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DEPT. OF HEALTH AND HUMAN SERVICES

Annual Report on Elevated Blood Lead Levels for Children 0 – 72 Months Old as required by NEB. REV. STAT. § 71-2518

Presented to Governor Pete Ricketts
and the Health and Human Services Committee of the Legislature

Department of Health and Human Services
Tom L. Williams, MD
Chief Medical Officer
Director, Division of Public Health

Environmental Health Unit
Mary Sue Semerena

Office of Environmental Health Hazards and Indoor Air
Doug Gillespie

Office of Epidemiology
Derry Stover

December 31, 2017

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Pete Ricketts, Governor

December 14, 2017

Patrick O'Donnell, Clerk of the Legislature
State Capitol, Room 2018
P.O. Box 94604
Lincoln, NE 68509

RE: 2016-2017 Elevated Blood-Lead Level Annual Report

Dear Mr. O'Donnell:

In accordance with Nebraska State Statute 71-2518, please find attached a copy of the 2016-2017 Elevated Blood-Lead Level (EBLL) annual report for children 0 – 72 months old. This report is for the period of October 1, 2016 to September 30, 2017 and demonstrates the work accomplished by the Lead Poisoning Prevention Program and lists the number of EBLL tests conducted and the number of children with an elevated level in Nebraska.

Sincerely,

Thomas L. Williams, M.D.
Chief Medical Officer
Director, Division of Public Health
Department of Health and Human Services

Annual Report on Elevated Blood Lead Levels for Children 0-72 Months Old

In April 2012, Legislative Bill 1038 was passed which required that the Division of Public Health establish a Lead Poisoning Prevention Program to include the following duties:

- Develop a 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

This report provides a summary of the progress that has been made in the establishment of the duties prescribed above.

Statewide Plan Development

DHHS developed a statewide plan with three criteria for testing children for lead poisoning. The first criterion is geography. To isolate important geographic variables, DHHS studied surveillance and demographic data, the percentage of older housing, and locations of known lead sources. The methodology used determined zip codes that historically have had increased risk of lead exposure. These include the Omaha Superfund Site (Baseline Human Health Risk Assessment, Omaha Lead Superfund Site, DHHS, 2004) as well as those zip codes with at least 5 lead poisoning cases between 2014 and 2015 and with more than 27% of the housing stock built before 1950. These zip codes are re-evaluated annually and will be updated as necessary.

The second criterion of the plan states what is currently required by the Medicaid and Women, Infants, and Children (WIC) programs. All children insured by Medicaid must be tested. No exceptions or waivers currently exist. WIC requires that upon enrollment of a child, the parent must be asked if the child has 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 (Federal Policy MPSF-WC-01-05-P).

The third criterion of the plan consists of a questionnaire designed to identify risks not addressed by the other criteria. The child's parents or guardians should be asked specific exposure questions to determine each child's risk. If the response to any of the questions is "yes" or "don't know," the child should be tested. The questions are as follows:

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?

This Statewide Blood Lead Testing Plan has been sent to all members of the Nebraska Medical Association. It is available on the DHHS website at: dhhs.ne.gov/lead.

The current plan is summarized on the following chart:

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

GEOGRAPHY

All Children Living in One of Nebraska's Targeted Communities for Lead Assessment/Testing

Alliance – 69301
Beatrice – 68310
Central City – 68826
Columbus - 68601
Fairbury - 68352
Fremont – 68025
Grand Island – 68801, 68803
Hastings – 68901
Lincoln – 68502, 68503, 68504, 68507, 68508, 68510, 68521
Nebraska City – 68410
Norfolk - 68701
Omaha – 68102, 68104, 68105, 68106, 68107, 68108, 68110, 68111, 68112, 68131, 68132
Schuyler - 68661
Scottsbluff – 69361
York - 68467

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.

Please note that targeted communities may change as more blood lead data is obtained. Zip codes will be re-evaluated annually and posted at [www.dhhs.ne.gov/lead.](www.dhhs.ne.gov/lead)

CRITERION 2

MEDICAID AND WIC

Medicaid:
ALL CHILDREN INSURED BY MEDICAID MUST BE TESTED—NO EXCEPTIONS OR WAIVERS EXIST.

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)

WIC:
Federal Policy (MPSF:WC-01-05-P) requires that upon enrollment of a child, the parent must be asked if the child has 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

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 lead test done, staff make and document a referral for a blood lead test back to their healthcare provider or to a lead screening program.

CRITERION 3

QUESTIONNAIRE
For
Children NOT Enrolled in Medicaid or WIC
And
Children NOT Residing within a Target Community

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.

QUESTIONNAIRE

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?

For additional information, i.e. jobs, hobbies, home remedies, cultural practices that include lead, visit dhhs.ne.gov/lead

11/2015

Development of Educational Materials
The DHHS Office of Environmental Health Hazards and Indoor Air continues to update its website to make information more easily attainable. The following brochures are available in English and Spanish:

- Childhood Lead Poison Prevention
- Lead Dust Clean-Up and Control
- Preventing Lead Poisoning in Adults
- Lead in Toys

These brochures are available on the DHHS website at dhhs.ne.gov/lead, along with other educational materials and resources.

Initiate Contact with Local Public Health Departments and Physicians
During the first year, a video conference was held with many of the local health departments through the Nebraska Statewide Telehealth Network to discuss the development of the Statewide Blood Lead Testing Plan. Subsequently, the Office of Epidemiology has held conference calls with Surveillance Coordinators at local health departments and have discussed protocols and guidelines for responding to individuals with elevated blood lead levels. The Office of Environmental Health Hazards and Indoor Air continues to communicate with physicians, local health departments, and parents when requests for additional assistance are received.

In September 2017, DHHS received a new grant of $391,795 from the Centers for Disease Control and Prevention (CDC) to strengthen childhood lead poisoning prevention activities in the state. The three-year cooperative agreement funding from CDC will support the Nebraska Childhood Lead Poisoning Prevention Program's efforts to reduce lead exposure and lead poisoning for Nebraska children under the age of six. DHHS plans to address childhood lead poisoning using a collaborative approach with state and community partners. DHHS will focus on key prevention strategies, including strengthening blood lead testing, surveillance and detection, prevention, and processes to identify lead-exposed children and link them to services.

In addition to updating the DHHS Lead Program website, a PowerPoint presentation was developed to aid staff in health care providers' offices across the state with learning about the blood lead testing plan.

Medical guidelines that provide follow-up recommendations for elevated blood lead levels were also developed and made available online. The Medical Management Recommendations for Health Care Professionals are outlined on the attached chart.

Medical Management Recommendations for Health Care Professionals

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- 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	• 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: • 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	• 3 months for first 2-4 tests • 6 - 9 months after BLL are declining
10 - 19 µg/dL	1 week – 1 month*		• 1 - 3 months for first 2-4 tests** • 3 - 6 months after BLL are declining
20 - 24 µg/dL	1 week – 1 month*		• 1 - 3 months for first 2-4 tests** • 1 - 3 months after BLL are declining
25- 44 µg/dL	1 week – 1 month*		• 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: • 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	• 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 the 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
• 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	• 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	• Stained glass • Fishing sinkers • Computer electronics • Automotive repair • Reloading bullets • Soldering • Artistic painting, jewelry making, and pottery glazing	• Ayurvedic medicines • Azarcon • Daw Tway • Bhasma • Smrti • 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:
1) **Keep it Clean**: Wash children's hands often and wet wipe/ wet dust surfaces to remove lead contamination
2) **Make your home lead safe:** Find and properly take care of sources of lead in the home
3) **Healthy Diets:** Provide regular meals and foods rich in iron, calcium, and Vitamin C
4) **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:
DHHS Lead-Based Paint Program
PO Box 95026
Lincoln, NE 68509-5026
402-471-0386 or 888-242-1100
402-471-8833 Fax
Email: dhhs.hhia@nebraska.gov
Website: http://www.dhhs.ne.gov/lead

Revised: 12/2016

Numbers of Children Tested and Confirmed Elevated Blood Lead Levels

Title 173 Chapter 1 of the Nebraska Administrative Code regarding Communicable Diseases lists all blood lead tests as reportable to the Department. Data is submitted from health care providers and laboratories to the Department either by automated electronic laboratory reporting to the Nebraska Electronic Disease Surveillance System (NEDSS), or is sent via mail or facsimile to be manually entered by program staff into NEDSS or the Systematic Tracking of Elevated Lead Levels and Remediation (STELLAR) database. The NEDSS and STELLAR datasets are combined, duplicate entries are removed, and then reviewed for missing information before data analysis.

Number of children age 0-72 months tested October 1, 2016, through September 30, 2017: 33,478

Number of children age 0-72 months tested with a confirmed blood lead level of 5 micrograms per deciliter or higher: 457