

# California Case Management Plan

# California Management Guidelines on Childhood Lead Poisoning for Health Care Providers



No level of lead in the body is known to be safe. In 2012, the Centers for Disease Control and Prevention (CDC) established a new “reference value” of 5 micrograms per deciliter (mcg/dL) for blood lead levels (BLLs), thereby lowering the level at which evaluation and intervention are recommended.<sup>1</sup>

Contact the California Department of Public Health, Childhood Lead Poisoning Prevention Branch (CLPPB), (510) 620-5600, [www.cdph.ca.gov/programs/CLPPB](http://www.cdph.ca.gov/programs/CLPPB), for additional information about childhood lead toxicity.

BLL <sup>2</sup>	EVALUATION AND TESTING	MANAGEMENT
<p><b>&lt; 5 mcg/dL</b></p> <p>Initial BLL and routine retest may be capillary (CBLL) or venous (VBLL)<sup>3,4</sup></p> <p><b>Retest for identified risk must be venous<sup>3</sup></b></p>	<p><b>General</b></p> <ul style="list-style-type: none"> <li>Perform routine history and assessment of physical and mental development.</li> <li>Assess nutrition and risk for iron deficiency.</li> <li>Consider lead exposure risks.</li> </ul> <p><b>Blood Lead Levels</b></p> <ul style="list-style-type: none"> <li>California regulations require testing at ages 1 and 2 years (up to 6 years if not tested at 2 years) if child is in a publicly funded program for low-income children, spends time at a pre-1978 place with deteriorated paint or recently renovated, or has other lead exposure risks.<sup>5</sup></li> <li>If screened early (before 12 months), retest in 3-6 months as risk increases with increased mobility.</li> <li>Test anyone birth to 21 years when indicated by changed circumstances, identification of new risks, or at the request of a parent or guardian.</li> <li>Follow up with VBLL in 6-12 months if indicated.</li> <li>See federal guides for Head Start<sup>6</sup> or refugees.<sup>7</sup></li> </ul>	<ul style="list-style-type: none"> <li>Comply with California regulations mandating a standard of care under which the health care provider, at each periodic health care visit from age 6 months to 72 months must give oral or written anticipatory guidance to a parent or guardian, including at a minimum that children can be harmed by lead, are particularly at risk for lead poisoning from the time they crawl until 72 months old, and can be harmed by deteriorating or disturbed paint and lead-contaminated dust.<sup>5</sup></li> <li>Discuss hand to mouth activity, hand washing, and sources of lead: e.g. lead-contaminated paint, dust, and soil (particularly near busy roads), plumbing, a household member's lead-related work, bullets, fishing sinkers; and also some: remedies, cosmetics, food, spices, tableware, cookware, batteries, jewelry, toys, and other consumer products.</li> <li>Discuss BLLs with family. Counsel on any risk factors identified.</li> <li>Encourage good nutrition, especially iron, vitamin C, and calcium. Consider referral to Supplemental Nutrition Program for Women, Infants, and Children (WIC).</li> <li>Encourage participation in early enrichment activities.</li> <li><b>Chelation is not recommended in this BLL range.</b></li> </ul>
<p><b>5-9 mcg/dL</b></p> <p>Initial BLL may be capillary or venous</p> <p><b>Every retest must be venous<sup>3</sup></b></p>	<p><b>General – Evaluate as above AND</b></p> <ul style="list-style-type: none"> <li>Take an environmental history to identify potential sources of exposure and provide preliminary advice on reducing/eliminating them.</li> <li>Test for iron sufficiency (CBC, Ferritin, and CRP).</li> <li>Perform structured developmental screening evaluations at periodic health visits as lead effects may manifest over years.</li> <li>Evaluate risk to other children and pregnant and lactating women in the home.</li> </ul> <p><b>Blood Lead Levels</b></p> <ul style="list-style-type: none"> <li>Retest in 1-3 months to be sure BLL is not rising.</li> <li>Then retest in 3 months and thereafter based on VBLL trend.</li> <li>If retest is in another range, retest per that range.</li> </ul>	<p><b>Manage as above AND</b></p> <ul style="list-style-type: none"> <li>Counsel on nutrition, iron, vitamin C, and calcium. Encourage taking high-iron and high-vitamin C foods together. Refer to WIC.</li> <li>Treat iron insufficiency per AAP guidelines. Consider starting a multivitamin with iron.</li> <li>Add notation of elevated BLL to child's medical record for future neurodevelopmental monitoring.</li> <li>Refer to an early enrichment program, e.g. Early Start or Head Start.</li> <li>Consider medical referral and testing for other children and pregnant and lactating women in the home.</li> <li>Coordinate with local Childhood Lead Poisoning Prevention Program (CLPPP) or state CLPPB for outreach, education, and other services. See <a href="http://www.cdph.ca.gov/programs/CLPPB">www.cdph.ca.gov/programs/CLPPB</a> for state and local contact information.</li> <li><b>Chelation is not recommended in this BLL range.</b></li> </ul>
<p><b>10-14 mcg/dL</b></p> <p>Initial BLL may be capillary or venous</p> <p><b>Every retest must be venous<sup>3</sup></b></p>	<p><b>General – Evaluate as above</b></p> <p><b>Blood Lead Levels</b></p> <ul style="list-style-type: none"> <li>Retest in 1-3 months to be sure BLL is not rising.</li> <li>To determine eligibility for full public health case management, retest after interval of 30 days (eligible if persistent in or above this range).</li> <li>If BLLs are stable or decreasing, monitor initially with VBLLs every 3 months and thereafter based on VBLL trend. If retest is in another range, retest per that range.</li> </ul>	<p><b>Manage as above AND</b></p> <ul style="list-style-type: none"> <li>If BLL is persistent in or above this range (30 days or more), contact the local CLPPP (or, if no local program, the state CLPPB) for full case management services, without charge or means test, for children aged birth to 21 years (nurse case management, environmental investigation, and recommendations for remediation of lead sources).</li> <li>The state CLPPB is available for further consultation: (510) 620-5600. See footnote for other lead-knowledgeable agencies.<sup>8</sup></li> <li><b>Chelation is not recommended in this BLL range.</b></li> </ul>

Reformatted summary table from: <http://www.dhcs.ca.gov/services/chdp/Documents/HAG/Chapter6.pdf>

<sup>1</sup> CDC, [www.cdc.gov/nceh/lead/acclpp/blood\\_lead\\_levels.htm](http://www.cdc.gov/nceh/lead/acclpp/blood_lead_levels.htm), accessed 09/2017. This reference level is to be periodically reevaluated.

<sup>2</sup> BLLs are rounded to the closest whole integer. (5 includes 4.5 mcg/dL, 10 includes 9.5 mcg/dL, 15 includes 14.5 mcg/dL, etc.)

<sup>3</sup> Capillary lead specimens are easily contaminated. They are acceptable for screening but all retests on BLLs ≥ 5 mcg/dL should be venous. Consider arterial or umbilical cord specimens as if venous. A heelstick may be used to obtain a capillary specimen in children under one year. LeadCare® analyzers should not be used for VBLLs. <https://www.fda.gov/MedicalDevices/Safety/AlertsandNotices/ucm558733.htm>.

<sup>4</sup> Analyzing laboratories must report results of all BLLs drawn in California to the state. California Health and Safety Code, section 124130.

<sup>5</sup> California Code of Regulations, Title 17, sections 37000-37100.

<sup>6</sup> Head Start, <https://eclkc.ohs.acf.hhs.gov/physical-health/article/lead-poisoning-prevention>, accessed 09/2017.

<sup>7</sup> CDC, <http://www.cdc.gov/immigrantrefugeehealth/guidelines/lead-guidelines.html>, accessed 09/2017.

<sup>8</sup> Pediatric Environmental Health Specialty Unit Network, (888) 347-2632. CDC, [www.cdc.gov/nceh/lead/default.htm](http://www.cdc.gov/nceh/lead/default.htm). Poison Control Center, (800) 222-1222

For additional information about lead poisoning, contact: California Department of Public Health Childhood Lead Poisoning Prevention Branch  
Tel. (510) 620-5600 [www.cdph.ca.gov/programs/CLPPB](http://www.cdph.ca.gov/programs/CLPPB)

BLL	EVALUATION AND TESTING	MANAGEMENT
<b>15–19 mcg/dL</b> Initial BLL may be capillary or venous <b>Every retest must be venous<sup>3</sup></b>	<b>General – Evaluate as above AND</b> <ul style="list-style-type: none"> <li>Consider abdominal X-ray if possible ingestion of leaded materials or history of pica/excessive mouthing.</li> </ul> <b>Blood Lead Levels</b> <ul style="list-style-type: none"> <li>Retest in 1-4 weeks to be sure BLL is not rising.</li> <li>Then, if stable or decreasing, monitor initially with VBLLs every 1-3 months and thereafter based on VBLL trend.</li> <li>If retest is in another range, retest per that range.</li> </ul>	<b>Manage as above AND</b> <ul style="list-style-type: none"> <li>Consider gut decontamination if foreign bodies consistent with lead are visualized on X-ray.</li> <li>If a single VBLL in this range, contact the local CLPPP (or, if no local program, the state CLPPB) for full case management services for children aged birth to 21 years.</li> <li>Any treatment of BLLs in this range should be provided in consultation with the state CLPPB: (510) 620-5600. See footnote 8 for other lead-knowledgeable agencies.</li> <li><b>Chelation is not recommended in this BLL range.</b></li> </ul>
<b>20–44 mcg/dL</b> Initial BLL may be capillary or venous <b>Every retest must be venous<sup>3</sup></b>	<b>General - Evaluate as above</b> <b>Blood Lead Levels</b> <ul style="list-style-type: none"> <li>Retest in 1-4 weeks to be sure BLL is not rising (the higher the BLL, the sooner the retest).</li> <li>Then, if stable or decreasing, monitor initially with VBLLs every 2-4 weeks and thereafter based on VBLL trend.</li> <li>If retest is in another range, retest per that range.</li> </ul>	<b>Manage as above AND</b> <ul style="list-style-type: none"> <li>Consider referral to California Children Services (CCS). Requires confirmed venous BLL equal to or greater than 20 mcg/dL.<sup>9</sup></li> <li>Consider referral for medical nutrition therapy.<sup>10</sup></li> <li><b>Chelation is not typically initiated in this BLL range.</b></li> </ul>
<b>45–69 mcg/dL</b> Initial BLL may be capillary or venous <b>Every retest must be venous<sup>3</sup></b>	<b>URGENT</b> <b>General – Evaluate as above AND</b> <ul style="list-style-type: none"> <li><b>OBTAIN ABDOMINAL X-RAY.</b></li> </ul> <b>Blood Lead Levels</b> <ul style="list-style-type: none"> <li><b>Confirm initial BLL with repeat VENOUS BLL:</b> <ul style="list-style-type: none"> <li>WITHIN 48 HOURS if BLL is 45-59 mcg/dL.</li> <li>WITHIN 24 HOURS if BLL is 60-69 mcg/dL.</li> </ul> </li> <li>Confirmatory venous BLL and other medically appropriate actions must occur <b>BEFORE</b> initiating chelation.</li> <li>Monitor response to chelation with VBLLs.</li> <li>Follow-up with VBLLs every 2-4 weeks (more frequently if status requires) until trend is downward or stable or as trend indicates.</li> <li>Consider modifying protocol if VBLLs are not decreasing as expected or remain chronically elevated, e.g. from a retained bullet.</li> <li>If retest is in another range, retest per that range.</li> </ul>	<b>URGENT</b> <b>Manage as above AND</b> <ul style="list-style-type: none"> <li>Consider chelation.</li> <li>Evaluate whether hospitalization is needed to reduce lead exposure and achieve compliance with treatment protocols.</li> <li>Immediately notify local CLPPP or state CLPPB.</li> </ul> <b>Chelation Therapy</b> <ul style="list-style-type: none"> <li><b>Consult with a physician experienced in managing chelation.</b></li> <li>Perform gut decontamination, if indicated, <b>BEFORE</b> chelation.</li> <li>Consider one of two chelating agents:               <ul style="list-style-type: none"> <li>Succimer per outpatient protocol; give on inpatient basis if compliance or exposure reduction cannot otherwise be assured,</li> <li><b>OR</b> CaNa<sup>2</sup>EDTA per hospital protocol.</li> </ul> </li> <li><b>* CAUTION: USE ONLY CALCIUM Na<sup>2</sup>EDTA.<sup>11</sup></b></li> <li>Very high BLLs have been associated with renal tubular dysfunction. If using potentially nephrotoxic chelating agents (e.g. CaNa<sup>2</sup>EDTA), <b>TEST RENAL FUNCTION BEFORE AND DURING TREATMENT.<sup>12</sup></b></li> <li>Repeat treatment cycles may be needed due to blood lead rebound.</li> </ul>
<b>≥ 70 mcg/dL</b> Initial BLL may be capillary or venous <b>Every retest must be venous<sup>3</sup></b>	<b>MEDICAL EMERGENCY</b> <b>General – Evaluate as 45-69 range.</b> <ul style="list-style-type: none"> <li><b>OBTAIN ABDOMINAL X-RAY.</b></li> </ul> <b>Blood Lead Levels</b> <ul style="list-style-type: none"> <li><b>IMMEDIATELY confirm initial BLL with repeat VENOUS BLL.</b></li> <li>Confirmatory venous BLL and other medically appropriate actions must occur <b>BEFORE</b> initiating chelation.</li> <li>Monitor response during chelation with VBLLs.</li> <li>Follow-up with VBLLs every 2-4 weeks (more frequently if status requires) until trend is downward or stable or as trend indicates.</li> <li>Consider modifying protocol if VBLLs are not decreasing as expected or remain chronically elevated, e.g. from a retained bullet.</li> <li>If retest is in another range, retest per that range.</li> </ul>	<b>MEDICAL EMERGENCY</b> <b>Manage as above AND</b> <ul style="list-style-type: none"> <li><b>If BLL is confirmed,</b> hospitalize to stabilize, chelate, reduce lead exposure, and monitor progress.</li> <li>Immediately notify local CLPPP or state CLPPB.</li> </ul> <b>Chelation Therapy</b> <ul style="list-style-type: none"> <li><b>Consult with a physician experienced in managing chelation.</b></li> <li>Perform gut decontamination, if indicated, <b>BEFORE</b> chelation.</li> <li><b>CAUTION:</b> If using CaNa<sup>2</sup>EDTA with dimercaprol (BAL) for chelation:               <ul style="list-style-type: none"> <li><b>Use only CALCIUM Na<sup>2</sup>EDTA.<sup>11</sup></b></li> <li><b>Assess for peanut allergy</b> (BAL is suspended in peanut oil).</li> </ul> </li> <li>Very high BLLs have been associated with renal tubular dysfunction. If using potentially nephrotoxic chelating agents (e.g. CaNa<sup>2</sup>EDTA), <b>TEST RENAL FUNCTION BEFORE AND DURING TREATMENT.<sup>12</sup></b></li> <li>Repeat treatment cycles may be needed, due to blood lead rebound.</li> </ul>

<sup>9</sup> California Code of Regulations, Title 22, section 41518.9.

<sup>10</sup> Academy of Nutrition and Dietetics, <http://www.eatrightpro.org/resource/practice/getting-paid/who-pays-for-nutrition-services/mnt-vs-nutrition-education>.

<sup>11</sup> CDC-MMWR, Deaths Associated with Hypocalcemia from Chelation Therapy—Texas, Pennsylvania, and Oregon, 2003-2005, March 3, 2006, 55(08):204-207. [www.cdc.gov/mmwr/preview/mmwrhtml/mm5508a3.htm](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5508a3.htm), accessed 09/2017.

<sup>12</sup> Preventing Lead Poisoning in Young Children: A Statement by the Centers for Disease Control, October 1991, US Department of Health and Human Services, Pharmacology of Chelating Agents, Chapter 7, pg 56, <https://www.cdc.gov/nceh/lead/publications/books/plpyc/Chapter7.htm>.

**CHILDHOOD LEAD POISONING PREVENTION BRANCH (CLPPB) PROTOCOL  
FOR NURSE CASE MANAGEMENT OF A LEAD-EXPOSED CHILD**

This protocol covers primary duties and deadlines for nurse case-management of a lead-exposed child. This is not a guide for the primary care provider (PCP), who should refer to the Provider Health Assessment Guidelines on “Blood Lead Test and Anticipatory Guidance” (HAGs).<sup>1</sup>

Blood lead levels are indicated as micrograms per deciliter (mcg/dL). Abbreviations used are blood lead level (BLL), capillary BLL (CBLL) and venous BLL (VBLL).

**Criteria for Full State Case Management of Child Aged Birth up to 21 Years**

- One VBLL equal to or greater than ( $\geq$ ) 14.5 mcg/dL,<sup>2</sup> or
- Two BLLs  $\geq$  9.5 mcg/dL, at least the second of which is venous, drawn at least 30 calendar-days apart. Need not be consecutive (there may be lower BLLs during the same period of time).

**Criteria for Standard Clinical Case Closure of State Cases**

Two or more VBLLs, the most recent of which is less than ( $<$ ) 4.5 mcg/dL, demonstrating the VBLL has remained  $<$  9.5 mcg/dL for at least 365 calendar days, there is a clear downward trend in VBLLs, and other objectives of the case management plan have been achieved.

BLL	NURSE CASE MANAGEMENT ACTIVITIES
<b>&lt; 4.5</b> capillary or venous <sup>3</sup>	<p><b>Below CDC Reference Level<sup>4</sup></b> – no specific nurse case-management response required</p> <ul style="list-style-type: none"> <li>▪ Routine reassessment, screening, and anticipatory guidance by PCP.</li> <li>▪ If contacted, any knowledgeable staff may provide information or send materials on childhood lead exposure and community resources (including websites) and positive steps, such as good nutrition, developmental stimulation, and avoiding lead hazards.</li> <li>▪ May provide other services as resources allow. May contact PCP.</li> </ul>
<b>4.5–9.4</b> capillary or venous <sup>3</sup>	<p><b>CDC Reference Level and above</b>, not meeting state case criteria – manage as above plus:</p> <ul style="list-style-type: none"> <li>▪ Remind PCP that <b>all subsequent BLLs must be venous</b>.</li> <li>▪ Remind PCP to obtain VBLL within 1-3 months, then retest in 3 months and then retest based on trend in BLLs. Monitor until at least 2 venous follow-up tests have been done to be sure VBLL is trending downward and most recent VBLL is <math>&lt;</math> 4.5 mcg/dL.</li> <li>▪ Within 2 months of notification of initial BLL, begin outreach and education.</li> <li>▪ As resources allow and depending on the BLL trend, provide additional, graded responses to reduce lead exposure, up to and including home visit (HV), environmental investigation (EI), or full management as provided to state cases.</li> </ul>
<b>9.5–14.4</b> initial capillary or venous <sup>3</sup>	<p><b>Potential State Case</b> (based on persistence) – manage as above plus:</p> <ul style="list-style-type: none"> <li>▪ Remind PCP to retest with VBLL within 1-3 months, then retest in 3 months and then retest based on result.</li> <li>▪ To qualify for full case management, there must be a confirming VBLL <math>\geq</math> 9.5 at least 30 calendar-days after initial BLL, even if BLL has been repeated in the interim.</li> <li>▪ Monitor until at least 2 venous follow-up tests have been done to be sure VBLL is trending downward and most recent VBLL is <math>&lt;</math> 4.5 mcg/dL.</li> </ul>
<b>9.5–14.4</b> confirmed venous <sup>3</sup> (persistent for $\geq$ 30 calendar days)	<p><b>Confirmed State Case</b> (based on persistence) – manage as above plus full case management:</p> <ul style="list-style-type: none"> <li>▪ Remind PCP to monitor with VBLLs initially every 3 months; thereafter retest based on result</li> <li>▪ Initial HV, reassessment, overall case management must be by Public Health Nurse (PHN).<sup>5</sup></li> <li>▪ Set up case file, including progress notes. Ensure access to RASSCLE.</li> <li>▪ Contact PCP to discuss case and case management services.</li> <li>▪ Within 2 calendar-days of notice of case-making BLL, notify Environmental Professional (EP).</li> <li>▪ Make HV, ideally at same time as EP, within 4 weeks of notice of case-making BLL.</li> <li>▪ Obtain written consent and comply with privacy requirements of CLPPB.<sup>6</sup></li> <li>▪ Gather data for Lead Poisoning Follow-Up Form (LPFF).</li> <li>▪ Explain BLL significance to family and facilitate further testing of child and household.</li> <li>▪ Educate family (lead sources, nutrition, child development, hygiene, house cleaning, etc.)</li> <li>▪ Evaluate or refer for evaluation of nutrition and developmental status.</li> <li>▪ With EP, identify personal (non-housing) lead hazards. Notify CLPPB of new or unusual ones.</li> <li>▪ FAX or mail HV and EI report (Provider Summary) to PCP. <b>Do not email confidential info.</b></li> <li>▪ Send copy of initial LPFF, appendices, 8552 form, consent, and Provider Summary to CLPPB within 60 calendar-days of HV. Send interim LPFFs within 30 calendar-days of significant changes other than BLLs. See <i>Protocol on Submitting Documents to CLPPB</i>.</li> <li>▪ Create and regularly update an individual case management plan.</li> <li>▪ Ensure child has a medical home. Make referrals, such as to Medi-Cal, WIC, and Head Start.</li> </ul>

BLL	NURSE CASE MANAGEMENT ACTIVITIES
9.5–14.4 confirmed venous <sup>3</sup> (cont.)	<ul style="list-style-type: none"> <li>▪ Notify Occupational Lead Poisoning Prevention Program (OLPPP) if occupational or take-home exposure is suspected. If job-related in a 16-21 year old, manage as any state case but coordinate with OLPPP. <b>Do not contact employer or company doctor; OLPPP will contact.</b></li> <li>▪ Maintain contact with PCP, including updates on progress of case, reminders of needed follow-up, collaboration on current and future plans, and notification when case is closed.</li> <li>▪ Maintain contact with family through letters, telephone, or visits. Make additional HVs if source is unclear or BLLs are not declining as expected. Notify family when case is closed.</li> <li>▪ Send copy of closing LPFF to CLPPB within 30 calendar-days of case closure.</li> <li>▪ Keep open at least until meets standard clinical case closure criteria or, <b>despite documented, good faith efforts</b>, child could not be found, is lost to follow-up, or family persistently refuses services. Do not close if active case management is continuing or on BLLs alone.</li> </ul>
14.5–19.4 capillary	<p><b>Potential State Case</b> (needs a confirming VBLL) – manage as above plus:</p> <ul style="list-style-type: none"> <li>▪ Remind PCP to obtain VBLL within 1-4 weeks, with further testing as appropriate for BLL result.</li> <li>▪ If repeat VBLL ≥ 14.5, BLL is confirmed and becomes a case without a 30 calendar-day wait.</li> <li>▪ If repeat VBLL ≥ 9.5–14.4, BLL is not confirmed and becomes a case only if persistent as above.</li> </ul>
14.5–19.4 venous <sup>3</sup>	<p><b>Confirmed State case</b> (based on a VBLL) – manage as above, for confirmed state case, plus:</p> <ul style="list-style-type: none"> <li>▪ Remind PCP to obtain VBLL within 1-4 weeks and then every 1-3 months.</li> <li>▪ Make HV within 2 weeks of notice of case-making BLL.</li> </ul>
19.5–44.4 capillary	<p><b>Potential State Case</b> (needs a confirming VBLL) – manage as above plus:</p> <ul style="list-style-type: none"> <li>▪ Remind PCP to obtain VBLL within 1-4 weeks (the higher the BLL, the sooner the retest).</li> <li>▪ If repeat VBLL ≥ 14.5, BLL is confirmed and becomes a case without a 30 calendar-day wait.</li> <li>▪ If repeat VBLL ≥ 9.5–14.4, BLL is not confirmed and becomes a case only if persistent as above.</li> </ul>
19.5–44.4 venous <sup>3</sup>	<p><b>Confirmed State case</b> (based on a VBLL) – manage as above plus:</p> <ul style="list-style-type: none"> <li>▪ Remind PCP to obtain VBLL within 1-4 weeks and then initially every 2-4 weeks until trend is downward or stable and then less often as trend indicates.</li> <li>▪ Make HV within 1 week of notice of case-making BLL.</li> <li>▪ Eligible for referral to California Children’s Services.<sup>7</sup></li> </ul>
44.5–69.4 capillary or venous <sup>3</sup>	<p><b>URGENT SITUATION</b> (based on a single CBLL or VBLL) – Potential hospitalization and chelation – manage as above plus:</p> <ul style="list-style-type: none"> <li>▪ Prepare in advance. Have blank case file, HV materials, clinician contacts, HAGs, and protocol for urgent or emergency BLL confirmation on weekends and holidays.<sup>8</sup></li> <li>▪ Immediately contact PCP and other involved medical provider, such as specialist or hospital MD.</li> <li>▪ Both CBLL and VBLL require a venous retest, which must occur within 48 hours if initial BLL ≥ 44.5 to 59.4, and within 24 hours if initial BLL ≥ 59.5 to 69.4. Confirming VBLL and other medically appropriate actions must occur <b>before any chelation</b>.</li> <li>▪ Treat as state case unless and until retest shows otherwise.</li> <li>▪ Immediately contact family. Urge that child get the confirmatory VBLL if not yet done.</li> <li>▪ Immediately contact EP. Arrange for HV and EI to be done if BLL is confirmed.</li> <li>▪ Make HV within 48 hours of notice of case-making VBLL. If necessary, do preliminary interview at hospital or by telephone to identify likely sources and then do HV as soon as possible.</li> <li>▪ Ensure household members, especially children and pregnant or lactating women, are tested.</li> <li>▪ Confirm environmental and nonenvironmental lead hazards have been removed or contained before child returns home. If not, ensure family can temporarily relocate.</li> <li>▪ Maintain close, ongoing contact with family, PCP, EP, and CLPPB clinicians.</li> </ul>
≥ 69.5 capillary or venous <sup>3</sup>	<p><b>EMERGENCY</b> (based on a single CBLL or VBLL) – manage as above plus:</p> <ul style="list-style-type: none"> <li>▪ Remind medical provider to obtain a VBLL immediately.</li> <li>▪ Make HV within 24 hours of notice of case-making VBLL.</li> </ul>

<sup>1</sup> Department of Health Care Services, Child Health and Disability Prevention Program (CHDP) and California Department of Public Health, CLPPB, [https://www.cdph.ca.gov/Programs/CCDCPHP/DEODC/CLPPB/CDPH%20Document%20Library/Lead\\_HAGs.pdf](https://www.cdph.ca.gov/Programs/CCDCPHP/DEODC/CLPPB/CDPH%20Document%20Library/Lead_HAGs.pdf) ; <http://www.dhcs.ca.gov/services/chdp/Documents/HAG/Chapter6.pdf>

<sup>2</sup> CLPPB rounds decimal numbers up to the nearest whole number, so that a value of 4.5 mcg/dl is equivalent to 5 mcg/dL, 9.5 mcg/dL is equivalent to 10 mcg/dL, and 14.5 mcg/dL is equivalent to 15, etc. Arterial or cord blood is acceptable in place of venous.

<sup>3</sup> LeadCare® analyzers should not be used for VBLLs.

<sup>4</sup> Current Centers for Disease Control and Prevention (CDC) reference level is 5 mcg/dL.

<sup>5</sup> In some circumstances, **and with CLPPB approval**, may be an RN under the supervision of a PHN.

<sup>6</sup> Or local jurisdiction, if more protective.

<sup>7</sup> 22 California Code of Regulations section 41518.9.

<sup>8</sup> CLPPB Program Letter 2014-02: “Confirmation of Childhood BLLs Constituting a Medical Emergency.”



# HEALTH CARE PROVIDERS

The California Lead Poisoning Prevention Act of 1991 (CCR Title 17) mandates a **TARGETED BLOOD LEAD SCREENING POLICY**, outlined below:

Provide <b>Anticipatory Guidance</b> to All Children 6-72 Months, at Each Periodic Health Assessment	
IF A CHILD	PROVIDER ACTION
Receives services from a publicly funded program (Medi-Cal, WIC, Healthy Families, Head Start)	Obtain Blood Lead Test at 12 <b>and</b> 24 months -or- Obtain Blood Lead Test at any age, up to 72 months, if never tested
Lives or spends more than 6 hours/week in a home built before 1978 that has peeling or chipped paint or that has been recently renovated	Obtain Blood Lead Test at 12 <b>and</b> 24 months -or- Obtain Blood Lead Test at any age up to 72 months, if never tested
Has a change in circumstances that increases their risk for lead poisoning	Obtain Blood Lead Test at any age, up to 72 months



For more information, see the [California Childhood Lead Poisoning Prevention Branch medical management guidelines](#)

# CHILDHOOD LEAD POISONING PREVENTION BRANCH

## CALIFORNIA SCREENING REGULATIONS

### Standard of Care on Screening for Childhood Lead Poisoning

State regulations impose specific responsibilities on doctors, nurse practitioners, and physician assistants doing periodic health care assessments on children between the ages of 6 months and 6 years. This is a brief summary of health care provider's responsibilities. These regulations apply to all physicians, nurse practitioners, and physician assistants, not just Medi-Cal or Child Health and Disability Prevention (CHDP) providers.

**Anticipatory Guidance: At each periodic assessment from 6 months to 6 years.**

#### • Screen (blood lead test)

- Children in publicly supported programs\* at both 12 months and 24 months.
  - Children age 24 months to 6 years in publicly supported programs\* who were not tested at 24 months or later.
- \* Examples of publicly supported programs include Medi-Cal, CHDP, and the Women, Infants, and Children Program (WIC).



#### • Assess: If child not in publicly supported program

- Ask: "Does your child live in, or spend a lot of time in, a place built before 1978 that has peeling or chipped paint or that has been recently remodeled?"
- Blood lead test: If the answer to the question is "yes" or "don't know."

#### • Other indications for blood lead test

- Suspected lead exposure
- Parental request
- Recent immigrant from country with high levels of environmental lead
- Change in circumstance has put child at risk of lead exposure

Follow-up: The Management Guidelines summarizes follow-up activities once a child is found to have an elevated blood level.

### Why Assess and Screen?

- Low levels of lead exposure have lasting neurodevelopmental effects

- Since lead exposure at low levels that do harm may not cause symptoms, at-risk children may not be identified and therefore would not receive appropriate treatment or environmental investigation
- State requirement

If you have any comments or questions, please feel free to contact your local Childhood Lead Poisoning Prevention Program or contact the Childhood Lead Poisoning Prevention Branch directly at (510) 620-5600.

Read the entire code of regulations.

Page Last Updated : February 12, 2019



# CHILDHOOD LEAD POISONING PREVENTION BRANCH

## PUBLIC HEALTH SERVICES AVAILABLE FOR LEAD-EXPOSED CHILDREN

*Services are provided at no cost to the family regardless of income or insurance status.*

As of July 1, 2016, the definition of a case of lead poisoning has changed. Anyone from birth up to the age of 21 with one venous BLL  $\geq$  14.5 mcg/dL; or two BLLs  $\geq$  9.5 mcg/dL, the second of which must be venous and drawn at least 30 days after the first BLL, is eligible for full case management. Case management includes home visits and follow-up by both a public health nurse and an environmental professional.

Public health services will also be offered to all children who have a blood lead test  $\geq$  4.5 mcg/dL. These children will receive at a minimum monitoring and outreach and education, and services may include other graded responses up to and including public health nursing and environmental investigation as for cases, as resources allow.

### Childhood Lead Poisoning Prevention Services

[A-Z Index \(by City or County\) of Childhood Lead Poisoning Prevention Programs \\*](#)

The Childhood Lead Poisoning Prevention Program (CLPPP) provides services to the community for the purpose of increasing awareness regarding the hazards of lead exposure, reducing lead exposure, and increasing the number of children assessed and appropriately blood tested for lead poisoning. The CLPPP program offers Public Health Nursing (PHN) home visits, environmental home inspections, and nutritional assessments to families of children who meet the case definition described above. The CLPPP provides telephone contacts and educational materials to families of lead-poisoned and lead-exposed children. The CLPPP provides information and education to the general public, medical providers, and community-based organizations.

*\* NOTE: In jurisdictions not currently contracted with the State, the CLPP Branch provides these services.*

*The Branch can be reached at:*

Childhood Lead Poisoning Prevention Branch

850 Marina Bay Parkway

Building P, Third Floor

Richmond, CA 94804

Phone: 510-620-5600

Fax: 510-620-5656

### Public Health Nurses:

- Conduct home visits to children with blood lead levels meeting the state case definition
- Complete a child/family assessment (physical, nutritional, psychosocial, and environmental).
- Identify and test for possible non-housing lead sources
- Provide ongoing case management, communicating with the family, the provider, and other agencies, if needed
- Provide health education, monitor lead levels, and encourage medical follow-up
- Communicate with health care providers and provide referrals when necessary



### **Environmental Professionals:**

- Conduct environmental home inspections to children with blood lead levels meeting the state case definition
- Conduct secondary address investigations, if indicated
- Identify and test for possible housing lead sources such as paint, soil, dust and water
- Provide recommendations to reduce contact with lead
- Follow up to see that sources of lead are corrected

### **Public Health Nutritionists (in some jurisdictions):**

- Provide nutritional assessments for children with blood lead levels meeting the State case definition
- Consult with doctors, nurses, and other professionals regarding nutritional status of lead-poisoned children

### **Health Education Staff (in some jurisdictions):**

- Provide information to families regarding possible lead sources, nutrition, and blood lead testing recommendations.
- Provide health education through presentations and health fairs to the general public, medical providers and community-based organizations
- Work with families and health care providers