

COUNTY OF LOS ANGELES – DEPARTMENT OF PUBLIC HEALTH

Maternal, Child and Adolescent Health Programs

Childhood Lead Poisoning Prevention Program (CLPPP)

Matrix: Management Guidelines for Children by Blood Lead Level (BLL)

<p>Screening Guidelines:</p> <ul style="list-style-type: none"> • Screen children at 12 and 24 months of age who are receiving services from publicly supported programs for low-income children, such as Medi-Cal, CHDP, Women, Infants and Children (WIC), and Healthy Families. ⁽²⁾ • Screen children at 12 and 24 months of age, who are not in a supported program but found to be at-risk when a parent/guardian answers “yes” or “don’t know” to the risk assessment question.⁽²⁾ • Screen children between 24 and 72 months who were not previously tested or who missed the 24 month test or when circumstances change that put the child at risk. ⁽²⁾ • Screen all newly arrived refugees under the age of 7 within two to three weeks of arrival in U.S.A, if no test was done screen within the first 90 days of arrival to Local County. <p>Reporting Guidelines: The analyzing lab ⁽⁶⁾ shall report to the Branch within <u>three (3)</u> days of analysis, all blood lead levels $\geq 10\mu\text{g/dL}$. If the blood lead level is $<10\mu\text{g/dL}$, it shall be reported within <u>30</u> calendar days ⁽⁶⁾</p> <p>Note: No level of lead in the body is known to be safe.</p> <p>Sampling Methods: If the initial BLL is a capillary sample⁽¹⁾, a confirmatory sample (venous) is required ⁽⁹⁾</p>		<p>Case Definition: For the purpose of initiating case management, a child from birth up to 21 years of age with:</p> <ul style="list-style-type: none"> • One venous BLL $\geq 20 \mu\text{g/dL}$ (A) ⁽⁹⁾ OR • Two BLLs $\geq 15 \mu\text{g/dL}$ drawn at least 30 days and no more than 600 days apart. The first specimen may be a capillary specimen. (B)(9) Second specimen must be venous. <p>Note: Blood lead test results should be rounded to the nearest whole number, with numbers with decimals equal to and above 0.5 rounded up and numbers with decimals below 0.5 rounded down (e.g. treat 4.5 mcg/dL as 5 mcg/dL, 4.3 mcg/dL as 4 mcg/dL and 14.5 mcg/dL as 15 mcg/dL). ⁽²⁾</p> <p>Closure Criterion: <u>Two</u> consecutive blood lead levels below $15 \mu\text{g/dL}$ measured at least 6 months apart. ⁽⁹⁾</p> <p>Note: When the source of lead is known, always consult with the assigned Program PHN prior to closing a case. ⁽¹⁰⁾</p>		
Initial Test Results by Blood Lead Level (BLL)	Primary Care Provider (PCP) Evaluation and Management Activities	CLPPP Case Management Activities	Child Health & Disability Prevention (CHDP) Program Activities	California Children's Services (CCS) Activities
5 to 9 $\mu\text{g/dL}$	<p>Consider an initial retest within 6 months ⁽²⁾. Blood lead levels may be capillary or venous.</p> <p>Newly Arrived Refugee: Retest in 3 months ⁽²⁾. If retest BLL is $<10\mu\text{g/dL}$, retest per “Screening Guidelines.” In addition to reporting above, the local Refugee Health Assessment Program (RHAP) shall report all BLLs to CLPPP.</p> <p>Pediatric Evaluation:</p> <p>A. Standard history, physical examination and frequent or more extensive developmental evaluations.</p> <p>B. Evaluate nutrition and consider iron deficiency; Evaluate lead exposure; Retest as for routine screening guidelines.</p> <p>Medical Case Management:</p> <p>A. Evaluate risk to, and consider testing for, other children in the home. Consider medical referral for, other household members (especially pregnant women). Discuss hand to mouth activity, hand washing & sources of lead exposure.</p> <p>B. Encourage good nutrition (iron, calcium and vitamin C). Consider referral to WIC.</p> <p>C. Encourage participation in early enrichment programs (Early Start).</p> <p>PM160 (09/01) Billing Instructions: For additional follow-up screening use code 3 or 5 in column “C” or “D”. The BLL is entered in the “comments/problems” section ⁽⁷⁾.</p>	<p>Mail <u>provider informational letter and Matrix</u> to primary care provider (PCP) to evaluate risk to and consider testing for, other household members such as children under six (6) years and pregnant or breastfeeding women.</p> <p>Additional Efforts: Contact the family to provide lead poisoning prevention education.</p> <p>For Refugee children: Fax the <u>provider letter and Refugee Screening Algorithm</u> to the PCP.</p>	<p>Maintain PCP policy and reference manual that includes (1) approval process (2) blood lead test and screening policy (3) standards for health assessment guidelines (4) criteria for appropriate referrals for diagnosis and treatment and (5) medical management guidelines for childhood lead poisoning.</p> <p>Conduct periodic provider audits to ensure compliance.</p>	No Action
10 to 14 $\mu\text{g/dL}$	<p>Initially retest within 3 months ⁽²⁾. If retest is in this range, monitor with BLLs every 3 months ⁽²⁾ until trend is downward or stable and then less often as trend indicates. If retest is another range, follow-up as for that range.</p> <p>Newly Arrived Refugee: Retest as above. If retest is another range, follow-up as for that range. If retest BLL is $\geq 10\mu\text{g/dL}$, consider referral to CLPPP for education and materials ⁽³⁾.</p> <p>Pediatric Evaluation/Medical Case Management: Evaluate and manage as above and consider referral to CLPPP.</p> <p>PM160 (09/01) Billing Instructions: same as above ⁽⁷⁾.</p>	<p>Additional Efforts: Mail <u>providers redraw letter and Matrix</u> to PCP. When time permits, consider initiating family contact to provide information and testing advice based on risk factors. Remind family that BLL should be in child’s medical history.</p> <p>For Refugee children: Same as above.</p>	<p>Same as above and</p> <p>(1) Conduct periodic provider audits to ensure compliance.</p>	No Action
15 to 19 $\mu\text{g/dL}$	<p>Confirm within 3 months ^(2,9). To determine eligibility for public health case management and environmental health investigation, retest after an interval of 30 days or more ⁽²⁾. If retest is another range, follow-up as for that range</p> <p>Pediatric Evaluation</p> <p>Evaluate as above and</p> <p>A. Perform Hemoglobin (Hgb) and Hematocrit (Hct) ^(2,9).</p> <p>Medical Case Management:</p> <p>Manage as above and</p> <p>A. Monitor BLLs every 1-3 months until trend is downward or stable ⁽²⁾.</p> <p>B. Initiate referral to local CLPPP for public health nurse case management, environmental investigation, recommendation for remediation of lead sources, educational materials and other health care needs or treatment. Provide nutritional education using USDA “My Pyramid”. For children with iron-deficiency (Hgb is $<11 \text{ mcg/dL}$) recommend a diet high in vitamin C, calcium, and iron, and limit high fat intake. Refer to WIC.</p> <p>C. Give anticipatory guidance about lead hazards and lead poisoning, which includes: source and hazard, effects of exposure, and how to minimize lead exposures and lead hazards.⁽⁵⁾</p> <p>PM160 (09/01) Billing Instructions: same as above ⁽⁷⁾</p>	<p>Case Management services are facilitated by the Program public health nurse (PHN) who makes a referral to Environmental Health (EH) and Community Health Services’ (CHS), district PHN (DPHN). The DPHN will: ⁽¹⁰⁾</p> <ul style="list-style-type: none"> - Coordinate care between the PCP, patient & parent - Initiate a home visit within <u>10 working days</u> of report - Provide lead awareness education - Complete and fax pgs. 1-10 of the lead poisoning follow-up form (LPPF) & the Provider Summary and route forms to the CLPPP-EH within 30 calendar days of initial home visit; Conduct case finding; Complete the PHN Assessment form & CDC US Growth Chart - Provide updates to CLPPP-PHN every 3 months; Route LPPF & PHN Assessment form to a Program PHN within 30 calendar days of the home visit - Create a Medical Record (MR) - Monitor case until closure criteria is achieved. 	<p>Same as above and</p> <p>1) Ensure that the PCP understands his/her role in the provision of services and the need to coordinate care for public health case management, environmental health investigation and remediation.</p> <p>(2) Review the PM 160 for health care needs and treatment.</p>	No Action

Initial BLL	PCP Evaluation and Management Activities	CLPPP Case Management Activities	CHDP Activities	CCS Activities
<p>20 to 44 $\mu\text{g}/\text{dL}$</p>	<p>If initial BLL is a capillary sample, perform a confirmatory (venous) test, based on the initial BLL below: -- 20-24 $\mu\text{g}/\text{dL}$, Confirm within one month ⁽²⁾. -- 25-44 $\mu\text{g}/\text{dL}$, Confirm within 1 week – 1 month ⁽²⁾. If retest is another range, follow-up as for that range.</p> <p>When BLL(s) meet “case definition” (A), or (B) provide “medical case management” described below:</p> <p><u>Pediatric Evaluation</u> Evaluate as above and</p> <p>A. Take history and conduct physical exam with attention to neurodevelopment. ⁽²⁾. B. Evaluate lead exposure, nutrition, & iron deficiency: Hgb/Hct, ferritin, and fe/TIBC are good measures). C. Consider abdominal x-ray and/or bowel decontamination (if particulate lead ingestion is suspected).⁽²⁾</p> <p><u>Medical Case Management:</u> Manage as above and</p> <p>A. Monitor BLLs every 2 weeks to 1 month ⁽²⁾ until trend is downward or stable and then less often as trend indicates. Initial a referral to local health department for public health nurse case management, environmental investigation, and recommendation for remediation of lead source ⁽³⁾. B. Provide nutritional education using USDA “My Pyramid”. For children with iron-deficiency (hemoglobin is <11 mcg/dL. Recommend a diet high in vitamin C, calcium, and iron, and limit high fat intake. C. Refer to California Children’s Services (CCS) ⁽⁴⁾ and WIC.</p> <p><u>PM160 (09/01) Billing Instructions:</u> same as above⁽⁷⁾.</p>	<p>Case Management (CM) services are provided by the Program PHN. The Program PHN will: ⁽⁹⁾</p> <ul style="list-style-type: none"> • Coordinate care between the PCP, patient & parent • Initiate a PHN home visit/ EH investigation (EI) within five (5) working days ⁽⁹⁾ • Initiate and fax a DHCS 4488, application DHCS 4480 and the laboratory report to CCS within two(2) working days of the initial home visit • Contact CCS within seven (7) working days to document receipt of the referral forms and determine care management needs; Refer to Early Intervention/Stimulation Programs • Complete pages 1-10 of LPFF, Provider Summary, & Visual PHN Survey Report.; Provide lead awareness education; Conduct nutritional assessment and counseling; Complete the Medi-Cal Questionnaire • Maintain a medical record (MR) & a nursing care plan • Mail a Provider Summary to the PCP • Discuss results with the patient/family • Complete CDC US Growth Chart • Complete PHN Assessment form • Contact PCP office via office visit within 30 days of date defined to discuss PHN case management and care management guidelines • Complete 2nd home visit within 90 days of date defined; Make additional visits as needed • Monitor case until closure criteria is achieved. 	<p>Same as above</p>	<p>Process Service Authorization Request (SAR) (DHCS 4488) and CCS application (DHCS 4480).</p> <p>Screen for eligibility and if indicated, issue authorization for treatment to a CCS paneled physician.</p> <p>Contact caregiver and Program PHN within five (5) working days of receipt of the referral to coordinate and determine care management needs.</p>
<p>$\geq 45 \mu\text{g}/\text{dL}$</p>	<p>Perform a confirmatory (venous) test, based on the initial BLL below: - Within 48 hour, if BLL is 45-59 $\mu\text{g}/\text{dL}$ ^(2, 9). - Within 24 hours, if BLL is 60-69 $\mu\text{g}/\text{dL}$ [Urgent Situation] ^(2, 9). - Immediately, if BLL is $\geq 70 \mu\text{g}/\text{dL}$ [Emergency] ⁽⁹⁾.</p> <p><u>Pediatric Evaluation</u> If the confirmatory BLL is $\geq 45 \mu\text{g}/\text{dL}$: ^(2, 9) Evaluate as above and</p> <p>A. Complete and fax service authorization referral DHCS 4488 (SAR) to CCS for a CCS Hem/Onc Special Care Center to facilitate consultation and potential hospitalization for chelation therapy. Initiate a referral for public health case management, environmental investigation and recommendation for remediation of lead source. B. Test renal function before and during chelation therapy. Order bowel decontamination prior to chelation. C. Make referral to an Early Intervention Program (i.e. Early Start and Regional Center (if applicable)). D. Blood work includes: hemoglobin, hematocrit, ferritin, and Fe/TIBC, complete blood count and renal function test.</p> <p><u>Medical Case Management:</u> Manage as above and</p> <p>A. Monitor BLLs every 2 weeks to 1 month until trend is downward or stable and then less often as trend indicates. B. Immediately notify local Childhood Lead Poisoning Prevention Program. C. Assist caregiver in completing an “Application to Determine Eligibility” (DHCS 4480).⁽⁴⁾ D. Complete a CCS 100 and forward a copy of CHDP billing form (PM160) to CCS. ⁽²⁾ E. Consider chelation therapy. Consult with a CCS paneled physician experienced in managing chelation therapy. Refer patient to CCS. F. If level remains $\geq 45 \mu\text{g}/\text{dL}$, further chelation therapy and environmental health investigation may be indicated. Refer the family to WIC. ⁽⁸⁾ G. Provide the local health department with the results of follow-up BLL tests.</p> <p><u>PM160 (09/01) Billing Instructions:</u> same as above.⁽⁷⁾</p>	<p>CM services and coordination is provided by the Program PHN. The Program PHN will: ⁽⁹⁾</p> <ul style="list-style-type: none"> • Initiate a PHN home visit and EI as follows: - 45-69 $\mu\text{g}/\text{dL}$, within two (2) working days of the report. - $\geq 70 \mu\text{g}/\text{dL}$, on day of report. (Priority #1) • Initiate and fax a DHCS 4488, application DHCS 4480 and the laboratory report to CCS within two(2) working days of the initial home visit • Contact CCS within seven(7) working days to document receipt of the referral forms and determine care management needs • Maintain a MR and nursing care plan • Complete pages 1-10 of LPFF, PHN Assessment form, Visual PHN Survey report, & the Provider Summary; Provide lead awareness education • Conduct case finding • Mail a copy of Provider Summary to the PCP and discuss results with the parent/family • Complete CDC US Growth Chart, nutritional screening & Medi-Cal Questionnaire • Contact PCP office via office visit within 30 days of date defined to discuss PHN case management and care management guidelines • Complete 2nd home visit within 90 days of date defined • Refer to Early Intervention/Stimulation Programs. • Make additional visits as needed • Monitor case until closure criteria is achieved. 	<p>Same as above.</p>	<p>Process as above and</p> <p>Screen for eligibility and if indicated, issue authorization for treatment to a CCS Hem/Onc Special Care Center.</p> <p>Contact caregiver and Program PHN within five (5) working days of receipt of the referral to coordinate and determine care management needs</p> <p>Review case annually for update & closure.</p>
<p>References: (1) Providers using a LeadCare II blood lead analyzer must have a certificate of waiver and be registered or licensed with state laboratory field services (LFS) for more information visit the website at www.dhs.ca.gov/lfs or contact the state Branch at (510)-620-5652. (2) CHDP Provider Letter No.: 08-10 and CLPPB Program Letter No.: 08-02, December 17, 2008. (3) Childhood Lead Poisoning Prevention Program; 5555 Ferguson Dr., Ste. 210-02, Commerce, CA 90022 (323) 869-7171. (4) To obtain a SAR or CCS application -HCS 4480 form) visit the website at: www.cdph.ca.gov/services/ccs/ (5) California Code of Regulations, Title 17, Section 37000-37100.</p>		<p>(6) For a list of laboratories proficient in blood lead analysis & reimbursed by CHDP, view: www.cdph.ca.gov/programs/BioChem/Pages/default.aspx (7) CHDP Provider Information Notice: Number 02:02. February 6, 2002. (8) CDC: Managing Elevated BLL Among Young Children. Medical Assessment and Interventions, March 2002. (9) State of California, Department of Public Health; CLPPB PHN Case Management Guidance Manual, September 2002. (10) County of Los Angeles Department of Public Health; Public Health Nursing Practice Manual, Section C: Lead Poisoning. 2007.</p> <p>EFF: 10/92 Rev. (10/09/03, 4/5/04, 7/18/06, 10/20/08, 4/1/09 rev. 3/22/11) L:\sections\casemgmt\matrix6.wp</p>		