

CHILDREN WITH ELEVATED BLOOD LEAD LEVELS

(FY2010 Appropriation Bill – Public Act 131 of 2009)

No Date Specified

Section 1129: The department shall provide a report annually to the house and senate appropriations subcommittees on community health, the house and senate fiscal agencies, and the state budget director on the number of children with elevated blood lead levels from information available to the department. The report shall provide the information by county, shall include the level of blood lead reported, and shall indicate the sources of the information.

*Michigan Department
of Community Health*



Jennifer M. Granholm, Governor
Janet Olszewski, Director

Legislative Report
Annual Childhood Lead Poisoning and Expenditures Report
Covering Fiscal Year 2008-09 (10/01/2008-09/30/2009)

Michigan Children Tested and Their Test Results

The following tables reflect lead testing numbers and blood lead test results by county for children through age six (Table 1) and less than sixteen years of age (Table 2) for fiscal year 2008-09. Figure 1 depicts the statewide testing information for the past three fiscal years for Michigan children \leq six years of age.

The Centers for Disease Control and Prevention defines lead poisoning as having a venous blood lead test result of ≥ 10 micrograms per deciliter (see footnotes for Figure 1). As indicated in Table 1, there were 1,540 children through six years of age with an elevated blood lead level (EBLL) identified during FY2009. In Table 1, data also reflect that statewide, 160,442 children through six years of age were tested; this is 18.2% of Michigan's total population of children in this age group. Although not shown in Table 1, 72.9% of those tested were Medicaid-enrolled. It is also important to note that the percentage of Michigan children through age of six with an EBLL has decreased from 9.9% during FY1998 to 1.0% in FY2009.

However, while overall prevalence has decreased, Medicaid-enrolled children still bear a disproportionate burden of lead poisoning.

- of children with blood lead levels 10-19 micrograms per deciliter, 89.7% were Medicaid enrolled;
- of children with blood lead levels 20-44 micrograms per deciliter, 91.6% were Medicaid enrolled; and
- of children with blood lead levels 45 micrograms per deciliter and greater, 100% were Medicaid enrolled.

Recommendations

1. MDCH and its partners will continue to work collaboratively through local coalitions in the target communities. The work of the coalitions has resulted in a significant increase in funding through federal and local grants to address lead hazards in housing as well as increasing lead awareness and education and testing.
2. MDCH will continue to work closely with the governor-appointed Childhood Lead Poisoning Prevention and Control Commission to create a coordinated cross-sector, multi-stakeholder aggressive effort to eliminate lead hazards from Michigan housing stock, increase testing of at-risk children, develop solutions to fund lead abatement through use of loans and tax credits, develop new, sustainable funding streams, and examine rental property owner liability and potential liability relief that's beneficial to both the rental property owner as well as the tenants.
3. MDCH will continue to address all CDC required program components which include an elimination plan, screening/testing, case management, surveillance, primary prevention, and strategic partnerships. The primary prevention component will be a primary focus. Primary

prevention strategies will focus on residents of pre-1950 housing in target communities, pregnant women, women of childbearing age, families with young children, and special populations (foreign adoptees, refugees, immigrants, children in foster care). As resources are limited, MDCH must develop creative strategies, i.e; volunteer programs, to reach the primary prevention goals and objectives.

4. MDCH will move toward a coordinated healthy homes approach, as encouraged by the CDC, HUD, and EPA, which will address a number of issues including, but not limited to, lead poisoning, injury prevention, pest management, and asthma.

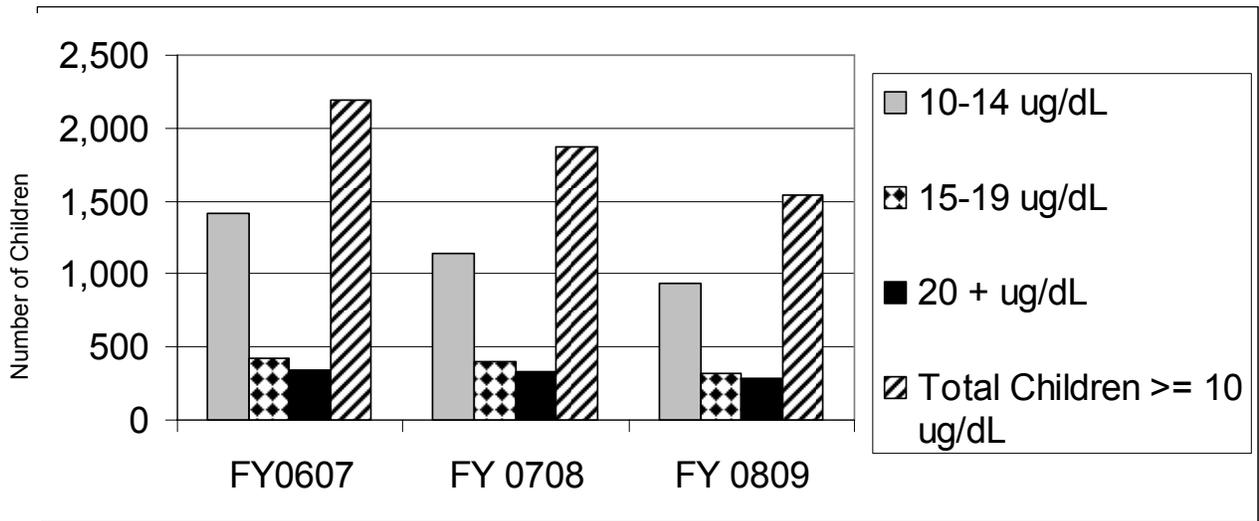
Table 2
Childhood Lead Poisoning Data Facts -- Fiscal Year 2008-2009 -- By County -- Children less than Sixteen Years of Age

County	Children Tested for Lead					Children with Low Level Exposure	Children with Confirmed Elevated Blood Lead Levels					Children with Elevated Capillary Tests, Not Confirmed by Venous				
	Children under Age 16*	Number of Children Tested	% Tested	% with BLL >= 5 ug/dL	% EBLL (>= 10 ug/dL, venous only)**		5 to 9 ug/dL (capillary, venous or unknown)	10-14 ug/dL (venous only)	15-19 ug/dL (venous only)	20-44 ug/dL (venous only)	>= 45 ug/dL (venous only)	Total EBLL (>= 10 ug/dL)	Capillary 10-14 (not confirmed by venous)	Capillary 15-19 (not confirmed by venous)	Capillary 20-44 (not confirmed by venous)	Capillary >= 45 (not confirmed by venous)
Alcona	1,532	93	6.1	7.5	0.0	6	0	0	0	0	0	0	0	0	0	1
Alger	1,401	129	9.2	5.4	0.0	7	0	0	0	0	0	0	0	0	0	0
Allegan	24,793	1,415	5.7	6.9	0.3	88	2	1	1	0	4	5	0	0	0	5
Alpena	5,070	320	6.3	9.1	0.6	23	1	1	0	0	2	4	0	0	0	4
Antrim	4,312	263	6.1	3.4	0.0	8	0	0	0	0	0	1	0	0	0	1
Arenac	2,819	265	9.4	2.6	0.0	7	0	0	0	0	0	0	0	0	0	0
Baraga	1,465	148	10.1	4.1	0.7	4	1	0	0	0	1	1	0	1	0	1
Barry	12,003	699	5.8	8.4	0.4	52	3	0	0	0	3	4	0	0	0	4
Bay	20,573	1,498	7.3	9.3	1.1	124	13	2	1	0	16	0	0	0	0	0
Benzie	3,289	193	5.9	2.1	0.0	3	0	0	0	0	0	1	0	0	0	1
Berrien	33,535	2,370	7.1	14.3	2.0	277	28	10	9	0	47	12	1	0	1	14
Branch	9,223	507	5.5	14.8	0.4	66	2	0	0	0	2	4	3	0	0	7
Calhoun	28,794	2,816	9.8	9.3	1.1	227	16	9	5	1	31	4	0	0	0	4
Cass	9,674	691	7.1	11.7	0.9	72	4	0	2	0	6	2	0	1	0	3
Charlevoix	5,028	210	4.2	5.2	1.4	8	2	0	1	0	3	0	0	0	0	0
Cheboygan	4,776	280	5.9	4.3	0.0	12	0	0	0	0	0	0	0	0	0	0
Chippewa	6,340	548	8.6	2.2	0.5	9	1	2	0	0	3	0	0	0	0	0
Clare	5,699	418	7.3	5.5	0.2	22	1	0	0	0	1	0	0	0	0	0
Clinton	14,562	731	5.0	2.9	0.0	21	0	0	0	0	0	0	0	0	0	0
Crawford	2,437	116	4.8	2.6	0.0	3	0	0	0	0	0	0	0	0	0	0
Delta	6,685	458	6.9	7.0	0.0	29	0	0	0	0	0	2	1	0	0	3
Dickinson	4,820	328	6.8	1.8	0.6	4	2	0	0	0	2	0	0	0	0	0
Eaton	20,738	1,450	7.0	5.9	0.3	77	3	2	0	0	5	2	1	0	0	3
Emmet	6,372	246	3.9	1.6	0.0	3	0	0	0	0	0	0	0	1	0	1
Genesee	94,796	6,925	7.3	6.2	0.6	379	26	6	7	2	41	9	1	0	0	10
Gladwin	4,503	319	7.1	3.4	0.0	11	0	0	0	0	0	0	0	0	0	0
Gogebic	2,379	264	11.1	5.3	1.1	11	2	1	0	0	3	0	0	0	0	0
Grand Traverse	16,422	885	5.4	6.1	0.1	52	1	0	0	0	1	1	0	0	0	1
Gratiot	7,761	545	7.0	5.1	0.4	25	2	0	0	0	2	1	0	0	0	1
Hillsdale	9,350	812	8.7	12.9	0.4	97	0	1	2	0	3	4	1	0	0	5
Houghton	6,445	525	8.1	3.8	0.4	17	0	1	1	0	2	1	0	0	0	1
Huron	5,618	559	10.0	8.4	0.4	45	0	1	1	0	2	0	0	0	0	0
Ingham	55,627	5,588	10.0	8.8	0.4	469	11	4	5	0	20	2	0	1	0	3
Ionia	13,310	827	6.2	3.9	0.2	30	1	0	1	0	2	0	0	0	0	0
Iosco	4,148	351	8.5	5.1	0.0	16	0	0	0	0	0	2	0	0	0	2
Iron	1,725	183	10.6	3.3	0.0	6	0	0	0	0	0	0	0	0	0	0
Isabella	11,985	706	5.9	1.7	0.0	12	0	0	0	0	0	0	0	0	0	0
Jackson	33,007	2,592	7.9	13.0	0.9	290	10	5	8	0	23	15	2	6	0	23
Kalamazoo	50,587	4,513	8.9	11.1	0.9	431	21	7	12	0	40	23	5	2	0	30
Kalkaska	3,482	189	5.4	5.3	0.0	10	0	0	0	0	0	0	0	0	0	0
Kent	144,049	9,042	6.3	10.7	1.1	826	68	17	14	1	100	32	5	6	0	43
Keeweenaw	369	27	7.3	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0
Lake	1,895	154	8.1	3.2	1.3	3	1	1	0	0	2	0	0	0	0	0
Lapeer	18,024	733	4.1	5.7	0.3	39	2	0	0	0	2	1	0	0	0	1
Leelanau	3,535	176	5.0	2.3	0.0	4	0	0	0	0	0	0	0	0	0	0
Lenawee	20,046	1,664	8.3	11.2	0.4	170	3	1	2	0	6	9	0	2	0	11
Livingston	38,011	1,193	3.1	2.4	0.3	23	4	0	0	0	4	2	0	0	0	2
Luce	1,019	99	9.7	5.1	1.0	4	1	0	0	0	1	0	0	0	0	0
Mackinac	1,699	150	8.8	2.7	0.0	4	0	0	0	0	0	0	0	0	0	0
Macomb	169,320	10,086	6.0	2.8	0.2	252	12	3	7	0	22	6	1	2	0	9
Manistee	4,231	335	7.9	11.9	0.9	35	1	2	0	0	3	2	0	0	0	2
Marquette	10,805	731	6.8	3.3	0.0	24	0	0	0	0	0	0	0	0	0	0
Mason	5,251	445	8.5	11.2	0.0	45	0	0	0	0	0	4	1	0	0	5
Mecosta	7,764	403	5.2	5.2	0.0	20	0	0	0	0	0	0	0	1	0	1
Menominee	4,345	263	6.1	5.3	0.4	12	0	0	1	0	1	1	0	0	0	1
Midland	16,559	868	5.2	2.9	0.0	25	0	0	0	0	0	0	0	0	0	0
Missaukee	2,967	172	5.8	3.5	0.6	5	1	0	0	0	1	0	0	0	0	0
Monroe	30,959	1,928	6.2	5.1	0.3	90	3	2	0	0	5	1	1	1	0	3
Montcalm	13,089	1,002	7.7	4.7	0.1	44	1	0	0	0	1	2	0	0	0	2
Montmorency	1,534	104	6.8	6.7	0.0	7	0	0	0	0	0	0	0	0	0	0
Muskegon	37,707	4,234	11.2	9.5	0.9	351	33	5	2	0	40	7	4	1	0	12
Newaygo	10,529	589	5.6	5.3	0.2	29	1	0	0	0	1	1	0	0	0	1
Oakland	248,701	15,692	6.3	3.5	0.2	500	21	5	11	0	37	7	0	2	0	9
Oceana	5,975	647	10.8	4.8	0.3	27	1	0	1	0	2	1	1	0	0	2
Ogemaw	3,622	351	9.7	3.4	0.0	12	0	0	0	0	0	0	0	0	0	0
Ontonagon	882	76	8.6	6.6	0.0	4	0	0	0	0	0	0	0	1	0	1
Osceola	4,641	234	5.0	4.7	0.4	10	0	1	0	0	1	0	0	0	0	0
Oscoda	1,493	84	5.6	3.6	0.0	3	0	0	0	0	0	0	0	0	0	0
Otsego	4,620	295	6.4	3.4	0.0	9	0	0	0	0	0	0	1	0	0	1
Ottawa	59,443	2,667	4.5	5.2	0.4	125	4	3	3	0	10	3	1	1	0	5
Presque Isle	2,074	128	6.2	7.8	0.0	10	0	0	0	0	0	0	0	0	0	0
Roscommon	3,729	287	7.7	1.7	0.0	5	0	0	0	0	0	0	0	0	0	0
Saginaw	41,868	3,659	8.7	9.9	0.8	311	17	8	5	0	30	16	3	1	0	20
St Clair	34,409	1,783	5.2	8.1	0.3	130	2	3	0	0	5	6	2	2	0	10
St Joseph	14,248	1,064	7.5	9.8	0.9	93	6	3	1	0	10	0	0	1	0	1
Sanilac	8,684	716	8.2	9.1	0.1	61	1	0	0	0	1	2	1	0	0	3
Schoolcraft	1,400	135	9.6	11.9	0.0	16	0	0	0	0	0	0	0	0	0	0
Shiawassee	14,407	980	6.8	5.0	0.3	46	3	0	0	0	3	0	0	0	0	0
Tuscola	10,863	884	8.1	6.3	0.1	54	1	0	0	0	1	0	1	0	0	1
Van Buren	16,979	1,442	8.5	6.9	0.6	86	5	2	1	0	8	4	0	1	0	5
Washtenaw	68,087	2,729	4.0	3.4	0.3	83	5	1	1	0	7	2	0	1	0	3
Wayne	440,478	60,425	13.7	11.9	1.7	5,884	630	221	183	15	1,049	182	31	26	0	239
Wexford	6,450	403	6.2	3.7	0.0	14	0	0	0	0	0	1	0	0	0	1
MICHIGAN	2,093,845	171,054	8.2	8.6	0.9	12,548	980	331	288	19	1,618	391	69	61	1	522

Sources: 2008 Population Estimates, U.S. Census Bureau (county populations); MDCH Data Warehouse, Lead Specimen table (children tested and elevated levels)

Note: %EBLL is calculated as follows: Number of Children w/EBLL divided by (Number of Children Tested minus Children w/elevated capillary tests, not confirmed by venous)

Figure 1
Michigan Children Confirmed as Lead Poisoned
Fiscal Years 2006-07 through 2008-09



Blood Lead Test Result	Fiscal Year 2006-07	Fiscal Year 2007-08	Fiscal Year 2008-09
10-14 µg/dL	1,416	1,140	932
15-19 µg/dL	428	401	317
≥ 20 µg/dL	345	333	291
Total Children ≥ 10 µg/dL	2,189	1,874	1,540
Total Children through Six Years of Age Tested	150,541	158,423	160,442

A blood lead level of ≥ 10 µg/dL (micrograms/deciliter) is considered to be diagnostic of lead poisoning. Recommended actions include the following:

- 10-19 µg/dL – Referrals are made to the local health department for follow-up. A nurse makes a home visit to recommend a diet high in iron, calcium and Vitamin C to decrease the potential for absorption of lead from the environment. There is a review of environmental factors that can place the child at-risk for lead poisoning.
- ≥ 20 µg/dL – Medical management is needed. Referrals are made to the local health departments for home visits by both a nurse and an environmental health sanitarian. The environmental health sanitarian inspects the home to determine the source of the lead poisoning and recommends actions for lead hazard control. When blood lead levels reach 45 µg/dL and over, hospitalization is required for chelation therapy. The danger to the child increases with the blood lead level. Levels of 70 µg/dL or more are considered medical emergencies requiring immediate hospitalization and intervention. Children who have been hospitalized for treatment cannot return to their homes until the environmental lead has been removed.

Expenditures

FY2009 funding for the Childhood Lead Poisoning Prevention Program came from four sources:

Funding Source	Amount
Centers for Disease Control & Prevention	\$ 841,059
Healthy Michigan Fund	1,000,000
Maternal Child Health Block	490,000
Michigan General Funds	106,900
TOTAL	\$2,437,959

The Center for Disease Control and Prevention (CDC), Maternal Child Health Block (MCHB) Title V and State General Funds (GF) monies during this report period were used to fund state program staff positions and fund target community health departments for activities required by the CDC, including:

- testing of children for blood lead status;
- primary prevention activities;
- comprehensive case management for children with elevated blood lead levels;
- maintenance of a statewide surveillance system;
- implementation of a statewide lead testing/lead screening plan; and
- purchase and/or development of outreach and educational materials for use by CLPPP staff, and managed care plans, health care providers and local public health agencies.

As mandated by the CDC, no CDC funds have been used for laboratory reimbursement for blood lead testing of uninsured children since July 1, 2005.

Healthy Michigan Funds in the amount of \$1M were allocated in FY2008-09, to continue addressing the seven priority activities identified in the *Final Report of the Governor's Task Force to Eliminate Childhood Lead Poisoning*. Collaboration between the two lead poisoning programs housed in the Department of Community Health, in conjunction with bureau and department administration, resulted in the following priority activities being addressed with the Healthy Michigan Funds:

- maintenance of a voluntary electronic Lead-Safe Housing Registry (pursuant to PA 433 of 2004) for Michigan rental properties;
- assistance to communities in the development of local lead activities and coalitions with the goal of local sustainability and grant writing (to finance remediation of homes with lead hazards where children under six years of age reside);
- assurance of comprehensive case management for children with severely elevated blood lead levels until their blood lead levels are lower than the "level of concern" (≥ 10 $\mu\text{g}/\text{dL}$ per CDC), achieved through funding or enhancing funding for Lead Initiative Coordinators in the targeted community public health agencies;
- support for the governor's lead commission meetings and public hearing (compliance with PA 431 of 2004);
- funding for Healthy Homes University to support lead education and awareness;

- funding for analysis of dust wipes and soil samples necessary for identification of environmental lead hazards;
- maintenance of web-based training modules for health care professionals;
- supported the Statewide Ombudsmen, who was responsible for leveraging additional funding towards Lead Safe Home Program interventions for families; and
- provision of a public awareness media campaign.