

**Department of Health and Human Services
Maine Center for Disease Control and Prevention
Division of Family Health
Public Health Nursing**

Procedure: Case Management of Children with Elevated Blood Lead Levels (BLL)

Revised: June 2008

Special Instructions:

1. Each Public Health Nursing unit has a Public Health Nurse (PHN) assigned as a lead resource nurse. The resource nurse is available to the Public Health Nursing Unit with resources and information on lead prevention and poisoning.
2. A blood lead level (BLL) of 10ug/dl or more is considered elevated in children under 6 years old.
3. Upon the receipt of a referral from the Maine Childhood Lead Poisoning Prevention Program (MCLPPP), the family or primary care provider (PCP) of a child with an elevated BLL, the Central Referral PHN shall assign the client to the appropriate nurse.
4. The Public Health Nurse (PHN) assigned to the client shall contact the family to set up a home visit to admit them to the PHN caseload in accordance with established PHN policy and procedure. If this cannot be met the PHN shall contact the supervisor and document the circumstances in the record.
5. The following is a guideline to use during an initial home visit with a child with any elevated blood lead level (EBLL).
 - **Activities during the initial home visit:**
 - a) Assess the parent's understanding of lead poisoning and the potential effects of lead poisoning on children's health.
 - b) Assess the family's hygiene practices.
 - c) Assess the parent's support systems and resources available.
 - d) Assess the child's nutritional status and parents' understanding of good nutritional practices. Make appropriate referrals if necessary. (Ex.: WIC)
 - e) Assess the child's home for potential lead hazards, using a visual environmental assessment.
 - f) Educate the parents about activities to reduce lead hazards, including specialized lead dust cleaning methods.
 - g) Determine if other potential sources of lead exposure are present in the child's environment.(i.e. take home dust from parent's occupation, painted furniture, etc.)
6. The child's BLL determines the timing and frequency of the Public Health Nursing home visits.

7. Additional nursing interventions are determined by the child's BLL.

□ **Child with BLL 10 - 14 µg/dl**

a) Initial Home Visit

The Public Health Nurse shall contact the family whose child has a confirmed blood lead level of 10-14 ug/dl within 2 business days and offer an initial visit within 10 business days of the receipt of the referral.

Activities of the first home visit include:

- All activities listed in #5 of this procedure
- At these lower lead levels, it may be unlikely to find the source/s of lead exposure.
- General preventative measures to decrease lead exposure are appropriate. (frequent hand washing, washing toys, etc). See Tip Sheet #5

b) Subsequent home visits

The nursing case manager shall determine if the child and parent require additional home visits.

□ **Child with BLL 15-19ug/dl**

- Note: MCLPPP makes a referral for an environmental investigation (EI). State law mandates that an EI be done on rental units where a lead poisoned child resides. In a private home it is the family's choice if an EI is done. Call MCLPPP with any questions regarding this process and the generation of an environmental report.

a) Initial home visit

The Public Health Nurse shall contact the family whose child has a confirmed blood lead level of 15-19 ug/dl within 2 business days and offer an initial visit within 10 business days of the receipt of the referral.

Activities of the first home visit include:

- All activities listed in #5 of this procedure
- Assist family in understanding the process of environmental testing and the generation of an environmental report.
- At this level, lead dust is the likely source of lead, most frequently from lead paint. Also consider other sources of lead, such as take home dust, soil, etc.
- Reinforce the need for further blood lead testing within 2 months.
- After the visit the PHN shall notify MCLPPP new information is available in CareFacts.
- After the visit the PHN shall inform the medical provider of the home visit and findings

b) Subsequent home visits

All children with an initial confirmed BLL 15-19ug/dl shall receive a second home visit within 2 months of the initial home visit.

Activities of the second home visit include:

- Assess parent's level of understanding and provide additional education as needed.
- Determine if second BLL has been scheduled or completed. Review results with parents.
- Determine if interim measures to reduce lead hazards have been accomplished
- Determine if the family has received the environmental report. Assist the parent in understanding of the report and how to use this report to protect the children from further exposure. PHN and/or the family to can call MCLPPP with questions
- The nursing case manager shall determine if the child and parents require additional home visits.
- Notify MCLPPP of discharge or when new information is available in CareFacts.

□ **Child with BLL \geq 20ug/dl**

(a) Initial home visit

The Public Health Nurse shall contact the family whose child has a confirmed venous BLL \geq 20 ug/dl within 1 business day of the receipt of a referral and offer an initial visit according to the schedule below. If the PHN is unable to meet this criterion due to family resistance, inability to locate the family, workload considerations, or other circumstances, the PHN shall notify the PHN –S and the MCLPPP and document this in the client's record.

BLL \geq 20 ug/dl and receiving chelation therapy – within 1 business day

BLL \geq 70 ug/dl – within 1 business day

BLL 45-69 ug/dl – within 2 business days

BLL 25-44 ug/dl – within 5 business days

BLL 20-24 ug/dl – within 7 business days

Activities of the first home visit include:

- All activities listed in #5 of this procedure
- Note: MCLPPP makes a referral for an environmental investigation (EI). State law mandates that an EI be done on apartments where a lead poisoned child resides (BLL \geq 20ug/dl). In a private home, it is the family's choice if an EI is done.
- Lead dust is a likely source of lead,. However, as BLlevels above 20ug/dl increase, acute poisoning I.e. ingestion of chips, objects, or home renovation activities, may be more likely exposure source. Also consider other sources of lead, such as take home dust, soil, etc.
- Notify MCLPPP when new information is available in CareFacts.
- After the visit the PHN shall inform the medical provider of the home visit and findings

b) Subsequent home visits:

All children with an initial confirmed BLL \geq 20 shall receive a second home visit per visit schedule in attached table.

Activities of second home visit:

- Review written materials with the parents and provide additional education as needed
- Determine if interim measures to reduce lead hazards have been accomplished
- Determine if second BLL(due 1 mo later) has been scheduled or completed. Review results with parents.
- Determine if the family has received the Environmental Report, if their questions have been answered and if they know how to contact the MCLPPP with questions.
- After the visit the PHN shall inform the medical provider of the home visit and findings
- Notify MCLPPP that new information is available in CareFacts.

□ **All Children Receiving Chelation Therapy**

NOTE: All children undergoing chelation therapy must be in a lead safe environment.

a) Initial home visit

The Public Health Nurse shall contact the family whose child is undergoing chelation therapy within 1 business day of the receipt of a referral and offer an initial visit according to the visit schedule in the attached table. This first visit may occur during hospitalization of the child or place child was relocated. If the PHN is unable to meet this criterion due to family resistance, inability to locate the family, workload considerations, or other circumstances, the PHN shall notify the PHN-S and the MCLPPP. The PHN shall document the circumstances in the patient's record.

Activities of the first home visit include:

- Emotional Support to family during this stressful period.
- All activities listed in #5 of this procedure.
- Perform above activities of home visit for children with $BLL \geq 20$ ug/dl.
- Assess compliance with medication administration at home
- Provide education to parents re: medication administration, side effects, and the necessity of finishing all doses.
- Provide education regarding the necessity of a lead-safe environment while on chelation medication

b) Subsequent home visits:

- All children receiving chelation therapy shall receive the second home visit per visit schedule in the attached table
- Review with the parents the need for further blood lead testing

8. Discharge Criteria

- 1) BLLs are decreasing.
- 2) All children in the home under 6 years of age have been tested for lead.
- 3) If an Environmental Investigation has been done, the family has received the report, and the report has been reviewed.

- 4) Parents demonstrate an understanding of lead dust risk and demonstrate that they are able to protect their children from further exposure to lead.
- 5) The client refuses the PHN's services or is non compliant with the PHN's interventions.

Please notify MCLPPP by phone or password protected email of new documentation in CareFacts and of discharge of client.

Timeline for Contact and Visits for Children with Elevated Blood Lead Levels (EBLL)

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Date

| EBLL | Initial contact with family | 1st visit | Subsequent visit |
|--|---------------------------------------|--|--|
| 10 –14 ug/dl | Within 2 business days of referral | Within 10 business days of referral | Determined by PHN case manager |
| 15 – 19 ug/dl | Within 2 business days of referral | Within 10 business days of referral | Within 2 months of initial home visit |
| 20 – 24 ug/dl | Within 1 business day of the referral | Within 7 business days of the referral | 1 month or sooner dependent on clients needs |
| 25 – 44 ug/dl | Within 1 business day of the referral | Within 5 business days of the referral | 1 month or sooner dependent on client needs |
| 45 – 69 ug/dl | Within 1 business day of the referral | Within 2 business days of the referral | Within 2 weeks of the initial visit |
| ≥ 70_ug/dl | Within 1 business day of the referral | Within 1 business day of the referral | Within 1 week of initial visit |
| ≥ 20 ug/dl and receiving chelation therapy | Within 1 business day of the referral | Within 1 business day of the referral | Within 1 week of initial visit |