

Michigan Department of Community Health Childhood Lead Poisoning Prevention

The Statewide Screening/Testing Plan for Childhood Lead Poisoning Prevention includes:

All children in the Medicaid program are **required** by Medical Services Administration to be tested at 12 and 24 months of age; or between 36 and 72 months if not tested previously. There are **NO** exceptions or waivers. MIChild-enrolled children should be tested if any risk factors exist (or at health care provider's discretion).



All children within designated “high risk” ZIP code areas (**see below**) should have a blood lead test at 12 months and 24 months of age, or between 36 and 72 months if not tested previously.



Parents/guardians of children under age six (not in the previous 2 categories) should be asked specific questions (using the approved questionnaire, see below). If any “Yes” or “Don’t Know” answers, obtain child’s blood lead test.



Health care providers always have the option of testing a client for lead if he/she determines the client to be at risk, or if the client or parent/guardian requests a blood lead test.

MDCH-Designated High Risk ZIP Codes (565 of 1978 Michigan ZIPs)

48001	48166	48401	48618	48813	48890	49061	49227	49325	49509	49760	49886
48002	48174	48413	48624	48815	48891	49064	49228	49327	49601	49765	49887
48003	48179	48414	48625	48817	48892	49065	49229	49328	49613	49769	49891
48005	48184	48416	48635	48818	48894	49066	49232	49329	49614	49770	49892
48006	48191	48418	48637	48819	48895	49067	49233	49330	49615	49774	49893
48009	48192	48419	48649	48822	48897	49068	49234	49331	49616	49776	49894
48014	48197	48422	48650	48823	48906	49070	49235	49333	49618	49779	49896
48015	48198	48426	48655	48827	48910	49072	49236	49336	49620	49781	49901
48021	48201	48427	48658	48829	48912	49073	49237	49337	49622	49783	49905
48022	48202	48429	48659	48831	48915	49076	49238	49344	49623	49801	49908
48023	48203	48432	48661	48832	48933	49078	49240	49347	49625	49806	49911
48027	48204	48435	48662	48834	49001	49079	49241	49348	49629	49807	49912
48028	48205	48436	48701	48835	49004	49080	49242	49349	49630	49812	49913
48030	48206	48441	48706	48836	49007	49082	49245	49403	49631	49814	49916
48032	48207	48444	48708	48837	49008	49085	49247	49404	49632	49815	49919
48039	48208	48445	48720	48838	49010	49087	49248	49405	49635	49818	49920
48041	48209	48450	48722	48841	49011	49088	49250	49408	49636	49821	49921
48060	48210	48453	48723	48845	49012	49089	49251	49410	49640	49822	49925
48062	48211	48454	48726	48846	49013	49090	49252	49411	49642	49825	49927
48067	48212	48456	48727	48847	49015	49091	49253	49412	49645	49826	49930
48069	48213	48458	48728	48848	49017	49092	49254	49415	49649	49827	49931
48070	48214	48460	48729	48849	49021	49093	49255	49417	49651	49829	49935
48072	48215	48461	48731	48850	49022	49094	49256	49419	49653	49833	49938
48074	48216	48464	48733	48851	49026	49095	49262	49420	49657	49834	49945
48079	48217	48465	48735	48854	49028	49096	49264	49421	49660	49835	49946
48089	48218	48466	48739	48856	49029	49097	49265	49423	49663	49836	49947
48091	48219	48468	48740	48857	49030	49098	49266	49431	49670	49837	49948
48097	48220	48469	48741	48858	49031	49099	49267	49435	49675	49839	49950
48104	48221	48470	48742	48860	49032	49101	49268	49437	49677	49840	49952
48118	48223	48471	48743	48861	49033	49102	49269	49440	49679	49847	49953
48120	48224	48472	48744	48865	49034	49103	49270	49441	49688	49848	49958
48122	48225	48475	48747	48866	49036	49106	49271	49442	49707	49849	49962
48124	48226	48502	48754	48867	49038	49107	49272	49444	49710	49853	49965
48125	48227	48503	48755	48871	49040	49111	49274	49446	49712	49854	49967
48126	48228	48504	48757	48872	49042	49113	49275	49449	49718	49855	49968
48128	48229	48505	48759	48873	49043	49116	49276	49450	49719	49858	49969
48130	48230	48506	48760	48875	49045	49117	49277	49451	49720	49861	49970
48131	48234	48507	48763	48877	49046	49120	49279	49453	49721	49862	
48133	48235	48529	48766	48878	49047	49125	49284	49454	49727	49866	
48137	48236	48601	48767	48879	49050	49126	49285	49455	49728	49868	
48141	48238	48602	48768	48880	49051	49128	49286	49457	49729	49870	
48145	48240	48604	48770	48881	49052	49129	49287	49461	49740	49873	
48146	48242	48607	48801	48883	49053	49201	49288	49464	49743	49874	
48157	48320	48612	48806	48884	49055	49202	49303	49503	49744	49878	
48158	48340	48614	48807	48885	49056	49203	49307	49504	49752	49879	
48159	48341	48615	48808	48886	49057	49220	49310	49505	49753	49880	
48160	48342	48616	48809	48888	49058	49221	49318	49506	49755	49881	
48161	48362	48617	48811	48889	49060	49224	49322	49507	49757	49883	

Questions for parents/guardians of children not Medicaid-eligible and not living in designated high-risk ZIP code:

Circle One

Does the child now or in the recent past live in or often visit a house built before 1950 with peeling or chipping paint? This could include a day care, preschool, or home of a relative.	Yes	No	Don't Know
Does the child now or in the recent past live in or often visit a house built before 1978 that has been remodeled within the last year?	Yes	No	Don't Know
Does the child have a brother or sister (or playmate) with lead poisoning?	Yes	No	Don't Know
Does the child live with an adult whose job or hobby involves lead? (See chart)	Yes	No	Don't Know
Does the child's family use any home remedies that may contain lead? (See chart)	Yes	No	Don't Know

Sources of Exposure:

The most common source of childhood lead poisoning in Michigan is lead dust from deteriorating paint in homes built before 1978. Other possible sources include:

Occupational

Auto/boat repair
 Auto parts/accessories manufacture
 Radiator repair
 Battery manufacture/repair
 Bridge/tunnel/elevated highway repair
 Plumber, pipe fitter (older buildings)
 Wrecking and Demolition
 Glass manufacturing Brass/copper/aluminum processing
 Chemical manufacturing
 Plastics manufacturing
 Rubber products manufacturing
 Steel welding and cutting
 Renovate/remodel older homes
 Furniture refinishing
 Art/painting
 Jewelry and pottery making
 Stained glass making
 Lead soldering (e.g., electronics)
 Lead shot, bullets, fishing sinkers
 Brass/copper/bronze/lead/iron foundries
 Power washing of pre -1978 home/bldg
 Scrap metal handling
 Paint manufacture (non-residential paint)
 Machining/grinding/melting lead alloys
 Bronze polishing
 Leaded glass manufacturing
 Burning lead-painted wood

Other

Imported cosmetics - Kohl, Surma
Folk remedies - Albayalde, Alkohol, Ayurvedoc, Azarcon (also called Alarcon, Coral, luiga, maria luisa and rueda), Greta, Ba Bow Sen, Bali Goli, Cebagin, Cordyceps, Ghasard, Hai ge fen, Kandu, Kushta, Mai ge fen, Pay-loo-ah, Poying tan, X-yoo-Fa
Food additives – Lozeena

Environmental

Ceramics/pottery
 Lead crystal
 Lead-soldered cans (imported)
 Burning lead-painted wood
 Use of water from lead pipes
 Living near lead-related industries
 Soil/dust near industries/smelters and heavily traveled roadways
 Miniblinds
 Candles with lead wicks
 Some imported painted toys

DIAGNOSTIC TESTING

If the initial blood lead test uses a capillary specimen, and is $\geq 10 \mu\text{g/dL}$, it must be confirmed with a venous test. An elevated venous sample is always confirmatory. Schedule for diagnostic testing of a child with an elevated BLL on a screening test:

If the screening test is:	obtain a venous test within:
10-19 $\mu\text{g/dL}$	3 months
20-44 $\mu\text{g/dL}$	1 month - 1 week*
45-59 $\mu\text{g/dL}$	48 hours
60-69 $\mu\text{g/dL}$	24 hours
$\geq 70 \mu\text{g/dL}$	Immediately as an emergency test

*** The higher the BLL, the more urgent the need for a diagnostic test**

CLINICAL EVALUATION

Medical History
<ul style="list-style-type: none"> ◆ Symptoms ◆ Developmental history ◆ Mouthing activities and pica ◆ Previous BLL measurements ◆ Family history of lead poisoning
Environmental History
<ul style="list-style-type: none"> ◆ Age, condition, and ongoing remodeling or repainting of primary residence and other places where the child spends time (including secondary homes and day-care centers). Determine whether the child may be exposed to lead-based paint hazards at any or all of these places. ◆ Occupational and hobby histories of adults with whom the child spends time. Determine whether the child is being exposed to lead from an adult's workplace or hobby. ◆ Other local sources of potential lead exposure.
Nutritional History
<ul style="list-style-type: none"> ◆ Take a dietary history; evaluate for adequacy of iron, calcium, calories ◆ Evaluate the child's iron status using appropriate laboratory tests. ◆ Ask about history of food stamps or WIC participation.
Physical Examination
<p>Pay particular attention to the neurologic examination and to the child's psychosocial and language development. Refer to Early On*.</p>

**PHYSICIAN AND HEALTH DEPARTMENT FOLLOW-UP ACCORDING
TO DIAGNOSTIC BLOOD LEAD LEVEL**

(µg/dL)	ACTION
<10	Reassess and test again (if indicated) in 1 year. Provide lead poisoning prevention pamphlets (appropriate language and reading level).
10-14	Provide lead poisoning prevention pamphlets and anticipatory guidance to prevent further exposure to lead. Blood lead level (BLL) again in 3 months.
15-19	Refer to local PH for family lead assessment & education nursing visit. (Time frame determined by local resources, suggested within 30 days.) Provide or refer for follow-up BLL in 3 months. Refer for social services as needed. If BLLs persist (i.e. 2 venous BLLs in this range at least 3 months apart), proceed according to actions for BLLs
20-44	Physician to provide thorough physical assessment and clinical management: refer to local PH for coordination of care as soon as possible. Refer other children under age 6 and pregnant women who live or spend time at this residence for blood lead tests. Local PH staff provide nursing and environmental investigations in the home within 10 working days of the referral. (Recommend joint visit if possible.) Refer for lead hazard control as needed. Note: EH investigations require a trained and certified Inspector/Risk Assessor.
45-69	Clinical management includes chelation therapy. Refer ASAP to local PH for nursing and environmental investigation, to be done within 5 working days of the referral. Lead hazard control should be completed before the child returns to residence.
≥70	Hospitalize child immediately and begin medical management, including chelation therapy. Refer immediately to local PH for nursing and environmental investigation (to be done within 24-48 hours of referral). Lead hazard control should be completed before the child returns to residence.

Continuing follow-up care is needed until the child has two consecutive BLLs (at least three months apart) less than 10 µg/dL (MDCH). At that time, the child may be discharged from care. Blood lead levels may remain high for extended periods of time, depending upon the length of time and severity of exposure. During this time, encourage family to continue the prescribed food plan.

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