

## 1. Disease Reporting and Follow-Up

### A. Purpose of Reporting and Surveillance

1. To assess the magnitude of the lead exposure problem in Oregon.
2. To identify all tested individuals with elevated blood lead levels (EBLL).
3. To identify the sources of lead exposure for people with EBLL, and to identify, notify, and evaluate others who may be at risk from those sources.
4. To ensure that persons with EBLL receive proper medical management, including follow-up, until their concentration of blood lead is brought down to acceptable levels.
5. To ensure that adequate environmental follow-up occurs, in order to reduce or eliminate the risk of further lead exposure from identified sources for the affected child and any family members, playmates, etc. who could also be exposed to the same source.
6. For occupational exposures, to ensure that Oregon Occupational Safety and Health Administration (OR-OSHA) is provided a listing of firms with at least one employee having a blood lead level (BLL) 25 micrograms per deciliter ( $\mu\text{g}/\text{dL}$ ) and above on a quarterly basis; and to collect data needed to develop strategies to minimize occupational lead exposure.

### B. Laboratory Disease Reporting Requirements

1. Labs must report all blood lead tests directly to the Department of Human Services (DHS) within 7 days [333-018-0015 5(d)]. Lab results may be sent electronically or faxed to (971) 673-0457. Labs are strongly encouraged to fax elevated levels within 1 working day. For more information on laboratory reporting, contact the Lead Poisoning Prevention Program at (971) 673-0440.

### C. Local Health Authority Follow-Up Responsibilities

1. DHS will refer childhood and non-occupational adult EBLL reports received directly from labs or providers to the Local Public Health Authorities (LPHA) for follow-up. If the LPHA is directly notified of an EBLL test result, they should report the case to DHS using case report form (DHS 42-10).
2. Forms that should be used for reporting and recording the results of follow-up investigations are available from the Lead Poisoning Prevention Program at (971) 673-0440 or at [www.healthoregon.org/lead](http://www.healthoregon.org/lead). Except for initial reporting, different forms are used for children and adults; they are listed in tables 1 and 2, respectively. Fax completed forms to the Lead Poisoning Prevention Program at (971) 673-0457, or mail to 800 NE Oregon St., Suite 640, Portland, OR 97232.
3. The nature and urgency of EBLL follow-up varies depending on the blood lead level (see table 3 and 4).

**Table 1. Lead Poisoning Forms for Children ( $\leq 17$  years old)**

<b>Form Title</b>	<b>Form Number</b>	<b>Usage</b>
<b>Elevated Blood Lead Reporting Form</b>	<b>DHS 42-10</b>	<b>All cases with BLL <math>\geq 10</math> <math>\mu\text{g/dL}</math></b>
<b>Oregon Childhood Lead Poisoning Prevention Program Lab Slip</b>	<b>OCLPPP 01</b>	<b>Lab slip for blood lead test analysis</b>
<b>Medical Information Form</b>	<b>OCLPPP MIF 01</b>	<b>All confirmed EBLs <math>\geq 10</math> <math>\mu\text{g/dL}</math></b>
<b>Elevated Blood Lead Investigation Questionnaire</b>	<b>OCLPPP EIQ 01</b>	<b>All confirmed EBLs <math>\geq 10</math> <math>\mu\text{g/dL}</math></b>

**Table 2. Lead Poisoning Forms for Adults ( $\geq 18$  years old)**

<b>Form Title</b>	<b>Form Number</b>	<b>Usage</b>
<b>Elevated Blood Lead Reporting Form</b>	<b>DHS 42-10</b>	<b>All cases with BLL <math>\geq 25</math> <math>\mu\text{g/dL}</math></b>
<b>Physician Interview Form</b>	<b>DHS 44-2</b>	<b>All Cases with BLL <math>\geq 25</math> <math>\mu\text{g/dL}</math></b>
<b>Adult Lead Case Interview Form</b>	<b>DHS 44-3</b>	<b>All cases with BLL <math>\geq 25</math> <math>\mu\text{g/dL}</math></b>

## **2. THE DISEASE AND ITS EPIDEMIOLOGY**

### **A. Description of Illness**

Lead is ingested or inhaled. The most common source of lead exposure is ingestion of lead-containing dust. The rate of lead uptake is affected by the individual's developmental stage, the route of exposure, and the nature of the lead [compounds] to which the individual is exposed. Nutritional status is also important: a healthy diet high in iron and calcium and low in fat, may slow the rate of lead absorption.

Absorption depends on the form of the lead. Inhaled, airborne lead is almost totally absorbed, while ingested lead absorption rates may vary from 10% in adults to 50% in children. Lead is absorbed more efficiently from dust from sanded lead-based paint than from whole paint chips. The most dangerous exposure is to lead vapors (formed whenever lead is melted) or other respirable lead compounds. Absorbed lead is detectable in blood, soft tissue and bone. The half-life of lead varies from about a month in blood, 1-1.5 months in soft tissue, and about 25-30 years in bone [Agency for Toxic Substances and Disease Registry (ATSDR) 2007].

For the purposes of these guidelines, persons with EBLs are considered to have lead poisoning. Lead poisoning can affect both children and adults, although the effects may vary markedly with age. It is convenient, albeit somewhat artificial, to divide lead poisoning into an acute disease that relates to current BLLs, and a chronic disease that relates to the cumulative effects of body lead burden. In both cases, the most prominent signs and symptoms are neurological. Bear in mind that persons with very high BLLs ( $\geq 70$   $\mu\text{g/dL}$  in children) should be treated as medical emergencies, regardless of overt symptomatology. Ingestion of a metallic object that may contain lead can result in an EBL within hours. Ingestion of any object that may contain lead should be treated as a medical emergency and treatment should include a blood lead test and abdominal x-ray.

### **Acute Disease**

Acute exposure to lead generally means exposure for a short time, but at high levels. Blood lead levels increase quickly after an acute exposure. The most common symptom of acute lead poisoning is colicky abdominal pain evolving over days to weeks. Constipation, diarrhea, and nonspecific complaints of irritability, fatigue, weakness and muscle pain may also occur. These symptoms are seldom caused by BLLs less than 50 µg/dL. In more severe cases, warning signs of acute, serious brain swelling include vomiting, irritability, restlessness, tremors, and progressive drowsiness. These symptoms may herald the onset of seizures, coma, and possibly death. The BLLs associated with encephalopathy in children vary from study to study, but BLLs of 70-80 µg/dL or greater appear to indicate a serious risk (ATSDR 2007).

### **Chronic Effects**

Chronic lead exposure generally means exposure to low to moderate levels of lead over a long period of time. Recent studies suggest that lead absorption is harmful at any concentration and that no safe level of lead exposure exists (Canfield et al. 2003; Lanphear et al. 2000, 2005b; Schwartz 1994; U.S. CDC 1991). Relatively low blood lead levels rarely cause overt signs and symptoms, but such exposure can cause permanent damage—especially in young children—including decreased IQ, developmental delays and behavioral disturbances.

## **B. Sources of Lead Exposure**

### **➤ Paint**

Lead was used in common house paint until 1978 when the Consumer Product Safety Commission (CPSC) restricted the amount of lead in household paint. Many buildings built before 1978 have lead-based paint inside and outside. Housing built before 1950 is at even greater risk of having lead-based paint, and having a higher concentration of lead in the paint. Lead paint in good condition poses little risk. Chipping, peeling or chalking lead paint is a common source of ingestible lead dust and may be a hazard.

### **➤ Dust**

Lead paint dust is the most common source of lead exposure for children. Lead in this form is much more easily absorbed. Interior house dust can become contaminated with lead as the result of the deterioration or disturbance of leaded paint, the tracking in of contaminated soil, and the fallout of airborne lead particulate from industrial or vehicular sources. Fine lead dust, and resulting contamination, can be created when painted surfaces rub against each other, such as where double hung windows slide up and down or when doors open and close. Lead in dust is increased after older paint has been disturbed through remodeling, renovation, paint preparation or repair.

### **➤ Occupational Exposures and “Secondary Transmission”**

While lead poisoning is obviously not a communicable disease, household contacts of persons with occupational, vocational, or other exposures may be exposed to lead dust or other compounds brought home. Many occupations can expose a worker to lead. Some of the occupations that carry a potential for exposure to lead include remodeling/renovation, painting, building demolition, construction, battery recycling, radiator repair, and bridge construction. People who work in a lead environment may bring lead dust into their car or home on their clothes and bodies unintentionally exposing family members. Good hygiene practices need to be observed to avoid bringing lead dust into the home from the work place. These include washing or showering and changing out of work clothes before leaving for home or entering a vehicle.

### ➤ **Hobby Sources**

Many hobbies involve lead use (e.g., making or handling lead shot/bullets, fishing weights/sinkers, toy soldiers, stained glass solder, ceramic glazing, etc). Heating and melting lead is particularly dangerous because of the formation of lead vapor, so respirator use and adequate ventilation are essential to prevent exposure. Other hobbies that carry a potential for exposure to lead include home remodeling and painting, furniture refinishing, welding, auto or boat repair, and target shooting at firing ranges. Hobbyists can protect their families by keeping the hobby activity away from living areas and by showering or changing clothes before entering the home.

### ➤ **Folk Medicines and Cosmetics**

Lead has been found in some traditional (folk) medicines used by East Indian, Indian, Middle Eastern, West Asian, and Hispanic cultures. Lead and other heavy metals are put into certain folk medicines on purpose because these metals are thought to be useful in treating some ailments. Sometimes lead accidentally gets into the folk medicine during grinding, coloring, or other methods of preparation. Medications such as *greta*, *alarcon*, *rueda* and *azarcon*, used in the Latino community for stomach ailments (*empacho*), or “pay-loo-ah,” similarly used by many Southeast Asians, may be as much as 90% lead by weight. Cosmetic products are a primary source of lead in Asian and Arab countries. Application of Kohl results in lead exposure primarily via hand-to-eye-to-mouth movement and subsequent ingestion of particles.

### ➤ **Tableware**

Imported, old, handmade, or poorly glazed ceramic dishes and pottery may contain lead. Lead may also be found in leaded crystal, pewter and brass dishware. In these pieces, acid substances may interact chemically with the glaze and accelerate the lead release. Therefore, acidic foods (such as orange, tomato and other fruit juices, tomato sauces, wines, and vinegar) stored in improperly glazed containers are potentially the most dangerous. If it is not known whether or not a particular tableware item contains lead, the item should not be used to store, cook or serve food or beverages.

### ➤ **Water**

Most well or city water does not naturally contain lead. Lead in drinking water is an infrequent source of lead poisoning in Oregon. Lead leaches into drinking water from brass faucets, lead solder that connects the pipes, or lead pipes. Hot water is particularly corrosive and should not be used for drinking, cooking, or preparing infant formula. The cold-water tap should be flushed for several minutes each morning or after sitting until there is a noticeable change in temperature of the water before any water is consumed.

### ➤ **Miscellaneous Sources**

Lead solder is no longer used in the processing of canned foods in the United States; therefore, lead in food has been dramatically reduced. Imported food products may still contain lead as some foreign manufactures may use lead solder in cans. Food may also be contaminated with lead from the soil during the growing process. Lead has been found in some consumer candies imported from Mexico. Certain candy ingredients such as chili powder and tamarind may be a source of lead exposure. Lead sometimes gets into the candy when processes such as drying, storing, and grinding the ingredients are done improperly. Also, lead has been found in the wrappers of some imported candies. The ink of these plastic or paper wrappers may contain lead that leaches into the candy.

There continues to be an ever-increasing array of household products that contain lead, especially imported products. In recent years, lead has been found in vinyl miniblinds, curtain weights, calcium supplements, hair dyes, crayons, and children’s jewelry and toys. Ingestion of any object that may contain lead should be treated as a medical emergency and treatment should include a blood lead test and abdominal x-ray.

### C. History of Lead Poisoning Guidelines

Lead poisoning in children was first recognized as a problem in the 1890s by two Australian physicians. In the United States, deleterious effects of long term lead exposure on children were documented as early as 1943. As evidence has accumulated on the often-subtle effects of low-dose exposure, the concentration of blood lead considered “harmless” has steadily declined. Levels that 30 years ago were considered acceptable may today be classified as a medical emergency.

The insidious nature of lead poisoning means that the only way to know if an adult or child has an EBLL is to perform a blood test. Some degree of lead exposure is ubiquitous in our society, but increasing awareness of the hazards of lead has resulted in marked reductions in exposure for many Americans. The average overall BLL in the U.S. was less than 2 µg/dL in 2005—down from 12.8 µg/dL in 1976 (CDC 2005).

### D. Occupational Exposures and OR-OSHA Involvement

OSHA standards govern occupational lead exposure in General Industry and Construction. These standards have very specific guidelines on blood lead monitoring of workers and provisions for removing workers from exposure when their average blood lead levels exceed 50 µg/dL. The DHS is responsible for ensuring follow-up of EBLs in occupationally exposed adults and referral of cases to OR-OSHA as needed. Listings of firms with at least one employee having a BLL 25 µg/dL and above are provided to OR-OSHA on a quarterly basis.

## 3. CASE DEFINITIONS, DIAGNOSIS, AND LABORATORY

### A. Testing Methods

Blood lead testing is the only acceptable laboratory test for screening and confirming lead poisoning. Venipuncture is preferred for specimen collection, but capillary testing is acceptable if care is taken to properly clean and prepare the finger. Capillary samples are easier to contaminate because of the possibility of lead containing dust and dirt on the hand or under the fingernails. All capillary BLLs of 10 µg/dL or higher must be followed with a confirmatory venous test. The higher the capillary screening BLL, the more urgent the need for a venous confirmatory test. The schedule for confirmatory testing of a child with an EBLL is outlined in table 3.

Several tests have been found to be insensitive and/or imprecise as **screening** tests for lead, and are not recommended. These include: erythrocyte protoporphyrin (EP), zinc protoporphyrin (ZPP), basophilic stippling, urine testing, and assays of hair or fingernail lead levels.

### Table 3. Confirmatory Testing Schedule

Any capillary screening BLL above 10 µg/dL must be confirmed with a venous sample. The higher the BLL on the capillary test, the more urgent the need for confirmatory testing. The table below outlines the confirmatory venous schedule based on the initial screening result.

<b>If result of capillary test (µg/dL) is:</b>	<b>Perform confirmatory test on venous blood within:</b>
<b>Level of Concern</b> 5-9	Confirmatory blood lead test recommended. Caregiver should discuss with their medical provider.
<b>Public Health Action Level</b> 10-19	30 days
20-44	7 days
45-59	2 days
60-69	1 day
≥ 70	Immediately as an emergency lab test

**Exception to confirmatory testing schedule:** If recent known exposure (e.g. foreign body ingestion, recent remodeling, etc.) confirm as soon as possible for all blood lead levels.

## B. Case Definitions: Public Health Action Levels

### 1. Confirmed EBLL

*Children* ( $\leq 17$  years old). Venous BLL  $\geq 10$   $\mu\text{g}/\text{dL}$

*Adults* ( $\geq 18$  years old). Venous BLL  $\geq 25$   $\mu\text{g}/\text{dL}$

## 4. SCREENING SCHEDULES AND MEDICAL MANAGEMENT

### A. Overview

The goal of lead screening is to identify individuals who have been exposed to lead, provide appropriate interventions and reduce the risk of exposure. If an EBLL is detected, the nature of care and the frequency of follow-up testing vary with the patient's age and the BLL. Whatever the age, individuals with EBLs (or their caregiver) should be educated about what lead poisoning is and what they can do about it. **The single most important factor in managing lead poisoning is identifying and reducing exposure to lead.** A variety of culturally appropriate educational pamphlets are available; they should be sent to the family or individual identified as having an EBLL.

### B. Anticipatory Guidance

Anticipatory guidance regarding lead hazard identification and risk reduction measures should be a routine part of an ongoing educational approach for pregnant women, children and their families. Medical providers should provide source identification and risk reduction educational materials. There is no safe level of lead and the majority of children and adults in the U.S. have blood lead levels less than 2  $\mu\text{g}/\text{dL}$  (CDC 2005). Individuals should reduce lead exposure and maintain the lowest possible blood lead level.

Lead exposure during pregnancy is especially problematic as lead can cross the placenta and interfere with normal development of the fetal brain. Pregnant women can be exposed to lead through all of the sources described previously. Pregnant or women likely to become pregnant should try to avoid exposure and maintain lead levels below 10  $\mu\text{g}/\text{dL}$  and as low as possible. Anticipatory guidance should focus on decreasing the risk of exposure to lead by advising against activities such as remodeling or repainting the baby's room or restoring old furniture. Women exposed occupationally may need special counseling.

### C. Screening Protocols for Children

All children should be assessed for risk of lead poisoning by administration of the Oregon Lead Risk Assessment Questionnaire (see below). This questionnaire should be administered at 1 and 2 years of age and between 3 and 5 years of age if not previously screened. If the answer to any question is "Yes" or "Don't know" a blood lead test should be performed. Follow-up questions may be needed to clarify responses.

1. Has your child lived in or regularly visited a home, child care or other building built before 1950?
2. Has your child lived in or regularly visited a home, child care or other building built before 1978 with recent or ongoing painting, repair and/or remodeling?
3. Is your child enrolled in or attending a Head Start program?
4. Does your child have a brother, sister, other relative, housemate or playmate with lead poisoning?

5. Does your child spend time with anyone that has a job or hobby where they may work with lead?  
*Examples: painting, remodeling, auto radiators, batteries, auto repair, soldering, making sinkers, bullets, stained glass, pottery, going to shooting ranges, hunting or fishing.*
6. Do you have pottery or ceramics made in other countries or lead crystal or pewter that are used for cooking, storing or serving food or drink?
7. Has your child ever taken any traditional home remedies or used imported cosmetics?  
*Examples: Azarcon, Alarcon, Greta, Rueda, Pay-loo-ah, or Kohl*
8. Has your child been adopted from, lived in or visited another country?
9. Do you have concerns about your child's development or behavior?

#### **D. Diagnostic Blood Lead Testing**

Blood lead testing should also be considered as part of a diagnostic work-up of any child regardless of age with the following symptoms:

- **Behavioral problems:** aggression, hyperactivity, attention deficit, school problems, learning disabilities, excessive mouthing or pica behavior and other behavior disorders.
- **Developmental problems:** growth, speech and language delays and/or hearing loss.
- **Symptoms or signs consistent with lead poisoning:** irritability, headaches, vomiting, seizures or other neurological symptoms, anemia, loss of appetite, abdominal pain and cramping or constipation.
- **Ingestion of foreign body.**

#### **E. Follow-up for Elevated Blood Lead Results**

Any capillary screening BLL above 10 µg/dL must be confirmed with a venous sample. The higher the BLL on the capillary test, the more urgent the need for venous confirmatory testing.

The table below is to be used as guidance. Case managers and medical providers should consider individual patient characteristics and caregiver capabilities and adjust the frequency of follow-up tests accordingly.

**Exception to confirmatory testing schedule:** If recent known exposure (e.g. foreign body ingestion, recent remodeling) confirm as soon as possible for all blood lead levels.

**Table 4. Follow-up Schedule for Childhood Blood Lead Results**

<b>BLL (µg/dL)</b>	<b>Confirmation Testing (venous)</b>	<b>Follow-Up Testing (venous)</b>	<b>Case-management (with confirmed EBLL)</b>
5-9  Level of Concern	Confirmatory testing recommended. Caregiver should discuss with their medical provider.	Caregiver should discuss with their medical provider.	No local health department case management required. If recent known exposure (e.g. foreign body ingestion, recent remodeling, etc.) confirm as soon as possible. Medical provider to provide source identification and risk reduction education. No additional action necessary unless exposure source or blood lead level change.
10-19  Public Health Action Level	30 days	3 months	Have medical provider complete medical information form (OCLPPP MIF 01). Send letter to caregiver confirming child's BLL. Complete environmental questionnaire over phone or perform on-site investigation to determine possible lead hazards. Take environmental samples as needed. Refer family to lead hazard control services if applicable and/or available. Provide nutritional and risk reduction education. If WIC enrolled notify local WIC program of EBLL. Refer family to WIC, social services, public assistance and early intervention as needed. Assure follow up blood lead testing. Advise medical provider of environmental investigation results and need to include history of EBLL in problem list of child's permanent medical record. Monitor for developmental problems and discuss with caregiver and medical provider of need for long-term developmental surveillance. Send copies of forms to DHS.
20-44	7 days	1 month	Above actions, plus: Children with BLLs $\geq 20$ µg/dL should have a physical exam.
45-59	2 days	Chelation with subsequent follow-up.	Above actions plus chelation therapy. Follow-up testing schedule determined by medical provider.
60-69	1 day	Chelation with subsequent follow-up	Above actions plus chelation therapy. Follow-up testing schedule determined by medical provider.
>70	Immediately as an emergency lab test	Chelation with subsequent follow-up	Above actions, plus hospitalize child for chelation therapy immediately. Follow-up testing schedule determined by medical provider. The child should not be permitted to return to any environment that would expose him/her to lead.

## **F. Case Management Time Frame**

Time frame for beginning case management or providing environmental investigations should begin as soon as confirmatory EBLL results are received.

## **G. Follow-up for Adult Cases**

### **1. Occupational Exposures**

All occupational case follow-up will be conducted by DHS staff. If the initial report form is sent to the LPHA directly by a medical provider or lab, and you cannot tell if it is an occupational exposure, the LPHA may contact the provider or refer the report to DHS to determine the type of exposure. Listings of firms with at least one employee having a BLL  $25 \mu\text{g}/\text{dL}$  and above are provided to OR-OSHA on a quarterly basis.

### **2. Non-Occupational Exposures**

#### **25-49 $\mu\text{g}/\text{dL}$**

Consult with DHS or interview the patient's physician (DHS 44-2) to obtain suspected source of exposure and determine if other household members, especially children and pregnant women, are also being exposed. Consult with DHS to determine whether additional follow-up actions are needed. If exposure source is non-occupational please complete the Adult Lead Case Interview form (DHS 44-3).

#### **$\geq 50 \mu\text{g}/\text{dL}$**

Same actions, plus: If occupational exposure, worker should be transferred to a job that doesn't expose the employee to lead.

#### **$\geq 60 \mu\text{g}/\text{dL}$**

BLLs at this level should be considered urgent. The Oregon Poison Center (1-800-222-1222) is a referral source for physicians requesting advice on treatment of adults. The greatest concern with adult cases is determining the source of exposure and determining whether other individuals are at risk from the same lead source.

### **3. Lead Exposure during Pregnancy**

Lead exposure during pregnancy is especially problematic as lead can cross the placenta and interfere with normal development of the fetal brain. High levels of lead during pregnancy can also cause miscarriage, stillbirth, low infant birth weight and premature delivery. Pregnant women can be exposed to lead through all of the sources described previously. Because lead is stored in bone, women who have worked or been exposed to lead in the past may have higher lead levels because lead can be released into the blood during pregnancy. Pregnant or women likely to become pregnant should try to avoid exposure and maintain lead levels below  $10 \mu\text{g}/\text{dL}$  and as low as possible. Guidance for pregnant women should focus on proper nutrition, sources of lead exposure and ways to reduce exposure before and during pregnancy. Risk factors such as pica, poor nutrition, county of origin, immigrant status, hobbies and occupations should be discussed. Women exposed occupationally may need special risk-reduction counseling.

## H. Chelation Therapy

Chelating agents solubilize lead, depleting it from soft and hard tissue and thereby reducing its acute toxicity. While chelation therapy is considered a mainstay in the medical management of children with BLLs  $\geq 45$   $\mu\text{g}/\text{dL}$ , it should be used with caution. Treatment with chelating agents lowers BLLs, but does not improve scores on tests of cognition, behavior, or neuropsychological functions except in patients with extremely high BLLs. Primary care providers (PCP) should consult with the DHS Lead Poisoning Prevention Program or Oregon Poison Center prior to using chelating agents. In the short term, chelation can redistribute body lead, causing an increase in lead concentrations in soft tissue, including the brain. Some chelators may remove essential minerals, such as calcium, iron, zinc, copper and other trace minerals, as well as lead. There is general agreement that individuals with very high BLLs (in children  $\geq 45$   $\mu\text{g}/\text{dL}$ ; in adult  $\geq 100$   $\mu\text{g}/\text{dL}$ ) should be chelated. Patients with lower BLLs (children  $< 25$   $\mu\text{g}/\text{dL}$ ; adults  $< 65$   $\mu\text{g}/\text{dL}$ ) are usually not chelated unless symptomatic and/or unresponsive to removal from exposure. For patients with in-between BLLs, chelation may or may not be appropriate.

## I. Case Closure

It often takes an extended period of time to complete all elements of case management. Cases may be closed when the following criteria have been met:

- 1. Laboratory case closure-** Child's BLL has declined to below 10  $\mu\text{g}/\text{dL}$  on **two** consecutive tests at least three months apart.
- 2. Administrative case closure-** Child is lost to follow-up. If child/family moves out of state, please notify the Lead Poisoning Prevention Program so that they can notify the health department in the state where the child has relocated. The case can also be closed if the medical provider or family does not plan on further follow-up testing. There should be at least three documented attempts to contact the family, whether by phone or letters. If possible, the last attempt to reach family should be through certified mail.