

## **Chapter 2**

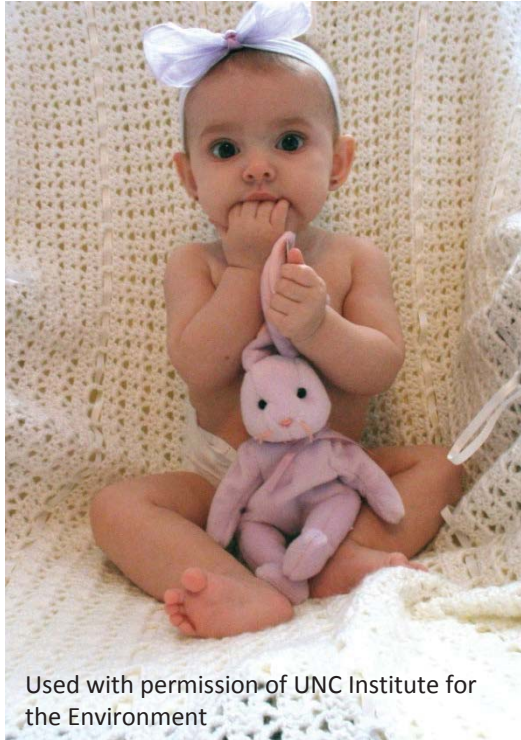
# **Requirements and Recommended Guidelines**

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## Chapter 2

### Requirements and Recommended Guidelines

Below are the requirements and recommended guidelines for specific groups of children at high risk.



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#### **Medicaid, Health Choice, and Women, Infants and Children (WIC) Program Participants**

All children enrolled in Health Check (Medicaid), Health Choice or the Special Nutrition Program for Women, Infants and Children (WIC Program) are **required** to have a blood lead test at 12 and 24 months of age. Children between 36-72 months must be tested if they have not previously been tested. Capillary blood lead samples are adequate for the initial blood lead test. Venous blood lead samples should be collected for confirmation of all blood lead test results  $\geq 5 \mu\text{g}/\text{dL}$ .

#### **Refugee Children**

The prevalence of elevated blood lead levels among newly resettled refugee children is higher than that for U.S. born children. This is attributed to several possible factors: (1) exposures in their previous country of residence, (2) malnutrition and deficiencies in iron, calcium and zinc, (3) living and playing in high-risk areas in the U.S. such as in and around homes built before 1978, and (4) exposure to lead-containing foods, candies, ceramics, utensils, cosmetics, and traditional remedies.

All refugee children **6 months to 16 years of age** are to be tested at the time of arrival to the United States. Repeat testing: For refugee children aged 6 months to 6 years of age blood lead testing should be repeated again 3 to 6 months after placement in a permanent residence **regardless of initial test results**. See 'Refugee Children' Tab G in the Appendix for more details.

Repeat testing has revealed elevated blood lead levels in some refugee children even when initial test results were not elevated. Chronic malnutrition and pica, which is common among certain refugee populations, put some of these children at greater risk of lead poisoning *after* placement in permanent residences. Therefore, this repeat blood test is considered to be a "medical necessity."

Refugee children **younger than 6 years** should undergo nutritional assessments as well as testing for hemoglobin or hematocrit level. Provide daily pediatric multivitamins

with iron for refugee children **6 months to 6 years of age**. See 'Refugee Children' Tab G in the Appendix for more details.

### **International Adoptees**

CDC recommends that all internationally adopted children have a blood lead test during their first medical examination in the U.S. and at 12 and 24 months of age.

Children immigrating to the United States through international adoptions may have health issues as diverse as the cultures into which they were born. Although recent research is sparse, evidence suggests that a significant proportion of immigrant and adopted children have elevated blood lead levels. Risk of elevated blood lead levels varies by country of origin.

### **Use of State Laboratory of Public Health for Blood Lead Analysis**

The State Laboratory Services of Public Health will analyze blood lead specimens for all children less than six years of age (and refugee children through 16 years) at no charge to the Medicaid or N.C. Health Choice (NCHC) beneficiary. Providers requesting analysis of specimens from children outside of this age group will need to contact the State Laboratory of Public Health at 919-807-8878.

State Laboratory test results also feed directly into the blood lead reporting system, removing the need for burdensome data entry by providers.

The Medicaid program encourages all providers to utilize the State Laboratory of Public Health for this service because it will:

- ◆ Facilitate and expedite reporting of blood lead testing on Medicaid recipients
  - ◆ Contribute to the creation of a central database on blood lead testing
  - ◆ Help assess the extent of North Carolina's lead problem
- ◆ Be less expensive for the Medicaid program

### **Point-Of-Care (POC) Lead Analyzers**

A growing number of health care providers in North Carolina are using point-of care (POC) lead analyzers (e.g. LeadCare® II) to test children for lead poisoning. Use of these analyzers provides an immediate test result reading which reduces delays in conducting diagnostic (i.e., confirmation) testing based on a child's initial blood lead test result. The provider can draw the diagnostic venous sample to be sent out to the reference lab, during the same office visit, thereby removing the hassle of bringing the patient back for the confirmation blood draw on a separate day.

The Clinical Laboratory Improvement Amendments (CLIA) designates facilities that use a POC lead analyzer as a laboratory. As such, they are required to report all blood lead test results for children less than six years old, even if determined in a clinical setting, to the North Carolina Childhood Lead Poisoning Prevention Program (NC CLPPP). To arrange for reporting blood lead test results, please contact Kim Gaetz at 919-707-5953 or [kim.gaetz@dhhs.nc.gov](mailto:kim.gaetz@dhhs.nc.gov).

Because current POC lead analyzers appear to provide optimal performance around 10  $\mu\text{g}/\text{dL}$  NC CLPPP recommends that all diagnostic test specimens be analyzed at a reference laboratory. Test results obtained using the POC lead analyzer cannot be accepted as a diagnostic test.

**Please note:** Blood lead test results should be rounded off to the nearest whole number when determining the type and timing of follow-up. For example, test results between 4.5 to 4.9  $\mu\text{g}/\text{dL}$  are rounded off to 5  $\mu\text{g}/\text{dL}$ . Rounding these values also allows for comparability with results reported from other laboratories and for submission to the Centers for Disease Control and Prevention, National Surveillance System.



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**§ 130A-131.7. Definitions.**

- (3) "Confirmed lead poisoning" means a blood lead concentration of 20 micrograms per deciliter or greater determined by the lower of two consecutive blood tests within a six-month period.
- (5) "Elevated blood lead level" means a blood lead concentration of 10 micrograms per deciliter or greater determined by the lower of two consecutive blood tests within a six-month period.

**§ 130A-131.8. Laboratory Reports of blood levels in children.**

(a) All laboratories doing business in this State shall report to the Department all environmental lead test results and blood lead test results for children less than six years of age and for individuals whose ages are unknown at the time of testing. Reports shall be made by electronic submission within five working days after test completion.

(b) Reports of blood lead test results shall contain all of the following:

- (1) The child's full name, date of birth, sex, race, ethnicity, address, and Medicaid number, if any;
- (2) The name, address, and telephone number of the requesting health care provider;
- (3) The name, address, and telephone number of the testing laboratory;
- (4) The laboratory results, whether the specimen type is venous or capillary; the laboratory sample number, and the dates the sample was collected and analyzed.

**§ 130A-131.9A. Investigation to identify lead poisoning hazards.**

(a) When the Department learns of confirmed lead poisoning, the Department shall conduct an investigation to identify the lead poisoning hazards to children. The Department shall investigate the residential housing unit where the child with confirmed lead poisoning resides. The Department shall also investigate the supplemental addresses of the child who has confirmed lead poisoning.

(a1) When the Department learns of an elevated blood lead level, the Department shall, upon informed consent, investigate the residential housing unit where the child with the elevated blood level resides. When consent to investigate is denied, the child with the elevated blood lead level cannot be located, or the child's parent or guardian fails to respond, the Department shall document the denial of consent, inability to locate, or failure to respond.

**§ 130A-131.9C. Abatement and Remediation.**

(a) Upon determination that a child less than six years of age has a confirmed lead poisoning of 20 micrograms per deciliter or greater and that child resides in a residential housing unit containing lead poisoning hazards, the Department shall require remediation of the lead poisoning hazards. The Department shall also require remediation of the lead poisoning hazards identified at the supplemental addresses of a child less than six years of age with a confirmed lead poisoning of 20 micrograms per deciliter or greater.

## Assessment and Testing Methodology

**Health care providers are encouraged to conduct a blood lead test on all children at 12 months and again at 24 months of age.** However, at a minimum, North Carolina children should be assessed for environmental risk factors of lead poisoning at 12 months and again at 24 months of age, using **Form 3958: Lead Risk Assessment Questionnaire** available in Appendix D. Children under six years of age who first enter the health care system between 25 and 72 months of age should have lead screening (via blood lead test or risk assessment questionnaire) at their first visit if no record of prior lead testing is available.

Although it is preferred that the assessment occurs at 12 and 24 months of age, there are acceptable ranges of ages during which screening may occur. For the 12-month screening, the acceptable range is from 9 through 18 months of age. For the 24-month screening, the acceptable range is from 18 through 30 months of age, with the goal being to conduct the screening as close as possible to 24 months of age. Childhood lead poisoning peaks at two years of age, due to the increased mobility and curiosity of toddlers at this age. Research has shown little value to screenings done prior to one year of age, due to children's developmental stages with respect to mobility and hand-to-mouth behaviors.

Assessment of potential lead exposure may be accomplished by performing a blood lead test (preferred) or by administering a risk assessment questionnaire. **All children participating in Health Check (Medicaid), Health Choice or the Special Nutrition Program for Women, Infants and Children (WIC Program) are required to receive a blood lead test at 12 and 24 months.** Other children living in low-risk ZIP codes may be assessed using the risk assessment questionnaire starting when the child is 12 months old. If all of the answers on the risk assessment questionnaire are "No" and the child lives in a low-risk ZIP code, the child is to be reassessed at 24 months of age. Any "Yes" or "I don't know" response on the questionnaire indicates the need to perform a blood lead test.

When 18 and 30 month-old children present for a WIC certification, WIC staff are to assess whether blood lead testing was performed by the child's medical home. If the lead test was not done or if the test result is not available, a blood lead test should be performed only when children are having a hemoglobin or hematocrit test done at the local agency during the WIC certification visit. Otherwise, the child should be referred to the agency's lead program staff or to the child's medical home, depending on the agency's protocol.

### **Reporting blood lead test results**

Report all blood lead test results to parents/guardians and document notification. Reporting blood lead test results not only informs the parent of the child's blood lead status but also facilitates prevention and education. Parental notification may also stimulate questions and feedback from the parent to the medical provider as to what the parent/guardian understands about the potential health effects of lead and how lead

exposure may affect their child. It also provides the parent with the knowledge to seek further testing options and measures to prevent future lead exposure.

### **Indications for Additional Testing**

Blood lead testing should be done at times other than the routine testing schedule if it is suspected that a child faces increased risk for lead exposure. Indications for additional testing include:

- ✓ **Increased likelihood of exposure due to housing.** A child's risk for lead exposure may increase because the family has moved to older housing or to a geographic area with a higher prevalence of lead poisoning or older housing, or because the child lives in an older home that has recently been repaired, remodeled or renovated.
- ✓ **Parental request.** Parents may express concern about their children's potential lead exposure because of residence in older housing, nearby construction or renovation, an elevated blood lead level (EBL) in a neighbor's child, or other possible exposures. Such information may be valuable in highlighting potential exposure. A blood lead test should be performed if there is reason to suspect that lead exposure has occurred.
- ✓ **Immigrant, foreign adoption, and foreign travel.** Immigrant children, foreign child adoption, and children traveling often to and from foreign countries less than 6 years of age may be at a potentially greater lead exposure risk.

### **Who and When to Test**

All children seen at local health departments for health maintenance visits (Baby and Child Health Check Clinics; Pediatric Supervisory Clinics; WIC Children etc.) and all children receiving services through private providers should receive a blood lead test at 12 and 24 months of age.

Ideally, children should be tested between 12 and 24 months of age, or upon their first entry to the health care system even if it is at a later age. Children identified as high risk should be retested in 12 months. Blood lead specimens should be collected by the child's primary care provider at well-visits. Referral to a provider solely for the purpose of blood lead testing is discouraged.

All refugee children **6 months to 16 years of age** are to be tested at the time of arrival to the United States. Repeat testing: For refugee children aged 6 months to 6 years of age blood lead testing should be repeated again 3 to 6 months after placement in a permanent residence **regardless of initial test results**. See 'Refugee Children' Tab G in the Appendix for more details.

CDC recommends that all internationally adopted children have a blood lead test during their first medical examination in the U.S. and at 12 and 24 months of age.