL)‡					
OLD IN MEDIC		<5	≥5 µg/dL Capillary or	5-14 μg/dL Venous	≥15 µg/dL Venous	BLL ≥5 veno	us samples	BLL ≥5 venous unknown	
County	Children Tested	,	Unknown samples*	samples	samples	N	%	N	%
Menominee	148	141	**	0	**	**	**	7	4.7
Midland	216	211	**	**	0	**	**	**	**
Missaukee	100	100	0	0	0	0	0	0	0
Monroe	563	553	**	**	**	**	**	10	1.8
Montcalm	473	461	**	**	0	**	**	12	2.5
Montmorency	46	46	0	0	0	0	0	0	0
Muskegon	1,053	989	29	28	7	35	3.3	64	6.1
Newaygo	292	287	**	**	0	**	**	**	**
Oakland	3,753	3,683	33	**	**	37	1.0	70	1.9
Oceana	186	185	**	0	0	0	0	**	**
Ogemaw	128	128	0	0	0	0	0	0	0
Ontonagon	25	24	0	**	0	**	**	**	**
Osceola	202	200	**	0	0	0	0	**	**
Oscoda	58	58	0	0	0	0	0	0	0
Otsego	153	153	0	0	0	0	0	0	0
Ottawa	1,211	1,179	**	**	0	**	**	32	2.6
Presque Isle	77	76	**	0	0	0	0	**	**
Roscommon	155	154	**	0	0	0	0	**	**
Saginaw	1,775	1,717	46	**	**	12	0.7	58	3.3
Saint Clair	1,177	1,121	49	**	**	7	0.6	56	4.8
Saint Joseph	495	472	**	**	0	**	**	23	4.6
Sanilac	187	182	**	**	0	**	**	**	**
Schoolcraft	58	58	0	0	0	0	0	0	0
Shiawassee	592	555	**	**	0	**	**	37	6.3
Tuscola	445	440	**	**	0	**	**	**	**
Van Buren	326	305	12	9	0	9	2.8	21	6.4
Washtenaw	992	977	**	**	0	**	**	15	1.5

Table 4. Blood Lead Levels for Children Age One and Two Enrolled in Medicaid† by County, 2015

CHILDREN ONE TO 1		Blood Lead L	evel (μg/dL)‡							
OLD IN MEDICAID <sup>†</sup>		<b>~</b> F	≥5 µg/dL Capillary or	5-14 μg/dL Venous	≥15 µg/dL	BLL ≥5 venc	ous samples	BLL ≥5 venous, capillary, or unknown samples		
County	Children Tested	<5	Unknown samples*	samples	Venous samples	N	%	N	%	
Wayne	14,226	13,359	187	608	72	680	4.8	867	6.1	
Wexford	235	232	**	**	0	**	**	**	**	
MICHIGAN	59,361	56,875	1,267	1,078	141	1,219	2.1	2,486	4.2	

<sup>†</sup>A child enrolled in Medicaid at any time in the year is included in the definition of Medicaid enrollment.

**Source**: MDHHS Data Warehouse

<sup>\*</sup> Eleven children 1 to 2 years of age had an elevated blood lead level (≥5 µg/dL) and were tested with unknown sample type.

<sup>\*\*</sup> Values less six (not including zero) were suppressed to maintain confidentiality. Some values six or greater may have been suppressed to prevent back-calculation.

<sup>&</sup>lt;sup>‡</sup>Reflects each child's highest venous result, or if no venous, highest capillary result, or if no venous or capillary, highest unknown test type result

Table 5. Blood Lead Levels for Children under Age Six by Zip Code, 2015 (sorted by zip code)

	Population	Child			L ≥5		Population	Child			L ≥5		Population	Child		BLL ≥5 any samples <sup>‡</sup>	
Zip Code	Under Age Six	Test N	tea %	any sa N	mples <sup>‡</sup> %	Zip Code	Under Age Six	Test N	ea %	any sa N	mples <sup>‡</sup> %	Zip Code	Under Age Six	Testo N	e <b>a</b> %	any sa N	mpies %
48001	594	143	24.1	**	**	48044	4,808	519	10.8	**	**	48083	1,743	271	15.5	**	**
48002	184	16	8.7	0	0	48045	1,084	205	18.9	0	0	48084	1,067	183	17.2	8	4.4
48003	444	54	12.2	**	**	48047	2,840	383	13.5	**	**	48085	1,383	206	14.9	**	**
48005	231	25	10.8	0	0	48048	689	108	15.7	**	**	48088	1,455	260	17.9	**	**
48006	183	43	23.5	**	**	48049	327	53	16.2	0	0	48089	2,548	687	27.0	11	1.6
48009	1,776	311	17.5	**	**	48050	74	11	14.9	0	0	48091	2,604	641	24.6	10	1.6
48014	377	74	19.6	**	**	48051	1,412	183	13.0	**	**	48092	1,637	431	26.3	**	**
48015	438	137	31.3	**	**	48054	302	55	18.2	0	0	48093	1,509	335	22.2	**	**
48017	695	149	21.4	0	0	48059	966	192	19.9	**	**	48094	1,228	150	12.2	**	**
48021	2,121	545	25.7	12	2.2	48060	3,266	1,290	39.5	83	6.4	48095	306	44	14.4	0	0
48022	220	31	14.1	0	0	48062	656	114	17.4	**	**	48096	119	26	21.8	0	0
48023	207	49	23.7	**	**	48063	221	45	20.4	**	**	48097	312	90	28.8	**	**
48025	790	144	18.2	**	**	48064	327	56	17.1	0	0	48098	1,068	137	12.8	0	0
48026	885	165	18.6	**	**	48065	561	87	15.5	**	**	48101	1,576	362	23.0	**	**
48027	234	41	17.5	0	0	48066	3,554	658	18.5	6	0.9	48103	3,312	370	11.2	**	**
48028	28	**	**	0	0	48067	1,421	296	20.8	**	**	48104	1,271	138	10.9	**	**
48030	1,309	285	21.8	7	2.5	48069	126	34	27.0	0	0	48105	2,214	161	7.3	**	**
48032	171	32	18.7	**	**	48070	496	82	16.5	0	0	48108	1,730	267	15.4	**	**
48033	931	317	34.0	**	**	48071	2,132	492	23.1	7	1.4	48111	3,078	559	18.2	**	**
48034	1,082	258	23.8	**	**	48072	1,184	205	17.3	**	**	48114	1,153	90	7.8	0	0
48035	2,760	442	16.0	6	1.4	48073	2,047	417	20.4	**	**	48116	1,578	115	7.3	**	**
48036	1,481	286	19.3	**	**	48074	828	181	21.9	6	3.3	48117	596	83	13.9	0	0
48038	2,458	409	16.6	**	**	48075	1,330	430	32.3	**	**	48118	797	88	11.0	**	**
48039	475	94	19.8	**	**	48076	1,439	399	27.7	**	**	48120	722	339	47.0	**	**
48040	645	108	16.7	**	**	48079	611	130	21.3	**	**	48122	938	328	35.0	**	**
48041	254	36	14.2	**	**	48080	1,366	241	17.6	**	**	48124	2,120	381	18.0	**	**
48042	2,100	243	11.6	**	**	48081	979	177	18.1	**	**	48125	1,713	365	21.3	**	**
48043	751	192	25.6	8	4.2	48082	1,083	116	10.7	**	**	48126	5,466	1,446	26.5	24	1.7

Table 5. Blood Lead Levels for Children under Age Six by Zip Code, 2015 (sorted by zip code)

	Population Under	Child Test			L ≥5 mples <sup>‡</sup>		Population Under	Child: Test			L ≥5 Imples <sup>‡</sup>		Population Under	Children Tested		BLL ≥5 any samples <sup>‡</sup>	
Zip Code	Age Six	N	%	N	%	Zip Code	Age Six	N	%	N	%	Zip Code	Age Six	N	%	Ň	· %
48127	3,330	730	21.9	10	1.4	48169	1,135	86	7.6	0	0	48207	1,592	531	33.4	39	7.3
48128	1,037	165	15.9	**	**	48170	2,461	179	7.3	**	**	48208	831	308	37.1	22	7.1
48130	1,149	55	4.8	**	**	48173	818	141	17.2	**	**	48209	3,705	1,446	39.0	100	6.9
48131	401	65	16.2	0	0	48174	2,435	638	26.2	6	0.9	48210	4,292	1,517	35.3	128	8.4
48133	590	55	9.3	0	0	48176	1,146	108	9.4	0	0	48211	560	241	43.0	26	10.8
48134	1,505	315	20.9	**	**	48178	2,292	266	11.6	**	**	48212	4,056	1,405	34.6	103	7.3
48135	2,001	345	17.2	**	**	48179	180	34	18.9	0	0	48213	2,310	716	31.0	90	12.6
48137	287	30	10.5	0	0	48180	5,363	1,458	27.2	17	1.2	48214	1,350	558	41.3	96	17.2
48138	387	69	17.8	0	0	48182	1,588	194	12.2	**	**	48215	1,107	370	33.4	47	12.7
48140	100	28	28.0	0	0	48183	2,663	524	19.7	7	1.3	48216	286	123	43.0	7	5.7
48141	2,601	708	27.2	11	1.6	48184	1,155	273	23.6	0	0	48217	373	180	48.3	9	5.0
48144	626	54	8.6	**	**	48185	3,554	741	20.8	8	1.1	48218	729	241	33.1	11	4.6
48145	237	21	8.9	**	**	48186	2,305	525	22.8	**	**	48219	3,765	1,336	35.5	39	2.9
48146	3,273	1,028	31.4	16	1.6	48187	3,333	436	13.1	**	**	48220	1,671	298	17.8	7	2.3
48150	1,867	293	15.7	**	**	48188	3,597	426	11.8	11	2.6	48221	2,723	942	34.6	63	6.7
48152	1,750	308	17.6	**	**	48189	931	91	9.8	0	0	48223	1,933	736	38.1	23	3.1
48154	1,896	298	15.7	**	**	48191	374	34	9.1	**	**	48224	4,186	1,380	33.0	91	6.6
48157	100	13	13.0	0	0	48192	1,441	357	24.8	**	**	48225	970	243	25.1	**	**
48158	405	46	11.4	**	**	48193	1,227	238	19.4	**	**	48226	93	37	39.8	**	**
48159	180	28	15.6	**	**	48195	1,568	459	29.3	**	**	48227	3,415	1,313	38.4	74	5.6
48160	617	88	14.3	**	**	48197	5,012	794	15.8	12	1.5	48228	5,338	1,868	35.0	77	4.1
48161	1,876	304	16.2	**	**	48198	3,545	647	18.3	8	1.2	48229	895	241	26.9	9	3.7
48162	2,197	292	13.3	**	**	48201	787	346	44.0	14	4.0	48230	1,153	180	15.6	10	5.6
48164	458	90	19.7	0	0	48202	734	382	52.0	53	13.9	48234	2,554	1,022	40.0	44	4.3
48165	417	107	25.7	**	**	48203	1,814	703	38.8	87	12.4	48235	3,234	1,303	40.3	70	5.4
48166	1,125	154	13.7	**	**	48204	2,542	800	31.5	119	14.9	48236	1,905	286	15.0	6	2.1
48167	1,311	211	16.1	**	**	48205	3,302	1,402	42.5	92	6.6	48237	2,259	588	26.0	8	1.4
48168	1,364	129	9.5	**	**	48206	1,717	592	34.5	82	13.9	48238	2,527	1,025	40.6	120	11.7

Table 5. Blood Lead Levels for Children under Age Six by Zip Code, 2015 (sorted by zip code)

	Population	Child	lren		L ≥5		Population	Population Children BLL ≥5			Population	Child	ren	BLL ≥5			
	Under	Test		any sa	mples <sup>‡</sup>		Under	Test			mples <sup>‡</sup>		Under	Test		any sa	mples <sup>‡</sup>
Zip Code	Age Six	N	%	N	%	Zip Code	Age Six	N	%	N	%	Zip Code	Age Six	N	%	N **	% **
48239	3,000	646	21.5	8	1.2	48340	2,603	753	28.9	6	0.8	48413	546	81	14.8		
48240	1,322	349	26.4	**	**	48341	1,251	320	25.6	15	4.7	48414	268	30	11.2	0	0
48243	*	**		0	0	48342	1,840	566	30.8	16	2.8	48415	666	130	19.5	0	0
48301	1,058	133	12.6	0	0	48346	1,440	191	13.3	**	**	48416	348	59	17.0	**	**
48302	611	121	19.8	**	**	48348	1,469	255	17.4	0	0	48417	219	29	13.2	0	0
48304	949	120	12.6	0	0	48350	512	63	12.3	**	**	48418	287	44	15.3	**	**
48306	1,844	117	6.3	**	**	48353	491	36	7.3	**	**	48419	183	25	13.7	**	**
48307	3,399	311	9.1	**	**	48356	511	47	9.2	0	0	48420	1,261	272	21.6	**	**
48309	1,684	148	8.8	**	**	48357	622	41	6.6	0	0	48421	366	66	18.0	**	**
48310	2,759	740	26.8	**	**	48359	667	121	18.1	**	**	48422	420	64	15.2	**	**
48312	1,899	435	22.9	**	**	48360	839	84	10.0	0	0	48423	1,968	368	18.7	7	1.9
48313	1,926	408	21.2	0	0	48362	1,205	126	10.5	**	**	48426	56	**	**	0	0
48314	1,308	229	17.5	**	**	48363	319	30	9.4	0	0	48427	213	15	7.0	**	**
48315	1,297	184	14.2	**	**	48367	220	22	10.0	**	**	48428	206	31	15.0	0	0
48316	1,664	200	12.0	**	**	48370	66	6	9.1	0	0	48429	311	118	37.9	**	**
48317	1,873	379	20.2	**	**	48371	1,625	173	10.6	**	**	48430	2,641	351	13.3	9	2.6
48320	307	57	18.6	**	**	48374	1,141	176	15.4	**	**	48432	62	**	**	0	0
48322	1,750	287	16.4	**	**	48375	1,293	288	22.3	9	3.1	48433	2,049	312	15.2	**	**
48323	1,033	135	13.1	0	0	48377	1,229	296	24.1	**	**	48435	146	24	16.4	0	0
48324	980	152	15.5	**	**	48380	317	27	8.5	0	0	48436	200	38	19.0	**	**
48326	1,589	236	14.9	9	3.8	48381	864	127	14.7	**	**	48437	17	**	**	**	**
48327	1,507	238	15.8	0	0	48382	1,627	188	11.6	0	0	48438	370	54	14.6	0	0
48328	1,999	315	15.8	**	**	48383	829	125	15.1	0	0	48439	3,103	533	17.2	**	**
48329	1,234	237	19.2	**	**	48386	1,079	134	12.4	**	**	48440	34	**	**	0	0
48331	1,173	192	16.4	0	0	48390	1,445	249	17.2	**	**	48441	250	40	16.0	0	0
48334	910	227	24.9	**	**	48393	1,365	265	19.4	**	**	48442	1,383	214	15.5	**	**
48335	1,532	470	30.7	28	6.0	48401	81	**	**	0	0	48444	612	120	19.6	**	**
48336	1,733	361	20.8	7	1.9	48412	395	54	13.7	**	**	48445	85	21	24.7	0	0

Table 5. Blood Lead Levels for Children under Age Six by Zip Code, 2015 (sorted by zip code)

	Population	Child	lren		L ≥5		Population	Child	ren		L ≥5		Population	Child	ren		L ≥5
	Under	Test		any sa	mples <sup>‡</sup>		Under	Test			mples <sup>‡</sup>		Under	Test		any sai	mples <sup>‡</sup>
Zip Code	Age Six	N	%	N	%	Zip Code	Age Six	N	%	N	%	Zip Code	Age Six	N	%	N **	**
48446	1,814	308	17.0	8	2.6	48505	1,776	596	33.6	16	2.7	48626	288	55	19.1		
48449	96	61	63.5	**	**	48506	2,426	600	24.7	18	3.0	48628	122	10	8.2	0	0
48450	141	26	18.4	**	**	48507	2,915	836	28.7	13	1.6	48629	373	68	18.2	0	0
48451	1,096	138	12.6	**	**	48509	469	97	20.7	**	**	48631	234	45	19.2	0	0
48453	402	52	12.9	**	**	48519	512	108	21.1	**	**	48632	228	69	30.3	0	0
48454	94	12	12.8	**	**	48529	829	213	25.7	6	2.8	48633	15	**	**	0	0
48455	452	50	11.1	**	**	48532	1,335	400	30.0	**	**	48634	393	44	11.2	0	0
48456	45	9	20.0	0	0	48601	3,085	1,105	35.8	41	3.7	48635	53	9	17.0	0	0
48457	549	106	19.3	**	**	48602	2,543	684	26.9	35	5.1	48636	24	9	37.5	0	0
48458	1,706	361	21.2	7	1.9	48603	1,458	370	25.4	10	2.7	48637	246	23	9.3	0	0
48460	181	42	23.2	0	0	48604	755	142	18.8	**	**	48638	1,258	200	15.9	**	**
48461	556	90	16.2	**	**	48607	67	25	37.3	**	**	48640	1,995	190	9.5	0	0
48462	609	121	19.9	0	0	48609	586	123	21.0	**	**	48642	2,449	205	8.4	**	**
48463	129	47	36.4	0	0	48610	124	41	33.1	0	0	48647	283	57	20.1	0	0
48464	230	17	7.4	0	0	48611	503	50	9.9	0	0	48649	37	17	45.9	0	0
48465	55	**	**	0	0	48612	549	115	20.9	**	**	48650	387	68	17.6	**	**
48466	107	16	15.0	0	0	48613	101	18	17.8	0	0	48651	197	47	23.9	0	0
48467	62	23	37.1	**	**	48614	73	13	17.8	**	**	48652	58	10	17.2	**	**
48468	34	**	**	0	0	48615	194	34	17.5	0	0	48653	445	62	13.9	**	**
48469	16	12	75.0	0	0	48616	649	95	14.6	**	**	48654	159	15	9.4	0	0
48470	13	**	**	0	0	48617	807	112	13.9	0	0	48655	396	74	18.7	**	**
48471	302	54	17.9	**	**	48618	344	33	9.6	**	**	48656	133	29	21.8	0	0
48472	213	17	8.0	**	**	48619	34	**	**	0	0	48657	411	41	10.0	**	**
48473	1,385	297	21.4	**	**	48621	45	17	37.8	0	0	48658	255	73	28.6	**	**
48475	168	15	8.9	**	**	48622	323	67	20.7	0	0	48659	219	53	24.2	**	**
48502	20	15	75.0	**	**	48623	837	110	13.1	0	0	48661	725	79	10.9	0	0
48503	2,295	637	27.8	36	5.7	48624	1,007	180	17.9	**	**	48662	62	14	22.6	0	0
48504	2,711	701	25.9	28	4.0	48625	812	174	21.4	**	**	48701	57	21	36.8	0	0

Table 5. Blood Lead Levels for Children under Age Six by Zip Code, 2015 (sorted by zip code)

	Population Under	Child Test			L ≥5 Imples <sup>‡</sup>		Population Under	Child Test			L ≥5 mples <sup>‡</sup>		Population Under	Child Test			L ≥5 mples <sup>‡</sup>
Zip Code	Age Six	N	.eu %	N	""" %	Zip Code	Age Six	N	.eu %	N	mpies %	Zip Code	Age Six	N	eu %	N	mpies %
48703	125	27	21.6	0	0	48746	638	113	17.7	0	0	48818	172	37	21.5	**	**
48705	22	**	**	0	0	48747	65	16	24.6	0	0	48819	187	30	16.0	0	0
48706	2,474	537	21.7	18	3.4	48748	48	13	27.1	**	**	48820	1,234	136	11.0	0	0
48708	2,189	458	20.9	36	7.9	48749	65	23	35.4	0	0	48821	416	25	6.0	0	0
48720	25	15	60.0	0	0	48750	393	110	28.0	6	5.5	48822	198	12	6.1	0	0
48721	**	**	**	0	0	48754	58	14	24.1	0	0	48823	2,142	363	16.9	**	**
48722	308	40	13.0	0	0	48755	171	26	15.2	0	0	48824	*	**		**	**
48723	744	206	27.7	**	**	48756	262	50	19.1	0	0	48825	*	**		0	0
48725	89	17	19.1	0	0	48757	331	56	16.9	0	0	48827	1,513	152	10.0	**	**
48726	434	69	15.9	**	**	48759	175	45	25.7	**	**	48829	222	53	23.9	**	**
48727	95	13	13.7	0	0	48760	46	23	50.0	0	0	48831	188	44	23.4	**	**
48728	18	**	**	0	0	48761	12	**	**	0	0	48832	98	13	13.3	0	0
48729	68	21	30.9	0	0	48762	43	6	14.0	0	0	48834	142	26	18.3	0	0
48730	248	31	12.5	**	**	48763	289	52	18.0	0	0	48835	190	16	8.4	0	0
48731	137	27	19.7	0	0	48765	21	6	28.6	0	0	48836	1,265	121	9.6	**	**
48732	468	134	28.6	**	**	48766	65	16	24.6	0	0	48837	1,291	121	9.4	**	**
48733	76	30	39.5	**	**	48767	103	20	19.4	0	0	48838	1,469	252	17.2	**	**
48734	384	53	13.8	0	0	48768	651	142	21.8	**	**	48840	604	110	18.2	**	**
48735	31	8	25.8	**	**	48770	144	20	13.9	0	0	48841	69	11	15.9	0	0
48737	57	9	15.8	**	**	48801	977	173	17.7	**	**	48842	1,605	293	18.3	**	**
48738	61	10	16.4	0	0	48806	49	11	22.4	0	0	48843	2,887	276	9.6	0	0
48739	177	26	14.7	0	0	48807	68	10	14.7	0	0	48845	59	12	20.3	**	**
48740	84	9	10.7	**	**	48808	356	58	16.3	0	0	48846	1,376	279	20.3	12	4.3
48741	105	17	16.2	0	0	48809	722	191	26.5	9	4.7	48847	302	58	19.2	0	0
48742	46	7	15.2	**	**	48811	333	57	17.1	**	**	48848	403	71	17.6	**	**
48743	*	**		0	0	48813	1,433	165	11.5	8	4.8	48849	440	65	14.8	0	0
48744	161	66	41.0	0	0	48815	157	21	13.4	0	0	48850	330	52	15.8	**	**
48745	83	7	8.4	0	0	48817	355	126	35.5	**	**	48851	293	36	12.3	0	0

Table 5. Blood Lead Levels for Children under Age Six by Zip Code, 2015 (sorted by zip code)

	Population	Child	lren		L ≥5		Population	Child	ren		L ≥5		Population	Child	ren		L ≥5
	Under	Test			mples <sup>‡</sup>		Under	Test			mples <sup>‡</sup>		Under	Test			mples <sup>‡</sup>
Zip Code	Age Six	N 16	%	N	%	Zip Code	Age Six	N	%	N **	**	Zip Code	Age Six	N	%	N 17	%
48853	49	16	32.7	0	0	48888	445	98	22.0			49014	1,419	295	20.8	17	5.8
48854	1,235	234	18.9			48889	86	11	12.8	0	0	49015	1,972	432	21.9	21	4.9
48855	994	83	8.4	0	0	48890	200	23	11.5	**		49017	1,446	306	21.2	15	4.9
48856	90	16	17.8	0	0	48891	108	35	32.4	0	0	49021	485	74	15.3	**	**
48857	199	25	12.6	**	**	48892	409	88	21.5	0	0	49022	3,166	611	19.3	21	3.4
48858	2,632	417	15.8	**	**	48893	457	45	9.8	**	**	49024	2,643	293	11.1	**	**
48860	145	14	9.7	**	**	48894	172	18	10.5	0	0	49026	103	17	16.5	**	**
48861	192	11	5.7	**	**	48895	710	103	14.5	**	**	49027	12	**	**	0	0
48864	1,369	153	11.2	**	**	48896	36	**	**	0	0	49028	522	86	16.5	**	**
48865	54	31	57.4	**	**	48897	60	12	20.0	0	0	49029	137	15	10.9	**	**
48866	306	75	24.5	**	**	48906	2,678	659	24.6	37	5.6	49030	243	29	11.9	**	**
48867	2,014	710	35.3	38	5.4	48910	2,900	841	29.0	24	2.9	49031	452	47	10.4	**	**
48870	10	**	**	0	0	48911	3,760	1,152	30.6	25	2.2	49032	280	37	13.2	**	**
48871	142	12	8.5	0	0	48912	1,400	369	26.4	16	4.3	49033	137	10	7.3	0	0
48872	581	107	18.4	6	5.6	48915	892	248	27.8	8	3.2	49034	205	25	12.2	0	0
48873	89	**	**	0	0	48917	1,567	370	23.6	7	1.9	49036	1,524	332	21.8	8	2.4
48874	12	**	**	0	0	48933	93	37	39.8	0	0	49037	2,049	478	23.3	13	2.7
48875	847	113	13.3	**	**	49001	1,907	529	27.7	36	6.8	49038	487	56	11.5	**	**
48876	310	37	11.9	**	**	49002	1,640	210	12.8	**	**	49040	393	27	6.9	0	0
48877	131	31	23.7	0	0	49004	1,403	225	16.0	6	2.7	49042	292	84	28.8	**	**
48878	140	21	15.0	**	**	49006	1,388	304	21.9	**	**	49043	286	37	12.9	**	**
48879	1,282	150	11.7	**	**	49007	768	245	31.9	22	9.0	49045	519	84	16.2	**	**
48880	583	99	17.0	**	**	49008	907	172	19.0	**	**	49046	306	60	19.6	0	0
48881	513	64	12.5	**	**	49009	2,840	445	15.7	10	2.2	49047	1,281	202	15.8	8	4.0
48883	403	61	15.1	0	0	49010	1,474	266	18.0	17	6.4	49048	2,157	524	24.3	18	3.4
48884	188	49	26.1	**	**	49011	135	25	18.5	**	**	49050	84	12	14.3	0	0
48885	52	13	25.0	0	0	49012	167	24	14.4	0	0	49051	63	16	25.4	0	0
48886	128	33	25.8	**	**	49013	390	62	15.9	**	**	49052	46	12	26.1	0	0

Table 5. Blood Lead Levels for Children under Age Six by Zip Code, 2015 (sorted by zip code)

	Population	Child			L ≥5		Population	Child			L ≥5		Population	Child			L ≥5
=1 0 1	Under	Test			mples ‡		Under	Test			mples ‡	=1 0 1	Under	Test			mples <sup>‡</sup>
Zip Code 49053	Age Six 541	N 94	% 17.4	N **	% **	Zip Code 49092	Age Six 151	N 11	% 7.3	N 0	0	Zip Code 49221	Age Six 3,274	N 517	% 15.8	N 67	% 13.0
49055	342	62	18.1	**	**	49093	1,238	342	27.6	17	5.0	49224	1,369	133	9.7	11	8.3
49056	220	66	30.0	0	0	49094	319	39	12.2	0	0	49227	109	21	19.3	**	**
49057	631	128	20.3	6	4.7	49095	100	11	11.0	0	0	49228	363	46	12.7	**	**
49058	1,248	148	11.9	9	6.1	49096	175	26	14.9	**	**	49229	188	27	14.4	**	**
49060	75	20	26.7	**	**	49097	666	75	11.3	0	0	49230	540	87	16.1	0	0
49061	51	14	27.5	0	0	49098	553	53	9.6	**	**	49232	250	49	19.6	**	**
49064	228	37	16.2	**	**	49099	396	70	17.7	**	**	49233	183	29	15.8	0	0
49065	340	47	13.8	**	**	49101	179	24	13.4	0	0	49234	116	41	35.3	0	0
49066	51	8	15.7	0	0	49102	45	8	17.8	**	**	49235	193	22	11.4	**	**
49067	213	37	17.4	**	**	49103	688	135	19.6	**	**	49236	374	30	8.0	**	**
49068	927	123	13.3	**	**	49106	273	23	8.4	**	**	49237	223	47	21.1	0	0
49070	288	24	8.3	0	0	49107	468	95	20.3	6	6.3	49238	230	19	8.3	0	0
49071	573	62	10.8	**	**	49111	198	61	30.8	0	0	49240	624	83	13.3	**	**
49072	229	36	15.7	**	**	49112	740	54	7.3	0	0	49241	177	39	22.0	**	**
49073	330	52	15.8	**	**	49113	112	20	17.9	**	**	49242	827	283	34.2	10	3.5
49076	216	27	12.5	**	**	49117	164	16	9.8	0	0	49245	477	48	10.1	**	**
49078	422	104	24.6	**	**	49120	2,771	445	16.1	24	5.4	49246	212	46	21.7	0	0
49079	1,076	99	9.2	**	**	49125	105	9	8.6	0	0	49247	470	105	22.3	9	8.6
49080	929	171	18.4	**	**	49126	66	21	31.8	**	**	49248	34	9	26.5	**	**
49082	557	73	13.1	**	**	49127	716	42	5.9	0	0	49249	134	41	30.6	**	**
49083	469	66	14.1	**	**	49128	281	30	10.7	**	**	49250	424	115	27.1	**	**
49085	1,588	87	5.5	**	**	49129	27	**	**	0	0	49251	297	109	36.7	**	**
49087	396	46	11.6	**	**	49130	151	16	10.6	**	**	49252	217	48	22.1	**	**
49088	225	44	19.6	**	**	49201	2,660	780	29.3	43	5.5	49253	59	31	52.5	**	**
49089	111	18	16.2	0	0	49202	1,837	543	29.6	25	4.6	49254	80	55	68.8	**	**
49090	995	121	12.2	**	**	49203	3,339	956	28.6	70	7.3	49255	219	16	7.3	0	0
49091	1,891	277	14.6	11	4.0	49220	124	29	23.4	**	**	49256	274	54	19.7	7	13.0

Table 5. Blood Lead Levels for Children under Age Six by Zip Code, 2015 (sorted by zip code)

	Population	Child			L ≥5		Population	Child			L ≥5		Population	Child			. ≥5
Zip Code	Under Age Six	Test N	tea %	any sa N	mples <sup>‡</sup> %	Zip Code	Under Age Six	Test N	ea %	any sa N	mples <sup>‡</sup> %	Zip Code	Under Age Six	Test N	ea %	any sa N	mples <sup>‡</sup> %
49259	127	23	18.1	0	0	49306	722	55	7.6	0	0	49343	487	56	11.5	**	**
49262	94	20	21.3	0	0	49307	969	118	12.2	**	**	49344	277	27	9.7	**	**
49264	143	29	20.3	**	**	49309	102	15	14.7	0	0	49345	1,097	202	18.4	**	**
49265	222	33	14.9	**	**	49310	205	19	9.3	0	0	49346	309	26	8.4	0	0
49266	154	40	26.0	**	**	49312	**	**	**	0	0	49347	80	17	21.3	0	0
49267	233	25	10.7	0	0	49315	1,619	124	7.7	**	**	49348	974	79	8.1	**	**
49268	61	14	23.0	**	**	49316	2,014	122	6.1	**	**	49349	453	74	16.3	0	0
49269	316	72	22.8	**	**	49318	104	31	29.8	**	**	49401	1,301	65	5.0	**	**
49270	286	46	16.1	**	**	49319	1,688	200	11.8	7	3.5	49402	80	13	16.3	**	**
49271	238	42	17.6	**	**	49321	1,375	271	19.7	8	3.0	49403	101	63	62.4	0	0
49272	117	33	28.2	0	0	49322	84	10	11.9	**	**	49404	728	67	9.2	**	**
49274	334	58	17.4	**	**	49323	916	61	6.7	**	**	49405	83	13	15.7	**	**
49276	83	**	**	0	0	49325	111	6	5.4	0	0	49408	707	150	21.2	6	4.0
49277	281	37	13.2	0	0	49326	244	44	18.0	0	0	49410	166	24	14.5	**	**
49279	29	7	24.1	**	**	49327	667	92	13.8	0	0	49411	72	18	25.0	0	0
49282	11	6	54.5	0	0	49328	322	21	6.5	0	0	49412	782	108	13.8	**	**
49283	164	49	29.9	0	0	49329	556	115	20.7	**	**	49415	377	73	19.4	0	0
49284	204	36	17.6	**	**	49330	531	107	20.2	**	**	49417	2,114	443	21.0	**	**
49285	352	82	23.3	0	0	49331	1,229	164	13.3	**	**	49418	1,887	246	13.0	**	**
49286	751	101	13.4	**	**	49332	188	22	11.7	0	0	49419	570	90	15.8	6	6.7
49287	104	6	5.8	**	**	49333	1,165	74	6.4	**	**	49420	616	170	27.6	6	3.5
49288	168	37	22.0	0	0	49336	313	38	12.1	0	0	49421	446	40	9.0	0	0
49289	17	**	**	0	0	49337	907	91	10.0	**	**	49423	4,123	655	15.9	24	3.7
49301	1,607	140	8.7	**	**	49338	172	14	8.1	**	**	49424	3,534	697	19.7	16	2.3
49302	814	62	7.6	**	**	49339	184	21	11.4	0	0	49425	446	42	9.4	0	0
49303	91	13	14.3	0	0	49340	199	33	16.6	0	0	49426	3,315	197	5.9	**	**
49304	186	56	30.1	**	**	49341	2,874	220	7.7	7	3.2	49428	2,010	120	6.0	0	0
49305	150	18	12.0	0	0	49342	196	8	4.1	0	0	49431	1,122	272	24.2	18	6.6

Table 5. Blood Lead Levels for Children under Age Six by Zip Code, 2015 (sorted by zip code)

	Population	Child	ren		L ≥5		Population	Child	ren		L ≥5		Population	Child	ren		L ≥5
	Under	Test		any sa	mples <sup>‡</sup>		Under	Test			mples <sup>‡</sup>		Under	Test			mples <sup>‡</sup>
Zip Code	Age Six	N	%	N	%	Zip Code	Age Six	N	%	N	%	Zip Code	Age Six	N	%	N **	% **
49435	222	23	10.4	0	0	49508	3,669	814	22.2	20	2.5	49631	385	70	18.2		
49436	114	18	15.8	0	0	49509	2,638	685	26.0	23	3.4	49632	96	6	6.3	0	0
49437	476	68	14.3	0	0	49512	1,417	314	22.2	**	**	49633	185	33	17.8	**	**
49440 <sup>†</sup>	74	21	28.4	**	**	49519	2,467	474	19.2	14	3.0	49635	171	42	24.6	**	**
49441	2,425	536	22.1	21	3.9	49525	1,845	246	13.3	**	**	49636	*	**		0	0
49442	3,822	811	21.2	56	6.9	49534	1,562	179	11.5	8	4.5	49637	295	65	22.0	**	**
49444	2,502	545	21.8	27	5.0	49544	620	133	21.5	**	**	49638	30	**	**	0	0
49445	1,263	180	14.3	**	**	49546	2,077	381	18.3	**	**	49639	190	28	14.7	**	**
49446	239	36	15.1	**	**	49548	2,928	701	23.9	25	3.6	49640	37	23	62.2	**	**
49448	312	51	16.3	0	0	49601	1,579	179	11.3	**	**	49642	21	8	38.1	0	0
49449	75	26	34.7	0	0	49611	24	11	45.8	0	0	49643	453	122	26.9	0	0
49450	231	81	35.1	**	**	49612	69	14	20.3	**	**	49644	54	9	16.7	0	0
49451	564	65	11.5	**	**	49613	16	6	37.5	0	0	49645	94	28	29.8	**	**
49452	109	34	31.2	0	0	49614	109	26	23.9	0	0	49646	666	82	12.3	**	**
49453	138	23	16.7	**	**	49615	206	39	18.9	0	0	49648	69	16	23.2	**	**
49454	397	91	22.9	6	6.6	49616	103	33	32.0	0	0	49649	486	120	24.7	**	**
49455	345	118	34.2	**	**	49617	149	39	26.2	0	0	49650	307	69	22.5	0	0
49456	1,126	231	20.5	**	**	49618	65	**	**	0	0	49651	514	69	13.4	**	**
49457	806	159	19.7	**	**	49619 <sup>†</sup>	65	15	23.1	0	0	49653	40	31	77.5	0	0
49459	118	32	27.1	**	**	49620	248	49	19.8	0	0	49654	7	**	**	0	0
49460	447	83	18.6	**	**	49621	139	33	23.7	**	**	49655	215	27	12.6	0	0
49461	579	82	14.2	0	0	49622	187	23	12.3	0	0	49656	105	15	14.3	0	0
49464	2,346	271	11.6	**	**	49623	50	12	24.0	0	0	49657	328	32	9.8	0	0
49503	2,872	794	27.6	95	12.0	49625	53	17	32.1	0	0	49659	399	120	30.1	0	0
49504	3,721	779	20.9	96	12.3	49626	10	**	**	0	0	49660	828	179	21.6	7	3.9
49505	2,809	565	20.1	41	7.3	49628	9	**	**	0	0	49663	519	50	9.6	**	**
49506	2,447	434	17.7	44	10.1	49629	110	17	15.5	**	**	49664	131	29	22.1	0	0
49507	4,965	1,328	26.7	188	14.2	49630	20	9	45.0	0	0	49665	272	54	19.9	0	0

Table 5. Blood Lead Levels for Children under Age Six by Zip Code, 2015 (sorted by zip code)

	Population Under	Child Tes			L ≥5 mples <sup>‡</sup>		Population Under	Child Test			L ≥5 mples <sup>‡</sup>		Population Under	Child Test			L ≥5 mples <sup>‡</sup>
Zip Code	Age Six	N	%	N	%	Zip Code	Age Six	N	%	N	%	Zip Code	Age Six	N	%	N	%
49667	13	**	**	0	0	49719	83	18	21.7	**	**	49759	57	11	19.3	**	**
49668	273	51	18.7	0	0	49720	540	69	12.8	0	0	49760	11	10	90.9	0	0
49670	89	**	**	0	0	49721	720	125	17.4	**	**	49762	11	**	**	0	0
49675	94	**	**	0	0	49722	19	**	**	0	0	49765	246	22	8.9	0	0
49676	157	43	27.4	**	**	49724	65	13	20.0	0	0	49766	161	13	8.1	0	0
49677	629	84	13.4	**	**	49726	17	**	**	0	0	49768	29	**	**	0	0
49679	82	14	17.1	0	0	49727	436	91	20.9	**	**	49769	87	26	29.9	0	0
49680	129	20	15.5	0	0	49728	7	**	**	0	0	49770	1,144	172	15.0	0	0
49682	295	63	21.4	**	**	49729	65	10	15.4	0	0	49774	68	13	19.1	**	**
49683	125	23	18.4	0	0	49730	125	25	20.0	0	0	49775	*	**		0	0
49684	3,194	581	18.2	10	1.7	49733	161	15	9.3	**	**	49776	88	11	12.5	0	0
49685	*	27		0	0	49735	1,389	206	14.8	0	0	49777	66	**	**	0	0
49686	1,794	497	27.7	14	2.8	49736	28	**	**	0	0	49779	198	51	25.8	0	0
49688	189	15	7.9	0	0	49738	463	62	13.4	0	0	49780	117	18	15.4	0	0
49689	61	14	23.0	0	0	49740	301	37	12.3	0	0	49781	219	49	22.4	0	0
49690	176	81	46.0	**	**	49743	35	**	**	0	0	49782	14	**	**	0	0
49696	*	12		**	**	49744	16	8	50.0	0	0	49783	1,464	208	14.2	**	**
49701	32	7	21.9	0	0	49745	52	20	38.5	0	0	49788	494	70	14.2	0	0
49705	144	6	4.2	0	0	49746	166	27	16.3	0	0	49791	11	**	**	0	0
49706	301	60	19.9	0	0	49747	63	9	14.3	0	0	49795	127	24	18.9	0	0
49707	1,324	204	15.4	**	**	49748	7	**	**	0	0	49796	**	**	**	0	0
49709	157	26	16.6	0	0	49749	165	35	21.2	0	0	49799	143	19	13.3	0	0
49710	7	**	**	0	0	49751	79	16	20.3	0	0	49801	752	87	11.6	0	0
49712	547	86	15.7	0	0	49752	23	7	30.4	0	0	49802	426	58	13.6	0	0
49713	152	24	15.8	0	0	49753	103	16	15.5	0	0	49805	*	**		0	0
49715	219	37	16.9	**	**	49755	125	21	16.8	0	0	49806	32	**	**	0	0
49716	17	**	**	0	0	49756	177	22	12.4	0	0	49807	212	21	9.9	**	**
49718	37	6	16.2	0	0	49757	30	**	**	0	0	49812	71	**	**	0	0

Table 5. Blood Lead Levels for Children under Age Six by Zip Code, 2015 (sorted by zip code)

	Population	Child			L ≥5		Population	Child			L ≥5		Population	Child			. ≥5
	Under	Test			mples <sup>‡</sup>		Under	Test			mples <sup>‡</sup>		Under	Test			mples <sup>‡</sup>
Zip Code 49814	Age Six	N 6	% 5.4	N 0	% 0	Zip Code 49863	Age Six	N **	**	N 0	0	Zip Code 49912	Age Six	N **	% **	N 0	% 0
		**	3.4 **				7	**	**	0							
49815	11			0	0	49864				**	0	49913	580	142	24.5	10	7.0
49816	12	7	58.3	0	0	49866	550	41	7.5			49915	35			0	0
49817	30	8	26.7	0	0	49868	313	69	22.0	0	0	49916	157	50 **	31.8	0	0
49818	57	**	**	0	0	49870	142	30	21.1	0	0	49917	37		**	0	0
49820	**	**	**	0	0	49871	34	**	**	0	0	49919	20	**	**	0	0
49821	56	18	32.1	**	**	49872	12	**	**	0	0	49920	286	36	12.6	0	0
49825	15	**	**	0	0	49873	10	**	**	0	0	49921	*	**		0	0
49827	61	10	16.4	0	0	49874	55	**	**	0	0	49922	56	17	30.4	**	**
49829	1,098	231	21.0	15	6.5	49876	14	6	42.9	0	0	49925	15	**	**	0	0
49831	50	**	**	0	0	49878	158	28	17.7	0	0	49927	32	**	**	0	0
49834	17	**	**	0	0	49879	42	**	**	0	0	49930	500	133	26.6	**	**
49835	54	7	13.0	0	0	49880	77	**	**	0	0	49931	386	106	27.5	0	0
49836	38	11	28.9	0	0	49881	9	**	**	0	0	49934	117	10	8.5	0	0
49837	596	94	15.8	**	**	49884	35	10	28.6	**	**	49935	235	63	26.8	**	**
49838	20	6	30.0	0	0	49885	131	11	8.4	0	0	49938	411	95	23.1	**	**
49840	49	**	**	0	0	49886	57	**	**	0	0	49945	178	32	18.0	**	**
49841	434	104	24.0	**	**	49887	114	17	14.9	0	0	49946	316	96	30.4	**	**
49847	64	13	20.3	**	**	49891	19	**	**	0	0	49947	7	**	**	0	0
49848	**	**	**	0	0	49892	81	10	12.3	0	0	49948	24	11	45.8	0	0
49849	1,002	101	10.1	**	**	49893	59	14	23.7	0	0	49950	92	10	10.9	0	0
49852	8	**	**	0	0	49894	17	14	82.4	0	0	49952	*	**		0	0
49853	65	15	23.1	0	0	49895	48	**	**	**	**	49953	103	12	11.7	0	0
49854	398	66	16.6	**	**	49896	167	37	22.2	**	**	49955	30	9	30.0	0	0
49855	1,840	152	8.3	6	3.9	49901	14	**	**	0	0	49958	89	9	10.1	0	0
49858	695	139	20.0	8	5.8	49905	192	50	26.0	0	0	49959	29	6	20.7	0	0
49861	21	**	**	0	0	49908	125	53	42.4	0	0	49960	**	**	**	0	0
49862	208	40	19.2	**	**	49911	179	31	17.3	**	**	49961	**	**	**	0	0

Table 5. Blood Lead Levels for Children under Age Six by Zip Code, 2015 (sorted by zip code)

	Population Under	Child Test			L ≥5 mples <sup>‡</sup>		Population Under	Child Test			L ≥5 mples <sup>‡</sup>		Population Under	Childr Teste		BLL any sar	+
Zip Code	Age Six	N	%	N	%	Zip Code	Age Six	N	%	N	%	Zip Code	Age Six	N	%	N	%
49962	**	**	**	0	0	49968	86	23	26.7	**	**	Unknown		107		**	**
49963	96	23	24.0	0	0	49969	69	15	21.7	0	0	PO box		226		0	0
49965	**	**	**	0	0	49970	10	**	**	0	0	TOTAL	700,787	140,857	20.1	4,791	3.4
49967	14	**	**	0	0	49971	**	**	**	**	**						

<sup>\*</sup>Census data not available

<sup>\*\*</sup> Values less six (not including zero) were suppressed to maintain confidentiality. Some numbers greater than or equal to six may have been suppressed to prevent back-calculation.

<sup>&</sup>lt;sup>†</sup>Population data from 2010 Census

<sup>&</sup>lt;sup>‡</sup>Reflects each child's highest venous result, or if no venous, highest capillary result, or if no venous or capillary, highest unknown test type result **Source**: American Community Survey 2014 5-year estimates (population data), unless otherwise noted; MDHHS Data Warehouse (children tested and BLL statistics)

Table 6. Blood Lead Levels for Children under Age Six by Zip Code, 2015 (sorted by percentage of EBLL

	Population Under	Child Test			L ≥5 mples <sup>‡</sup>		Population Under	Child Test			L ≥5 mples <sup>‡</sup>		Population Under	Child: Test			. ≥5 mples <sup>‡</sup>
Zip Code	Age Six	N	%	N	%	Zip Code	Age Six	N	%	N	%	Zip Code	Age Six	N	%	N	%
48214	1,350	558	41.3	96	17.2	49001	1,907	529	27.7	36	6.8	49093	1,238	342	27.6	17	5.0
48204	2,542	800	31.5	119	14.9	48221	2,723	942	34.6	63	6.7	49444	2,502	545	21.8	27	5.0
49507	4,965	1,328	26.7	188	14.2	49419	570	90	15.8	6	6.7	49017	1,446	306	21.2	15	4.9
48202	734	382	52.0	53	13.9	49431	1,122	272	24.2	18	6.6	49015	1,972	432	21.9	21	4.9
48206	1,717	592	34.5	82	13.9	48224	4,186	1,380	33.0	91	6.6	48813	1,433	165	11.5	8	4.8
49256	274	54	19.7	7	13.0	49454	397	91	22.9	6	6.6	48809	722	191	26.5	9	4.7
49221	3,274	517	15.8	67	13.0	48205	3,302	1,402	42.5	92	6.6	48341	1,251	320	25.6	15	4.7
48215	1,107	370	33.4	47	12.7	49829	1,098	231	21.0	15	6.5	49057	631	128	20.3	6	4.7
48213	2,310	716	31.0	90	12.6	48060	3,266	1,290	39.5	83	6.4	49202	1,837	543	29.6	25	4.6
48203	1,814	703	38.8	87	12.4	49010	1,474	266	18.0	17	6.4	48218	729	241	33.1	11	4.6
49504	3,721	779	20.9	96	12.3	49107	468	95	20.3	6	6.3	49534	1,562	179	11.5	8	4.5
49503	2,872	794	27.6	95	12.0	49058	1,248	148	11.9	9	6.1	48084	1,067	183	17.2	8	4.4
48238	2,527	1,025	40.6	120	11.7	48335	1,532	470	30.7	28	6.0	48912	1,400	369	26.4	16	4.3
48211	560	241	43.0	26	10.8	49014	1,419	295	20.8	17	5.8	48234	2,554	1,022	40.0	44	4.3
49506	2,447	434	17.7	44	10.1	49858	695	139	20.0	8	5.8	48846	1,376	279	20.3	12	4.3
49007	768	245	31.9	22	9.0	48216	286	123	43.0	7	5.7	48043	751	192	25.6	8	4.2
49247	470	105	22.3	9	8.6	48503	2,295	637	27.8	36	5.7	48228	5,338	1,868	35.0	77	4.1
48210	4,292	1,517	35.3	128	8.4	48227	3,415	1,313	38.4	74	5.6	48201	787	346	44.0	14	4.0
49224	1,369	133	9.7	11	8.3	48906	2,678	659	24.6	37	5.6	49408	707	150	21.2	6	4.0
48708	2,189	458	20.9	36	7.9	48872	581	107	18.4	6	5.6	48504	2,711	701	25.9	28	4.0
48207	1,592	531	33.4	39	7.3	48230	1,153	180	15.6	10	5.6	49091	1,891	277	14.6	11	4.0
48212	4,056	1,405	34.6	103	7.3	49201	2,660	780	29.3	43	5.5	49047	1,281	202	15.8	8	4.0
49203	3,339	956	28.6	70	7.3	48750	393	110	28.0	6	5.5	49855	1,840	152	8.3	6	3.9
49505	2,809	565	20.1	41	7.3	49120	2,771	445	16.1	24	5.4	49441	2,425	536	22.1	21	3.9
48208	831	308	37.1	22	7.1	48235	3,234	1,303	40.3	70	5.4	49660	828	179	21.6	7	3.9
49913	580	142	24.5	10	7.0	48867	2,014	710	35.3	38	5.4	48326	1,589	236	14.9	9	3.8
48209	3,705	1,446	39.0	100	6.9	48602	2,543	684	26.9	35	5.1	48229	895	241	26.9	9	3.7
49442	3,822	811	21.2	56	6.9	48217	373	180	48.3	9	5.0	48601	3,085	1,105	35.8	41	3.7

Table 6. Blood Lead Levels for Children under Age Six by Zip Code, 2015 (sorted by percentage of EBLL

	Population Under	Child: Test			L ≥5 mples <sup>‡</sup>		Population Under	Child Test			L ≥5 mples <sup>‡</sup>		Population Under	Child: Test		BLI any sai	.≥5 nples <sup>‡</sup>
Zip Code	Age Six	N	%	Ň	. %	Zip Code	Age Six	N	%	N	. %	Zip Code	Age Six	N	%	N	· %
49423	4,123	655	15.9	24	3.7	48430	2,641	351	13.3	9	2.6	48198	3,545	647	18.3	8	1.2
49548	2,928	701	23.9	25	3.6	49508	3,669	814	22.2	20	2.5	48180	5,363	1,458	27.2	17	1.2
49242	827	283	34.2	10	3.5	48030	1,309	285	21.8	7	2.5	48185	3,554	741	20.8	8	1.1
49420	616	170	27.6	6	3.5	49036	1,524	332	21.8	8	2.4	48174	2,435	638	26.2	6	0.9
49319	1,688	200	11.8	7	3.5	48220	1,671	298	17.8	7	2.3	48066	3,554	658	18.5	6	0.9
49022	3,166	611	19.3	21	3.4	49424	3,534	697	19.7	16	2.3	48340	2,603	753	28.9	6	0.8
49048	2,157	524	24.3	18	3.4	49009	2,840	445	15.7	10	2.2	48001	594	143	24.1	**	**
49509	2,638	685	26.0	23	3.4	48021	2,121	545	25.7	12	2.2	48003	444	54	12.2	**	**
48706	2,474	537	21.7	18	3.4	48911	3,760	1,152	30.6	25	2.2	48006	183	43	23.5	**	**
48074	828	181	21.9	6	3.3	48236	1,905	286	15.0	6	2.1	48009	1,776	311	17.5	**	**
48915	892	248	27.8	8	3.2	48336	1,733	361	20.8	7	1.9	48014	377	74	19.6	**	**
49341	2,874	220	7.7	7	3.2	48458	1,706	361	21.2	7	1.9	48015	438	137	31.3	**	**
48223	1,933	736	38.1	23	3.1	48423	1,968	368	18.7	7	1.9	48023	207	49	23.7	**	**
48375	1,293	288	22.3	9	3.1	48917	1,567	370	23.6	7	1.9	48025	790	144	18.2	**	**
48506	2,426	600	24.7	18	3.0	49684	3,194	581	18.2	10	1.7	48026	885	165	18.6	**	**
49519	2,467	474	19.2	14	3.0	48126	5,466	1,446	26.5	24	1.7	48032	171	32	18.7	**	**
49321	1,375	271	19.7	8	3.0	48089	2,548	687	27.0	11	1.6	48033	931	317	34.0	**	**
48219	3,765	1,336	35.5	39	2.9	48091	2,604	641	24.6	10	1.6	48034	1,082	258	23.8	**	**
48910	2,900	841	29.0	24	2.9	48146	3,273	1,028	31.4	16	1.6	48036	1,481	286	19.3	**	**
48342	1,840	566	30.8	16	2.8	48507	2,915	836	28.7	13	1.6	48038	2,458	409	16.6	**	**
48529	829	213	25.7	6	2.8	48141	2,601	708	27.2	11	1.6	48039	475	94	19.8	**	**
49686	1,794	497	27.7	14	2.8	48197	5,012	794	15.8	12	1.5	48040	645	108	16.7	**	**
49037	2,049	478	23.3	13	2.7	48071	2,132	492	23.1	7	1.4	48041	254	36	14.2	**	**
48603	1,458	370	25.4	10	2.7	48127	3,330	730	21.9	10	1.4	48042	2,100	243	11.6	**	**
48505	1,776	596	33.6	16	2.7	48237	2,259	588	26.0	8	1.4	48044	4,808	519	10.8	**	**
49004	1,403	225	16.0	6	2.7	48035	2,760	442	16.0	6	1.4	48047	2,840	383	13.5	**	**
48446	1,814	308	17.0	8	2.6	48183	2,663	524	19.7	7	1.3	48048	689	108	15.7	**	**
48188	3,597	426	11.8	11	2.6	48239	3,000	646	21.5	8	1.2	48051	1,412	183	13.0	**	**

Table 6. Blood Lead Levels for Children under Age Six by Zip Code, 2015 (sorted by percentage of EBLL

	Population Under	Child Test			L ≥5 mples <sup>‡</sup>		Population Under	Child Test			L ≥5 mples <sup>‡</sup>		Population Under	Child Test			L ≥5 mples <sup>‡</sup>
Zip Code	Age Six	N	%	N	%	Zip Code	Age Six	N	%	N	%	Zip Code	Age Six	N	%	N	%
48059	966	192	19.9	**	**	48120	722	339	47.0	**	**	48191	374	34	9.1	**	**
48062	656	114	17.4	**	**	48122	938	328	35.0	**	**	48192	1,441	357	24.8	**	**
48063	221	45	20.4	**	**	48124	2,120	381	18.0	**	**	48193	1,227	238	19.4	**	**
48065	561	87	15.5	**	**	48125	1,713	365	21.3	**	**	48195	1,568	459	29.3	**	**
48067	1,421	296	20.8	**	**	48128	1,037	165	15.9	**	**	48225	970	243	25.1	**	**
48072	1,184	205	17.3	**	**	48130	1,149	55	4.8	**	**	48226	93	37	39.8	**	**
48073	2,047	417	20.4	**	**	48134	1,505	315	20.9	**	**	48240	1,322	349	26.4	**	**
48075	1,330	430	32.3	**	**	48135	2,001	345	17.2	**	**	48302	611	121	19.8	**	**
48076	1,439	399	27.7	**	**	48144	626	54	8.6	**	**	48306	1,844	117	6.3	**	**
48079	611	130	21.3	**	**	48145	237	21	8.9	**	**	48307	3,399	311	9.1	**	**
48080	1,366	241	17.6	**	**	48150	1,867	293	15.7	**	**	48309	1,684	148	8.8	**	**
48081	979	177	18.1	**	**	48152	1,750	308	17.6	**	**	48310	2,759	740	26.8	**	**
48082	1,083	116	10.7	**	**	48154	1,896	298	15.7	**	**	48312	1,899	435	22.9	**	**
48083	1,743	271	15.5	**	**	48158	405	46	11.4	**	**	48314	1,308	229	17.5	**	**
48085	1,383	206	14.9	**	**	48159	180	28	15.6	**	**	48315	1,297	184	14.2	**	**
48088	1,455	260	17.9	**	**	48160	617	88	14.3	**	**	48316	1,664	200	12.0	**	**
48092	1,637	431	26.3	**	**	48161	1,876	304	16.2	**	**	48317	1,873	379	20.2	**	**
48093	1,509	335	22.2	**	**	48162	2,197	292	13.3	**	**	48320	307	57	18.6	**	**
48094	1,228	150	12.2	**	**	48165	417	107	25.7	**	**	48322	1,750	287	16.4	**	**
48097	312	90	28.8	**	**	48166	1,125	154	13.7	**	**	48324	980	152	15.5	**	**
48101	1,576	362	23.0	**	**	48167	1,311	211	16.1	**	**	48328	1,999	315	15.8	**	**
48103	3,312	370	11.2	**	**	48168	1,364	129	9.5	**	**	48329	1,234	237	19.2	**	**
48104	1,271	138	10.9	**	**	48170	2,461	179	7.3	**	**	48334	910	227	24.9	**	**
48105	2,214	161	7.3	**	**	48173	818	141	17.2	**	**	48346	1,440	191	13.3	**	**
48108	1,730	267	15.4	**	**	48178	2,292	266	11.6	**	**	48350	512	63	12.3	**	**
48111	3,078	559	18.2	**	**	48182	1,588	194	12.2	**	**	48353	491	36	7.3	**	**
48116	1,578	115	7.3	**	**	48186	2,305	525	22.8	**	**	48359	667	121	18.1	**	**
48118	797	88	11.0	**	**	48187	3,333	436	13.1	**	**	48362	1,205	126	10.5	**	**

Table 6. Blood Lead Levels for Children under Age Six by Zip Code, 2015 (sorted by percentage of EBLL

	Population	Child			L ≥5		Population	Child			L ≥5		Population	Child			. ≥5
	Under	Test			mples <sup>‡</sup>		Under	Test			mples <sup>‡</sup>		Under	Test		any sai	
Zip Code	Age Six	N	%	N	%	Zip Code	Age Six	N	%	N	%	Zip Code	Age Six	N	%	N	%
48367	220	22	10.0	**	**	48454	94	12	12.8	**	**	48655	396	74	18.7	**	**
48371	1,625	173	10.6	**	**	48455	452	50	11.1	**	**	48657	411	41	10.0	**	**
48374	1,141	176	15.4	**	**	48457	549	106	19.3	**	**	48658	255	73	28.6	**	**
48377	1,229	296	24.1	**	**	48461	556	90	16.2	**	**	48659	219	53	24.2	**	**
48381	864	127	14.7	**	**	48467	62	23	37.1	**	**	48723	744	206	27.7	**	**
48386	1,079	134	12.4	**	**	48471	302	54	17.9	**	**	48726	434	69	15.9	**	**
48390	1,445	249	17.2	**	**	48472	213	17	8.0	**	**	48730	248	31	12.5	**	**
48393	1,365	265	19.4	**	**	48473	1,385	297	21.4	**	**	48732	468	134	28.6	**	**
48412	395	54	13.7	**	**	48475	168	15	8.9	**	**	48733	76	30	39.5	**	**
48413	546	81	14.8	**	**	48502	20	15	75.0	**	**	48735	31	8	25.8	**	**
48416	348	59	17.0	**	**	48509	469	97	20.7	**	**	48737	57	9	15.8	**	**
48418	287	44	15.3	**	**	48519	512	108	21.1	**	**	48740	84	9	10.7	**	**
48419	183	25	13.7	**	**	48532	1,335	400	30.0	**	**	48742	46	7	15.2	**	**
48420	1,261	272	21.6	**	**	48604	755	142	18.8	**	**	48748	48	13	27.1	**	**
48421	366	66	18.0	**	**	48607	67	25	37.3	**	**	48759	175	45	25.7	**	**
48422	420	64	15.2	**	**	48609	586	123	21.0	**	**	48768	651	142	21.8	**	**
48427	213	15	7.0	**	**	48612	549	115	20.9	**	**	48801	977	173	17.7	**	**
48429	311	118	37.9	**	**	48614	73	13	17.8	**	**	48811	333	57	17.1	**	**
48433	2,049	312	15.2	**	**	48616	649	95	14.6	**	**	48817	355	126	35.5	**	**
48436	200	38	19.0	**	**	48618	344	33	9.6	**	**	48818	172	37	21.5	**	**
48437	17	**	**	**	**	48624	1,007	180	17.9	**	**	48823	2,142	363	16.9	**	**
48439	3,103	533	17.2	**	**	48625	812	174	21.4	**	**	48824	*	**		**	**
48442	1,383	214	15.5	**	**	48626	288	55	19.1	**	**	48827	1,513	152	10.0	**	**
48444	612	120	19.6	**	**	48638	1,258	200	15.9	**	**	48829	222	53	23.9	**	**
48449	96	61	63.5	**	**	48642	2,449	205	8.4	**	**	48831	188	44	23.4	**	**
48450	141	26	18.4	**	**	48650	387	68	17.6	**	**	48836	1,265	121	9.6	**	**
48451	1,096	138	12.6	**	**	48652	58	10	17.2	**	**	48837	1,291	121	9.4	**	**
48453	402	52	12.9	**	**	48653	445	62	13.9	**	**	48838	1,469	252	17.2	**	**

Table 6. Blood Lead Levels for Children under Age Six by Zip Code, 2015 (sorted by percentage of EBLL

	Population Under	Child Test			L ≥5 mples <sup>‡</sup>		Population Under	Child Test			L ≥5 mples <sup>‡</sup>		Population Under	Child Test			L ≥5 mples <sup>‡</sup>
Zip Code	Age Six	N	.c <b>u</b> %	N	<b>%</b>	Zip Code	Age Six	N N	%	N	<b>%</b>	Zip Code	Age Six	N N	%	N	%
48840	604	110	18.2	**	**	49011	135	25	18.5	**	**	49082	557	73	13.1	**	**
48842	1,605	293	18.3	**	**	49013	390	62	15.9	**	**	49083	469	66	14.1	**	**
48845	59	12	20.3	**	**	49021	485	74	15.3	**	**	49085	1,588	87	5.5	**	**
48848	403	71	17.6	**	**	49024	2,643	293	11.1	**	**	49087	396	46	11.6	**	**
48850	330	52	15.8	**	**	49026	103	17	16.5	**	**	49088	225	44	19.6	**	**
48854	1,235	234	18.9	**	**	49028	522	86	16.5	**	**	49090	995	121	12.2	**	**
48857	199	25	12.6	**	**	49029	137	15	10.9	**	**	49096	175	26	14.9	**	**
48858	2,632	417	15.8	**	**	49030	243	29	11.9	**	**	49098	553	53	9.6	**	**
48860	145	14	9.7	**	**	49031	452	47	10.4	**	**	49099	396	70	17.7	**	**
48861	192	11	5.7	**	**	49032	280	37	13.2	**	**	49102	45	8	17.8	**	**
48864	1,369	153	11.2	**	**	49038	487	56	11.5	**	**	49103	688	135	19.6	**	**
48865	54	31	57.4	**	**	49042	292	84	28.8	**	**	49106	273	23	8.4	**	**
48866	306	75	24.5	**	**	49043	286	37	12.9	**	**	49113	112	20	17.9	**	**
48875	847	113	13.3	**	**	49045	519	84	16.2	**	**	49126	66	21	31.8	**	**
48876	310	37	11.9	**	**	49053	541	94	17.4	**	**	49128	281	30	10.7	**	**
48878	140	21	15.0	**	**	49055	342	62	18.1	**	**	49130	151	16	10.6	**	**
48879	1,282	150	11.7	**	**	49060	75	20	26.7	**	**	49220	124	29	23.4	**	**
48880	583	99	17.0	**	**	49064	228	37	16.2	**	**	49227	109	21	19.3	**	**
48881	513	64	12.5	**	**	49065	340	47	13.8	**	**	49228	363	46	12.7	**	**
48884	188	49	26.1	**	**	49067	213	37	17.4	**	**	49229	188	27	14.4	**	**
48886	128	33	25.8	**	**	49068	927	123	13.3	**	**	49232	250	49	19.6	**	**
48888	445	98	22.0	**	**	49071	573	62	10.8	**	**	49235	193	22	11.4	**	**
48890	200	23	11.5	**	**	49072	229	36	15.7	**	**	49236	374	30	8.0	**	**
48893	457	45	9.8	**	**	49073	330	52	15.8	**	**	49240	624	83	13.3	**	**
48895	710	103	14.5	**	**	49076	216	27	12.5	**	**	49241	177	39	22.0	**	**
49002	1,640	210	12.8	**	**	49078	422	104	24.6	**	**	49245	477	48	10.1	**	**
49006	1,388	304	21.9	**	**	49079	1,076	99	9.2	**	**	49248	34	9	26.5	**	**
49008	907	172	19.0	**	**	49080	929	171	18.4	**	**	49249	134	41	30.6	**	**

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	Population Under	Child Test			L ≥5 Imples <sup>‡</sup>		Population Under	Child Test			L ≥5 mples <sup>‡</sup>		Population Under	Child Test		BLL any sar	. ≥5 mples <sup>‡</sup>
Zip Code	Age Six	N	%	N	%	Zip Code	Age Six	N	%	N	%	Zip Code	Age Six	N	%	N	%
49250	424	115	27.1	**	**	49331	1,229	164	13.3	**	**	49464	2,346	271	11.6	**	**
49251	297	109	36.7	**	**	49333	1,165	74	6.4	**	**	49512	1,417	314	22.2	**	**
49252	217	48	22.1	**	**	49337	907	91	10.0	**	**	49525	1,845	246	13.3	**	**
49253	59	31	52.5	**	**	49338	172	14	8.1	**	**	49544	620	133	21.5	**	**
49254	80	55	68.8	**	**	49343	487	56	11.5	**	**	49546	2,077	381	18.3	**	**
49264	143	29	20.3	**	**	49344	277	27	9.7	**	**	49601	1,579	179	11.3	**	**
49265	222	33	14.9	**	**	49345	1,097	202	18.4	**	**	49612	69	14	20.3	**	**
49266	154	40	26.0	**	**	49348	974	79	8.1	**	**	49621	139	33	23.7	**	**
49268	61	14	23.0	**	**	49401	1,301	65	5.0	**	**	49629	110	17	15.5	**	**
49269	316	72	22.8	**	**	49402	80	13	16.3	**	**	49631	385	70	18.2	**	**
49270	286	46	16.1	**	**	49404	728	67	9.2	**	**	49633	185	33	17.8	**	**
49271	238	42	17.6	**	**	49405	83	13	15.7	**	**	49635	171	42	24.6	**	**
49274	334	58	17.4	**	**	49410	166	24	14.5	**	**	49637	295	65	22.0	**	**
49279	29	7	24.1	**	**	49412	782	108	13.8	**	**	49639	190	28	14.7	**	**
49284	204	36	17.6	**	**	49417	2,114	443	21.0	**	**	49640	37	23	62.2	**	**
49286	751	101	13.4	**	**	49418	1,887	246	13.0	**	**	49645	94	28	29.8	**	**
49287	104	6	5.8	**	**	49426	3,315	197	5.9	**	**	49646	666	82	12.3	**	**
49301	1,607	140	8.7	**	**	49440 <sup>†</sup>	74	21	28.4	**	**	49648	69	16	23.2	**	**
49302	814	62	7.6	**	**	49445	1,263	180	14.3	**	**	49649	486	120	24.7	**	**
49304	186	56	30.1	**	**	49446	239	36	15.1	**	**	49651	514	69	13.4	**	**
49307	969	118	12.2	**	**	49450	231	81	35.1	**	**	49663	519	50	9.6	**	**
49315	1,619	124	7.7	**	**	49451	564	65	11.5	**	**	49676	157	43	27.4	**	**
49316	2,014	122	6.1	**	**	49453	138	23	16.7	**	**	49677	629	84	13.4	**	**
49318	104	31	29.8	**	**	49455	345	118	34.2	**	**	49682	295	63	21.4	**	**
49322	84	10	11.9	**	**	49456	1,126	231	20.5	**	**	49690	176	81	46.0	**	**
49323	916	61	6.7	**	**	49457	806	159	19.7	**	**	49696	*	12		**	**
49329	556	115	20.7	**	**	49459	118	32	27.1	**	**	49707	1,324	204	15.4	**	**
49330	531	107	20.2	**	**	49460	447	83	18.6	**	**	49715	219	37	16.9	**	**

Table 6. Blood Lead Levels for Children under Age Six by Zip Code, 2015 (sorted by percentage of EBLL

	Population	Child			L ≥5		Population	Child			L ≥5 mples <sup>‡</sup>		Population	Child			. ≥5
Zip Code	Under Age Six	Test N	ea %	any sa N	mples <sup>‡</sup> %	Zip Code	Under Age Six	Test N	ea %	any sa N	mpies %	Zip Code	Under Age Six	Test N	ea %	any sar N	mpies %
49719	83	18	21.7	**	**	Unknown		107		**	**	48179	180	34	18.9	0	0
49721	720	125	17.4	**	**	48002	184	16	8.7	0	0	48184	1,155	273	23.6	0	0
49727	436	91	20.9	**	**	48005	231	25	10.8	0	0	48189	931	91	9.8	0	0
49733	161	15	9.3	**	**	48017	695	149	21.4	0	0	48243	*	**		0	0
49759	57	11	19.3	**	**	48022	220	31	14.1	0	0	48301	1,058	133	12.6	0	0
49774	68	13	19.1	**	**	48027	234	41	17.5	0	0	48304	949	120	12.6	0	0
49783	1,464	208	14.2	**	**	48028	28	**	**	0	0	48313	1,926	408	21.2	0	0
49807	212	21	9.9	**	**	48045	1,084	205	18.9	0	0	48323	1,033	135	13.1	0	0
49821	56	18	32.1	**	**	48049	327	53	16.2	0	0	48327	1,507	238	15.8	0	0
49837	596	94	15.8	**	**	48050	74	11	14.9	0	0	48331	1,173	192	16.4	0	0
49841	434	104	24.0	**	**	48054	302	55	18.2	0	0	48348	1,469	255	17.4	0	0
49847	64	13	20.3	**	**	48064	327	56	17.1	0	0	48356	511	47	9.2	0	0
49849	1,002	101	10.1	**	**	48069	126	34	27.0	0	0	48357	622	41	6.6	0	0
49854	398	66	16.6	**	**	48070	496	82	16.5	0	0	48360	839	84	10.0	0	0
49862	208	40	19.2	**	**	48095	306	44	14.4	0	0	48363	319	30	9.4	0	0
49866	550	41	7.5	**	**	48096	119	26	21.8	0	0	48370	66	6	9.1	0	0
49884	35	10	28.6	**	**	48098	1,068	137	12.8	0	0	48380	317	27	8.5	0	0
49895	48	**	**	**	**	48114	1,153	90	7.8	0	0	48382	1,627	188	11.6	0	0
49896	167	37	22.2	**	**	48117	596	83	13.9	0	0	48383	829	125	15.1	0	0
49911	179	31	17.3	**	**	48131	401	65	16.2	0	0	48401	81	**	**	0	0
49922	56	17	30.4	**	**	48133	590	55	9.3	0	0	48414	268	30	11.2	0	0
49930	500	133	26.6	**	**	48137	287	30	10.5	0	0	48415	666	130	19.5	0	0
49935	235	63	26.8	**	**	48138	387	69	17.8	0	0	48417	219	29	13.2	0	0
49938	411	95	23.1	**	**	48140	100	28	28.0	0	0	48426	56	**	**	0	0
49945	178	32	18.0	**	**	48157	100	13	13.0	0	0	48428	206	31	15.0	0	0
49946	316	96	30.4	**	**	48164	458	90	19.7	0	0	48432	62	**	**	0	0
49968	86	23	26.7	**	**	48169	1,135	86	7.6	0	0	48435	146	24	16.4	0	0
49971	**	**	**	**	**	48176	1,146	108	9.4	0	0	48438	370	54	14.6	0	0

Table 6. Blood Lead Levels for Children under Age Six by Zip Code, 2015 (sorted by percentage of EBLL

	Population Under	Child Test			L ≥5 mples <sup>‡</sup>		Population Under	Child Test			L ≥5 mples <sup>‡</sup>		Population Under	Child Test		BLL any sar	
Zip Code	Age Six	N	%	N	%	Zip Code	Age Six	N	%	N	%	Zip Code	Age Six	N	%	N	%
48440	34	**	**	0	0	48635	53	9	17.0	0	0	48745	83	7	8.4	0	0
48441	250	40	16.0	0	0	48636	24	9	37.5	0	0	48746	638	113	17.7	0	0
48445	85	21	24.7	0	0	48637	246	23	9.3	0	0	48747	65	16	24.6	0	0
48456	45	9	20.0	0	0	48640	1,995	190	9.5	0	0	48749	65	23	35.4	0	0
48460	181	42	23.2	0	0	48647	283	57	20.1	0	0	48754	58	14	24.1	0	0
48462	609	121	19.9	0	0	48649	37	17	45.9	0	0	48755	171	26	15.2	0	0
48463	129	47	36.4	0	0	48651	197	47	23.9	0	0	48756	262	50	19.1	0	0
48464	230	17	7.4	0	0	48654	159	15	9.4	0	0	48757	331	56	16.9	0	0
48465	55	**	**	0	0	48656	133	29	21.8	0	0	48760	46	23	50.0	0	0
48466	107	16	15.0	0	0	48661	725	79	10.9	0	0	48761	12	**	**	0	0
48468	34	**	**	0	0	48662	62	14	22.6	0	0	48762	43	6	14.0	0	0
48469	16	12	75.0	0	0	48701	57	21	36.8	0	0	48763	289	52	18.0	0	0
48470	13	**	**	0	0	48703	125	27	21.6	0	0	48765	21	6	28.6	0	0
48610	124	41	33.1	0	0	48705	22	**	**	0	0	48766	65	16	24.6	0	0
48611	503	50	9.9	0	0	48720	25	15	60.0	0	0	48767	103	20	19.4	0	0
48613	101	18	17.8	0	0	48721	**	**	**	0	0	48770	144	20	13.9	0	0
48615	194	34	17.5	0	0	48722	308	40	13.0	0	0	48806	49	11	22.4	0	0
48617	807	112	13.9	0	0	48725	89	17	19.1	0	0	48807	68	10	14.7	0	0
48619	34	**	**	0	0	48727	95	13	13.7	0	0	48808	356	58	16.3	0	0
48621	45	17	37.8	0	0	48728	18	**	**	0	0	48815	157	21	13.4	0	0
48622	323	67	20.7	0	0	48729	68	21	30.9	0	0	48819	187	30	16.0	0	0
48623	837	110	13.1	0	0	48731	137	27	19.7	0	0	48820	1,234	136	11.0	0	0
48628	122	10	8.2	0	0	48734	384	53	13.8	0	0	48821	416	25	6.0	0	0
48629	373	68	18.2	0	0	48738	61	10	16.4	0	0	48822	198	12	6.1	0	0
48631	234	45	19.2	0	0	48739	177	26	14.7	0	0	48825	*	**		0	0
48632	228	69	30.3	0	0	48741	105	17	16.2	0	0	48832	98	13	13.3	0	0
48633	15	**	**	0	0	48743	*	**		0	0	48834	142	26	18.3	0	0
48634	393	44	11.2	0	0	48744	161	66	41.0	0	0	48835	190	16	8.4	0	0

Table 6. Blood Lead Levels for Children under Age Six by Zip Code, 2015 (sorted by percentage of EBLL

	Population	Child			L ≥5		Population	Child			L ≥5		Population	Child			. ≥5
Zip Code	Under Age Six	Test N	ed %	any sa N	mples <sup>‡</sup>	Zip Code	Under Age Six	Test N	ted %	any sa N	mples <sup>‡</sup> %	Zip Code	Under Age Six	Test N	ed %	any sar N	
48841	Age Six	11	15.9	0	% 0	49050	Age Six	12	14.3	0	0	49267	233	25	10.7	0	% 0
48843	2,887	276	9.6	0	0	49051	63	16	25.4	0	0	49272	117	33	28.2	0	0
48847	302	58	19.2	0	0	49052	46	12	26.1	0	0	49276	83	**	**	0	0
48849	440	65	14.8	0	0	49056	220	66	30.0	0	0	49277	281	37	13.2	0	0
48851	293	36	12.3	0	0	49061	51	14	27.5	0	0	49282	11	6	54.5	0	0
48853	49	16	32.7	0	0	49066	51	8	15.7	0	0	49283	164	49	29.9	0	0
48855	994	83	8.4	0	0	49070	288	24	8.3	0	0	49285	352	82	23.3	0	0
48856	90	16	17.8	0	0	49089	111	18	16.2	0	0	49288	168	37	22.0	0	0
48870	10	**	**	0	0	49092	151	11	7.3	0	0	49289	17	**	**	0	0
48871	142	12	8.5	0	0	49094	319	39	12.2	0	0	49303	91	13	14.3	0	0
48873	89	**	**	0	0	49095	100	11	11.0	0	0	49305	150	18	12.0	0	0
48874	12	**	**	0	0	49097	666	75	11.3	0	0	49306	722	55	7.6	0	0
48877	131	31	23.7	0	0	49101	179	24	13.4	0	0	49309	102	15	14.7	0	0
48883	403	61	15.1	0	0	49111	198	61	30.8	0	0	49310	205	19	9.3	0	0
48885	52	13	25.0	0	0	49112	740	54	7.3	0	0	49312	**	**	**	0	0
48889	86	11	12.8	0	0	49117	164	16	9.8	0	0	49325	111	6	5.4	0	0
48891	108	35	32.4	0	0	49125	105	9	8.6	0	0	49326	244	44	18.0	0	0
48892	409	88	21.5	0	0	49127	716	42	5.9	0	0	49327	667	92	13.8	0	0
48894	172	18	10.5	0	0	49129	27	**	**	0	0	49328	322	21	6.5	0	0
48896	36	**	**	0	0	49230	540	87	16.1	0	0	49332	188	22	11.7	0	0
48897	60	12	20.0	0	0	49233	183	29	15.8	0	0	49336	313	38	12.1	0	0
48933	93	37	39.8	0	0	49234	116	41	35.3	0	0	49339	184	21	11.4	0	0
49012	167	24	14.4	0	0	49237	223	47	21.1	0	0	49340	199	33	16.6	0	0
49027	12	**	**	0	0	49238	230	19	8.3	0	0	49342	196	8	4.1	0	0
49033	137	10	7.3	0	0	49246	212	46	21.7	0	0	49346	309	26	8.4	0	0
49034	205	25	12.2	0	0	49255	219	16	7.3	0	0	49347	80	17	21.3	0	0
49040	393	27	6.9	0	0	49259	127	23	18.1	0	0	49349	453	74	16.3	0	0
49046	306	60	19.6	0	0	49262	94	20	21.3	0	0	49403	101	63	62.4	0	0

Table 6. Blood Lead Levels for Children under Age Six by Zip Code, 2015 (sorted by percentage of EBLL

	Population	Child			L ≥5		Population	Child			L ≥5		Population	Child			. ≥5
	Under	Test			mples <sup>‡</sup>		Under	Test			mples <sup>‡</sup>		Under	Test		any sar	
Zip Code	Age Six	N	%	N	%	Zip Code	Age Six	N **	%	N	%	Zip Code	Age Six	N **	**	N	%
49411	72	18	25.0	0	0	49636				0	0	49710	7			0	0
49415	377	73	19.4	0	0	49638	30	**	**	0	0	49712	547	86	15.7	0	0
49421	446	40	9.0	0	0	49642	21	8	38.1	0	0	49713	152	24	15.8	0	0
49425	446	42	9.4	0	0	49643	453	122	26.9	0	0	49716	17	**	**	0	0
49428	2,010	120	6.0	0	0	49644	54	9	16.7	0	0	49718	37	6	16.2	0	0
49435	222	23	10.4	0	0	49650	307	69	22.5	0	0	49720	540	69	12.8	0	0
49436	114	18	15.8	0	0	49653	40	31	77.5	0	0	49722	19	**	**	0	0
49437	476	68	14.3	0	0	49654	7	**	**	0	0	49724	65	13	20.0	0	0
49448	312	51	16.3	0	0	49655	215	27	12.6	0	0	49726	17	**	**	0	0
49449	75	26	34.7	0	0	49656	105	15	14.3	0	0	49728	7	**	**	0	0
49452	109	34	31.2	0	0	49657	328	32	9.8	0	0	49729	65	10	15.4	0	0
49461	579	82	14.2	0	0	49659	399	120	30.1	0	0	49730	125	25	20.0	0	0
49611	24	11	45.8	0	0	49664	131	29	22.1	0	0	49735	1,389	206	14.8	0	0
49613	16	6	37.5	0	0	49665	272	54	19.9	0	0	49736	28	**	**	0	0
49614	109	26	23.9	0	0	49667	13	**	**	0	0	49738	463	62	13.4	0	0
49615	206	39	18.9	0	0	49668	273	51	18.7	0	0	49740	301	37	12.3	0	0
49616	103	33	32.0	0	0	49670	89	**	**	0	0	49743	35	**	**	0	0
49617	149	39	26.2	0	0	49675	94	**	**	0	0	49744	16	8	50.0	0	0
49618	65	**	**	0	0	49679	82	14	17.1	0	0	49745	52	20	38.5	0	0
49619†	65	15	23.1	0	0	49680	129	20	15.5	0	0	49746	166	27	16.3	0	0
49620	248	49	19.8	0	0	49683	125	23	18.4	0	0	49747	63	9	14.3	0	0
49622	187	23	12.3	0	0	49685	*	27		0	0	49748	7	**	**	0	0
49623	50	12	24.0	0	0	49688	189	15	7.9	0	0	49749	165	35	21.2	0	0
49625	53	17	32.1	0	0	49689	61	14	23.0	0	0	49751	79	16	20.3	0	0
49626	10	**	**	0	0	49701	32	7	21.9	0	0	49752	23	7	30.4	0	0
49628	9	**	**	0	0	49705	144	6	4.2	0	0	49753	103	16	15.5	0	0
49630	20	9	45.0	0	0	49706	301	60	19.9	0	0	49755	125	21	16.8	0	0
49632	96	6	6.3	0	0	49709	157	26	16.6	0	0	49756	177	22	12.4	0	0

Table 6. Blood Lead Levels for Children under Age Six by Zip Code, 2015 (sorted by percentage of EBLL

	Population	Child	lren		L ≥5		Population	Child	lren		L ≥5		Population	Child	ren	BLL	
	Under	Test			mples <sup>‡</sup>		Under	Test			mples <sup>‡</sup>		Under	Test		any sar	
Zip Code 49757	Age Six	N **	% **	N 0	% 0	Zip Code 49817	Age Six	N 8	% 26.7	N 0	% 0	Zip Code 49885	Age Six	N 11	% 8.4	N 0	% 0
49760	11	10	90.9	0	0	49817	57	**	**	0	0	49886	57	**	**	0	0
49762	11	**	**	0	0	49818	**	**	**	0	0	49887	114	17	14.9	0	0
49762	246	22	8.9	0	0	49825	15	**	**	0	0	49891	114	**	**	0	0
49766		13	8.1		0	49827	61	10	16.4			49891	81	10	12.3	0	
	161	**	**	0				**	**	0	0	49892	59				0
49768	29			0	0	49831	50	**	**	0	0			14	23.7	0	
49769	87	26	29.9	0	0	49834	17			0	0	49894	17	14 **	82.4 **	0	0
49770	1,144 *	172 **	15.0	0	0	49835	54	7	13.0	0	0	49901	14			0	0
49775				0	0	49836	38	11	28.9	0	0	49905	192	50	26.0	0	0
49776	88	**	12.5	0	0	49838	20	6 **	30.0	0	0	49908	125	53 **	42.4 **	0	0
49777	66			0	0	49840	49			0	0	49912	23			0	0
49779	198	51	25.8	0	0	49848	**	**	**	0	0	49915	35	**	**	0	0
49780	117	18	15.4	0	0	49852	8	**	**	0	0	49916	157	50	31.8	0	0
49781	219	49	22.4	0	0	49853	65	15	23.1	0	0	49917	37	**	**	0	0
49782	14	**	**	0	0	49861	21	**	**	0	0	49919	20	**	**	0	0
49788	494	70	14.2	0	0	49863	6	**	**	0	0	49920	286	36	12.6	0	0
49791	11	**	**	0	0	49864	7	**	**	0	0	49921	*	**		0	0
49795	127	24	18.9	0	0	49868	313	69	22.0	0	0	49925	15	**	**	0	0
49796	**	**	**	0	0	49870	142	30	21.1	0	0	49927	32	**	**	0	0
49799	143	19	13.3	0	0	49871	34	**	**	0	0	49931	386	106	27.5	0	0
49801	752	87	11.6	0	0	49872	12	**	**	0	0	49934	117	10	8.5	0	0
49802	426	58	13.6	0	0	49873	10	**	**	0	0	49947	7	**	**	0	0
49805	*	**		0	0	49874	55	**	**	0	0	49948	24	11	45.8	0	0
49806	32	**	**	0	0	49876	14	6	42.9	0	0	49950	92	10	10.9	0	0
49812	71	**	**	0	0	49878	158	28	17.7	0	0	49952	*	**		0	0
49814	112	6	5.4	0	0	49879	42	**	**	0	0	49953	103	12	11.7	0	0
49815	11	**	**	0	0	49880	77	**	**	0	0	49955	30	9	30.0	0	0
49816	12	7	58.3	0	0	49881	9	**	**	0	0	49958	89	9	10.1	0	0

Table 6. Blood Lead Levels for Children under Age Six by Zip Code, 2015 (sorted by percentage of EBLL

	Population Under	Child Test			. ≥5 mples <sup>‡</sup>
Zip Code	Age Six	N	%	N	%
49959	29	6	20.7	0	0
49960	**	**	**	0	0
49961	**	**	**	0	0
49962	**	**	**	0	0

	Population Under	Child Test			. ≥5 mples <sup>‡</sup>
Zip Code	Age Six	N	%	N	%
49963	96	23	24.0	0	0
49965	**	**	**	0	0
49967	14	**	**	0	0
49969	69	15	21.7	0	0

	Population Under	Childr Teste		BLL any san	-
Zip Code	Age Six	N	%	N	%
49970	10	**	**	0	0
PO box		226		0	0
TOTAL	700,787	140,857	20.1	4,791	3.4

Source: American Community Survey 2014 5-year estimates (population data), unless otherwise noted; MDHHS Data Warehouse (children tested and BLL statistics)

<sup>\*</sup>Census data not available

<sup>\*\*</sup> Values less six (not including zero) were suppressed to maintain confidentiality. Some numbers greater than or equal to six may have been suppressed to prevent back-calculation.

<sup>&</sup>lt;sup>†</sup>Population data from 2010 Census

<sup>&</sup>lt;sup>‡</sup>Reflects each child's highest venous result, or if no venous, highest capillary result, or if no venous or capillary, highest unknown test type result