DEPARTMENT OF
PUBLIC HEALTH
AND WELLNESS

Childhood Lead Poisoning Prevention Program (CLPPP)

5/1/2017

Provider Toolkit and Guide

This guide is meant to update providers and educators throughout the Louisville Metro Area of the requirements for blood lead testing and follow-up procedures for children 72 months of age or younger and pregnant women.

EXECUTIVE SUMMARY

The Childhood Lead Poisoning Prevention Program (CLPPP) is a Federal and State program implemented with support from the Centers for Disease Control and Prevention, the Kentucky Department for Public Health, and the Louisville Metro Department of Public Health & Wellness. CLPPP's goal is to prevent lead poisoning in children 72 months of age or younger by focusing program activities in five target areas of the city (40203, 40210, 40211, 40212, 40215) having the highest concentration of housing built before 1978. With knowledge of the target areas and lead specific procedures, medical providers will be able to effectively screen and monitor blood lead levels, and be better equipped to instruct parents and guardians on specific actions to protect their children from lead poisoning.

This toolkit's intended audience is primary care providers and is designed with two primary components. This first component is designed to equip all area providers with lead specific guidance concerning identification of patients, determining when to screen, and follow-up actions for monitoring blood lead levels. The second component provides this guidance in easy to use tools to be utilized during an exam and educational material for parents or guardians to prevent lead exposure and how to reduce blood lead levels.

Utilization of this toolkit will create a cohesive understanding of childhood lead poisoning, screening, monitoring, and prevention for primary care providers in the Louisville Metro area.

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TOOLKIT MATERIALS

Provider Materials

i. Verbal Risk Assessment
ii. Provider Guidelines for Children with Elevated Blood Lead Levels
iii. Fax Submittal Form
iv. Reporting Requirements
v. Chelation and Nutritional Interventions

Parent / Guardian Handouts

i. What Your Child's Blood Lead Test Means
ii. Cleaning Up Sources of Lead in the Home
iii. Tips for Lead Safe Nutrition and Community Resources for Healthy Eating

CHILDHOOD LEAD POISONING PREVENTION PROGRAM

PROVIDER TOOLKIT AND GUIDE

PROGRAM OVERVIEW

The Childhood Lead Poisoning Prevention Program (CLPPP) within Louisville Metro Public Health and Wellness (LMPHW) offers a comprehensive approach for providing primary and secondary prevention of childhood and prenatal lead poisoning of children 72 months of age and younger and pregnant women.

Primary prevention includes activities such as blood lead screenings for at-risk populations and education on preventive strategies to decrease childhood and prenatal lead hazard exposure.

Secondary prevention includes assistance with case management and follow-up for elevated blood lead levels, environmental services, epidemiological studies, education and connections to other professionals and programs.

Within the Louisville Metro area, our program has five target zip codes that have been determined to have the highest risk of potential lead poisoning based on concentration of housing built before 1978 and the highest population of children living in poverty. These zip codes are based on the State of Kentucky's 2014 evaluation of at-risk children throughout the state[7]:

40203	*40210*	*40211*	*40212*	*40215*

VERBAL RISK ASSESSMENT

CHILDREN

The Lead Poisoning Verbal Risk Assessment (see attached Provider Materials) should be reviewed at every preventive visit for all children ages 0-72 months to determine the patient's lead hazard risks. The American Academy of Pediatrics (AAP)[1] recommends that the verbal risk assessment be performed at ages 6, 9, 12, 18, and 24 months, and ages 3, 4, 5, and 6 years. A blood lead test should be performed for any "Yes" or "I don't know" response to any question on the assessment. All children enrolled in Medicaid, regardless of whether coverage is funded through title XIX or XXI, are required to receive blood lead screening tests at ages 12 months and 24 months. In addition, any child between 24 and 72 months with no record of a previous blood lead screening test must receive one. Completion of a risk assessment questionnaire does not meet the Medicaid requirement. The Medicaid requirement is met only when the two blood lead screening tests identified above (or a catch-up blood lead screening test) are conducted.

Document within the patient's medical record when a lead poisoning verbal risk assessment was completed, and any positive response(s) and action(s) taken:

- A "Yes" or "I Don't Know" response to any question on the Lead Poisoning Verbal Risk Assessment will warrant a blood test for lead poisoning at that time, regardless of the child's payer source or zip code area.
- Any child with a positive risk factor identified on the Verbal Risk Assessment but not having an Elevated Blood Lead Level (EBLL) should be provided lead poisoning prevention education (information available at the end of this guide) and tested at least annually, (≤72 months of age) as long as any risk factor exists. Create an alert to continue testing at least annually until the child turns 6 years old or responses to the assessment change.
- If the assessment is negative at each visit, **a blood lead level test should be completed for children who live in a target zip code, those 72 months of age or younger who have not been previously tested and at 12 and 24 months of age for all Medicaid children.**

PREGNANT WOMEN[5]

Review each of these questions at the positive pregnancy test visit or initial prenatal visit to determine if lead hazard risks exist. A blood lead test should be performed for any "Yes or I Don't Know" response to any question on the assessment. Document within the medical record any time the assessment was conducted at the positive pregnancy test/initial prenatal visit, and any positive response(s) and action(s) taken. Contact CLPPP for further recommendations if needed.

A copy of the Lead Poisoning Verbal Risk Assessment Questionnaire can be found at the END OF THIS GUIDE.

LEAD TESTING AND FOLLOW-UP

Blood lead testing should be provided for all at-risk patients. This includes children 72 months of age and younger and prenatal patients who:

1. Are enrolled in Medicaid *(see note)
2. Have a "Yes" or "Don't know" response to any questions on the Lead Poisoning Verbal Risk Assessment
3. Have not previously been tested and live in a targeted zip code area (can be found in the Program Overview). For those that have been previously tested, continue testing according to AAP Recommendations.

*NOTE: Medicaid requires blood lead testing for eligible children 72 months and younger, at ages 12 and 24 months, and for all children between 24 and 72 months of age who do not have a documented blood lead test[4].

BLOOD LEAD SPECIMEN COLLECTION GUIDELINES[14]

According to the KRS 211.902[13], subsection one, the medical provider will assure all blood lead results ≥ 2.3 µg/dL are reported to the Cabinet by the entity analyzing the blood lead specimens. Not all machines are capable of analyzing results down to 2.3 ug/dL. If your machine cannot read to this level, report **all** blood lead level results to the Cabinet. In addition, providers should notify Louisville CLPPP either by fax (574-6657) or email (LMPHWCLPPP@louisvilleky.gov) for all blood lead level results greater than or equal to 5 µg/dL. More information on reporting requirements and a fax submittal form can be found in the Provider Materials section at the end of the toolkit.

SCREENING

- Initial sample from a child can be capillary or venous
- A venous draw is considered confirmatory test
- Venous samples should always be taken on pregnant women
- A test should be repeated if the sample was unable to be analyzed due to clotting, insufficient quantity, or any other incorrect collection technique

CONFIRMATORY

- All initial capillary tests must have either a second capillary test or a venous draw to be confirmed
- Confirmation is necessary for CLPPP to initiate case management
- If the first confirmatory test could not be analyzed due to incorrect collection techniques, repeat the test

FOLLOW-UP

- Follow-up testing should be done on ALL children with levels greater than or equal to 5 µg/dL according to the Provider Guidelines for Children with Elevated Blood Lead Levels sheet
- Maintain communication with the case manager with CLPPP to ensure patients are receiving follow-up services

UNCONFIRMED and UNSATISFACTORY

- Following receipt of test results, children with unconfirmed blood lead levels greater than or equal to 5 µg/dL will be sent a letter urging parents or guardians to contact their provider for a confirmatory test within one (1) to three (3) months depending on test result level
- Additionally, samples deemed "unsatisfactory" by a lab due to insufficient sample size, contamination, or improper sample labeling will need to be repeated

Please call the patient to reschedule the test. In addition, the CLPPP Clerk and/or Case Manager will notify the parent or guardian of the necessity of a repeat test by phone call or mail within one week of receiving the lab result.

NOTE: Venipunctures are considered a confirmed specimen. If the results are ≥ 15 µg/dL, this result is to be considered a confirmed EBLL. For levels that are ≥ 5 µg/dL, refer to the "Provider Guidelines for Children with Elevated Blood Lead Levels" informational sheet included at the end of this guide for follow-up testing schedule and clinical interventions[14].

PROVIDER GUIDELINES FOR CHILDREN WITH ELEVATED BLOOD LEAD LEVELS

Please adhere to the corresponding informational sheet available for use at the end of this guide designating necessary clinical interventions and next steps for providers to follow at each blood lead level range.

ENVIRONMENTAL MANAGEMENT FOR ELEVATED BLOOD LEAD LEVEL PATIENTS[8]

Environmental Management through on site visual investigative home visits and comprehensive risk assessments is one component of the on-going process related to the elimination of lead poisoning.

LMPHW may initiate home visual investigations following the receipt of elevated blood lead level (EBLL) test results from a provider, an outside laboratory (hospital lab, LabCorp, Quest, etc.) or our onsite laboratory for BLLs of 5 µg/dL and above.

Upon receipt of BLL results, CLPPP can initiate the following environmental investigation. For children identified as having a BLL of:

- BLL of 5µg/dL - 14.9µg/dL: a visual investigative home visit may be requested for the patients' primary residence to identify potential sources of lead-based health hazard exposure. The visual investigative home visit at this range is voluntary based on the parents' consent. In conjunction with the Louisville Water Company, a water sample to test for lead content may also be taken during this investigation. Please encourage parents to participate in this home visit and water sampling if it is offered.
- Confirmed EBLLs of ≥ 15µg/dL: In addition to a required visual investigative home visit, an environmental risk assessment for identification of lead hazards (comprehensive lead risk assessment) will be conducted by CLPPP and includes water sampling. A lead hazard inspection is mandatory for all children with a confirmed BLL of ≥15µg/dL.

HOME VISIT AND VISUAL INVESTIGATION SCHEDULE

BLOOD LEAD LEVEL	TIME FRAME FOR HOME VISIT ASSESSMENTS
Confirmed BLL 5-14.9ug/dL	within 4 weeks of a confirmed BLL in this range; optional
15-19.9 µg/dL	within 2 weeks; & refer for comprehensive lead risk assessment; required
20-44.9 µg/dL	within 1 week; & refer for comprehensive lead risk assessment; required
45-69.9 µg/dL	within 48 hours; & refer for comprehensive lead risk assessment; required
>70 µg/dL	within 24 hours; & refer for comprehensive lead risk assessment; required

TESTING IMMIGRANT POPULATIONS

A variety of foods, candies, and traditional therapies have been found to be the source of exposure for many immigrant children. It should also be noted that an even more limited parental awareness of the dangers associated with lead exposure may exist. Malnourished children may be at increased risk for lead poisoning due to low levels of iron, calcium and Vitamin C in the body.[10]

Because of these compounding factors, immigrant children are at an above average risk for lead poisoning from ongoing exposures once in the United States. Families often settle into high-risk areas with older housing, resulting in 6-29% of children with normal BLLs at the time of new arrival screenings to have elevated BLLs when retested several weeks/months later. [3,6]

CDC RECOMMENDATIONS FOR POST-ARRIVAL LEAD SCREENING OF IMMIGRANTS[10]

1. Check BLLs of all immigrant children 6 months-16 years of age upon their arrival in the United States (generally within 90 days, preferably within 30 days of arrival). If the child is 72 months of age or younger, report any BLL of 5µg/dL or greater to CLPPP.
2. Within 3-6 months post-resettlement, a follow-up blood lead test should be conducted on all immigrant children aged 6 months- 6 years of age, regardless of the initial screening BLL result.
3. Certain children may be at risk for anemia. Within 90 days of their arrival in the United States evaluate children aged 6 months–6 years of age for anemia. If anemia is a possibility, the child should also undergo nutritional assessment and testing for hemoglobin or hematocrit level with one or more of the following: mean corpuscular volume (MCV) with the red cell distribution width (RDW), ferritin, transferrin saturation, or reticulocyte hemoglobin content. A routine complete blood count with differential is recommended for all immigrants following their arrival in the United States, and these red cell parameters are included in this testing.
4. Provide daily pediatric multivitamins with iron to all immigrant children aged 6 months - 6 years of age if presenting with poor nutrition or anemia.

CASE CLOSURE WITH CLPPP

Case closure with LMPHW is determined based on the following confirmed blood lead level groups [8]:

- BLL 5-14.9 µg/dL – Case closure occurs when the child has one test less than or equal to 4.9µg/dL, repeat testing as indicated by the AAP Recommendations for Preventive Pediatric Health Care.
- BLL 15µg/dL and greater– Case closure occurs when confirmed BLL is less than or equal to 4.9µg/dL for at least six months with testing at one month intervals. If monthly tests cannot be obtained, a minimum of three tests during the six month time period is required; and all environmental hazards must have been addressed, and no new environmental hazards must be introduced; or as ordered by the physician.

Cases will also be closed with CLPPP when the child ages out of the program on their sixth (6) birthday. The provider may choose to continue testing at six month intervals at their own discretion for elevated blood lead levels in individuals over 72 months of age.

Case closure for pregnant women[5] with elevated blood lead levels will occur once the pregnancy has ended. If the woman had an elevated blood lead level at any point during her pregnancy, test the infant after birth and adhere to the Provider Guidelines for Elevated Blood Lead Levels for continued testing instructions.

References

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PROVIDER MATERIALS

i. Verbal Risk Assessment
ii. Provider Guidelines for Children with Elevated Blood Lead Levels
iii. Fax Submittal Form
iv. Reporting Requirements
v. Chelation and Nutritional Interventions

Childhood Lead Poisoning Verbal Risk Assessment Questionnaire

1. Do you live in or visit a building built before 1978 with peeling/chipping paint or with ongoing renovation that may create dust?

2. Do you live with or know someone close to you (at work/ home/church/school) that has or has had lead poisoning or an elevated blood lead level in the past?

3. Do you or someone close to the child work in an occupation or participate in a hobby that may contain lead? Some examples are:

Auto mechanics/bodywork	Plumbing	Smelting Metals/Scrap yards
Farm/Migrant Farm Work	Blowing Glass	Jewelry Making/Repair
Furniture Refinishing	Gardening	Metal Sculpting
Renovation Work	Painting	Stained Glass
Painting Roads	Printing	Car/Boat repair
Metal Work/Welding	Casting Aluminum	Firing Ranges
Plastics Manufacturing	Ceramic Making	Firearms/Firing Range Electronic
Radiator Repairs	Bridge Repair/Painting	soldering
Home Repairs/Remodeling	High Construction Area	Making Bullets/Sinkers/Lead Toys
Battery Recycling/Smelting/Recycling		

4. Do you use folk remedies, cosmetics or use old painted pottery to store food? Some examples are:

IMPORTED COSMETICS: **Middle East, India, Pakistan, Africa** • Kohl, Surma, Al Koh: a powder used both as a cosmetic eye make-up and applied to skin infections and the navel of a newborn child. Can be ingested when on hands • Kajal: eye cosmetic, when used can be ingested if on hands. • Sindoor: a powder applied to face or scalp during ceremonies; can also be mistakenly used as a food additive.

FOODS: • **Middle East** • Lozeena: a bright orange powder used by Iraqis to color rice and meat • **Mexico** • Tamarind Candy: gel like candy made with chilies, and placed in little pots to eat with little spoons. With the candy, wrappers and pots have been identified as having high lead levels • Chapulines (dried grasshoppers): can be chocolate coated; grasshoppers eat chilies that are contaminated with lead from soil and area silver mine fallout

FOLK REMEDIES: • **Hispanic** • Azarcon aka: Ruedo, Corol, Maria Luiso, Alarcon, Ligo: used for intestinal illness. • **Mexico** • Greta: a yellow powder used for intestinal illness. • **Dominican Republic** • Litargirio: yellow/ peach powder used as a deodorant, foot fungicide, treatment for burns and wound healing. • **Vietnam/ Hmong Community** • Pay-loo-ah- a red powder given for rash or fever. • **Asian/ Tibet/ India/Thailand** • Ayurvedic medicine, • Tibetan Herbal Vitamin • **Asia**: Bo Ying compound (the "product") manufactured by Eu Yan Sang (Hong Kong) for use in infants and children for treatment of influenza, fever, sneezing, and nasal discharge. **China** • Jin Bu Huan: used to relieve pain, • Po Ying Tan: used to treat minor ailments in children, • Ba-Baw-San. • **India** • Ghasard: a brown powder given as an aid in digestion. • **Thailand** • Daw Tway is a digestive aid used in Thailand and Myanmar (Burma). • **Iran** • Bint Al Zahab: Rock ground into a powder and mixed with honey and butter given to newborn babies for colic and early passage of meconium after birth. • **Saudi Arabia** • Traditional Saudi Medicine: Orange powder prescribed by a traditional medicine practitioner for teething; also has an antidiarrheal effect, • Santrinj: An amorphous red powder containing 98% lead oxide used principally as a primer for paint for metallic surfaces, but also as a home remedy for "gum boils" and "teething." • Bint Dahab: A yellow lead oxide used by local jewelers and as a home remedy, • **Kuwait** • Bokhoor: A traditional practice of burning wood and lead sulphide to produce pleasant fumes to calm infants. **Other:** • Bala Goli: a round, flat, black bean dissolved in 'gripe water' and used for stomach ache. • Kandu: a red powder used to treat stomachaches.

5. Do you live within 3 blocks or less from a busy road/ highway?

Soil around your home could be contaminated by the fallout from past leaded gasoline or lead based paint dust and chips that can land on your soil or in water (cisterns/wells). Lead can also be absorbed in fast growing plants such as kale, spinach, and other garden vegetables from contaminated soil and then consumed by animals and humans and can lead to an increase in blood lead levels.

This page adapted from the Kentucky Department for Public Health Childhood Lead Poisoning Prevention Program Lead Poisoning Verbal Risk Assessment Questionnaire

Provider Guidelines for Elevated Blood Lead Levels

for pregnant women and children up to 72 months of age

*A confirmed test is: **two** capillary tests, one capillary test **and** one venous test, or **one venous** test.

Blood Lead Level

Range	Clinical Intervention	What to Do Next
0-4.9 µg/dL	• None- not considered lead poisoned by CDC	• Retest again at AAP assigned intervals • Test all pregnant women in the home
5-9.9 µg/dL	• *Confirm capillary test with second capillary or venous test within 1 month to 12 weeks. • Provide guardian with educational packet & review • Environmental lead hazards visual inspection may be completed by LMPHW within 4 weeks of testing	• Schedule and repeat confirmatory test in or around 12 weeks if necessary • Test all other children under 72 months living in the home if not previously tested • Test all pregnant women in the home
10-14.9 µg/dL	• *Confirm capillary test with second capillary or venous test within 1 month. • Provide guardian with educational packet & review • Environmental lead hazards visual inspection may be completed by LMPHW within 4 weeks of testing	• Schedule and repeat confirmatory test in or around 4 weeks if necessary • Test all other children under 72 months living in the home if not previously tested • Test all pregnant women in the home
Confirmed 5-14.9 µg/dL	If after the second or "confirmatory" blood lead test level remains in this range, repeat every 12 weeks until blood lead level is <5 µg/dL then retest according to routine AAP schedule.	
15-44.9 µg/dL This is considered "lead poisoned"	• Obtain *confirmation specimen within one week, if this is a venous specimen, no additional "confirmation" needed. • Provide guardian with educational packet & review • Required environmental lead hazards risk assessment completed by LMPHW within 1-2 weeks of testing	• Repeat testing at 1-2 month intervals until blood lead level in less than 5 µg/dL for at least 6 months with testing at 1 month intervals, If monthly tests cannot be obtained, a minimum of 3 tests during the 6 month period is required. • Test all other children under 72 months living in the home if not previously tested • Resume testing according to routine AAP schedule. • Test all pregnant women in the home
25 µg/dL and above	If *confirmatory blood lead test level is 25 µg/dL or above, evaluate for medical nutrition therapy and refer to a hematology specialist for evaluation and, potentially, chelation.	
45-69.9 µg/dL	• *Confirm blood lead level within 48 hours. • Provide guardian with educational packet & review • Refer for chelation therapy • Required environmental lead hazards risk assessment completed by LMPHW within 48 hours of testing	• Submit venous confirmation specimen within **48 hours.** During post chelation therapy, retest monthly until: blood lead level is less than 5 µg/dL for 6 months (capillary specimens are acceptable). • Test all other children under 72 months living in the home if not previously tested • Test all pregnant women in the home
70 µg/dL and above MEDICAL EMERGENCY	• *Confirm blood lead level within 24 hours. • Provide guardian with educational packet & review • Refer for chelation therapy • Required environmental lead hazards risk assessment completed by LMPHW within 24 hours of testing	• Submit venous confirmation specimen within **24 hours.** During post chelation, retest monthly until: Blood lead level is less than 5 µg/dL for 6 months (capillary specimens are acceptable). • Test all other children under 72 months living in the home if not previously tested • Test all pregnant women in the home

AAP Periodicity Schedule for Lead Screening[1]

	INFANCY								EARLY CHILDHOOD							MIDDLE CHILDHOOD					
AGE	Prenatal	Newborn	3-5 d	By 1 mo	2 mo	4 mo	6 mo	9 mo	12 mo	15 mo	18 mo	24 mo	30 mo	3y	4y	5y	6y	7y	8y	9y	10y
Lead Screening							*	*	• or *		*	• or *		*	*	*	*				

KEY • = to be performed * = verbal risk assessment to be performed with appropriate action to follow, if possible

Childhood Lead Poisoning Prevention Program (CLPPP) Contacts:

Nurse Case Manager: Karen Hess 574-5802
Program Coordinator: Elise Bensman 574-6524
Environmentalist: Matthew Przystal 574-6630
Program Fax: 574-6657
Program Main Line: 574-6650
Program Email: LMPHWCLPPP@louisvilleky.gov

DEPARTMENT OF PUBLIC HEALTH AND WELLNESS

Adapted from the Kentucky Department for Public Health Guidelines on Blood Lead Screening and Management of Childhood Elevated Blood Lead Levels (EBLL)[8]

LOUISVILLE METRO DEPARTMENT
OF PUBLIC HEALTH & WELLNESS

Childhood Lead Poisoning Prevention Program
400 East Gray Street
Louisville, Kentucky 40202

FACSIMILE TRANSMITTAL

DATE: _____ **TIME: _____**

TO: Name: _____

Fax #: _____574-6657_____

Telephone #: _____574-6650_____

Number of pages including cover: _____

FROM: Name: _____
NAME OF PRACTICE AND PROVIDER

Fax #: _____

Telephone #: _____

TEST INFO: _____
PATIENT NAME (LAST, FIRST) , DOB

_____
TEST RESULT

_____
WAS THIS A CONFIRMATION TEST?

_____
ADDITIONAL INFORMATION (Capillary or venous, language other than English, etc.)

PLEASE BE SURE TO REPORT ALL BLOOD LEAD TEST RESULTS OF 2.3 ug/dL AND ABOVE TO THE CABINET.

Reporting Requirements

For an Analyzing Lab

- Assure that your lab is CLIA certified and that they are reporting according to the CLIA minimum requirements, **Per 42 CFR 493.1241(c)(1)-(c)(8)**[15]
- Per **KRS 211.902**[13], Health care providers in Kentucky are responsible for reporting the required standardized reporting information to the analyzing lab on the lab specimen requisition form. Health care providers are responsible to make contact with their labs in assuring the reporting of this information.
- If your analyzing lab is located outside of Kentucky, you must confirm that they report results to the Cabinet.
- If you are unsure what to do to ensure you are meeting the requirements for reporting, contact the **Clinical Laboratory Improvement Amendments**[2] within the **Centers for Medicare & Medicaid Services** as well as the Cabinet to ensure you are meeting Kentucky's minimum requirements.

For a Lead Care II Analyzer

- Utilize the **Kentucky Online Gateway** to confidentially report test results: There must be a designated user set up in the Kentucky Online Gateway system who will report these results within 7 days of analyzing.
- If you do not have an account set up with a designated user, you must request an account **here** to gain access.
- Additionally, you can consult the manual for the Lead Care II analyzers **here**[11]

In addition to reporting to the Cabinet, please report all blood lead levels of 5 ug/dL and above directly to CLPPP at LMPHW by fax to 502-574-6657

If you have any questions regarding reporting results, contact the Cabinet at 502-564-2154.

All blood lead results are reportable within 7 days to the Cabinet and the local health department.[13]

Chelation Therapy and Nutritional Interventions

Referring a Patient for Chelation Therapy

- According to the CDC[14], any child with a confirmed blood lead level **of 45 µg/dL** or greater should be referred to a hematology specialist for medical evaluation by the provider. While there is no formal agreement between LMPHW and any specialists, one common office for patients to be referred is:

  University of Louisville's Pediatric Cancer and Blood Disorders Group - Dianne Burnett, APRN Main Office Phone: (502)-588-3600

- If referred for chelation evaluation, please notify the LMPHW Case Manager. Continue follow-up testing per the Provider Guidelines for Children with Elevated Blood Lead Levels.

Assessing a Child for Nutritional Interventions[14]

- For children with **BLLs of 25 µg/dL and above**, evaluate the risk for anemia based on criteria such as low income, migrant or recently arrived refugee families, SNAP and/or WIC qualified families, etc.
- If the child is at risk for anemia or has poor nutrition, encourage the parent or guardian to apply for programs like WIC, if eligible.
- Encourage the parent or guardian to increase the intake of foods that provide an adequate supply of iron, vitamin C and calcium for the child's size and age.
- If the child remains deficient in these vitamins and minerals, refer for medical nutrition therapy.

You may choose to refer the child to a hematology specialist at 25 µg/dL for evaluation, but chelation for levels between 20 µg/dL and 45 µg/dL has not been shown to offer therapeutic benefits for reducing BLLs.[14]

Information regarding Community Resources for Healthy Eating can be found at the end of this Toolkit.

PARENT MATERIALS

i. What Your Child's Blood Lead Test Means
ii. Hand Washing/Wet Mopping and Dusting
iii. Nutrition

DEPARTMENT OF PUBLIC HEALTH AND WELLNESS

CHILDHOOD LEAD POISONING PREVENTION PROGRAM

For children under 6 years old

What Your Child's Blood Lead Test Means

based on recommendations by the Centers for Disease Control and Prevention[14]

- The **blood lead test** tells you how much lead is in your child's blood.
- Lead is harmful to a child's growth, behavior, and ability to learn.
- **No amount of lead in the body is safe**.
- Lead poisoning happens when children eat, swallow, or breathe in dust from old lead paint.
- Many homes built before 1978 may have old lead paint.
- If paint peels, cracks, or is worn down, the chips and dust can spread around your home and onto children's hands and toys and into their mouths.
- For children up to age six years old, your doctor or nurse should ask you **at every Well-Child visit** about lead poisoning and require a blood lead test.
- **A high test result taken from the fingertip should be checked again with blood taken from a vein** (usually in the arm). If the second result is still high, you should follow these steps.

Test Results	What You Need to Do Next
0-4	**Your child's blood lead test result is about the same as most children's in the United States.** • Help to protect your child from lead by following the tips on the next page.
5-9	**Your child's blood lead level is higher than most children's.** • Your doctor and local health department will contact you to help you find the sources of lead and ways you can protect your child. • Get another test for confirmation if needed. • Retest your child again in 12 weeks • Have any other children under 6 years old and pregnant women in the home tested for lead.
10-14	**Your child's blood lead level is high. You should take action.** • Your doctor and local health department will contact you to help you find the sources of lead and ways you can protect your child. • Get another test for confirmation if needed. • Retest your child again in 4 weeks • Have any other children under 6 years old and pregnant women in the home tested for lead.
15-44	**Your child's blood lead level is very high. Get help!** • Your doctor and local health department will contact you to help you protect your child from lead and talk about how your child is growing and what they eat. • Find where the lead could be coming from. A public health worker will contact you to schedule a home visit to find possible sources of lead. • Have any other children under 6 years old and pregnant women in the home tested for lead. • Get another test for confirmation within one week if needed. • Once the level is confirmed, retest every 1-2 months until your child's lead level drops below 5.
45 or higher	**YOUR CHILD NEEDS MEDICAL ATTENTION RIGHT AWAY.** • Ask your doctor if your child should be taken to the hospital for medical treatment. • A health department worker will need to visit your home to find where the lead could be coming from. • Your child should not go back home until the lead sources are fixed or removed. • Have any other children under 6 years old and pregnant women in the home tested for lead.

Adapted from materials created by the State of New York Department of Health

How to Protect Your Child from Lead Poisoning

Serve foods with calcium, iron, and vitamin C.

These foods help keep lead from staying in your child's body:

- Foods with calcium: milk, cheese, yogurt, tofu, and green, leafy vegetables.
- Foods with iron: beans, lean meat, fortified cereal and peanut butter.
- Foods with vitamin C: oranges, orange juice, grapefruit, tomatoes, green peppers.

Wash dust off of hands, toys, bottles, windows and floors.

- Wash your child's hands and face after play, before eating and before bed.
- Wash toys, stuffed animals, pacifiers and bottles with **soap and water** often.
- Mop floors often, and use damp paper towels to clean window wells and sills.

Do not bring lead home on clothes, toys, or jewelry.

- Lead is in some children's jewelry, toys, keys, and old furniture. Sign-up for children's product recall alerts at the **Consumer Product Safety Commission** website at www.cpsc.gov
- Hobbies such as painting, plumbing, construction, car repair, or working with firearms, stained glass or pottery may contain lead. Avoid spreading the lead by changing work clothes before going home; taking shoes off at the door; washing clothes on their own; and washing face, hands and uncovered skin.

Keep lead out of your food and sink water.

- If you have not used water from the sink in several hours, let it run for one minute before using the water. Sink water could have lead from old plumbing.
- Only use **cold sink water** for drinking, cooking, and making baby formula. Boiling your water does not get rid of lead.
- Use lead-free dishes. Don't serve or keep food in pewter, crystal, or cracked pottery.
- Call LMPHW to see which dishes, spices, candy, cosmetics, and health remedies have been found to have lead.

Fix peeling lead paint and make home repairs safely.

- Keep children away from peeling or chipped paint.
- Before making home repairs, call Lead Safe Louisville to learn how to work safely and keep dust levels down.
- Children and pregnant women should stay away from repairs that disturb old paint, such as sanding and scraping. They should stay away until the area is cleaned using wet cleaning methods and a HEPA vacuum (not dry sweeping).

Find out more about lead.

- Talk with your child's doctor or nurse.
- Call CLPPP with the Louisville Metro Department of Public Health and Wellness (LMPHW) at 502-574-6650.
- Visit our website at **https://louisvilleky.gov/government/health-wellness/childhood-lead-poisoning-prevention** for more information.

Cleaning Up Sources of Lead in the Home[12]

STEP 1 Regular Washing

Wash your child's hands and face often with soap and water. Make sure your child's hands and face are clean before eating and going to bed.

Be sure to wash toys, bottles and pacifiers often with soap and water. Don't let your child play with any toys that have fallen on the ground until they have been cleaned with soap and water.

Don't let your child eat any food that has fallen on the ground.

STEP 2 Cleaning With A Special Vacuum

You can use a special vacuum cleaner called a High Efficiency Particulate Air Filter (HEPA) vacuum to clean up lead. The HEPA vacuum has a special filter that can hold small pieces of lead.

Another option is to use a wet-dry vacuum in the wet setting to clean up the wash or rinse water. When you use the wet/dry vacuum, be sure to keep about two inches of water in the bottom of the canister. The water will help hold the lead dust. Only use the wet/dry vacuum to vacuum up the wash or rinse water when you are cleaning up lead. Do not use the wet/dry vacuum to pick up dry dust or lead paint chips.

Never use your household vacuum cleaner to clean up paint dust or chips from walls, floors or window sills and wells. Household vacuum cleaners are okay for regular cleaning jobs, but only once lead has been cleaned up. But when it comes to cleaning up lead, your household vacuum cleaner filter cannot pick up and hold the small pieces of lead - it can blow lead dust into the air where people can breathe it in.

Adapted from materials created by the Minnesota Department of Health

STEP 3 Wet Washing

STEP ONE
Pick up any loose paint chips and other debris that can be found in the window wells, sills, door frames, and floors. Put the paint chips and debris in double thick garbage bags. Seal the bag.

STEP TWO
Use two buckets - one for the cleaning solution, and one for the clean rinse water. Clearly mark each bucket. Be sure to wear waterproof, chemical resistant, rubber gloves while you are wet washing. Keep the children away from this and all cleaners.

STEP THREE
Make a cleaning solution made up of household detergent and water. Mix according to the directions on the container.

STEP FOUR
Wash the window wells and sills, door frames, walls and floors thoroughly with the cleaning solution. Use two separate sets of disposable rags or paper towels - one set for the washing step and one set for the rinse step.

STEP FIVE

Rinse the area that you washed with cleaning solution with clean water, using a different disposable rag or paper towel. It is important to use a different rag or paper towel for the cleaning and rinsing steps.

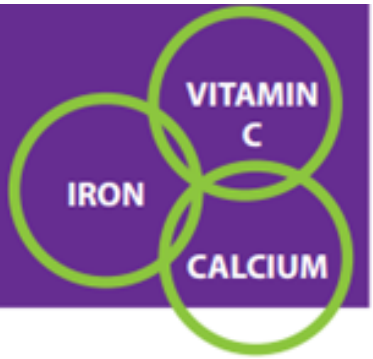
STEP SIX
Put all rags, paper towels and paint chips in a double thick garbage bag. Seal the bag. Keep the bag out of the reach of children and pets. Place bags in the garbage for pickup.

Questions?

For more information, please contact the **Louisville Metro Department of Public Health and Wellness Childhood Lead Poisoning Prevention Program** at (502) 574-6650

DEPARTMENT OF PUBLIC HEALTH AND WELLNESS

Tips for Lead-Safe nutrition[16]



- Children with empty stomachs absorb more lead than children with full stomachs
- Provide your child for 4 to 6 small meals during the day
- Iron, Calcium and Vitamin C rich foods help protect your child

A healthy diet can help protect your child from the harmful effects of lead

Iron-rich foods

- Normal levels of iron work to protect the body from the harmful effects of lead
- Iron rich foods are: lean red meats, fish and chicken
- Iron-fortified cereals and dried fruits like raisins and prunes are other sources for iron.

Calcium-rich foods

- Calcium reduces lead absorption and makes teeth and bones strong.
- Calcium-rich foods are: milk, yogurt and cheese.

Vitamin C-rich foods

- Vitamin C and iron-rich foods work together to reduce lead absorption.
- Vitamin C-rich foods are: oranges, orange juice, grapefruits and grapefruit juice.
- Tomatoes, tomato juice and green peppers are also a good source of Vitamin C.

Adapted from materials created by the Lead Safe Salt Lake Housing Program

COMMUNITY RESOURCES FOR HEALTHY EATING

WIC

The Women, Infants and Children (WIC) nutrition program helps pregnant women, new mothers and young children eat well, learn about nutrition and stay healthy. WIC provides services to pregnant, postpartum and breastfeeding women, as well as children under the age of 5. All WIC services are free to those who qualify. Call or visit their website to see if you are eligible.

Locations

Administrative Office
400 E. Gray St.
Louisville KY 40202
574-6676

U of L Pediatrics
555 S. Floyd St.
Louisville KY 40202
852-5316

Park DuValle
3015 Wilson Ave.
Louisville KY 40211
774-4401

Dixie Health Center
7219 Dixie Highway
Louisville, KY 40258
574-7975

L & N
908 W. Broadway
Louisville, KY 40202
595-3121

Newburg Health Center
4810 Exeter Ave.
Louisville, KY 40218
574-5978

Many local offices are open in the evenings so that clients do not have to miss work.
www.louisvillewic.org

Fresh STOP

Fresh STOP is a group of farm-fresh food markets that pop up at local churches, housing authorities, and community centers in fresh food insecure neighborhoods. Participants can sign up one to two weeks in advance and pay a small amount based on their income with cash, credit/debit cards, or EBT/Food Stamps/ SNAP Benefits (see each individual market's page for details). There are 12 locations throughout the city and can be viewed on their website:
www.newroots.org

Dare to Care

Dare to Care distributes food to their partner agencies, which include food pantries, shelters, emergency kitchens and other social service organizations. In turn, these agencies provide food assistance to community members in need. If you are in need of food assistance, please call Dare to Care at 502.966.3821 or visit their website to find an agency in your area:
http://daretocare.org/need-food/

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