MDHHS Michigan Department of Health & Human Services

Health and Aging Services Administration

BULLETIN

HASA

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Distribution: Practitioners, Local Health Departments, Federally Qualified Health Centers, Rural Health Clinics, Medicaid Health Plans, Tribal Health Centers

Issued: April 1, 2022

Subject: Update of Blood Lead Reference Value (BLRV) and Recommendations on the Medical Management of Childhood Lead Exposure

Effective: May 1, 2022

Programs Affected: Medicaid, Healthy Michigan Plan, MIChild, Children's Special Health Care Services

The American Academy of Pediatrics (AAP) periodicity schedule recommends that children enrolled in Medicaid be tested for blood lead exposure at 12 and 24 months of age, or between 36 to 72 months of age if they have not previously been tested. The purpose of the policy is to update the blood lead reference value (BLRV) and recommendations on the medical management of childhood lead exposure. The Centers for Disease Control and Prevention (CDC) has lowered the BLRV from 5 micrograms/deciliter (µg/dL) to 3.5 µg/dL. The AAP has responded to the CDC's new BLRV by updating its guidance and recommendations for the medical management of elevated blood lead levels (BLLs) for pediatric practitioners to protect all children from the adverse effects of lead.

While the AAP supports this BLRV as an indication for when certain actions and interventions should occur, both the AAP and CDC caution that there is no established safe BLL in children. Providers may use their own clinical judgement in determining the appropriate actions in the medical management of children potentially exposed to lead whose BLLs are below the levels as indicated per the updated recommendations.

Recommendations on Medical Management of Childhood Lead Exposure*

Blood Lead Level	Action
< 3.5 µg/dL	• The limit of detection for lead can vary by lab and is typically between 1 and 3.3 µg/dL. • Review laboratory results with the family. For reference, the geometric mean BLL for children 1-5 years old in the United States is less than 1 µg/dL. Emphasize with the family the dangers of lead and the need for vigilance. • Repeat the BLL in 6-12 months if the child is at high risk or if the environmental risk changes during the timeframe. Ensure lead testing is done at 1 and 2 years of age and thereafter, based on local and state guidelines. • For children tested at age <12 months, consider re-testing in 3-6 months, as lead exposure may increase as mobility increases. Consider lead-contaminated tap water used daily for infant formula as a possible significant source that may be missed in later assessments of BLL.

Blood Lead Level	Action
	• Perform routine health maintenance, including assessment of nutrition, physical and mental development, as well as iron deficiency risk factors, as per the recommendations in the AAP Bright Futures Guidelines. • Provide preliminary advice about reducing/eliminating exposures (e.g., wash children's hands/toys frequently; damp-mop floors, windows and windowsills; leave shoes at the home's threshold; place duct-tape or contact paper over chipping/peeling paint; avoid renovations that may create a dust hazard).
3.5-14 µg/dL	• Perform steps as described above for levels <3.5 µg/dL. • Re-test venous BLL within 1-3 months to ensure the lead level is not rising. If it is stable or decreasing, re-test the BLL in 3 months. Refer patient to the local health department (LHD). Contact the MDHHS Childhood Lead Poisoning Prevention Program at 517-335-8885 and/or the CDC at 800-CDC-INFO (800-232-4636), the National Lead Information Center at 800-424-LEAD (5323), or the national Pediatric Environmental Health Specialty Unit (PEHSU) network (pehsu@aap.org) for resources regarding lead-poisoning prevention. • Take a careful environmental history to identify potential sources of exposure. Consider young siblings and other children who may be exposed. If lead paint in older homes is the exposure concern, advise that lead paint abatement is the best solution, and refer the family to the LHD for resources and information. • Provide nutritional counseling related to calcium, vitamin D, and iron. In addition, recommend having fruit at every meal, as iron absorption quadruples when taken with vitamin C-containing foods. Encourage the consumption of iron-enriched foods (e.g., cereals, meats). Some children may be eligible for Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) or other nutritional resources. • Ensure iron sufficiency with adequate laboratory testing (complete blood count [CBC], ferritin, and reticulocyte count) and treatment per AAP guidelines. Consider starting a multivitamin with iron or iron supplementation as indicated. • Perform structured developmental screening evaluations at child health maintenance visits per recommendations in Bright Futures Guidelines, and, if indicated, refer to therapeutic and special educational programs (e.g., Early Intervention Program or Individualized Education Plan), as lead's effect on development may manifest over years.
15-44 µg/dL	• Perform steps listed above for levels 3.5-14 µg/dL. Report results to the LHD. • Determine if there are any symptoms which may be subtle and can include anorexia and abdominal discomfort. • Confirm BLL with venous sample within 1 to 2 weeks, or more rapidly for higher levels. • Work with the family to identify and remove potential lead sources. Refer to the LHD to conduct home investigation to assess for the lead source. • Additional specific evaluation of the child, such as an abdominal x-ray, should be considered based on the environmental investigation and history (e.g., pica for paint chips, mouthing behaviors). Gastrointestinal decontamination may be considered if radio-opaque foreign bodies consistent with ingested lead are visualized on x-ray. Any treatment for BLL in this range should be done in consultation with an expert. • Contact your regional PEHSU or the Michigan Poison and Drug Information Center (MiPDC) at 1-800-222-1222 for guidance.
>44 µg/dL	• Follow above guidance for BLL 15-44 µg/dL. Report results to state and local health authorities. • Confirm the BLL with repeat venous lead level within 48 hours or more rapidly for higher levels. • Obtain a CBC, electrolytes, blood urea nitrogen, creatinine, liver transaminase enzyme levels, and urinalysis in anticipation of chelation therapy.

Blood Lead Level	Action
	• Abdominal x-ray should be done to look for radio-opaque foreign bodies suggestive of recent ingestion as this may change management. Consider gastrointestinal decontamination if radio-opaque foreign bodies consistent with ingested lead are visualized on x-ray. • Emergently admit all symptomatic children to a hospital; if there is evidence of significant central nervous system pathology, consider pediatric intensive care unit admission. If asymptomatic, consider hospitalization and/or chelation therapy (managed with the assistance of an experienced provider). Chelation in the context of ongoing exposure is ineffective and may result in increasing lead levels in the central nervous system. Factors that may influence management include the status of the home with respect to lead hazards, ability to isolate the lead source, family social situation, and chronicity of the exposure. An elevated blood zinc-protoporphyrin level (ZPP) can confirm either an iron-deficiency anemia as a comorbidity in the lead-poisoned child or, if there is no iron deficiency present, a more chronic lead exposure. Contact your regional PEHSU or MiPDC at (1-800-222-1222) for assistance. • Prior to initiating chelation therapy for outpatient therapy, it is critical that the home environment is inspected, temporary mitigation measures applied, and preferably demonstration of stable or down trending lead levels indicating the primary source of lead exposure has been removed prior to starting chelation therapy. There is a risk of worsening lead exposure if chelation therapy continues in a residence with persistent lead hazards. It is expected, after a course of chelation therapy, that the BLL will rebound as the lead re-equilibrates. After chelation is completed, continue to follow the child until the BLL declines steadily; consider occurrence of re-exposure if the BLL remains stable or rebounds above pre-chelation levels.

* Notes:

- Table and recommendations adopted from the AAP and the PEHSU.
- No level of lead in the blood is safe.

Blood Lead Exposure Follow-up and Case Management Services

Many LHDs provide blood lead exposure follow-up, including case management services and environmental investigations. Case management services for children with a BLRV of 3.5 µg/dL or greater are covered under the Children's Special Health Care Services (CSHCS) case management services benefit. Beneficiaries are eligible for a maximum of six billing units per year. Children do not need to be enrolled in CSHCS to access this case management benefit. (Refer to the Additional Information on Blood Lead Testing subsection [Benefits Section] of the Local Health Departments Chapter and the Case Management Benefit subsection [Benefits Section] of the Children's Special Health Care Services Chapter of the Michigan Department of Health and Human Services [MDHHS] Medicaid Provider Manual for more information.)

Manual Maintenance

Retain this bulletin until the information is incorporated into the MDHHS Medicaid Provider Manual.

Questions

Any questions regarding this bulletin should be directed to Provider Inquiry, Department of Health and Human Services, P.O. Box 30731, Lansing, Michigan 48909-8231, or e-mailed to ProviderSupport@michigan.gov. When you submit an e-mail, be sure to include your name, affiliation, NPI number, and phone number so you may be contacted if necessary. Typical Providers may phone toll-free 800-292-2550. Atypical Providers may phone toll-free 800-979-4662.

An electronic copy of this document is available at www.michigan.gov/medicaidproviders >> Policy, Letters & Forms.

Approved

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