

CHILDHOOD LEAD POISONING PREVENTION IN MICHIGAN

FISCAL YEAR 2020 REPORT TO THE LEGISLATURE

Prepared by the
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INTRODUCTION

For more than forty years, government, environmental advocates, landlords, schools, and parents have worked to reduce and eliminate childhood lead poisoning hazards. These efforts have led to considerable gains, including increased awareness of lead as an environmental hazard, reductions and/or complete elimination of the use of lead in consumer products, and improvements in guidance for the testing and the treatment of lead poisoned children.

Unfortunately, lead poisoning is far from eradicated. Exposure to lead tends to be higher in Michigan's urban areas due to aging housing stock and poor living conditions. Young children, wherever they live, are particularly vulnerable because of their tendency to put contaminated items such as hands and toys into their mouths.

Why does this matter? Lead is a potent neurotoxin. Children's growing bodies absorb more lead than adults do, and their developing brains and nervous systems are more sensitive to the damaging effects of lead.

Exposure to high levels of lead can result in brain damage and even death. Low levels of lead in the body have been shown to affect IQ, ability to pay attention, and academic achievement.

The goal of the Michigan Childhood Lead Poisoning Prevention Program (CLPPP) within the Michigan Department of Health and Human Services (MDHHS) is to address lead hazards before children are exposed. While the state and its local partners have seen some success, including declines in the overall rate of childhood lead poisoning, there is still much work to be done.

This report has been prepared in accordance with Lead Abatement Act 368 of 1978, Section 333.5474 of the Michigan Compiled Laws. Under MCL 333.5474, the department is required to produce an annual report for the legislature detailing the number of children screened for lead poisoning and expenditures under the lead poisoning prevention program. (See Appendix 1.) This report is for Fiscal Year 2020.

NUMBERS OF MICHIGAN CHILDREN TESTED FOR LEAD AND BLOOD LEAD TEST RESULTS

This report describes blood lead test results for children under 6 years of age for state Fiscal Year 2020 (October 1, 2019-September 30, 2020). Comparison data are provided for the previous 10 fiscal years (2010-2019). Data in this report is current as of April 1, 2021. Each child was counted once each year, even if they had more than one test that year. The counts of children by blood lead level were based on the value representing the highest blood lead level obtained from a venous blood draw (or a capillary blood test if there was no venous test) that fiscal year.

Under MCL 333.5474, the Department is required to annually report to the legislature the number of children with blood lead levels equal to or greater than (\geq) 10 micrograms per deciliter ($\mu\text{g}/\text{dL}$) which, when the law was enacted in 1998, was the recommended threshold for 'blood lead level of concern.' In 2012, the Centers for Disease Control and Prevention (CDC) released updated recommendations for addressing childhood lead poisoning and prevention. As a result of these recommendations, there is no longer a threshold for 'blood lead level of concern.' Rather, as research now shows, even low levels of lead in blood present health risks. The CDC now recommends that a blood lead level of $\geq 5 \mu\text{g}/\text{dL}$ be considered elevated and provides recommendations for monitoring and follow-up of children down to this lower blood lead level. Given the changes to the CDC recommendations, the data tables and figures that follow include blood lead test results with a level of $\geq 5 \mu\text{g}/\text{dL}$, in addition to the threshold of $\geq 10 \mu\text{g}/\text{dL}$ that was used in previous reports.

In Fiscal Year 2020, blood lead tests for 104,830 children under age 6 were reported by laboratories. A total of 2,619 (2.5%) of tested children had blood lead levels $\geq 5 \mu\text{g}/\text{dL}$ and 530 (0.5%) had blood lead levels $\geq 10 \mu\text{g}/\text{dL}$. Less testing was done in Fiscal Year 2020 than in previous years as a result of the COVID-19 pandemic, which has led to an increase in barriers to service and decreased access to blood lead testing.

Table 1 provides the number and percent of children under age 6 tested and those with elevated blood lead levels for the fiscal years 2010-2020.

Figure 1 shows the number of children under age 6 with blood lead levels $\geq 5 \mu\text{g}/\text{dL}$ and $\geq 10 \mu\text{g}/\text{dL}$ for the fiscal years 2010-2020.

Figure 2 shows the percent of children tested with these blood lead levels for the same fiscal years.

Table 1: Total Number of Children under Age 6 Tested for Lead and the Number (#) and Percent (%) of Children with Elevated Blood Lead Levels (≥ 5 $\mu\text{g}/\text{dL}$ and ≥ 10 $\mu\text{g}/\text{dL}$) by Fiscal Year in the State of Michigan: 2010-2020

Fiscal Year	# Children Tested	# ≥ 5 $\mu\text{g}/\text{dL}$	% ≥ 5 $\mu\text{g}/\text{dL}$	# ≥ 10 $\mu\text{g}/\text{dL}$	% ≥ 10 $\mu\text{g}/\text{dL}$
2010	153,656	10,213	6.6	1,618	1.1
2011	151,496	8,180	5.4	1,337	0.9
2012	148,752	6,876	4.6	1,128	0.8
2013	148,533	5,924	4.0	913	0.6
2014	144,577	5,260	3.6	918	0.6
2015	138,825	4,712	3.4	823	0.6
2016	155,013	5,488	3.5	1,056	0.7
2017	150,251	4,920	3.3	991	0.7
2018	142,227	4,242	3.0	882	0.6
2019	143,140	4,113	2.9	838	0.6
2020	104,830	2,619	2.5	530	0.5

FIGURE 1. NUMBER OF MICHIGAN CHILDREN UNDER AGE 6 WITH ELEVATED BLOOD LEAD LEVELS: FISCAL YEARS 2010-2020

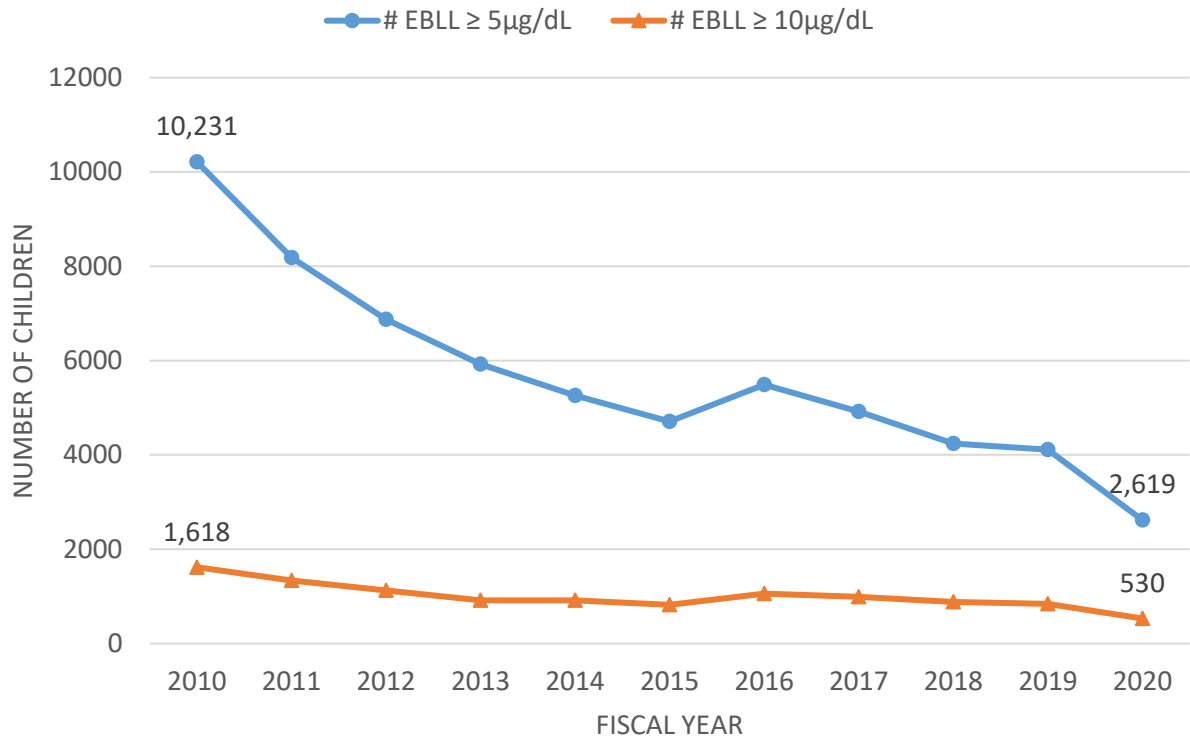
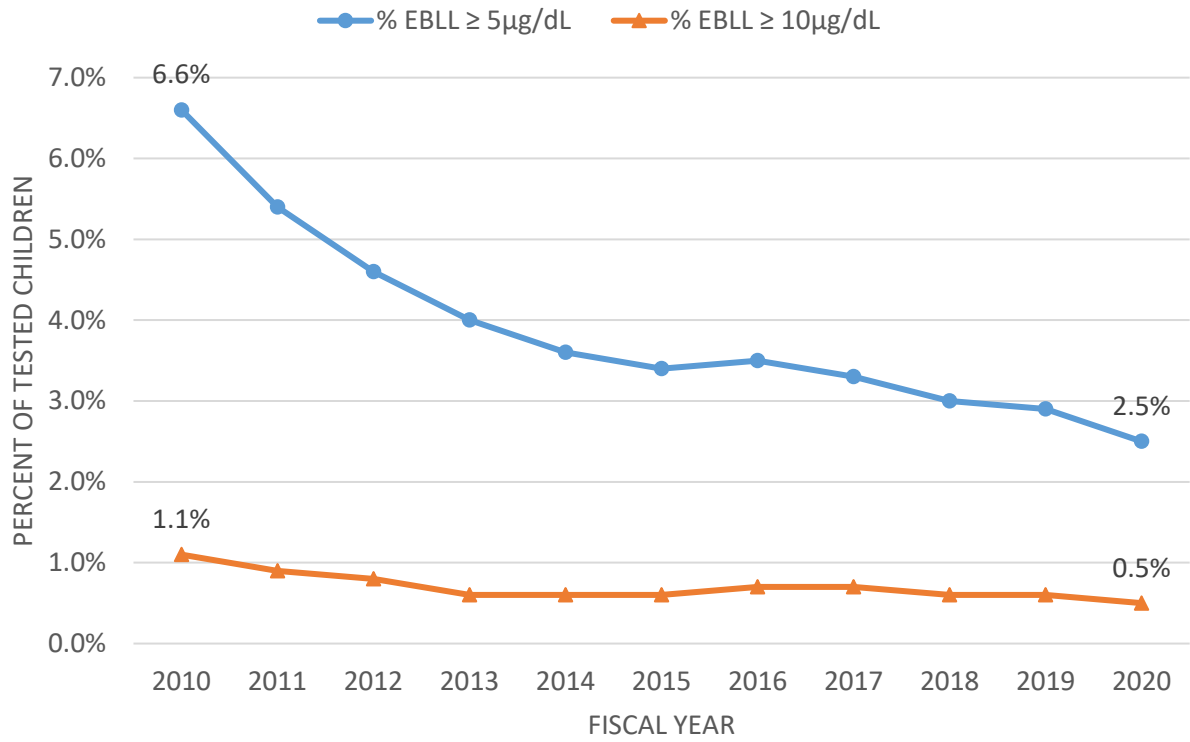


FIGURE 2. PERCENTAGE OF MICHIGAN CHILDREN UNDER AGE 6 WITH ELEVATED BLOOD LEAD LEVELS: FISCAL YEARS 2010-2020



FUNDING

FY 2020 funding for the Childhood Lead Poisoning Prevention Program came from five sources:

Fiscal Year	Maternal and Child Health Services Block Grant*	State of Michigan Lead Exposure Response and Abatement General Funds	State of Michigan CLPPP General Funds	State of Michigan Flint Supplemental Funds	Centers for Disease Control and Prevention	Total
2020	\$1,079,800	\$550,500	\$601,500	\$300,000	\$408,904	\$2,940,704

*Source: Federal Health Resources and Services Administration

Funding was used to maintain three components of the MDHHS lead poisoning prevention program as required by PA 368 of 1978, Section 333.5474:

1) A surveillance system capable of gathering, storing, and reporting blood lead results for Michigan children. Many grants, programs and activities are dependent on, and benefit directly from, surveillance system data, including the MDHHS Lead Safe Home Program, local health departments (LHDs), the Michigan State Housing Development Authority, the Michigan Care Improvement Registry (MCIR), Medicaid, researchers, and the public. In FY 2020, CLPPP improved the surveillance system by:

- Enhancing the Michigan Childhood Lead Poisoning Surveillance System (MICLPS) application to collect new data allowing CLPPP to better track timeliness of reporting and availability of blood lead data. CLPPP continued to migrate labs to automated reporting via HL7 messaging and created new file submission routes that populate blood lead results into MICLPS automatically.
- Developing a system to provide monthly aggregations of blood lead test results to partners, stakeholders, and the public.
- Working with partners to improve the algorithm used to match individuals within the blood lead tables and across MDHHS data systems using the Master Person Index (MPI). This improves accuracy of linkage between CLPPP, Medicaid, and MCIR data systems.
- Supporting and providing technical assistance to local health departments in the use of the Healthy Homes and Lead Poisoning Surveillance System (HHLPS), an online CDC data management system for maintaining nursing case management (NCM) information. CLPPP also began the planning phase for development of a new case management system that will link NCM data to the environmental investigation and abatement registry to ensure comprehensive care for children with elevated blood lead levels.

2) Clinical case management coordination.

- The CLPPP Nurse Consultant acted as an expert consultant to clinical health care providers and LHDs throughout Michigan to assure that cases of childhood lead poisoning were managed appropriately.

- Medicaid funds were provided to 43 LHDs to provide NCM services to Medicaid-enrolled children with elevated blood lead levels. In FY 2020, 657 NCM home visits were completed by the LHDs, serving 542 Medicaid-enrolled children with elevated blood lead levels.
- Flint supplemental funds were used to support the intensive efforts to provide NCM to all children in Flint with elevated blood lead levels.

3) Comprehensive educational and community outreach prevention. Funds were allocated to 13 local health departments throughout Michigan to provide lead poisoning prevention education and outreach. Activities included:

- Campaigns to educate and inform key audiences about lead hazards;
- Informational materials to assist parents and caregivers on safe cleaning practices to reduce lead exposure;
- Alerts and just-in-time communications on hazardous products; and
- Outreach and training to primary care providers on counseling, testing, and treating lead exposed patients.

CONCLUSION & RECOMMENDATIONS

Childhood lead poisoning remains a public health threat for many Michigan children. The number and percentage of tested children with blood lead levels of greater than or equal to 5 µg/dL and 10 µg/dL have decreased since 2007. However, the age of Michigan's housing stock, the number of children living in rental homes, and lack of funding and contractors for lead remediation keep lead poisoning risk as an environmental public health concern. The COVID-19 pandemic has increased barriers to services and decreased the availability of blood lead testing across the state.

Blood lead testing results from 1998 to the present can be found in the CLPPP Annual Reports, available at Michigan.gov/Lead.

Beginning in late FY 2015, a major focus of lead poisoning prevention activities has been in response to lead exposures in the City of Flint. Data summaries and information specific to Flint can be found at Michigan.gov/Flintwater.

Over the next year, the CLPPP will also continue efforts to reduce exposures and poisonings by:

- Improving the systems for managing the surveillance data electronically;
- Analyzing and disseminating data on children with elevated blood lead levels;
- Informing and educating the general population in order to prevent childhood lead poisoning;
- Ensuring appropriate public health case management and interventions statewide when a child is identified with an elevated blood lead level;
- Linking lead poisoning prevention services, including assessment and abatement of lead hazards in homes, to families in need; and
- Educating primary care providers about the importance of screening children for blood lead, retesting to confirm elevated test results, and appropriate treatment of lead-poisoned children.

The Michigan Department of Health and Human Services will not exclude from participation in, deny benefits of, or discriminate against any individual or group because of race, sex, religion, age, national origin, color, height, weight, marital status, gender identification or expression, sexual orientation, partisan considerations, or a disability or genetic information that is unrelated to the person's eligibility.

APPENDIX 1

Excerpts from Act 368 of 1978 regarding legislative reporting requirements

MCL 333.5474(2) “The department shall report to the legislature by January 1, 1999, and annually thereafter, the number of children through age 6 who were screened for lead poisoning during the preceding fiscal year and who were confirmed to have had blood lead levels above 10 micrograms per deciliter. The report shall compare these rates with those of previous fiscal years and the department shall recommend methods for improving compliance with guidelines issued by the federal centers for disease control and prevention, including any necessary legislation or appropriations.”

MCL 333.5474(3) “Not more than 1 year after the effective date of this part, and annually thereafter, the department shall prepare a written report regarding the expenditures under the lead poisoning prevention program including the amounts and sources of money from the previous year and a complete accounting of its use. The report shall be given to the appropriate committees of the legislature and be made available to the general public upon request.”