APPENDIX C: LEAD SCREENING

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C.1 Blood Lead Screening Procedures and Follow-up Testing

Every Texas child should have a blood lead test at 12 months of age and 2 years of age. For all children who are enrolled in the Texas Health Steps (THSteps) Program, blood lead testing is mandatory when they are 12 months of age and 2 years of age or whenever they receive their first checkup (up to and including the 6-year checkup). Documentation of the questions contained in the Form Pb-110, Risk Assessment for Lead Exposure: Parent Questionnaire, is required for the THSteps checkup. A provider-created medical record must contain the completed questions on the Risk Assessment for Lead Exposure screening tool and the results based on the questions on the completed form. If the completed form is not retained in the medical record, a copy of the form must be available for review. The questionnaire should be administered to the parent by the provider at all subsequent visits when a blood lead test is not performed for clients birth through 6 years of age. A “yes” or “don’t know” answer to any question on the risk assessment questionnaire indicates that a blood lead test should be administered.


C.2 Symptoms of Lead Poisoning

Children with elevated blood lead levels (EBLLs) in the range of 10–45μg/dL may be asymptomatic, although impairment of neurodevelopment may become evident as they get older. Very high lead levels may cause colic, constipation, anorexia, or vomiting. Children with venous blood lead levels (BLLs) over 44μg/dL are eligible for medical intervention. However, it is important not to equate the absence of symptoms with the absence of toxicity.

C.3 Measuring Blood Lead Levels

A blood lead test is the only definitive method to detect recent or ongoing exposure. BLLs are measured as micrograms of lead per deciliter (μg/dL) of whole blood. The Centers for Disease Control and Prevention (CDC) define a blood lead level of 10μg/dL as a level of concern. This is the measurement standard in Texas for an EBLL and requires follow-up. The blood lead “level of concern” should not be interpreted as a definitive toxicological threshold. Mounting evidence suggests adverse health effects in children with BLLs below 10μg/dL.

Blood lead tests, in order of occurrence:

- Screening test—A blood lead test that indicates whether a client may have an EBLL.
- Diagnostic test—A venous blood lead test that is performed within recommended guidelines to determine the status of a client who has previously had an EBLL on a screening test (See Pb:109 for recommended guidelines). Unless the diagnostic test is performed within four weeks of the screening date, it is not a diagnostic test but rather a new screening test.
- Follow-up test—A venous blood lead test to monitor the status of a client with a previously elevated diagnostic test for lead.

Note: A follow-up test is not related to the THSteps follow-up visit. A visit to monitor a child with EBLL would be submitted as an acute care evaluation and management (E/M) visit.

Providers are responsible for conducting a diagnostic test when a screening test finds a lead level of 10μg/dL or greater. Blood for a screening test may be drawn from a venous or capillary site. A venous blood draw is strongly recommended and preferred. To order free venous sample supplies from the DSHS Laboratory, call (toll free) 1-888-963-7111, Ext. 7661.

Note: The capillary lead screen analysis is subject to a false positive result from skin lead contamination during collection. A soap and water wash of the patient’s hands or feet and the collector’s hands (or the wearing of gloves) must be performed to minimize the chance of contamination. Alcohol cleansing alone is not sufficient.
If the screening test is 10μg/dL or above, recalling a client for a diagnostic sample may be billed as a THSteps follow-up visit. If the screening test was rejected due to clotting, insufficient quantities, or perceived contamination, the provider must repeat the sample as a diagnostic test. Again, the provider may bill the visit and analysis as an E/M visit. Providers can submit the specimen to the DSHS Clinical Chemistry Laboratory using the appropriate Department of State Health Services (DSHS) Laboratory Specimen Submission form (the same way as for all other THSteps laboratory blood specimens). If the initial blood lead test is collected as part of a THSteps medical checkup, it must be submitted to the DSHS Laboratory; diagnostic and follow-up tests for the same client may be sent to a private laboratory.

Refer to:

Subsection C.5, “Form Pb-109: Reference for Follow-up Blood Lead Testing and Medical Case Management” in this appendix for interpretation of laboratory test results and guidelines for follow-up for clients with elevated blood lead levels.

Subsection 5.3.2.7.6, “Required Laboratory Tests Related to Medical Checkups” in this handbook.

Subsection 5.3.1.8, “Newborn Examination” in this handbook.

Providers can find more information about the medical and environmental management of lead-poisoned children on the DSHS Texas Childhood Lead Poisoning Prevention Program (TX CLPPP) website at www.dshs.state.tx.us/lead or by calling 1-800-588-1248.

C.4 Environmental Lead Investigation (ELI) Services

C.4.1 Enrollment
State and local health departments that employ or contract certified lead risk assessors must be enrolled with Texas Medicaid as a THSteps provider to perform ELI services.

• State and local health departments that are currently enrolled in Texas Medicaid must complete the THSteps Provider Enrollment Application.

• State and local health departments that are not currently enrolled in Texas Medicaid must complete the Texas Medicaid Provider Enrollment Application and the THSteps Provider Enrollment Application.

C.4.2 Services/Benefits, Limitations and Prior Authorization
ELI services must be billed with procedure code T1029, which is restricted to diagnosis codes V1586 and 9849. Texas Medicaid may only reimburse a state or local health department for the certified lead risk assessor’s time and activities during an onsite investigation of a client’s home or primary residence. Laboratory analysis of environmental substances (e.g., water, paint, or soil) is not a benefit of Texas Medicaid.

Children who have confirmed and persistent EBLLs may require an ELI to determine the source of the lead exposure. An ELI is completed in a client’s home or primary residence by a certified lead risk assessor to determine whether a lead hazard exists and, if so, whether the lead source could be the cause of the EBLL.

C.4.2.1 Requesting an ELI
For the purpose of requesting an ELI, a lead screening provider is a physician, nurse practitioner (NP), clinical nurse specialist (CNS), or physician’s assistant (PA) who conducts blood lead tests for a THSteps client. Lead screening providers may submit a request for an ELI after a blood lead test has been conducted and there is evidence of persistent and confirmed EBLLs for the client. An EBLL is defined as a BLL of 10μg/dL or higher.
An ELI may be considered medically necessary if the results of the most recent blood lead test indicate any of the following:

- A venous BLL result of 10μg/dL to 19μg/dL from two separate specimens conducted at least 12 weeks apart
- A venous BLL result of 20μg/dL or greater from one specimen

**Note:** The ELI must be requested as soon as possible and no later than 30 days after obtaining the most recent BLL that indicates medical necessity. The lead screening provider must maintain in the client's medical record the ELI request and the documentation of the BLLs that indicates medical necessity.

The lead screening provider can request an ELI by completing Form Pb-101 "Environmental Lead Investigation Request" and submitting it to the TX CLPPP. TX CLPPP will review the request and determine whether the criteria for an ELI have been met. If an ELI request meets the TX CLPPP criteria, TX CLPPP sends a referral for an ELI to a state or local health department that is enrolled as a THSteps provider so that it can be assigned to a certified lead risk assessor.

An ELI can be performed under one of the following circumstances:

- No previous investigation of the current home or primary residence has been performed.
- There is a change in the client's current home or primary residence.

If a previous investigation of the current home or primary residence has been performed and there has been a change in the client's residential environment, TX CLPPP will determine whether the criteria have been met for an additional ELI.

**C.4.2.2 Prior Authorization**

Prior Authorization is not required for ELI services.

**C.4.3 Documentation Requirements**

The state or local health department that is responsible for conducting the investigation must maintain the following documentation in the client's medical record:

- The TX CLPPP fax transmittal cover sheet that refers the ELI request to the local health department. The cover sheet must include:
  - The site to be assessed.
  - A statement that identifies the site as the client's primary place of residence.
- A completed Form Pb-101: Environmental Lead Investigation Request (two pages) that includes the:
  - Name of the referring lead screening provider.
  - BLLs that indicate medical necessity.
  - Client's diagnosis (code V1586 or 9849).
- A completed Form Pb-103: Elevated Blood Lead Level Investigation Questionnaire (all pages) that includes the:
  - Date and location of the investigation.
  - Name of the client who received the investigation.
  - Identifying information and signature of the certified lead risk assessor who conducted the investigation. The person listed as the assessor must be the same person who signs the report.

**Note:** Forms Pb-101 and Pb-103 are located on the TX CLPPP website at www.dshs.state.tx.us/lead/providers.shtm.
C.4.4 Claims Filing and Reimbursement

C.4.4.1 Claims Filing

ELI services must be submitted to TMHP in an approved electronic format or on the CMS-1500 paper claim form. Providers can purchase CMS-1500 paper claim forms from the vendor of their choice. TMHP does not supply the forms.

The following documentation must be submitted with the claim:

- The TX CLPPP fax transmittal cover sheet that refers the ELI request to the state or local health department. The cover sheet must include:
  - The site to be assessed.
  - A statement that identifies the site as the client’s primary place of residence.
- A completed Form Pb-101: Environmental Lead Investigation Request
- The first and last page of Form Pb-103: Elevated Blood Lead Level Investigation Questionnaire, which has been completed by the lead risk assessor

An ELI is subject to retrospective review and may be recouped if the documentation maintained by the lead screening and ELI providers does not support medical necessity.

Refer to: Section 3: TMHP Electronic Data Interchange (EDI) (Vol. 1, General Information) for information about electronic claims submissions.

Section 6: Claims Filing (Vol. 1, General Information) for general information about claims filing.

Subsection 6.5, “CMS-1500 Paper Claim Filing Instructions” Section 6, "Claims Filing" (Vol. 1, General Information) for instructions on completing paper claims.

C.4.4.2 Reimbursement

Providers can refer to the online fee lookup (OFL) or the applicable fee schedule on the TMHP website at www.tmhp.com.
C.5 Form Pb-109: Reference for Follow-up Blood Lead Testing and Medical Case Management

**Healthcare Provider:**
- Immediately retest the child if the blood lead test result is invalid due to “Clotted” or “Insufficient Quantity.”
- Follow the flowchart below to determine if or when follow-up testing and medical case management is necessary.

### Table 1: Schedule for Obtaining a Diagnostic Venous Sample

<table>
<thead>
<tr>
<th>Capillary Screening Test Result (mcg/dL)</th>
<th>Perform Venous Diagnostic Test Within</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-44</td>
<td>1 week - 4 weeks&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>45-59</td>
<td>48 hours</td>
</tr>
<tr>
<td>60-69</td>
<td>24 hours</td>
</tr>
<tr>
<td>70 and up</td>
<td>Immediately as an emergency lab test</td>
</tr>
</tbody>
</table>

### Table 2: Schedule for Follow-Up Venous Blood Lead Testing

<table>
<thead>
<tr>
<th>Venous Blood Lead Level (mcg/dL)</th>
<th>Early Follow-up (first 2-4 tests after identification)</th>
<th>Late Follow-up (after BLL begins to decline)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-14</td>
<td>3 months</td>
<td>6-9 months</td>
</tr>
<tr>
<td>15-19</td>
<td>1-3 months</td>
<td>3-6 months</td>
</tr>
<tr>
<td>20-24</td>
<td>1-3 months</td>
<td>1-3 months</td>
</tr>
<tr>
<td>25-44</td>
<td>2 weeks - 1 month</td>
<td>1 month</td>
</tr>
<tr>
<td>45 and up</td>
<td>As soon as possible</td>
<td>Chelation with subsequent follow-up&lt;sup&gt;c&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

### Table 3: Medical Case Management for Children with a Diagnostic Elevated Blood Lead Levels

<table>
<thead>
<tr>
<th>10-14 mcg/dL</th>
<th>15-19mcg/dL</th>
<th>20-44mcg/dL</th>
<th>45-69mcg/dL</th>
<th>70 or higher mcg/dL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Lead Education: Dietary &amp; Environmental</td>
<td>1. Lead Education: Dietary &amp; Environmental</td>
<td>1. Lead Education: Dietary &amp; Environmental</td>
<td>1. Lead Education: Dietary &amp; Environmental</td>
<td>1. Hospialize and commence chelation therapy&lt;sup&gt;e&lt;/sup&gt;</td>
</tr>
<tr>
<td>2. Follow-up BLL monitoring</td>
<td>2. Follow-up BLL monitoring</td>
<td>2. Follow-up BLL monitoring</td>
<td>2. Follow-up BLL monitoring</td>
<td>2. Proceed according to actions for 45-69 mcg/dL</td>
</tr>
<tr>
<td>• A follow-up BLL persists at least 12 weeks after diagnostic venous test</td>
<td>• A follow-up BLL persists at least 12 weeks after diagnostic venous test, or</td>
<td>• BLLs increase</td>
<td></td>
<td>9. Abdominal X-ray with bowel decontamination if indicated</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10. Chelation therapy&lt;sup&gt;c&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

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<sup>b</sup> The higher the BLL on the screening test, the more urgent the need for diagnostic testing.

<sup>c</sup> Health care providers should consult with an expert in the management of these lead levels before administering chelation. Chelation therapy should never be administered before a venous diagnostic is obtained. Contact your local Poison Control Center or visit Texas CLPPP for a referral.

Tables adapted from Managing Elevated Blood Lead Levels Among Young Children: CDC, March 2002

Texas Childhood Lead Poisoning Prevention Program
PO Box 149347 • Austin, TX 78714-9347 • 1-800-588-1248 • www.dshs.state.tx.us/lead

(Rev. 07/08/10)
C.6 Lead Poisoning Prevention Educational Materials and Forms

Providers may order lead poisoning prevention educational materials and forms by written request to the DSHS warehouse or by contacting the warehouse online at webds.dshs.state.tx.us/mamd/litcat/default.asp. Other materials are available for download from the Texas CLPPP website at www.dshs.state.tx.us/lead.

Written requests for warehoused materials can be faxed to 1-512-458-7269 or mailed to the DSHS warehouse at:

DSHS Literature and Forms
Attn: Warehouse Manager
1100 West 49th Street
Austin, TX 78756-3199

Providers should include the catalog number, title of item, quantity needed, and return mailing address.

The following table lists materials available to providers at no cost.

<table>
<thead>
<tr>
<th>Free Lead Poisoning Prevention Materials Available Online and from the DSHS Warehouse</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-26** Protect Your Children From Lead Poisoning</td>
</tr>
<tr>
<td>1-26a** Protect Your Children From Lead Poisoning (Spanish)</td>
</tr>
<tr>
<td>1-307** Lead Around the Home (English/Spanish, front and back)</td>
</tr>
<tr>
<td>1-308** Lead in Your Food and Remedies (English/Spanish, front and back)</td>
</tr>
<tr>
<td>1-309** Lead in the Workplace and at Home (English/Spanish, front and back)</td>
</tr>
<tr>
<td>1-310** My Child Has a High Lead Level (English/Spanish, front and back)</td>
</tr>
<tr>
<td>1-311** How Lead Affects Your Child’s Health (English/Spanish, front and back)</td>
</tr>
<tr>
<td>1-312** Educator’s Brochure</td>
</tr>
<tr>
<td>1-313** Getting a Good Specimen (Poster)</td>
</tr>
<tr>
<td>Pb-100*** Possible Sources of Lead Exposure: Interview Questions</td>
</tr>
<tr>
<td>Pb-101*** Request for Environmental Investigation</td>
</tr>
<tr>
<td>Pb-102*** Follow-up of an Elevated Blood Lead Level</td>
</tr>
<tr>
<td>Pb-104*** Physician Checklist for Parent Education Topics</td>
</tr>
<tr>
<td>Pb-109*** Reference for Follow-up Blood Lead Testing and Medical Case Management</td>
</tr>
<tr>
<td>Pb-110*** Risk Assessment for Lead Exposure: Parent Questionnaire</td>
</tr>
<tr>
<td>13-32* Get the Lead Out With Good Nutrition</td>
</tr>
</tbody>
</table>

* Available only from the warehouse
** Available from the warehouse or online (PDF format) from the Texas CLPPP website at www.dshs.state.tx.us/lead/default.shtm
*** Available only online (PDF format)