Kansas
Department of Health and Environment
*Division of Health*

# Elevated Blood Lead Investigation Guideline

## Contents



*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.*


Last Reviewed: 03/2017
Version 03/2017

## Revision History:

| Date | Replaced | Comments |
|---|---|---|
| 03/2017 | 11/2013 | Updated case definitions and modified all sections of the guideline. New resources added for investigation. |
| 11/2013 | - | First version |

# 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

### 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

## 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 CLIA-certified facility or an approved portable device 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 and other approved facilities via:

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

Additionally, KHEL will provide blood collection supplies at no cost to Kansas local health departments 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.

Capillary samples are used only for screening purposes. All elevated capillary samples should be confirmed by a venous sample. See the Elevated Blood Lead Case Investigation and Management Algorithm (Appendix B) for the timeframe in which venous samples should be taken. All retesting after intervention should be via venous sample.

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

- About: www.kdheks.gov/labs/blood_lead/blood_lead.htm
- 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 535,000 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, cosmetics or medicines from other countries, and take-home lead from hobbies such as pottery, and certain occupations including lead battery manufacturing.

## DISEASE OVERVIEW

**A. Agent:**

Lead is found throughout our environment. It is a naturally occurring bluish-gray 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 the majority of adult cases are workplace-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 deficit 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 for child and adult lead poisoning is identification of the lead source and stopping exposure. 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 ug/dL may warrant the use of chelation therapy. The local health department 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 $\geq$ 80 ug/dL and is almost always warranted for levels $\geq$ 100 ug/dL. The local health department should recommend to the patient that they contact their physician to discuss treatment.

## NOTIFICATION TO PUBLIC HEALTH AUTHORITIES

Elevated blood lead levels in children and adults are reportable by laboratories directly to the Kansas Department of Health and Environment-Bureau of Epidemiology and Public Health Informatics within 24 hours. Non-elevated blood lead test results for children and adults are reportable to KDHE-BEPHI within 30 days.

**Kansas Department of Health and Environment (KDHE)**
**Bureau of Epidemiology and Public Health Informatics (BEPHI)**
**Phone: 1-877-427-7317**
**Fax: 1-877-427-7318**

## SCREENING CRITERIA

While the local health department may choose to expand blood lead testing services, the priority for offering testing should be:

- Children under the age of 6 years
- Any children under the age of 16 years
- Pregnant or lactating women
- Any close family member of an elevated blood lead child

The local health department may also consider using the Lead Risk Questionnaire (Appendix A) when determining whether to test.

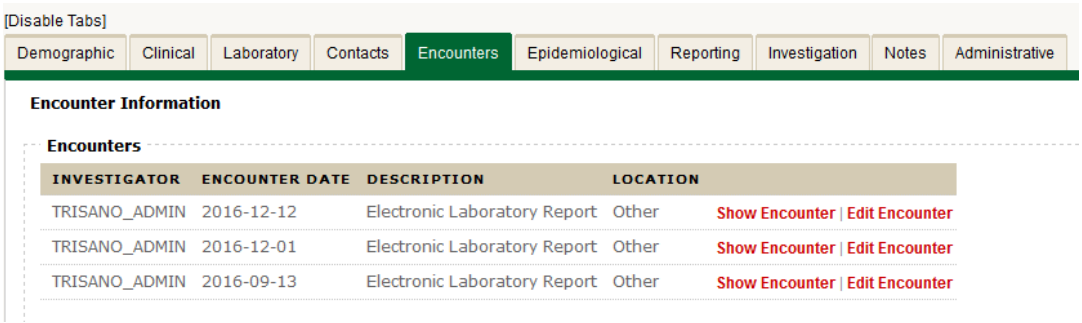
## INVESTIGATOR RESPONSIBILITIES

### Elevated Blood Lead Level, Child < 16 years

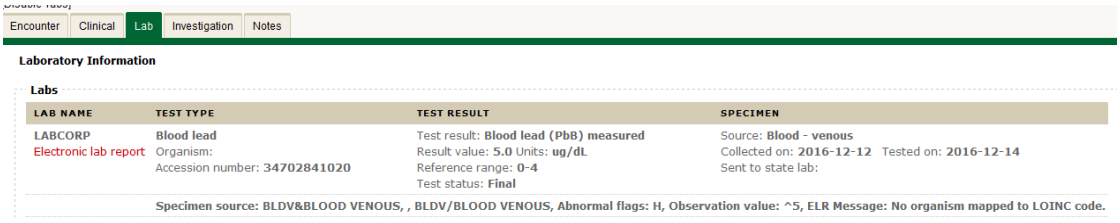
**Definition:** Blood lead test result greater than or equal to 5 micrograms per deciliter (µg/dL) for persons less than 16 years of age.

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

1) Accept the case in EpiTrax within 3 business days.
2) In the [Encounters] tab, choose **Show Encounter** next to the encounter that you are working on which will be the lab report for the current blood lead test result.



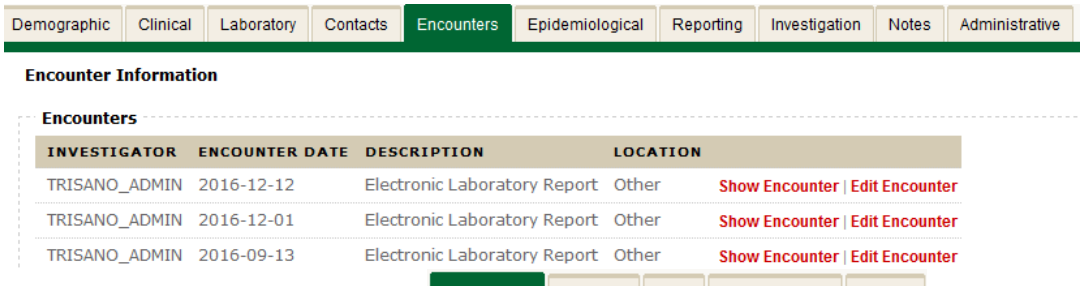

3) Choose the [Lab] tab and note the result value and the source.




4) Refer to the Elevated Blood Lead Case Investigation and Management Algorithm (Appendix B).
   - Note: 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.
5) 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 

, 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 [Encounters] tab then choose Edit Encounter for the current lab.




   - Choose the [Encounters] tab: 

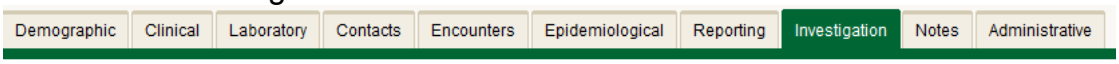

       . Update the residential address where the patient was living at the time the blood sample was drawn.

- Choose the [Clinical] tab: 

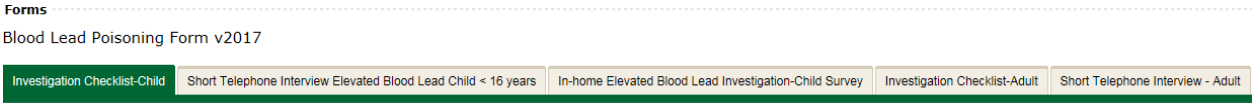
    - Update treatment given by the physician
    - Verify ordering provider
    - Verify ordering provider phone
    - Verify ordering facility
    - Verify ordering facility phone
- Choose the [Lab] tab: 

    - 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.

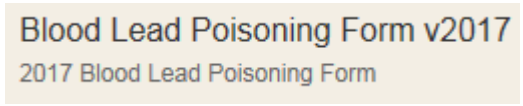
6) Go back to the main morbidity event by clicking on the patient name in red.
7) Choose the Investigation tab:




8) You should see the Blood Lead Poisoning Form v2017 in use. If it is properly loaded, you will see the following tabs.




- For older cases, the old form called Blood Lead Poisoning Exposure Investigation Form will need to be removed from the case before the new form Blood Lead Poisoning Form v2017 can be added to the case.
    - Select Add/Remove forms for this event in the left panel. Click on the checkbox next to the Blood Lead Poisoning Exposure Investigation Form. Scroll down and click “Remove Forms” and select yes at the prompt. **Be very careful that you are only removing the Blood Lead Poisoning Exposure Investigation Form.**
    - Scroll down the list of Forms available for use and choose the Blood Lead Poisoning Form v2017.

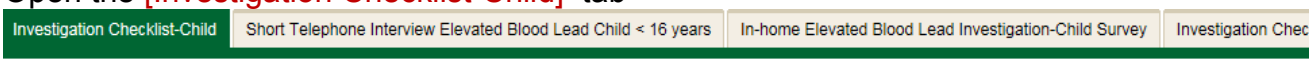



    - Check the box next to Morbidity Event
    - Scroll to the bottom of the screen and select “Add form”
    - Scroll back up to the top of the screen. You should see that the Blood Lead Poisoning Form v2017 has been added to the event.
    - Select Show CMR at the top of the screen to go back to the case.

9) Choose the [Investigation] tab


    - You should now see the Blood Lead Poisoning Form v2017 loaded

10) Open the [Investigation Checklist-Child] tab




- Make sure you are in Edit mode
- KDHE will automatically send letters when 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, please contact KDHE to confirm that letters were sent.
- KDHE will automatically send 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, please contact KDHE to confirm that fact sheet was sent.
- Use this checklist to keep track of other actions taken by the local health department.

11) Open the [Short Telephone Interview … Child…] tab


- Make sure you are in Edit mode
- If the local health department prefers, they can print off a hard copy of the Short Telephone Interview-Child (Appendix C). However, they must enter the data into the form in EpiTrax. Data not entered into the EpiTrax form cannot be exported later for analysis.

12) 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 them an educational packet.
- Discuss with the family and physician when the child should be retested. Refer to the Elevated Blood Lead Case Investigation and Management Algorithm (Appendix B).
- The local health department investigator should mail the Elevated Blood Lead Education Packet (Appendix D) 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.

13) 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 local health department or family does not have access to an EBL Certified Inspector, open the In-home Interview-Child Survey (Appendix E).
- If the local health department prefers, they can print off a hard copy of the In-home Interview-Child Survey (Appendix E). However, they must enter the data into the form in EpiTrax. Data not entered into the EpiTrax form cannot be exported later for analysis.
  - Note that the in-home interview, which is a face-to-face interview, can be conducted by any local health department staff. HOWEVER, collection of environmental samples and on-site testing in and around the home to verify lead contamination must be conducted by

an EBL Certified Inspector. Local health department staff should not 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 be used to guide a discussion about potential sources of lead exposure in the home, discuss recommended cleaning and maintenance techniques, and discuss proper nutrition and diet.

  - A template report summarizing the findings from the In-home Interview can be found in the attachments 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 Inspector. 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.

14) For any child with a venous sample ≥ 15 ug/dL, contact the Pediatric Environmental Health Specialty Unit (PEHSU) at Children's Mercy Hospital. The PEHSU is able to provide a free medical consultation to either local health department staff or to the provider caring for the child via telephone to discuss medical management. The PEHSU is a resource to help with management of children with very high lead levels. However, they are not primarily responsible for case investigation and management, as that responsibility falls to the LHD investigator.
   - PEHSU can be contacted by emailing mapehsu@cmh.edu or calling 913-588-6638. Please use the EpiTrax number when identifying patients to protect confidential patient information.
   - To facilitate sharing of information between the LHD, physicians, and PEHSU, the Notes section 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.
   - Fill in the Date and Completed By fields within the Investigation Checklist-Child form.
15) Record actions completed and recommendations in the [Notes] section of the case in EpiTrax.

- Cases can be closed once a child has two non-elevated (< 5 ug/dL) venous test results within 12 weeks.
- Once a child is no longer considered an elevated blood lead case, it is recommended that the child is screened using the Lead Risk Questionnaire (Appendix A) annually to make sure that he/she is not exposed to any lead sources.

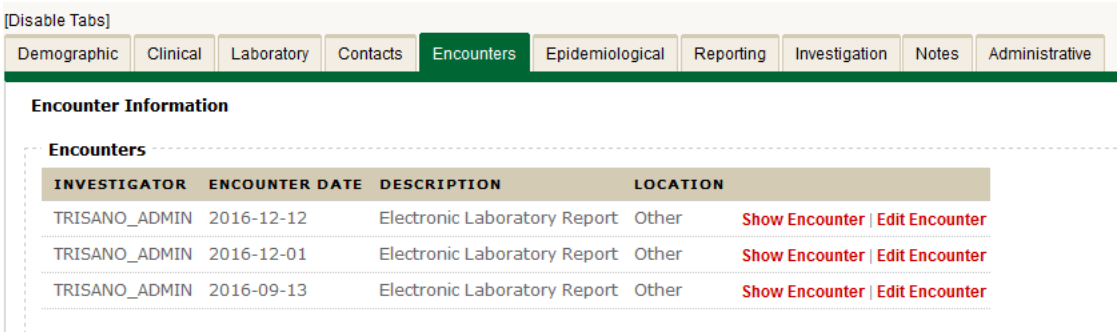
## Elevated Blood Lead Level, Adult

**Definition:** Blood lead test result greater than or equal to 5 micrograms per deciliter (µg/dL) for persons 16 years of age or older

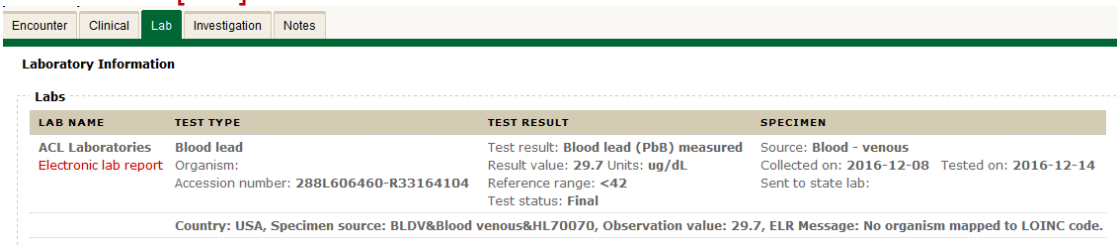
Upon notification of an elevated blood lead test result for an adult, the local health department investigator should:

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

**2)** In the [Encounters] tab, choose Show Encounter next to the Encounter that you are working on. The Encounter is the lab report for the current blood lead test result.



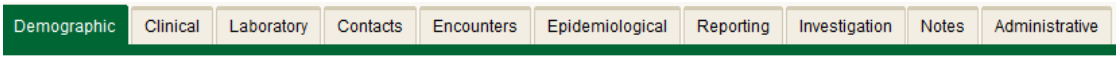

**3)** Choose the [Lab] tab and note the result value and the source.



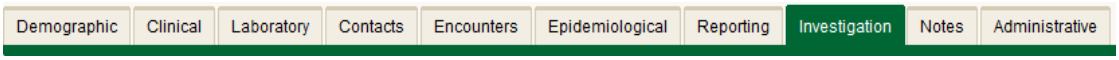

**4)** Refer to the Elevated Blood Lead Case Investigation and Management Algorithm (Appendix B).
- Note that all capillary results must be confirmed by a venous sample before any case investigation or management occurs. Refer to the Elevated Blood Lead Case Investigation and Management Algorithm (Appendix B) to determine how urgently the confirmatory test should be performed.

**5)** Go back to the main morbidity event by clicking on the patient name in red.

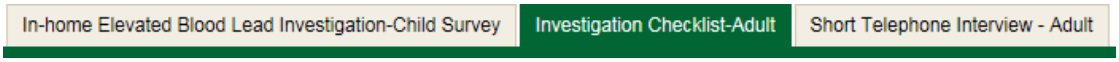
**6)** Choose the [Demographic] tab and find the patient phone number. Contact the patient directly.



**7)** Choose the [Investigation] tab:




**8)** Open the [Investigation Checklist-Adult] tab




- Make sure you are in Edit mode
- KDHE will automatically send letters when test results are received. If the Date and Completed by options for "mailed letter to patient and physicians re: elevated result" are not filled out, please contact KDHE to confirm that letters were sent.
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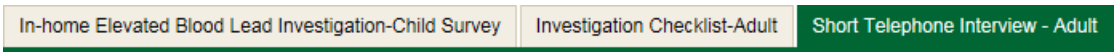
- Use this checklist to keep track of other actions taken by the local health department.

**9)** Open the [Short Telephone Interview - Adult]…tab




- If the local health department prefers, they can print off a hard copy of the Short Telephone Interview-Adult (Appendix F). However, they must enter the data into the form in EpiTrax. Data not entered into the EpiTrax form cannot be exported later for analysis.

16) At the conclusion of the Short Telephone Interview-Adult, the investigator should discuss the potential source(s) of the lead exposure. Tell the respondent that you will mail them an educational packet.

- Discuss with the patient and physician when the adult should be retested. Refer to the Elevated Blood Lead Case Investigation and Management Algorithm (Appendix B).
- The local health department investigator should mail the Elevated Blood Lead Informational Packet (Appendix D) to BOTH the patient and the physician.
- Fill in the Date and Completed By fields within the Investigation Checklist-Adult form.

**10)** Record actions completed and recommendations in the [Notes] section of the case in EpiTrax.

- Once the above actions have been completed, the case can be closed.
- It is recommended that if the adult continues to have elevated blood lead levels (≥ 5 ug/dL), that the local health department perform the Short Telephone Interview-Adult annually to make sure that children are not exposed.

## 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:
- Indicate 'lost to follow-up' on the [Investigation] tab with the number of attempts to contact the case recorded.
- Record at least the information that was collected from the initial reporter.
- Record a reason for 'lost to follow-up' in [Notes].

**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 they can review the case before sending to the state.
- The LHD Administrator will then "Approve" or "Reject" the 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 EpiTrax User Guide, Case Routing 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.

Kansas
Department of Health and Environment

# 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 by: _____ Date _____

**Questions:**

| | Yes or Don't Know | No |
|---|---|---|
| 1. Does your child live in or visit a home, day-care or other building built before 1978? | ☐ | ☐ |
| 2. Does your child live in or visit a home, day-care or other building with ongoing repairs or remodeling? | ☐ | ☐ |
| 3. Does your child eat or chew on non-food things like paint chips or dirt? | ☐ | ☐ |
| 4. Does your child have a family member or friend who has or did have an elevated blood lead level? | ☐ | ☐ |
| 5. Is your child a newly arrived refugee or foreign adoptee? | ☐ | ☐ |
| 6. Does your child come in contact with an adult whose job or hobby involves lead exposure? | | |

*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 other countries such as pottery, health remedies, spices, or food? | ☐ | ☐ |

*Examples*

- Traditional medicines such as Ayurvedic, greta, azarcón, alarcón, alkohl, bali goli, coral, ghasard, liga, pay-loo-ah, and rueda
- Cosmetics such as kohl, surma, and sindor
- Imported or glazed pottery, imported candy, and imported nutritional pills other than vitamins.
- Foods canned or packaged outside the U.S.

Test Immediately

Kansas
Department of Health and Environment

# 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 de nacimiento: _____ # de Medicaid: _____

Nombre del proveedor: _____ Administrado por: _____ Fecha _____

**Preguntas:**

| | Sí o No sé | No |
|---|---|---|
| 1. ¿Su hijo(a) vive o visita un hogar, guardería u otro edificio construido antes de 1978? | ☐ | ☐ |
| 2. ¿Su hijo(a) vive o visita un hogar, guardería u otro edificio donde se están haciendo reparaciones o remodelaciones? | ☐ | ☐ |
| 3. ¿Su hijo(a) come o mastica objetos no alimenticios como virutas de pintura o tierra? | ☐ | ☐ |
| 4. ¿Su hijo(a) tiene un familiar o amigo que tiene o tuvo una concentración alta de plomo en la sangre? | ☐ | ☐ |
| 5. ¿Su hijo(a) es un refugiado recién llegado o es un hijo adoptivo extranjero? | ☐ | ☐ |
| 6. ¿Su hijo entra en contacto con un adulto cuyo trabajo o pasatiempo implica una exposición al plomo? | | |

*Ejemplos*

| | | |
|---|---|---|
| • Construcción o reparación de vivienda ☐ | • Preparación química ☐ | • Reparación de radiadores ☐ |
| • Fabricación o reparación de baterías ☐ | • Conexiones de válvulas/tuberías ☐ | • 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 muebles ☐ | • Soldadura ☐ |
| • Ir a un campo de tiro o recargar balas ☐ | • Hacer pesas para la pesca ☐ | • Otro _____ ☐ |

| | | |
|---|---|---|
| 7. ¿Su familia utiliza productos de otros países tales como cerámica, remedios para la salud, especies o alimentos? | ☐ | ☐ |

*Ejemplos*

- Medicinas tradicionales como Ayurvedic, greta, azarcón, alarcón, alkohl, bali goli, coral, ghasard, liga, pay-loo-ah, y rueda
- Cosméticos tales como kohl, surma y sindor
- Cerámica importada o esmaltada, dulces importados, píldoras nutricionales importadas que no sean vitaminas.
- Alimentos enlatados o envasados fuera de Estados Unidos.

Hacer la prueba inmediatamente

| Elevated Blood Lead Case Investigation and Management Algorithm (Child < 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 physician** | **Telephone interview conducted** | **Mailed full education packet to parents and physicians** | **When to recommend retesting** | **In-home interview conducted** | **Referred to Pediatric Environmental Health Specialty Unit at Children's Mercy Hospital** |
| **≥ 5 ug/dL and < 10 ug/dL** | Capillary | LHD to call parents and physicians and recommend confirmatory venous test in 1 - 3 months. Urgency for the confirmatory test is based on how high the test result is. | | | | | | |
| | Venous | Yes (KDHE) | Yes (KDHE) | No | No | 3 months | No | No |
| **≥ 10 ug/dL and < 15 ug/dL** | 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. | | | | | | |
| | Venous | Yes (KDHE) | Yes (KDHE) | Yes, 20 minute interview (LHD) | Yes (LHD) | 1 to 3 months | No if exposure is identified in telephone interview. Yes (LHD or regional investigator) if no exposure is identified OR if BLL are not decreasing over the last 3 tests. | No |
| **≥ 15 ug/dL and < 45 ug/dL** | 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. | | | | | | |
| | Venous | Yes (KDHE). PEHSU contact information included in the letter. | Yes (KDHE) | Yes, 20 minute interview (LHD) | Yes (LHD) | 1 to 3 months if BLL 15-24 ug/dL; 2 weeks to 1 month if 25-44 ug/dL | Yes (LHD or regional investigator) | Yes (LHD) |
| **≥ 45 ug/dL** | Capillary | LHD to call parents and physicians and recommend confirmatory venous test within 48 hours if ≥45ug/dL and <60 ug/dL; 24 hours if ≥ 60 ug/dL and <70 ug/dL; immediately if ≥70 ug/dL. | | | | | | |
| | Venous | Yes (KDHE). PEHSU contact information included in the letter. | Yes (KDHE) | No (full EBL investigation) | Yes (LHD) | As soon as possible | Yes (LHD or regional investigator) | Yes (LHD) |

| Elevated Blood Lead Case Investigation and Management Algorithm (Adult ≥ 16 years old) | | | | | | |
|---|---|---|---|---|---|---|
| **Blood lead test result** | **Sample Type** | **Mailed letter to patient and physicians re: elevated result (includes checklist of what to do if there are children in the home)** | **Mailed one page fact sheet to patient and physician** | **Telephone call asking about screening children in the home** | **Mailed full education packet to patient and physicians** | **When to recommend retesting** |
| **≥ 5 ug/dL and < 10 ug/dL** | Capillary | LHD to call patient and physicians and recommend confirmatory venous test in 1 - 3 months | | | | |
| | Venous | Yes (KDHE) | Yes (KDHE) | Yes (LHD) | Yes (LHD) | Monthly if known ongoing exposure (occupation/hobby) |
| **≥ 10 ug/dL and < 15 ug/dL** | Capillary | Recommend confirmatory venous test in 1 week - 1 month | | | | |
| | Venous | Yes (KDHE) | Yes (KDHE) | Yes (LHD) | Yes (LHD) | Monthly if known ongoing exposure (occupation/hobby) |
| **≥ 15 ug/dL and < 45 ug/dL** | Capillary | LHD to call patient and physicians and recommend confirmatory venous test in 1 week - 1 month | | | | |
| | Venous | Yes (KDHE) | Yes (KDHE) | Yes (LHD) | Yes (LHD) | Monthly if known ongoing exposure (occupation/hobby) |
| **≥ 45 ug/dL** | Capillary | LHD to call patient and physicians and recommend confirmatory venous test as soon as possible | | | | |
| | Venous | Yes (KDHE) | Yes (KDHE) | Yes (LHD) | Yes (LHD) | Monthly if known ongoing exposure (occupation/hobby) |

Kansas
Department of Health and Environment