C&TC Requirements

General
C&TC providers are required to screen blood lead levels (BLL) in children at 12 and 24 months of age, and children up to 6 years of age who did not have a BLL screen at the 24-month visit. In addition, children should be screened whenever their history indicates concern for lead poisoning, or their risk factors change. Newly arrived refugees less than 72 months of age should be retested 3 to 6 months after placement in permanent residence (Minnesota Department of Health, 2013). For more information, refer to the Blood Lead Screening Guidelines for Minnesota (www.health.state.mn.us).

Personnel
Screening may be completed by a medical assistant or lab technician. A licensed healthcare provider: physician, nurse practitioner, physician assistant, or Registered or Public Health Nurse (RN, PHN) who has completed the C&TC Comprehensive Screening training through the Minnesota Department of Health (MDH) must interpret the results and ensure appropriate follow-up.

Documentation
It is not necessary to have a complete record of laboratory test results on the documentation forms. Test results may be found elsewhere in the chart, but documentation forms should indicate where this information can be found.

For documentation examples, refer to the C&TC Documentation Forms for Providers and Clinics (www.dhs.state.mn.us).

Procedure
The only definitive way to find out if a child was exposed to lead is to do a BLL screening test. Administering a risk questionnaire alone without a BLL test at 12 and 24 months of age does not meet C&TC requirements.

The specimen for the BLL screen may be either capillary or venous blood. The child’s hands should be washed before capillary BLL tests are done. Alcohol wipes do not sufficiently remove lead dust.

When the result is greater than or equal to 5 micrograms lead per deciliter of blood (5 mcg/dL), a venous blood lead test is required to confirm the results of the capillary draw according to the timeline in the following table.

<table>
<thead>
<tr>
<th>Confirmatory Testing for Elevated BLLs</th>
</tr>
</thead>
<tbody>
<tr>
<td>If result of capillary screening test is:</td>
</tr>
<tr>
<td>5 – 14.9 mcg/dL</td>
</tr>
<tr>
<td>15 – 44.9 mcg/dL</td>
</tr>
<tr>
<td>45 – 59.9 mcg/dL</td>
</tr>
<tr>
<td>≥ 60 mcg/dL</td>
</tr>
</tbody>
</table>

Source: Childhood Lead Treatment Guidelines for Minnesota (Minnesota Department of Health, 2019).

Referral and Follow-up
A child with a BLL greater than or equal to 5 mcg/dL must receive appropriate follow-up from their primary care provider. For specifics on case management and treatment, refer to these resources:

- Childhood Blood Lead Clinical Treatment Guidelines (www.health.state.mn.us) (Revised 2019)

After an initial confirmed elevated venous result, repeat a blood lead test on a venous sample every 3 months or do more frequent monitoring for higher BLLs, as needed.
lead levels should continue to be monitored until they are below 5 mcg/dL.

MDH receives all BLL test results drawn in MN. Elevated results are referred to local Public health for follow-up (Minnesota Department of Health, 2019).

**Guidelines for Women during Pregnancy and Lactation**

MDH recommends blood lead screening for pregnant women identified as at risk of having an elevated BLL. Infants of mother’s with elevated BLL need specific follow-up. Refer to Blood Lead Screening Guidelines for Pregnant and Breastfeeding Women in Minnesota (www.health.state.mn.us).

**Importance of Lead Screening**

Lead toxicity can affect every organ system. Many individuals with elevated blood lead levels have no apparent signs or symptoms, but even low levels of exposure produce many subtle health and learning effects (Centers for Disease Control and Prevention, 2015). There is no safe blood lead level for children.

A blood lead test is the only way to know if a child has been exposed to lead. Refer to Childhood Lead Exposure (www.health.state.mn.us).

**Professional Recommendations**

Centers for Disease Control and Prevention

A BLL of 5 mcg/dL or higher requires intervention to prevent further lead exposure and elevation in blood lead levels (Centers for Disease Control and Prevention, 2015).

**Resources**

Minnesota Department of Human Services

- C&TC Schedule of Age-Related Screening Standards (www.dhs.state.mn.us)