



Gerd W. Clabaugh, MPA
Director

Terry E. Branstad
Governor

Kim Reynolds
Lt. Governor

Iowa Childhood Lead Poisoning Prevention Program

Increasing Blood Lead Testing of Iowa Children 1 – 3 Years of Age

The Ask

In order to gain a better understanding of blood lead testing practices throughout Iowa the Iowa Department of Public Health is asking local public health departments to survey clinics and medical providers within their county. Gaining a better understanding of blood lead testing practices will assist the department in developing future guidelines that will:

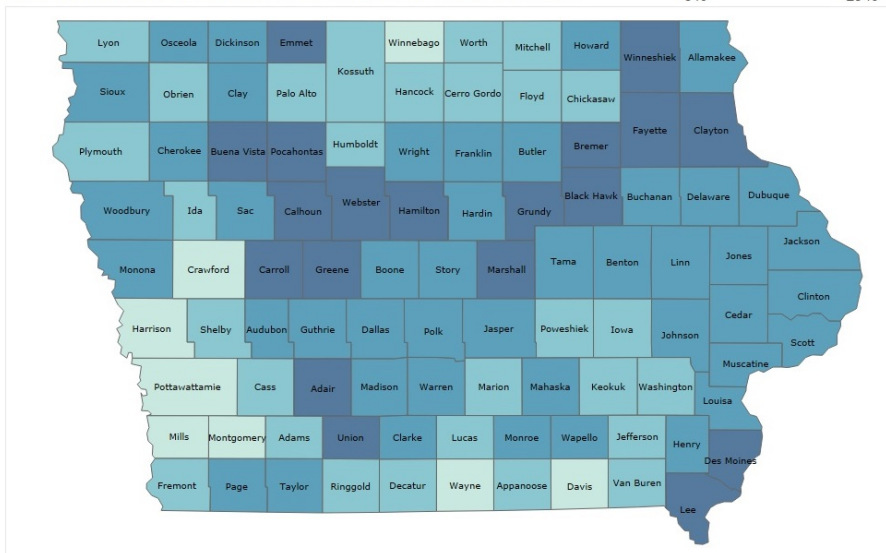
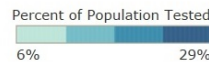
- Lead to increasing blood lead testing and confirmation rates for children under 6 years of age, especially children between the ages of 1 to 3 years.
- Improve level of care coordination and delivery of intervention services statewide.

Background

Lead exposure is dangerous and can seriously harm a child’s health. Only a blood lead test can tell if a child has an abnormal exposure to lead. Children with elevated test results require additional testing and follow-up to decrease further exposure and limit damage to the long-term health of the child.

Children Under 6 Annual Blood Lead Testing - 2017

Selected Age Group: **0 to Under 3**
Hover over a County to see the County Name and values for that County.
Clicking on a County will show the values for that County in the lower right.



State of Iowa Measures - 2017

Selected Age Group: 0 to Under 3	
Children Tested	47,879
Percent of Population Tested	20.1%

All County - 2017

Selected Age Group: 0 to Under 3	
Children Tested	47,879
Percent of Population Tested	20.1%

Exposure risks change over time as a toddler becomes more active. A test at 12 months of age does not predict what that child’s exposure will be over the next few months or years.

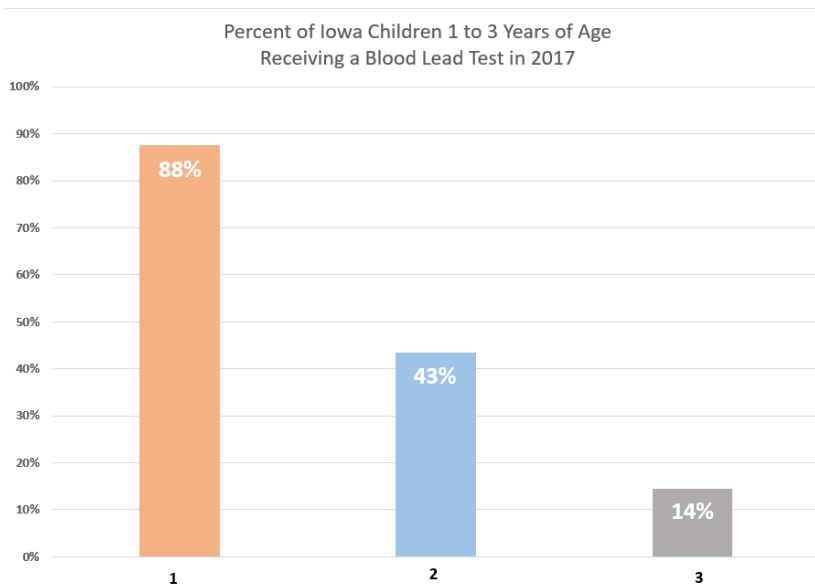
A variety of risk factors have been identified in Iowa that increase the risk of lead exposure. IDPH recommends annual blood lead tests at 1, 2 and 3 years of age for all children to provide the best care for Iowa children.

Periodic evaluation is

needed for older children to determine if additional testing is indicated because of individual risk factors or a prior history of exposure.

The Problem

A child's prime growth and development stages occur between 12 to 36 months of age. These are also years where a child is increasingly more active and curious about the environments where they live and play. [Iowa Public Health Tracking Portal](#) data shows that only 20% of children under three years of age received a blood lead test in 2017, with percentages ranging from 6% to 29% across counties.



Childhood Lead Poisoning Prevention Program surveillance data for 2017 shows 88 percent of the children receiving a blood lead test were one year old (12 to <24 months) Only 43 percent of two year old children (24 to <36 months) and 14 percent of three year old children (36 to <48 months) were tested. Current minimum testing guidelines recommended by IDPH, CDC, AAP, and

other child health organizations require blood lead testing at a minimum of 12 and 24 months of age.

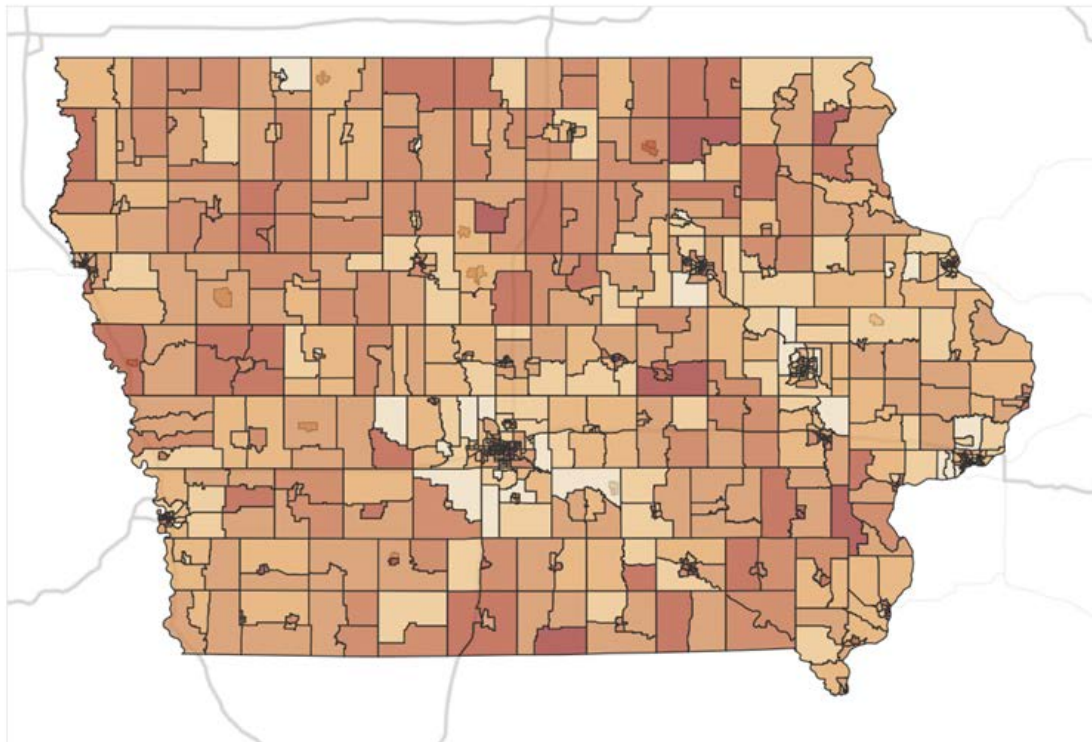
According to the Environmental Public Health Tracking program's [Lead Risk Model](#), housing age, child poverty and language other than English spoken in the home are good predictors of risk of childhood lead exposure in Iowa.

- **Lead risk from housing built prior to 1950:** Homes built before 1978 are more likely to contain lead-based paint. In 1978, the federal government banned residential use of lead-containing paint. Lead from paint, including lead-contaminated dust, is the most common source of lead poisoning. The Lead Exposure Risk Model uses housing built prior to 1950 because of the higher risk for lead exposure. **The lead risk map shows that 70 percent of Iowa census tract areas have housing that is considered moderate or high risk for lead exposure based on the age of housing.**
- **Poverty of children under 6:** Children from all social and economic backgrounds can be exposed to lead but the children with the greatest risk of lead poisoning are those who

live in poverty in older housing that is in poor repair. **The lead risk map shows that 66 percent of census tract areas have moderate to high risk based on child poverty.**

- **Language other than English spoken in the home:** Language is a critical component of risk communication for developing effective public health interventions. Those who do not speak English may be unaware of the dangers of lead or may use products containing lead. The Lead Risk model can help guide risk assessment actions and the development of lead poisoning prevention strategies for at-risk populations. **The lead risk map shows that 60 percent of census tract areas have homes at moderate or high risk because English is not the primary language spoken in the home.**

Lead Risk Model by Census Tract



The Lead Risk Model provides medical providers and local public health with information on three key lead risk factors identified by the CDC. Medical providers can use the map to assess the general level of lead exposure risk in their patient population and adjust their care recommendations as needed to optimize prevention. The Lead Risk Model can be used as an educational tool to help parents understand the recommendations made by the medical provider. Local public health professionals can use the Lead Risk Model to educate their community about lead exposure and to direct their outreach to areas with populations most at risk.

The Solution to Increase Testing and Diagnosis

- Review a child's lead test status **every** time they access care. This can be a standing order performed as part of the office intake for the child.
 - Any child with a prior elevated capillary test in the past year should have a venous blood lead test. Only venous tests are considered confirmatory.
 - Children 12 months to 47 months of age should receive a blood lead test if their chart has no record of a test in the past 9-12 months. This can be a capillary or venous test.
 - Children under 12 months of age should be tested if older children in the home have been diagnosed with elevated blood lead levels.
 - Children 4 or 5 years of age with no prior blood lead test result listed in the patient chart should be tested. Review the child's risk factors and determine if the child had a previous elevated lead test. Order a test if risk of exposure is high or to retest a prior exposure.
 - Children older than 5 years have a very low risk of lead exposure and can be evaluated for testing using a risk questionnaire if there is concern.
- Provide onsite testing or blood collection at your office or clinic site to increase compliance.
- Add blood lead testing reminders to your electronic medical records system for annual testing, confirmation testing of elevated capillary results and periodic retests as appropriate for the child's exposure. Hard copy charts can use sticky notes as reminders.
- Capillary blood lead test results of 5 mcg/dL or higher need to be confirmed with a venous blood lead test as soon as possible (best is within a month or sooner) to rule out false positives and to initiate follow up of confirmed exposures, such as advice to parents, referral for services, and intervention to stop exposure.

Current References, Requirements and Recommendations for Lead Testing

- Iowa Department of Public Health: The current recommendations are based on data analysis of testing and exposure risk patterns in Iowa. IDPH currently recommends that all children receive a blood lead test at approximately 12, 24 and 36 months of age. Children 4 to 5 years of age should be evaluated for prior testing history and current exposure risk, and then tested as appropriate. Testing is recommended for children under 12 months if older children in the home have been diagnosed with an elevated blood lead level. Additional testing at all ages may be recommended based on personal risk factors and exposure history. Iowa children are required to have at least one blood lead test prior to school.

Prior Iowa Blood Lead Testing Guidelines utilized a risk questionnaire and recommended testing children according to their risk classification (low-risk or high-risk). Those

guidelines recommended low-risk children be tested at ages 12 and 24 months and high-risk children be tested at 12, 18, and 24 months, and every year afterwards up to 5 years of age. [Iowa Blood Lead testing Guidelines.](#)

- ACA coverage for preventive services require lead testing for children at risk of exposure, birth through 6 years. (Reference is Wellmark ACA Preventive Services, 2019) <https://www.wellmark.com/insurance-explained/-/media/sites/public/files/Insurance-Explained/Wellmark-ACA-Preventive-Services-List.pdf>)
- EPSDT Providers – initial and periodic health check-ups include laboratory tests for blood lead testing. (<http://idph.iowa.gov/epsdt/epsdt-providers>)
- Medicaid: All children enrolled in Medicaid, regardless of whether coverage is funded through Title XIX or XXI, are required to receive blood lead 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. <https://www.medicaid.gov/medicaid/benefits/epsdt/lead-screening/index.html>
- The American Academy of Pediatrics: Pediatricians and other primary care providers should test asymptomatic children for elevated blood lead concentrations according to federal, local, and state requirements. Immigrant, refugee, and internationally adopted children also should be tested for blood lead concentrations when they arrive in the United States because of their increased risk. Pediatricians and other primary care health providers should conduct targeted testing of children for elevated blood lead concentrations if they are 12 to 24 months of age and live in communities or census block groups with greater than or equal to 25% of housing built before 1960 or a prevalence of children’s blood lead concentrations greater than or equal to 5 mcg/dL.

Direct questions or requests for additional information to the CLPPP manager, Kevin Officer at kevin.officer@idph.iowa.gov or 800-972-2026.



Gerd W. Clabaugh, MPA
Director

Kim Reynolds
Governor

Adam Gregg
Lt. Governor

Survey of Blood Lead Testing Practices
For Children Under 6 Years of Age

Purpose: The purpose of this survey is for IDPH to gain a better understanding of blood lead testing practices within a clinical or medical provider setting. Your survey responses will assist the department in developing blood lead testing guidelines that will:

- Lead to increasing blood lead testing and confirmation rates for children under 6 years of age, especially children between the ages of 1 to 3 years.
- Improve level of care coordination and delivery of intervention services statewide.

Lead exposure is dangerous and can seriously harm a child's health. Only a blood lead test can tell if a child has been exposed to lead. Because a child's risk of exposure changes rapidly, toddlers need more than one blood lead test to monitor exposure. Children with elevated test results require additional testing and follow-up to decrease further exposure and limit damage to the long-term health of the child.

1. What blood lead testing guidelines do you follow for determining a child's level of exposure to lead?
 - a. CDC
 - b. AAP/PEHSU
 - c. Medicaid
 - d. IDPH Childhood Lead Poisoning Prevention Program
 - e. Other: (describe) _____

2. What issues or barriers prevent you from testing children at 1, 2, and 3 year of age annually? If any, please describe:

3. Do you have the capability of reviewing records to determine what percentage of children are being tested for lead according to your office protocols? Yes No

4. If yes, would you be willing to share your findings with IDPH? Yes No

5. Would you be willing to work with IDPH to improve outreach to parents regarding the importance of screening and follow-up testing for childhood lead exposure?
- a. If yes, what would be the best means of communicating this messaging to parents?

Brochures	Website	During office visit
Social Media	Video	Other (explain):

6. Does you use an electronic medical records system that could provide reminders for blood lead testing of children at 1, 2 and 3 years of age? Yes No
- a. If yes, can the system also provide reminders for confirmation and follow-up testing of abnormal results?

Clinic/Provider Information

Clinic/Provider Name: _____

Clinic/Provider Location (City only): _____

Clinic/Provider Service Area (County): _____

Primary Contact Person: _____

Phone:

Email:

Thank you for your time in completing our survey.

Please email or fax your completed survey to:

Kevin J. Officer

**Community Health Consultant | Bureau of Environmental Health Services |
Division of ADPER & Environmental Health | Iowa Dept. of Public Health
321 E. 12th Street | Des Moines, IA 50319
Phone: 515/242-5902 | Fax: 515/281-4529 | Email: Kevin.Officer@idph.iowa.gov**