

THE NEBRASKA BLOOD LEAD TESTING PLAN

July 2012

Recommendations for Health Care Professionals



Lead Poisoning in Nebraska

- Children are most vulnerable
 - All children under age 6 are at risk due to:
 - Hand-to-mouth activity
 - Rapidly growing bodies
- Children living in older housing at greatest risk
 - Nebraska has a high percentage of old homes
- Testing rates are low in many areas of Nebraska

Lead Poisoning in the Body

- No known threshold for effects of lead
- Lead poisoning causes adverse health effects
 - Damage to nervous system and brain
 - Delayed growth & development
 - Learning disabilities, decreased IQ and hearing damage
 - Increased risk of behavioral problems
 - In extreme cases, it can lead to coma and death
- In Pregnant Women
 - Increased risk of premature and low-birth weight newborns

Recent Legislative Activity

NEB. REV. STAT. §71-2518 (Effective July 19, 2012)

Directs DHHS Division of Public Health to establish a lead poisoning prevention program, including these components:

- Develop the Statewide Blood Lead Risk Assessment/Blood Lead Testing Plan
- Develop educational materials targeted to health care providers, child care providers, public school personnel, owners and tenants of residential dwellings, and parents of young children
- Initiate contact with the local public health department or the physician, when a child has an elevated blood lead level (EBLL) and offer technical assistance
- Report annually to the Legislature

**Nebraska DHHS Division of Public Health/Childhood Lead Poisoning Prevention Program
Statewide Blood Lead Risk Assessment/Blood Lead Testing Plan**

Three Criteria for Testing a Child for Lead Poisoning		Specifics for Each Criterion												
CRITERION 1	<p align="center">GEOGRAPHY</p> <p>All Children Living in One of Nebraska's Targeted Communities for Lead Assessment/Testing</p>	<table border="0"> <tr> <td>Alliance – 69301</td> <td>Harvard – 68944</td> <td>Omaha – 68102, 68104, 68105, 68106, 68107, 68108, 68110, 68111, 68112, 68131, 68132</td> </tr> <tr> <td>Beatrice – 68310</td> <td>Hastings – 68901</td> <td>Scottsbluff – 69361</td> </tr> <tr> <td>Fremont – 68025</td> <td>Lincoln – 68502, 68503</td> <td></td> </tr> <tr> <td>Grand Island – 68801</td> <td>Nebraska City – 68410</td> <td></td> </tr> </table> <p>DHHS strongly recommends that all children living in these communities be tested for lead poisoning at 12 and 24 months of age. Children between 25 and 72 months of age need to be tested as soon as possible, if not previously tested.</p> <p><i>Please note that targeted communities may change as more blood lead data is obtained. Zip codes will be re-evaluated annually and posted each July at www.dhhs.ne.gov/lead.</i></p>	Alliance – 69301	Harvard – 68944	Omaha – 68102, 68104, 68105, 68106, 68107, 68108, 68110, 68111, 68112, 68131, 68132	Beatrice – 68310	Hastings – 68901	Scottsbluff – 69361	Fremont – 68025	Lincoln – 68502, 68503		Grand Island – 68801	Nebraska City – 68410	
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CRITERION 2	<p align="center">MEDICAID AND WIC</p> <p><i>Medicaid:</i> ALL CHILDREN INSURED BY MEDICAID MUST BE TESTED—NO EXCEPTIONS OR WAIVERS EXIST.</p> <p><i>WIC:</i> Federal Policy (MPSF:WC-01-05-P) requires that upon enrollment of a child, the parent must be asked if the child had a blood lead test. If the child has not had a test, they must be referred to programs where they can obtain such a test</p>	<p>Medicaid: “CMS (Centers for Medicare and Medicaid Services) requires that all children receive a screening blood lead test at 12 months and 24 months of age. Children between the ages of 36 months and 72 months of age must receive a screening blood lead test if they have not been previously screened for lead poisoning. A blood lead test must be used when screening Medicaid-eligible children” (http://www.cms.gov/MedicaidEarlyPeriodicScrn/) http://www.sos.ne.gov/rules-and-regs/regsearch/Rules/Health_and_Human_Services_System/Title-471/Chapter-33.pdf)</p> <p>WIC: For every child age 12 months and older, during the Nutrition Risk Assessment, WIC staff will ask the question “has your child had a blood lead test done in the past 12 months?” Document the Yes or No response. If a child has not had a blood test done, staff make and document a referral for a blood lead test back to their healthcare provider or to a lead screening program.</p>												
CRITERION 3	<p align="center">QUESTIONNAIRE</p> <p align="center">For Children NOT Enrolled in Medicaid or WIC And Children NOT Residing within a Target Community</p> <p>The child's parents/guardians should be asked specific exposure questions (See Questions at right) to determine each child's risk. If the response to any of the exposure questions is “Yes” or “Don't Know”, the child should be tested.</p>	<p align="center">QUESTIONNAIRE</p> <ol style="list-style-type: none"> 1) Does the child live in or often visit a house, daycare, preschool, home of a relative, etc. built before 1950? 2) Does the child live in or often visit a house built before 1978 that has been remodeled within the last year? 3) Does the child have a brother, sister or playmate with lead poisoning? 4) Does the child live with an adult whose job or hobby involves lead? 5) Does the child's family use any home remedies or cultural practices that may contain or use lead? 6) Is the child included in a special population group, i.e., foreign adoptee, refugee, migrant, immigrant, foster care child? <p><i>For additional information, i.e. jobs, hobbies, home remedies, cultural practices that include lead, visit dhhs.ne.gov/lead</i></p>												

About the Blood Lead Testing Plan

Criterion 1 - Geography

Zip Codes in Criterion 1 include:

- 10 zip codes within the Nebraska Lead Superfund Site which have an identified risk (Baseline Human Health Risk Assessment, Omaha Lead Superfund Site, DHHS, 2004)
- Those with at least 5 lead poisoning cases between 2009 and 2011 and more than 27% of the housing stock built before 1950

Targeted communities may change as more blood lead data is obtained. Zip codes will be re-evaluated annually and posted each July at www.dhhs.ne.gov/lead

About the Blood Lead Testing Plan

Criterion 2 – Medicaid and WIC

Requirements for testing a child's blood lead level when participating in these programs remain the same:

- Medicaid: all children should receive a blood lead test at 12 months and 24 months of age. Children between the ages of 36 months and 72 months of age must receive a blood lead test if they have not been previously screened for lead poisoning. A blood lead test must be used when screening Medicaid-eligible children
- WIC: For every child age 12 months and older, during the Nutrition Risk Assessment, WIC staff will ask the question “has your child had a blood lead test done in the past 12 months?”
 - Children who have not had a blood lead test are referred for one

About the Blood Lead Testing Plan

Criterion 3 - Questionnaire

Series of questions designed to discover what else might place a child at risk, including:

- Age of house, daycare, preschool, etc
- Sibling who is lead poisoned
- Parental jobs or hobbies
- Certain population groups, cultural practices or home remedies

Sources of Exposure in the Home

- Lead-based paint in poor condition
- Lead dust from deteriorated lead paint
- Children playing in contaminated soil around home from paint or pollution
- Imported candy or food grown in contaminated soil
- Some Toys and toy jewelry
- Folk Medicines
- Taking lead home from work or hobbies

Occupations Involving Lead

- Contractors who renovate/repair homes built before 1978
- Workers who sand, scrape or blast lead-based paint
- Recyclers of metal, electronics, and batteries
- Manufacturers of bullets, ceramics, electronics, and jewelry
- Firing range workers, gunsmiths, or police officers
- Construction and demolition workers
- Foundries and scrap metal operations
- Lead smelters
- Bridge construction and repair
- Steel workers
- Automobile repair

Hobbies Involving Lead

- Stained glass
- Fishing sinkers
- Computer electronics
- Automotive repair
- Reloading bullets
- Artistic painting and pottery glazing
- Soldering

Cultural Practices

Lead has been found in some traditional and folk medicines, such as those used for arthritis, infertility, upset stomach, menstrual cramps, colic and other illnesses:

- Ayurvedic medicines
- Daw Tway
- Bhasma
- Smrti
- Ba-baw-san
- Ghasard
- Greta
- Azarcon

Follow-up Testing and Medical Case Management

Detailed guidelines about follow-up blood lead testing and medical case management for children are available from DHHS at: www.dhhs.ne.gov/lead

Additional information is available from CDC at: <http://www.cdc.gov/nceh/lead/>

Medical Management Recommendations for Health Care Professionals



- There is no safe level of lead in the blood
- Any confirmed level of lead in the blood indicates child has been exposed to lead
- Any elevated capillary test should be confirmed with a venous blood sample
- The following are general guidelines and are adapted from the CDC

Childhood Blood Lead Testing & Follow-up Recommendations			
Blood Lead Test Result	Retest using Venous Blood to confirm within:	Recommended Actions based on BLL	Venous Retest Intervals—after recommended actions
< 5 µg/dL	N/A	<ul style="list-style-type: none"> • Provide lead education (dietary & environmental) • Environmental assessment for pre-1978 housing • Provide follow-up blood lead monitoring 	Retest according to Blood Lead Screening Plan
5 - 9 µg/dL	1 – 3 months	Above Actions, plus: <ul style="list-style-type: none"> • Complete history and physical exam • Lab work: iron status, consider hemoglobin or hematocrit • Refer to health department for environmental investigation • Recommend lead hazard reduction in home • Neurological, behavioral, and developmental monitoring • Abdominal X-Ray (if particular lead ingestion is suspected with bowel decontamination) 	<ul style="list-style-type: none"> • 3 months for first 2-4 tests • 6 - 9 months after BLL are declining
10 - 19 µg/dL	1 week – 1 month*		<ul style="list-style-type: none"> • 1 - 3 months for first 2-4 tests** • 3 - 6 months after BLL are declining
20 - 24 µg/dL	1 week – 1 month*		<ul style="list-style-type: none"> • 1 - 3 months for first 2-4 tests** • 1 - 3 months after BLL are declining
25 - 44 µg/dL	1 week – 1 month*		<ul style="list-style-type: none"> • 2 weeks - 1 month for first 2-4 tests • 1 - 3 months after BLL are declining
45 - 59 µg/dL	ASAP no later than 48 hours	Above Actions, plus: <ul style="list-style-type: none"> • Lab work: iron status, hemoglobin or hematocrit, free erythrocyte protoporphyrin • Oral Chelation therapy. Consider hospitalization if lead-safe environment cannot be assured 	Every 24 hours or as medically indicated
60 - 69 µg/dL	ASAP no later than 24 hours		Every 24 hours or as medically indicated
≥ 70 µg/dL	Urgently as an emergency test	<ul style="list-style-type: none"> • Hospitalize and commence chelation therapy (following confirmatory venous blood lead test) in conjunction with consultation from a medical toxicologist or a pediatric environmental health specialty unit • Proceed according to actions for 45-69 µg/dL 	Every 24 hours or as medically indicated

*The higher the BLL on this screening test, the more urgent the need for confirmatory testing
 **Some case managers or PCPs may choose to repeat blood lead tests on all new patients within a month to ensure that BLL level is not rising more quickly than anticipated

Sources of Lead	Occupations Involving Lead	Hobbies Involving Lead	Cultural Practices & Folk Medicines
<ul style="list-style-type: none"> • Lead-based paint in poor condition • Lead dust from deteriorated lead paint • Contaminated soil from paint or pollution • Some toys, imported candy, and cosmetics • Some folk medicines • Bringing lead home from work 	<ul style="list-style-type: none"> • Contractors who renovate or repair buildings • Workers who sand, scrape or blast lead paint • Recyclers of metal, electronics, batteries • Manufacturers of bullets, ceramics & electronics • Steel workers • Firing range workers, gunsmiths, police officers • Construction and demolition workers • Foundries and scrap metal operations • Bridge construction and repair • Automobile repair 	<ul style="list-style-type: none"> • Stained glass • Fishing sinkers • Computer electronics • Automotive repair • Reloading bullets • Soldering • Artistic painting, jewelry making, and pottery glazing 	<ul style="list-style-type: none"> • Ayurvedic medicines • Azarcon • Daw Tway • Bhasma • Smriti • Ba-baw-san • Ghasard • Greta

Definitions: BLL: Blood lead level Testing: A blood test Screening: Applying criteria in the Blood Lead Testing Plan to determine risk Lead Hazard Reduction: Lead abatement and interim controls like paint stabilization, lead dust control, cleaning, and addressing bare soil.	Lead Prevention Tips for Parents: • #Keep it Clean: Wash children's hands often and wet wipe/wet dust surfaces to remove lead contamination • #Make your home lead safe: Find and properly take care of sources of lead in the home • #Healthy Diets: Provide regular meals and foods rich in iron, calcium, and Vitamin C • #Medical Check-ups: Have child see PCP. If a BLL over 5 µg/dL, make sure child is tested to ensure levels decline.	Contact Information: Lead Poisoning Prevention Program Nebraska Dept of Health & Human Services 301 Centennial Mall South PO Box 95026 Lincoln, NE 68509 Phone: 402-471-0366 or 1-888-242-1100 Fax: 402-471-8833 Email: dhs.hhia@nebraska.gov Website: http://www.dhhs.ne.gov/lead
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Revised: 8/2012

Reporting Requirements

- Blood lead tests are required to be reported within 7 days of detection
 - Includes all venous and capillary tests regardless of result
- The physician is required to report lead results to DHHS unless the laboratory that performs the lead analysis reports the test
 - 173 NAC 1-003.01B
- Reports must include the following demographic information:
 - The date of sample collection and analysis
 - Whether the sample is a capillary or venous blood sample
 - The date of birth, address, and sex of the patient
 - The name and address of the physician
 - The race and ethnicity of the patient, if known.

For More Information

- Office: Nebraska Department of Health & Human Services
Childhood Lead Poisoning Prevention Program
PO Box 95026
Lincoln, NE 68509
Phone: 402-471-0386 or 1-888-242-1100 menu 3
Fax: 402-471-8833
- Online: www.dhhs.ne.gov/lead
- Additional Resources: www.cdc.gov/lead