

**Michigan's Case Management Protocol  
for Children with a Blood Lead Levels  
(venous)  
Equal to or Greater than 20ug/dL.**



## Michigan's Case Management Protocol for Children with a Blood Lead Level (venous) Equal to or Greater than 20ug/dL.

### Application of this protocol:

The state of Michigan's childhood lead poisoning elimination goal is to identify and provide appropriate services by 2010 to all children with Elevated Blood Lead Levels (EBLL)  $\geq$  10 ug/dL.

To meet this goal, case management services are **required without exception** for all EBL children with blood lead levels (BLL)  $\geq$  20 ug/dL. Any local Childhood Lead Poisoning Prevention Program (CLPPP) activities funded in whole or part by funds from the State's 2006 CDC lead poisoning prevention grant **must** follow the protocol for service delivery and use the accompanying forms presented below. Funded programs that wish to use forms or processes other than the ones presented below must demonstrate to the State's satisfaction that they collect data and provide services that are equivalent in all respects to those listed below.

Local Health Departments or CLPP programs not funded through the 2006 CDC lead poisoning prevention program should use these protocols as a standard of care for providing case management for EBL  $\geq$  20 ug/dL.

These protocols also set the benchmarks for management for children with lower BLLs.

### Definition of Case Management:

Case Management of children with EBLs involves coordinating, providing, and overseeing the services required to reduce their BLLs below the (CDC's) level of concern. It is based on the efforts of an organized team that includes the child's caregivers.

Effective case management includes:

- Ongoing communication with the caregivers and other service providers;
- Follow-up to assure that appropriate action has been taken; and
- A cooperative approach to solving problems that arise during efforts to decrease the child's blood lead level and eliminate environmental lead hazards.

Case management is **not** minimal activities of referring to other service providers, contacting caregivers by telephone, etc.

The **eight components** of case management are:

1. Client identification and outreach;
2. Individual assessment and diagnosis;
3. Service planning and resource identification;
4. Linking of clients to needed services;
5. Service implementation and coordination;
6. Monitoring of service delivery;
7. Advocacy; and
8. Evaluation.

(“Managing Elevated Blood Lead Levels Among Young Children”, CDC, March 2002, pp. 4-5.)

Local public health agencies will give **service priority** to children with the **highest BLLs** and those **less than two** years of age.

The time frame for initial home visit will be:

- BLL 15-19 (persistent, 3 months apart or more) within 2 weeks of referral;
- BLL 20-44 within one week of referral;
- BLL 45-70 within 48 hours of referral; and
- BLL =>70 within 24 hours of referral.

(Ibid., p. 6)

An in-home investigation will include a health assessment conducted by a nurse, and an environmental assessment conducted by a certified EBL lead investigator/risk assessor. Medicaid will reimburse the agency (upon billing) for two nursing visits and two environmental visits in the home of a child with lead poisoning (beginning at venous BLLs=>10). The same individual (with the appropriate professional credentials) may provide and bill for reimbursement for **both** the nursing and environmental services. In addition, the same services should be provided for any other sites where the child spends significant amounts of time. The case management team will then use the results of both assessments/ investigations to develop a plan for child protection and hazard correction. Expectations for the resulting plan are that it is comprehensive, family-centered, and implements all appropriate referral including legal enforcement.

The **case manager is responsible for assuring** that the child receives services in a timely fashion.

1. Upon receiving results of an EBLL (see service priority), a case manager is assigned to the family per the agency’s protocol.
2. The case manager or designee will schedule an appointment with the child’s caregiver in the child’s home as soon as possible after the case is assigned. The total time from the referral to the agency until the caregiver appointment should never exceed the time frames stated above.

3. If the caregiver does not have a telephone, the case manager should visit the child's home and leave information at the door if no one is there or send a letter specifying the date and time the visit will be made.
4. If the child's BLL is  $\geq 45$ , the case manager will contact the PCP immediately to determine his/her plan for chelation (home vs. hospital). A lead hazard assessment will be conducted in the child's home within one week or less. **If the child is receiving chelation therapy, the lead hazard assessment must be completed and the property certified as free of hazards before the child returns to that location.**
5. At the **home visit, the objectives** are:
  - To collect a health, development, social and dietary history for the affected child. Siblings and other at-risk children living in the home are also advised to obtain blood lead testing.
  - To identify the probable sources of lead in the child's environment. Secondary addresses in which exposure could be occurring are noted and investigated. Steps to prevent exposure to sources should be stressed at the first home visit.
  - To provide education and anticipatory guidance for caregivers so that the effects of exposure are minimized.
  - To develop a Plan of Care that identifies resources appropriate to the individual child and family so that exposure is reduced, recommendations based on the visit can be implemented, and impact of lead exposure is minimized.

**NOTE:** Although all cases require a minimum of two PHN visits, additional visits and phone contacts are often necessary.

6. At the **environmental visit, the objectives** are:
  - To identify all sources of lead hazards in the child's home environment, using the Michigan EBLL protocol. (See "Environmental Investigations for Children with Elevated Blood Lead Levels," MDCH, February 2010: [http://www.michigan.gov/documents/mdch/EBL\\_EI\\_Protocol\\_02.08.10\\_310643\\_7.pdf](http://www.michigan.gov/documents/mdch/EBL_EI_Protocol_02.08.10_310643_7.pdf)).
  - To provide specific print materials identifying both temporary and permanent lead hazard control options and procedures.
  - To re-inspect the child's home (and related environments) after lead hazard control activities, to assure safe environments.

**NOTE:** Although all cases require a minimum of two environmental visits, additional visits are often necessary.

The case manager must be sufficiently knowledgeable about environmental investigation and follow-up to assure that inspection and remediation take place

in a timely fashion, and that short-term efforts are made to decrease an affected child's exposure to lead hazards.

**Ongoing communication** between the child's PCP, the various public health agency's staff members (nursing, environmental health, nutritionist, social worker, etc.) and the child's caregiver(s) throughout the extended period of time that will be needed to complete all the elements of the child's individualized case management plan is the **primary responsibility of the case manager**.

It is the responsibility of the case manager to ensure that reminder letters are sent to the parents/foster parents/guardians at the beginning of the month that the child with EBLs is due for a follow up BLL. The case manager is also responsible for assuring that someone follows up on referrals for other problems identified during case management.

**It must be remembered that behavioral change recommendations (dietary changes, cleaning habits, etc.) usually have a modest effect. Best results are obtained when the case manager assists the family in focusing on and completing the recommendations designed to eliminate environmental lead hazards.**

Source: "Managing Elevated Blood Lead Levels Among Young Children," CDC, March 2002.

### **The Nursing Assessment (Initial Nursing Home Visit)**

The purpose of this visit is to gather sufficient information to develop an Individualized Plan of Care for the child with EBLs and to ensure that all siblings and pregnant women in the household are identified for further screening. The child with EBL should be present at this visit in order for the PHN to perform a physical assessment and observe his/her behavior. During the initial visit, the PHN should complete the following activities.

1. Ask for caregiver authorization to release protected health information to the case management team and to referral sources as needed using the MDCH HIPAA Authorization to Disclose Protected Health Information Form or any other agency-developed disclosure form and for purposes of federal Title X and Michigan lead Abatement Act enforcement.
2. Interview the child's caregiver(s) to collect the child's health, social and nutritional history. If existing data are available, and are less than 3 months old, they can be reviewed and updated.
3. Obtain a health history that addresses the current health status of the child, and includes:
  - ✓ Past history of lead testing and, if necessary, chelation for the child;
  - ✓ Past history of lead testing for other family members;

- ✓ Child's history of anemia (if any); ask caregiver to relate information re: the child's hemoglobin status;
  - ✓ Caregiver's observations about the child's developmental progress;
  - ✓ Caregiver's assessment of the child's behavior;
  - ✓ Caregiver's assessment of the child's cognitive development;
  - ✓ A visual/physical assessment of the child's body systems including eyes, heart and lungs, abdomen/digestive, elimination, muscular and skeletal;
  - ✓ Performing a standardized developmental screening to provide a baseline for the future (Ages and Stages/DDST/other) and identifying the type of assessment used.
4. Complete a nutrition history for the child that includes the following:
- ✓ Caregiver's description of the child's usual diet pattern. The PHN should begin with a twenty-four hour recall of his/her intake and ask if this is typical of the child's intake.
  - ✓ Ask about child's intake of breast milk, formula and/or cow's milk;
  - ✓ Ask about child's intake of other dairy/calcium sources;
  - ✓ Ask caregiver about child's intake of iron-containing foods and dietary fat;
  - ✓ Inquire about ethnic food products imported or carried from another country;
  - ✓ Ask about dietary supplements;
  - ✓ Ask caregiver the number of meals and number of snacks the child consumes each day; and
  - ✓ Ask where the child sits to eat.
5. Ask about the child's social history. This should include:
- ✓ Caregiver's description of play and sleep habits;
  - ✓ A child's usual play area;
  - ✓ Environments other than the child's primary residence where the child spends 20 hours per week or more (address and caregiver name(s));
  - ✓ Family occupational and hobby history: include occupations and hobbies of adults in the home and other adults with whom the child spends time;
  - ✓ Caregiver should be asked to describe any cultural practices or foods in use by the immediate family as well as other adults with whom the child spends time;
  - ✓ Behavior: ask the caregiver about mouthing/hand-to-mouth behaviors (to be expected in young children), including fingers in mouth; chewing on toys, crayons, newspaper/other print material, matches; consumes non-food items, such as dirt, grass, cigarettes/ashes; chews on furniture? crib/playpen? window sills/frames/doors?; plays at or near chipping or flaking paint, or has been seen eating paint chips.

6. Gather other information:

- √ Family income source?
- √ Does family receive: WIC, food stamps, Medicaid/Medicare, other social agency support, such as Salvation Army, food pantry, etc.?
- √ If the residence is a rental property: name, address, phone number and/or other contact information for the rental property owner.
- √ Barriers to obtaining medical care: time, both amount of time needed and time of day, child care, transportation, literacy, language barrier, etc.

After the child's history is completed, per the caregiver, ask the caregiver for permission to look around the child's common areas for visual evidence of exposure sources, exposure behaviors and family practices.

### **Individualized Plan of Care**

Upon completing the Initial Nursing Home Visit assessment, the PHN will develop, in conjunction with the family/guardian/foster parent of the child with EBL, an Individualized Plan of Care (POC). This individualized plan should address the unique circumstances of the child and family, and be tailored to the family's occupational and cultural background and literacy needs. The document should be signed by the family/guardian/foster parent and the PHN should provide the family with a copy. The Individualized Plan of Care serves as the basis for tracking referrals, caregiver compliance, follow up BLL, and progress on lead hazard remediation and/or enforcement of federal Title X and the Michigan Lead Abatement Act.

### **The Nursing Assessment (Follow Up Telephone and Other Contacts)**

It is the responsibility of the PHN to monitor implementation of the Individualized Plan of Care on a **quarterly** basis, or more frequently if the child's EBL is higher than 25 ug/dL or the child is under 24 months of age. Monitoring can take the form of phone calls, letters, and emails to the environmental investigator, family, health care provider's office, and other referrals, as long as the PHN is certain that this method reaches the intended recipient and can ascertain progress toward the care plan objectives. Monthly phone calls to the family will build trust and rapport, as well as identify the need for further referrals. All contacts made must be noted in the activity log along with the name and agency of the person contacted, the name of the person making the contact and the reason for the contact.

### **The Nursing Assessment (Follow Up Home Visits by PHN)**

Multiple home visits provide the opportunity to reinforce key educational messages in the Individualized Plan of Care. In addition, the purpose of these visits is to assess caregiver implementation of the plan of care, including compliance with medical follow up, housekeeping practices, and reductions in

exposure. It also allows the PHN to verify progress with referrals and identify need for further services.

The PHN will conduct a minimum of two home visits before the case is closed. During these follow-up home visits, the PHN should:

1. Review contact information and primary care provider information with child's caregiver(s);
2. Review the Initial Home Visit Form and document changes in EBLI, child's health history, nutritional history, social history, and conditions in the home;
3. Review Individualized Plan of Care to identify additional messages to communicate at this visit;
4. Assess family's understanding of its responsibilities under the Plan of Care. Determine whether additional education or resources are needed to implement the Plan;
5. Revise Individualized Plan of Care as needed and obtain caregiver signature; and
6. Notify health care provider and other members of the team, including the Environmental Investigator, of significant changes.

### **Case Closure**

Nursing services should not be discontinued until:

1. At least two home visits have been completed in which lead education was provided;
2. Nutritional, medical, and developmental assessments were completed;  
and  
The child has had two consecutive blood lead levels below 10ug/dL within a six month period.
3. A case should **not be** closed until recommendations for abatement and/or reduction of lead hazards have been completed.

A case may be administratively closed for the following reasons:

1. The child is age seven or older and currently living in lead-safe environment.
2. The parent refuses services.
3. The family moves out of jurisdiction (MDCH/CLPPP should be notified of the child's move and a referral should be made to the jurisdiction in which the family has relocated).

4. The address has been confirmed by the PCP or screening source and there have been at least three documented attempts to locate or gain access to the family. (This includes two visits to the home and one certified letter sent to the address.)

## Case Management Forms

Form	Contents Captured	When to Use	Who Should Receive Copy
<b><u>Activity Log</u></b>	Documents all successful and unsuccessful contact with the family as well as communications with the primary care provider. It also documents dates of all home visits by case manager and environmental investigator and the date of case closure.	This form should be used to document all actions associated with the case. Enter source or contact for each entry and the person making the contact. Compare progress on the case to the milestones listed for the specific BLL to ensure that follow up is timely.	Kept in case file.
<b><u>HIPAA Authorization to Disclose protected Health Information</u></b>	Documents the agencies that will have access to data collected on the child with an EBLL. Specifies that the data can be disclosed to housing agencies, early childhood education, nutritional, and other services.	Review with and obtain caregiver's signature at beginning of Initial Home Visit.	Store in file.  Provide copies of form whenever initiating referrals.
<b><u>Initial Home Visit form</u></b>	Documents all client information, caregiver information, lead test history, developmental assessment information, physical assessment data, nutritional assessment data, social history, visual observations and potential sources of lead exposure.	Completed during the initial home visit.  Review when completing the Individualized Plan of Care and at all follow-up visits/contacts.	Kept in case file.
<b><u>Individualized Plan of Care</u></b>	Documents the plan of care for each family. The plan should be specific for the needs of the family. It should also be discussed with and signed by the family.	Form should be completed at initial home visit or within one week of completing the visit.  Review Initial Home Visit form when completing the individualized plan of care.  Review plan of care at all follow up visits/contacts.	Kept in case file.  Send copies to family and medical provider.
<b><u>Health Care Provider form</u></b>	Documents the activities and observations the case manager has made through home visits, phone contacts, and referrals for physician review. Also highlights follow-up activities for physician and PHN based on confirmed BLL.	Complete after each home visit or referral.  Send reminder to health care provider at the beginning of the month that the EBL child is due for a follow up BLL.	Keep one copy in chart.  Send copy to Health Care provider and Family.

<b>Form</b>	<b>Contents Captured</b>	<b>When to Use</b>	<b>Who Should Receive Copy</b>
<b><u>Environmental Blood Lead Level Investigation Report</u></b>	Completed by Environmental Investigator. Identifies all lead hazards and documents specific short and long-term recommendations for addressing these hazards.	<p>Must be completed within time frames specified according to EBLL.</p> <p>Ideally should be completed as part of a joint visit with the PHN.</p> <p>PHN should review this report when completing the Plan of Care and Health Care Provider forms.</p>	<p>Copy should be kept in case file.</p> <p>Property owner and family should receive copy of report.</p>
<b><u>Referral Tracking form</u></b>	Documents and tracks all referrals.	Should be reviewed at least quarterly and during every home visit to determine whether referrals have been successfully implemented.	Kept in case file.
<b><u>Follow Up Visit Report</u></b>	Documents changes in addresses, social history, and compliance with plan of care. Revisions to the plan should be discussed with and signed by the family.	<p>Completed during each follow-up home visit by PHN.</p> <p>After visit is complete, health care provider and other team members should be notified of significant changes.</p>	<p>Kept in file.</p> <p>A copy should be sent to the family.</p>
<b><u>Case Closure form</u></b>	This form should be completed when closing a case.	Completed only after close out criteria are met.	<p>Kept in file.</p> <p>A copy of this form should be sent to the medical provider and any referral agencies that will continue to follow the child.</p>
<b><u>Monthly Report to MI State CLPPP</u></b>	Completed for all new cases of EBLs $\geq$ 20 ug/dL and documents progress on existing cases. Most, if not all, this information should be captured on the Initial Home Visit, EBLL Investigation report, Referral Tracking Form, and Follow Up Home Visits reports.	Completed monthly by Lead Initiative Coordinators.	State CLPPP