

Elevated Blood Lead Investigation Guideline

Contents

| CASE DEFINITION | 4 |
|---|-----|
| LABORATORY ANALYSIS | |
| SCREENING CRITERIA | |
| INVESTIGATOR RESPONSIBILITIES | 6 |
| Elevated Blood Lead Level, Child < 16 years | 6 |
| Elevated Blood Lead Level, Adult | .10 |
| DATA MANAGEMENT AND REPORTING TO THE KDHE | |
| ADDITIONAL INFORMATION / REFERENCES | .13 |
| Appendix A: Lead Risk Questionnaire | .14 |
| Appendix B: Elevated Blood Lead Case Investigation and Management Algorithm | .16 |
| Appendix C: Short Telephone Interview-Child | |
| Appendix D: Elevated Blood Lead Education Packet-Child | |
| Appendix E: In-home Interview-Child Survey Ø | |
| Appendix F: Short Telephone Interview-Adult ✓ | |
| Appendix G: Elevated Blood Lead Education Packet-Adult | |
| Word Document Template: Summary of In-home Interview | |

Attachments can be accessed through the Adobe Reader's navigation panel for attachments. Throughout this document attachment links are indicated by this symbol ; when the link is activated in Adobe Reader it will open the attachments navigation panel. The link may not work when using PDF readers other than Adobe.

Effective Date: 01/2016 Published Date: 05/xx/2019
Current version: 05/2019 Last Updated: 05/08/2019

Revision History:

| Date | Replaced | Comments |
|---------|----------|---|
| 05/2019 | 01/2018 | Updated all sections of the guideline. New adult education packet resource. |
| 01/2018 | 01/2017 | Updated notification section for all lab results to be reported within 24 hours. |
| 01/2017 | 11/2013 | Updated case definitions and modified all sections of the guideline. New resources added for investigation. |
| 11/2013 | - | First version |

Effective Date: 01/2016 Version 05/2019

Elevated Blood Lead Investigation Disease Management and Investigation Guidelines

CASE DEFINITION

Elevated Blood Lead Level, Childhood

Criteria for Case Investigation and Management:

 Blood lead test result greater than or equal to 5 micrograms per deciliter (µg/dL) for persons less than 16 years of age on the day the blood sample was drawn.

Elevated Blood Lead Level, Adult

Criteria for Case Investigation and Management:

 Blood lead test result greater than or equal to 5 micrograms per deciliter (µg/dL) for persons 16 years of age or older on the day the blood sample was drawn.

LABORATORY ANALYSIS

The results of any blood lead draw (capillary, venous or unknown sample type) on a Kansas child or adult that produces a quantifiable result and is analyzed by a Clinical Laboratory Improvement Amendments (CLIA)-certified facility or a portable device designed by the manufacturer to detect lead in a blood sample is reportable to the Kansas Department of Health and Environment (KDHE).

The Kansas Health and Environmental Laboratories (KHEL) will analyze blood samples collected by local health departments (LHDs) and other approved facilities via:

- collection of a capillary sample using a capillary tube (microtainer or vacutainer)
- collection of a venous sample for Medicaid patients or uninsured patients

Additionally, KHEL will provide blood collection supplies at no cost to Kansas LHDs and other approved facilities. Supplies must be ordered on a "Requisition for Laboratory Specimen Kits" form and samples submitted with a "Universal Form." Instructions on how to order supplies and submit specimens can be found at www.kdheks.gov/labs/packaging_and_shipping.html. Note: Submitting facilities should avoid covering required information fields located on the top of the form with bar codes or other markings.

Capillary samples are used only for screening purposes; meaning the first time a child or adult has been tested for lead. All elevated capillary samples with a result of 5 ug/dL or greater must be confirmed by a venous sample. See the <u>Elevated Blood Lead Case Investigation and Management Algorithm (Appendix B)</u> for the recommended testing schedule. Once a patient has a confirmed elevated blood lead level from a venous sample, all follow-up testing must use a **venous sample**.

Additional resources for laboratory testing can be found at KHEL website:

Analysis: www.kdheks.gov/labs/blood lead/blood lead analysis.htm

- Collection: www.kdheks.gov/labs/blood_lead/blood_lead_collection.htm
- Brochure: www.kdheks.gov/neonatal/download/BL_Brochure_for_collectors.pdf

EPIDEMIOLOGY

According to the Centers for Disease Control and Prevention, approximately half a million children in the United States ages 1-5 years have blood lead levels greater than 5 micrograms of lead per deciliter of blood. The most common source of lead poisoning in children comes from deteriorating lead-based paint, and in Kansas, a large proportion of the homes were built before 1978 when the addition of lead in residential paint was banned. Other sources of lead exposure include lead pellets from guns, some imported cosmetics, spices, and medicines, use of glazed pottery for cooking or storing food, certain hobbies, and certain occupations including lead battery manufacturing (take-home lead).

DISEASE OVERVIEW

A. Agent:

Lead is found throughout our environment. It is a naturally occurring bluishgray metal found in small amounts in the Earth's crust. A good amount of lead in our environment comes from human activities including burning fossil fuels, mining, and manufacturing. In the United States, the most common source of exposure for lead-poisoned children is lead-based paint, while most exposures in adults are work-related. A blood lead test is the only way to tell if a child or adult has an elevated blood lead level.

B. Clinical Description:

The health effects of lead exposure include intellectual and behavioral deficits in children and hypertension and kidney disease in adults (ATSDR, 1999).

C. Routes of exposure:

The most common routes of exposure to lead are ingestion and inhalation.

D. Treatment:

The primary management methods for blood lead poisoning in children and adults are identification and removal of the exposure source(s) or putting barriers in place to avoid introducing lead into the body. In the case of very high blood lead levels, a physician may need to consider chelation therapy to help reduce the amount of lead in the body. For children, a **venous** blood lead level \geq 45 µg/dL may warrant the use of chelation therapy. The LHD should immediately recommend that the physician managing the child contact the Pediatric Environmental Health Specialty Unit (PEHSU) at Children's Mercy Hospital for a free medical consultation. The PEHSU can be contacted at (913) 588-6638 or toll free at (800) 421-9916.

In adults, chelation therapy is generally reserved for individuals with very high blood lead levels or signs of toxicity. Chelation therapy should be strongly considered for adults with **venous** levels > 80 ug/dL and is almost always

warranted for levels \geq 100 ug/dL. The LHD should recommend to the patient that he/she contacts his/her physician to discuss treatment.

NOTIFICATION TO PUBLIC HEALTH AUTHORITIES

All blood lead test results performed on a Kansas resident are reportable by laboratories to the KDHE's Bureau of Epidemiology and Public Health Informatics within 24 hours, except if the reporting period ends on a weekend or state-approved holiday. In that case, the report shall be submitted by 5:00 p.m. on the next business day following the weekend or the holiday. Reports should be submitted electronically using the Electronic Laboratory Reporting platform or the Blood Lead Results Reporting Web application located on the KDHE website.

Blood Lead Results Reporting Application: https://keap.kdhe.state.ks.us/ReportableConditions/

User Instructions are available on the main page of the application. Providers must set up a password-protected account to obtain access to the application. For questions regarding the Blood Lead Results Reporting Application, or to set up an account, contact the application administrator:

Laurie Render <u>Laurie.Render@ks.gov</u> 785-296-4499

SCREENING CRITERIA

It is recommended that all children under age 6 years be screened using the <u>Lead Risk Questionnaire</u> (Appendix A). While the LHD may choose to offer blood lead testing services to a wider clientele, the following population subgroups should have priority:

- Medicaid, underinsured, or uninsured children under the age of 6 years
- All children under age 6 years that have one or more risk factors identified on the Lead Risk Questionnaire
- Pregnant or lactating women
- Any close family member of a child with an elevated blood lead level

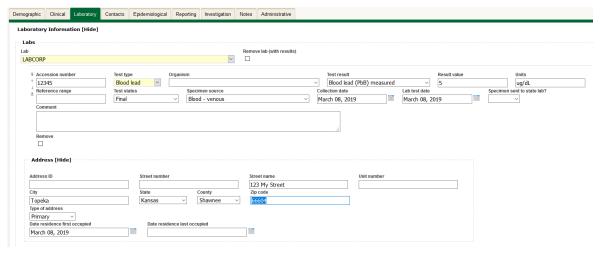
INVESTIGATOR RESPONSIBILITIES

Elevated Blood Lead Level, Child < 16 years

Definition: Blood lead test result greater than or equal to 5 micrograms per deciliter (μ g/dL) for persons less than 16 years of age on the day the sample was drawn.

Upon notification of an elevated blood lead test result for a child, the local health department (LHD) investigator should:

1) Accept the case in EpiTrax within 3 business days.



- 2) In the [Laboratory] tab, note the result value and the source.
 - Note: the address in this tab is the current residential address at the time of this test. It may not match the address listed in the demographic tab if the patient has moved. Please verify that this is the correct address.
- 3) Refer to the <u>Elevated Blood Lead Case Investigation and Management Algorithm (Appendix B)</u>.
 - Note: all capillary results must be confirmed by a venous sample before
 any case investigation or management occurs. Refer to the <u>Elevated</u>
 <u>Blood Lead Case Investigation and Management Algorithm (Appendix
 B)</u> to determine how urgently the confirmatory test should be performed.
- 4) If investigation and case management is needed for the case, which begins with a telephone interview, first gather the following information from the primary care physician/nurse and/or the family. Update the EpiTrax record with the following information:
 - In the View Morbidity Event page VIEW MORBIDITY EVENT , select Edit mode.
 - In the [Demographic] tab:



- Verify name of patient and correct spelling
- Enter name of parent/guardian
- Enter guardian relationship to patient
- Enter contact information for parent/guardian
- Verify patient date of birth
- Enter patient gender
- Enter patient ethnicity
- Enter patient race
- Enter patient primary language
- Enter insurance type

Choose the [Clinical] tab:



- Update treatment given by the physician
- Verify ordering provider name
- Verify ordering provider phone
- Verify ordering facility name
- Verify ordering facility phone
- Choose the [Laboratory] tab:



 Verify the specimen source as capillary or venous. For parents, you may need to explain that a capillary blood sample would have been taken as a finger stick, while the venous sample would have been drawn from the vein.

5) Choose the Investigation tab:



 You should see the Blood Lead Poisoning Form v2019 in use for new cases. If it is properly loaded, you will see the following tabs.



7) Open the [Investigation Checklist-Child] tab



- Make sure you are in Edit mode
- KDHE automatically sends letters when elevated test results are received. If the **Date** and **Completed by options** for "mailed letter to family and physicians re: elevated result" are not filled out, contact KDHE to confirm that letters were sent.
- KDHE automatically sends one-page fact sheets when test results are received. If the **Date** and **Completed by** options for "mailed one-page fact sheet to parents and physicians" option is not filled out, contact KDHE to confirm that fact sheet was sent.
- LHD will use this checklist to record other actions taken by the LHD.
- Open the [Short Telephone Interview Elevated Blood Lead Child < 16 years] tab

Investigation Checklist-Child Short Telephone Interview Elevated Blood Lead Child < 16 years In-home Elevated Blood Lead Investigation-Child

- Make sure you are in Edit mode
- If the LHD investigator prefers, he/she can print a hard copy of the <u>Short Telephone Interview-Child (Appendix C)</u>. However, he/she must enter the data into the form in EpiTrax. Data not entered in the EpiTrax form

cannot be exported later for analysis.

- 9) At the conclusion of the Short Telephone Interview, the investigator should discuss the potential source(s) of the lead exposure. Tell the respondent that you will mail him/her an educational packet.
 - Discuss with the family and physician when the child should be retested.
 Refer to the <u>Elevated Blood Lead Case Investigation and Management Algorithm (Appendix B)</u>.
 - The LHD investigator should mail the <u>Elevated Blood Lead Education</u>
 <u>Packet-Child (Appendix D)</u>

 to BOTH the parents and the physician in the case of a child patient.
 - Fill in the **Date** and **Completed By** fields within the Investigation Checklist-Child form.
- 10) If an in-home EBL investigation needs to be conducted for a child (EBL investigations are not routinely conducted for an adult case), it should only be conducted by a state certified EBL investigator. If resources are limited and the LHD or family does not have access to an EBL Certified Investigator, open the In-home Interview-Child Survey (Appendix E).
 - - Note: The in-home, face-to-face interview can be conducted by any LHD staff. HOWEVER, collection of environmental samples and on-site testing in and around the home to verify lead contamination <u>must be</u> conducted by an EBL Certified Investigator. LHD staff <u>should not</u> make a visual inspection of the property or make an official declaration about the source or sources of lead exposure. The responses during the face-to-face interview should only guide a discussion about the <u>potential</u> sources of lead exposure in the home, the recommended cleaning and maintenance techniques, and proper nutrition and diet.
 - A template report summarizing the findings from the In-home Interview can be found in the <u>attachments</u> of this pdf. The report reviews the potential source(s) of lead exposure based on interview responses and reviews education given to parents/guardians. It clearly states that if parents/guardians want sampling results to verify potential source(s) of lead exposure, they should have an inspection done by an EBL Certified Investigator. A list of approved professionals can be found at www.kshealthyhomes.org/contact_lead_professionals.htm under the Lead Activity Firms link.
 - For more information on the certification process, please contact the KDHE Healthy Homes and Lead Hazard Prevention Program at (866) 865-3233 or email at KDHE.lead@ks.gov.
 - Fill in the **Date** and **Completed By** fields within the Investigation Checklist-Child form.
- 11) For any child with a venous sample > 15 ug/dL, you may contact the

Pediatric Environmental Health Specialty Unit (PEHSU) at Children's Mercy Hospital. The PEHSU is able to provide a free telephone medical consultation to either LHD staff or to the child's provider to discuss medical management. The PEHSU is a resource to help with management of children with very high lead levels. The PEHSU is not primarily responsible for case investigation and management. **The LHD investigator is still responsible for case investigation and management.**

- To grant access to the case to the PEHSU, select Route to Local Health Depts. under Jurisdictions. Check PCC (Poison Control Center) and route event.



 To facilitate sharing of information between the LHD, physicians, and PEHSU, the [Notes] tab of the case in EpiTrax should be kept up to date.



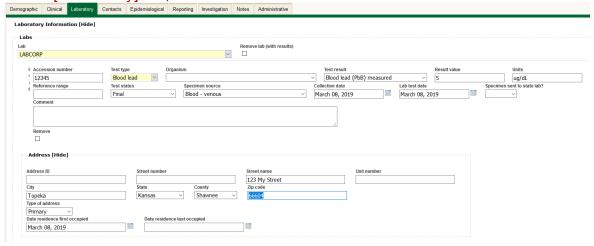
- In situations where an in-home EBL investigation is needed but the LHD does not have access to an EBL Certified Investigator, the LHD can discuss with PEHSU staff the feasibility of conducting the investigation on behalf of the LHD. PEHSU's ability to conduct in-home investigations is limited by geographic area, as well as the resources available at PEHSU. LHD investigator should attend home inspection and continue to follow the case until the child no longer has an elevated blood lead level.
- Fill in the **Date** and **Completed By** fields within the Investigation Checklist-Child form.
- 12) Record actions completed and any recommendations that were made in the [Notes] tab of the case in EpiTrax.
 - Cases can be <u>closed</u> once a child has two non-elevated (< 5 ug/dL) venous test results within 12 weeks.
 - Once a case is closed, it is recommended that the child be screened using the Lead Risk <u>Questionnaire</u> (<u>Appendix A</u>) annually to make sure that he/she is no longer exposed to lead.

Elevated Blood Lead Level, Adult

Definition: Blood lead test result greater than or equal to 5 micrograms per deciliter (µg/dL) for persons 16 years of age or older on the day the sample was drawn.

Upon notification of an elevated blood lead test result for an adult, the local health department (LHD) investigator should:

- 1) Accept the case in EpiTrax within 3 business days.
- 2) In the [Laboratory] tab, note the result value and the source.



- Note: the address in this tab is the current residential address at the time of this test. It may not match the address listed in the demographic tab if the patient has moved. Please verify that this is the correct address.
- 3) Refer to the <u>Elevated Blood Lead Case Investigation and Management Algorithm (Appendix B)</u>.
 - Note that all capillary results must be confirmed by a venous sample before any case investigation or management occurs. Refer to the Elevated Blood Lead Case Investigation and Management Algorithm (Appendix B) to determine how urgently the confirmatory test should be performed.
- **4)** Choose the [Demographic] tab and find the patient phone number. Contact the patient directly.



5) Choose the [Investigation] tab:



6) Open the [Investigation Checklist-Adult] tab

In-home Elevated Blood Lead Investigation-Child Survey Investigation Checklist-Adult Short Telephone Interview - Adult

Make sure you are in Edit mode

- Use this checklist to keep track of other actions taken by the LHD
- LHD investigator should make a minimum of 3 attempts to contact the patient at different times of day. Use the checklist to document attempts.
- 7) Open the [Short Telephone Interview Adult] tab

In-home Elevated Blood Lead Investigation-Child Survey Investigation Checklist-Adult Short Telephone Interview - Adult

- If the LHD investigator prefers, he/she can print a hard copy of the <u>Short Telephone Interview-Adult (Appendix F)</u>. However, he/she must enter the data into the form in EpiTrax. Data not entered in the EpiTrax form cannot be exported later for analysis.
- 8) After the Short Telephone Interview-Adult, the investigator should discuss the potential source(s) of the lead exposure. Tell the respondent that you will mail him/her an educational packet.
 - Discuss with the patient and physician when the adult should be retested. Refer to the <u>Elevated Blood Lead Case Investigation and Management Algorithm (Appendix B)</u>.
 - The LHD investigator should mail the <u>Elevated Blood Lead Informational</u> <u>Packet-Adult (Appendix G)</u> to BOTH the patient and the ordering physician.
 - Fill in the **Date** and **Completed By** fields within the Investigation Checklist-Adult form.
- 9) Record actions completed and the recommendations that were made in the [Notes] tab of the case in EpiTrax.
 - Once the above actions have been completed, the case can be closed.
 - It is recommended that if an adult continues to have elevated blood lead levels (≥ 5 ug/dL), that the LHD perform the <u>Short Telephone</u> <u>Interview-Adult</u> annually to assess if other members of his/her household, especially children, are exposed to lead.

DATA MANAGEMENT AND REPORTING TO THE KDHE

- **A.** Accept the case assigned to the LHD and record the date the LHD investigation was started on the [Administrative] tab.
- **B.** Organize and collect data, using appropriate data collection tools including, but not limited to:
 - Lead Risk Questionnaire
 - In-home Interview Child Survey
 - Short Telephone Interview Adult
 - Alternatively, investigators can collect and enter all required information directly into EpiTrax [Investigation], [Clinical], [Demographics], [Epidemiological] tabs.
- **C.** Report data collected during the course of the investigation via EpiTrax.
 - Verify that all data requested has been recorded on an appropriate EpiTrax
 [tab], or that actions are completed for a case lost to follow-up as outlined
 below.
 - Paper report forms do not need to be sent to KDHE after the information is recorded and/or attached in EpiTrax. The forms should be handled as directed by local administrative practices.
- **D.** If a case is lost to follow-up, after the appropriate attempts to contact the case have been made:
 - Record the attempts to contact in the [Investigation] tab.
 - Record, at a minimum, the information that was collected from the initial reporter.
 - Record a reason for 'lost to follow-up' in [Notes] tab.
- **E.** Once the investigation is completed, the LHD investigator will record the date the investigation was completed on the [Administrative] tab and click the "Complete" button. This will trigger an alert to the LHD Administrator so he/she can review the case before submitting it to the state.
 - The LHD Administrator will then "Approve" or "Reject" the Confidential Morbidity Report (CMR).
 - Once a case is "Approved" by the LHD Administrator, BEPHI staff will
 review and close the case after ensuring it is complete and that the case is
 assigned to the correct event, based on the reported symptoms reported.
 (Review the <u>EpiTrax User Guide</u>, <u>Case Routing</u> for further guidance.)

ADDITIONAL INFORMATION / REFERENCES

Agency for Toxic Substances and Disease Registry (ATSDR). Toxicological profile for lead. Atlanta, GA: US Department of Health and Human Services, Agency for Toxic Substances and Disease Registry; 1999. Available at: www.atsdr.cdc.gov/toxprofiles/index.asp. Accessed on: November 5, 2013.



Lead Risk Questionnaire

Purpose: To identify children who need to be tested for lead exposure **Instructions:**

- If Yes or Don't Know, test the child immediately
- For more information, contact your county's local health department

| Patient's Name: | DOB: | Medicaid #: | | | |
|--|--|--|----------|-------------------|----|
| Provider's Name: | Administered b | y: | Date _ | | |
| 1. Does your child live in or visit a home, do 2. Does your child live in or visit a home, do 3. Does your child eat or chew on non-food 4. Does your child have a family member o 5. Is your child a newly arrived refugee or fo 6. Does your child come in contact with an | ay-care or other building with one I things like paint chips or dirt? r friend who has or did have an e oreign adoptee? | going repairs or remodeling? | | Yes or Don't Know | No |
| Examples House construction or repair | ☐ • Chemical preparation | ☐ • Radiator repair | | | |
| Battery manufacturing or repair | • Valve and pipe fittings | ☐ • Pottery making | | | |
| Burning lead-painted wood | ☐ • Brass/copper foundry | • Lead smelting | | | |
| Automotive repair shop or junk yard | ☐ • Refinishing furniture | ☐ • Welding | | | |
| Going to a firing range or reloading bullets | • Making fishing weights | Other | _ 🗆 | | |
| 7. Does your family use products from othe Examples Traditional medicines such as Ayurvedic, gree Cosmetics such as kohl, surma, and sindor Imported or glazed pottery, imported candy, and sindor Foods canned or packaged outside the U.S. | eta, azarcón, alarcón, alkohl, bali go | li, coral, ghasard, liga, pay-loo-ah, an | id rueda | Test Immediately | |



Cuestionario de Riesgo de Plomo

Propósito: Identificar a los niños que necesitan pruebas de exposición al plomo **Instrucciones:**

- Si responde Sí o No sé, hacerle inmediatamente la prueba al niño
- Para obtener mayor información, comunicarse con el departamento de salud local de su condado

| Nombre del paciente: | Fecha d | Fecha de nacimiento: # o | | | _ |
|--|--|--|-------------|-----------------|----|
| Nombre del proveedor: | Administra | Administrado por: | | | _ |
| Preguntas: 1. ¿Su hijo(a) vive o visita un hogar, guarder 2. ¿Su hijo(a) vive o visita un hogar, guarder 3. ¿Su hijo(a) come o mastica objetos no al 4. ¿Su hijo(a) tiene un familiar o amigo que 5. ¿Su hijo(a) es un refugiado recién llegad 6. ¿Su hijo entra en contacto con un adulto | ía u otro edificio donde se están imenticios como virutas de pintur tiene o tuvo una concentración a o o es un hijo adoptivo extranjero | haciendo reparaciones o remod a o tierra? Ilta de plomo en la sangre? ? | elaciones? | Sí o No sé | No |
| EjemplosConstrucción o reparación de vivienda | ☐ • Preparación química | Reparación de radiadores | ; | | |
| Fabricación o reparación de baterías | ☐ • Conexiones de válvulas/tube | rías • Fabricación de cerámica | | | |
| Quemar madera con pintura de plomo | ☐ • Fundición de latón/cobre | ☐ • Fundición de plomo | | | |
| Taller de reparación de carros o chatarrería | ☐ • Renovar acabado de mueble | es 🗆 • Soldadura | | | |
| Ir a un campo de tiro o recargar balas | ☐ • Hacer pesas para la pesca | □ • Otro | . \square | | |
| 7. ¿Su familia utiliza productos de otros paí Ejemplos Medicinas tradicionales como Ayurvedic, gref Cosméticos tales como kohl, surma y sindor Cerámica importada o esmaltada, dulces imp Alimentos enlatados o envasados fuera de Esta | a, azarcón, alarcón, alkohl, bali goli, ortados, píldoras nutricionales impo | coral, ghasard, liga, pay-loo-ah, y | | Hacer la prueba | |

| | | | od Lead Case Ir | vestigation an | d Management A | Algorithm (Child | d < 16 years old) | | |
|---------------------------------|-------------|--|---|--|---|--|---|--|--|
| Blood lead test result | Sample type | Mailed letter to parents and physicians re: elevated result | Mailed one page fact sheet to parents and physicians | Mailed full education packet to parents and physicians | Telephone interview conducted | When to recommend retesting | Full EBL investigation conducted | Recommend to Pediatric Environmental Health Specialty Unit at Children's Mercy Hospital | |
| | Capillary | | rents and physic high the test res | | mend confirmator | y venous test in | 1 - 3 months. Urg | gency for the confirmatory test is | |
| ≥ 5 ug/dL and < 10 ug/dL | Venous | | | | N | 0 | Na | Na | |
| | | Yes (KDHE) | Yes (KDHE) | No ians and recomi | No No Nend confirmator | 3 months | No 1 week - 1 month | No . Urgency for the confirmatory test | |
| 40/:!! | Capillary | | w high the test r | | Tiona committator | , | | ergeney for the committeery teet | |
| ≥ 10 ug/dL and < 15 ug/dL | Venous | Yes (KDHE) | Yes (KDHE) | Yes (LHD) | Yes, 20 minute interview (LHD) | 1 to 3 months | No if exposure is identified in telephone interview. Yes (LHD) if no exposure is identified OR if BLL are not decreasing over the last 3 tests. | No | |
| | Capillary | | LHD to call parents and physicians and recommend confirmatory venous test in 1 week - 1 month. Urgency for the confirmatory test is based on how high the test result is. | | | | | | |
| ≥ 15 ug/dL and < 45 ug/dL | Venous | Yes (KDHE). PEHSU contact information included in the letter. | Yes (KDHE) | Yes (LHD) | Yes, 20 minute interview (LHD) | 1 to 3 months if BLL 15-24 ug/dL; 2 weeks to 1 month if 15- 44 ug/dL | Yes (LHD or regional investigator) | As needed (LHD may contact as needed) | |
| | Capillary | | rents and physic d <70 ug/dL; imn | | | y venous test wi | thin 48 hours if ≥₄ | 45ug/dL and <60 ug/dL; 24 hours if | |
| <u>></u> 45 ug/dL | Venous | Yes (KDHE). PEHSU contact information included in the letter. | Yes (KDHE) | Yes (LHD) | No (full EBL investigation) | As soon as possible | Yes (LHD or regional investigator) | Yes, required (LDH will contact) | |

| Elevated Blood Lead Case Investigation and Management Algorithm (Adult ≥ 16 years old) | | | | | | | | |
|--|--|---|--|--|--|--|--|--|
| Blood lead test result | Sample Type | Mailed Elevated Blood Lead Informational Packet – Adult to patient and physicians | Telephone call asking about screening children in the home | When to recommend retesting | | | | |
| | Capillary LHD to call patient and physicians and recommend confirmatory venous test in 1 - 3 months | | | | | | | |
| ≥ 5 ug/dL and < 10 ug/dL | Venous | Yes (LHD) | Yes (LHD) | Monthly if known ongoing exposure (occupation/hobby) | | | | |
| | Capillary | Recommend confirmatory venous to | test in 1 week - 1 month | | | | | |
| ≥ 10 ug/dL and < 15 ug/dL | Venous | Yes (LHD) | Yes (LHD) | Monthly if known ongoing exposure (occupation/hobby) | | | | |
| | Capillary | LHD to call patient and physicians | in 1 week - 1 month | | | | | |
| ≥ 15 ug/dL and < 45 ug/dL | Venous | Yes (LHD) | Yes (LHD) | Monthly if known ongoing exposure (occupation/hobby) | | | | |
| | Capillary | LHD to call patient and physicians and recommend confirmatory venous test as soon as possible | | | | | | |
| ≥ 45 ug/dL | Venous | Yes (LHD) | Yes (LHD) | Monthly if known ongoing exposure (occupation/hobby) | | | | |