

July 18, 2003

CHDP Provider Information Notice No.: 03-16
CLPP Provider Information Notice No.: 2003-A

TO: ALL CHILD HEALTH AND DISABILITY PREVENTION (CHDP)
PROGRAM PROVIDERS AND MEDICAL MANAGED CARE PLANS

SUBJECT: UPDATED GUIDANCE FOR SCREENING FOR AND MANAGEMENT
OF CHILDHOOD LEAD POISONING

The purpose of this information notice is to provide you with updated information on the policy and procedures for the screening and management of childhood lead poisoning. Please insert the enclosures with this provider information notice into your copy of the CHDP Health Assessment Guidelines after you have removed the existing February 1997 versions.

Revised CHDP Policy

The Blood Lead Test and Management Guidelines for Children with Elevated Blood Lead Levels (Section 704) in the CHDP Health Assessment Guidelines have been revised. Revisions have been made in response to the updated CHDP and Childhood Lead Poisoning Prevention (CLPP) Program letters, recent California regulations on Screening for Childhood Lead Poisoning, and newly released Centers for Disease Control and Prevention (CDCP) manual, "Managing Elevated Blood Lead Levels Among Young Children."¹⁻³

Changes in the CHDP Health Assessment Guidelines include the following:

- Because all children receiving health care services through CHDP are considered at high risk for lead poisoning, use of a lead poisoning risk assessment questionnaire is no longer used to determine lead poisoning risk status in children receiving services through CHDP.



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Children's Medical Services Branch
714/744 P Street, P.O. Box 942732, Sacramento, CA 94234-7320
(916) 327-1400

Internet Address: <http://www.dhs.ca.gov/pcf/cms>

- The schedule for re-testing blood lead levels, once an elevated level, i.e., greater than or equal to 10 µg/dL has been identified, has been revised. (Please see Table 704.1.)

There is no known safe lower level for blood lead. For the complete Health Assessment Guidelines on the blood lead test and the required anticipatory guidance to prevent lead exposure, please see the revised Section 704.

Note: Screening blood tests may be done on either a venous or a capillary specimen. However, all repeat and follow-up blood lead tests should be performed on a venous blood specimen. Appendix T in the Health Assessment Guidelines provides protocols for collecting specimens for blood lead analysis. Some clarifications and revisions have been made in these materials.

Reminder On New Provider Regulations

California Regulations finalized in November 2001 require health care providers participating in CHDP and other publicly funded programs for low-income children, to:

- Give anticipatory guidance about lead hazards and lead poisoning at each periodic health assessment, starting at age six months and continuing until 72 months of age.
- Screen for lead poisoning by ordering a blood lead test at ages 12 and 24 months.
- Screen for lead poisoning by ordering a blood lead test for any child ages 12 to 24 months if the provider becomes aware that testing was not performed at age 12 months or at some time thereafter.
- Screen for lead poisoning by ordering a blood lead test in a child age 24 to 72 months, as soon as the health care provider becomes aware that testing was not performed at 24 months of age or thereafter.

Testing and Analysis Codes

The CHDP Code numbers for billing and reporting blood lead testing and counseling services remain unchanged and are discussed in prior CHDP and CLPP Provider Information Notices.¹⁻⁴

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New Laboratory Reporting Requirements for Blood Lead Test Results

As of January 1, 2003, a laboratory that performs a blood lead analysis on a specimen of human blood drawn in California is required to report the test result to the California Department of Health Services (DHS). The laboratory is also required to report certain specified information on the person tested, the health care provider ordering the test, and laboratory performing the analysis.⁵ This reporting requirement will facilitate identification of children with elevated blood lead levels, promote appropriate environmental and health care interventions, lead to development of strategies to increase screening for childhood lead exposure, and prevent and eliminate lead poisoning.

Please provide the information requested by the laboratory with your test requisition or test specimen. This includes the name, birth date, address, and gender of the person being tested. Also be sure to provide your name, office address and telephone.

Questions

If you have questions about lead poisoning or the required lead screening, please contact your local CHDP or CLPP Program. A current list of CLPP Programs is enclosed.

Thank you for working to prevent and eliminate childhood lead poisoning in California.

Original Signed by Maridee Gregory, M.D.

Maridee A. Gregory, M.D., Chief
Children's Medical Services Branch

Original Signed by Valerie Charlton, M.D.

Valerie Charlton, M.D., M.P.H., Chief
Childhood Lead Poisoning Prevention Branch

Enclosures

References

- 1) CHDP Provider Information Notice No.: 01-06 (Corrected) and CLPP Provider Information Notice No.: 01-A (Corrected), issued September 21, 2001.
- 2) California Code of Regulations, Title 17, Division 1, Chapter 9, Screening for Childhood Lead Poisoning, Sections 37000 through 37100, adopted in final form November 2001.
- 3) Centers for Disease Control and Prevention. **Managing Elevated Blood Lead Levels Among Young Children: Recommendations from the Advisory Committee on Childhood Lead Poisoning Prevention.** Atlanta: CDC; 2002.
- 4) CHDP Provider Information Notice No.: 01-07 issued November 26, 2001.
- 5) California Health and Safety Code, Section 124130, amended by legislation September 26, 2002.

Protocol for Collecting Venipuncture Specimens for Blood Lead Analysis

Overview

Testing for lead poisoning is done by using a blood lead analysis performed by a proficient laboratory.

With lowering of blood lead levels that were once considered safe and lead ubiquitous in the environment, every effort must be made to prevent any lead contamination of the sample to minimize the possibility of a false positive result.

Venous blood samples are less likely to be contaminated by ambient lead and are the method of choice. Venous samples should be used for all testing done to confirm or follow up a blood lead level.

Blood Collection Tubes can contain lead, which can falsely elevate the blood lead test results. To help ensure reliable results:

- *Use collection tubes that are sold for “Trace Metal Analysis” or tubes that have been screened for lead.* Tubes recommended for blood lead testing are either 5.0 cc brown top tubes specifically sold for lead testing or 7.0 cc royal blue top tubes sold for trace metal testing. Standard lavender top tubes (2.0 – 5.0 cc.) containing liquid EDTA are also suitable for lead testing if each lot of tubes is screened to determine the lead content. This may be possible in cases when the laboratory will provide the collection tubes. Liquid EDTA is the recommended anti-coagulant, although heparin is also a suitable anti-coagulant for lead analysis. Screening one percent of the tubes in every lot is recommended.
- *Collect 2.5 to 3.5 cc. of blood.* The greater the volume of blood collected, the more reliable the test results will be. This is true because a larger volume of blood minimizes the effect of lead contamination from the tubes on the test results, and allows for repeat determinations by the laboratory, if necessary. Although the minimum volume of blood needed for a lead test is 0.5 cc., providing the laboratory with a larger sample decreases the chance of unnecessary follow-up in the case of false positive results. As a rule of thumb, vacutainers should, at a minimum, always be filled at least halfway. Because the brown top, trace metal tubes are 5 cc. and the royal blue top 7 cc., approximately 2.5 to 3.5 cc. of blood should be collected routinely. Failure to fill the tube to the manufacturers specifications may result in falsely low blood lead values.

Venipuncture is the recommended method. The California Department of Health Services/Childhood Lead Poisoning Prevention Program has found venipuncture to be the most reliable way to obtain a blood specimen for lead analysis. There is less potential for contamination with ambient lead in a blood sample collected by venipuncture, thereby minimizing the number of false positive results. A small amount of ambient lead will more easily contaminate a fingerstick sample because the volume of blood collected through fingerstick is generally significantly less than the volume collected through a

venous sample. For example, the results of 0.1 µg lead in 0.5 cc. of blood is 20 µg/dL, and would require follow-up. The result of the same 0.1 µg lead in 3 cc. of blood is only 3 µg/dL.

Collect 2.5 cc. to 3.5 cc. of blood, depending on the size of the collection tube used.

The quality of the blood lead test results is improved if the vacutainer is always filled up at least halfway. Therefore, if using a brown top tube (5 cc.), collect a minimum of 2.5 cc. of blood. If using a royal blue top tube (7 cc.), collect a minimum of 3.5 cc. of blood. If using a 2 cc. pre-screened lavender top tube, fill the tube completely.

Fill the vacutainer with blood and gently rock the tube. Insert the butterfly needle into the vacutainer. Rock the vacutainer to mix the blood with the anticoagulant as the blood flows from the syringe into the vacutainer. Rock the vacutainer at least 15 times.

Label the tube of blood. Include the child's name, date of birth, and date of collection on the tube of blood. Include your name and office contact information on the laboratory requisition form, in addition to the child's name, date of birth, gender, address, and telephone number.

Comfort the child and inform the parent of when and how they will be notified of the test results.

Store and transport the blood sample properly. The storage requirement for blood lead level (BLL) specimens depends on the methodology used by the analyzing laboratory. The analyzing laboratory must supply information about the specimen collection, storage, and shipping requirements for their analytic system. The provider should be certain that the analyzing laboratory's requirements are known and followed. Failure to do so may result in inaccurate BLL values being reported. If samples are to be mailed, you must comply with all current U.S. Postal Service regulations regarding labeling and container requirements for sending blood specimens. Other shipping companies have additional requirements and these must be solicited from the carrier prior to using their service for shipping blood specimens. For best results, do not mail samples over the weekend, especially during warmer weather.

Send blood samples only to a laboratory that is proficient in blood lead analysis.

California law requires laboratories that perform blood lead analysis to be proficient. A listing of proficient laboratories is available at www.dhs.ca.gov/ehlb/BioChem. This list is updated approximately three times per year. A list of laboratories proficient in blood lead analysis and enrolled in the CHDP Program is available from the Children's Medical Services Branch, Provider Services Unit 916-322-8702 or your local Child Health and Disability Prevention (CHDP) Program.

To be proficient, a laboratory must obtain satisfactory results on 80 percent of the test specimens. A test sample is considered satisfactory if the lead concentration found does not differ from the true (or "target") value by more than 4 micrograms (µg) of lead per deciliter (dL or 100 ml) or 10 percent (%), whichever is greater, of whole blood. Thus, if

a blood sample has a reported value of 10 µg/dL, the true lead concentration is probably not greater than 14 µg/dL or less than 6 µg/dL.

See Centers for Disease Control, “*Preventing Lead Poisoning in Young Children*,” October 1991.

Capillary Sampling Protocol

The high potential for lead contamination of capillary specimens during collection is well known. The following protocol reduces the risk of contaminating capillary specimens.

Necessary Materials

- *Silicone spray or swabs.* The benefits of using a barrier spray, which forms a layer between the skin and blood droplets, have been debated. In addition to doubts about the spray’s effectiveness in reducing specimen contamination, the spray makes the collection more expensive and complex. Because some evidence supports the claim that the spray reduces contamination (New York State Department of Health (NYSDH), 1989, Mitchell et al., 1974), silicone spray is included in this procedure.
- *Lancets.* The type of lancet used is largely a matter of personal preference, so long as sterility is guaranteed.
- *Collection containers.* If glass capillary tubes are used, sealing clay or tube caps will also be required. No additional supplies are needed for most other microcontainers. The laboratory should be consulted to ensure that an appropriate size capillary tube is used.
- *Trash bags for medical waste and containers for sharps.* Bags containing medical waste should be clearly identified as such.
- *Storage or mailing containers if needed.* If specimens require shipment, follow the Postal Service or other appropriate regulations for shipping body fluids.

Materials used in the collection procedure that could contaminate the specimen (for example, blood containers, alcohol swabs, and barrier sprays) must be lead free. Before selecting equipment for use in blood collection, consult with the laboratory about its requirements. In many cases, the laboratory will recommend or supply suitable collection equipment and may precheck the equipment for lead contamination. Some instrument manufacturers also supply collection materials that are pretested for lead content.

Collecting Capillary Specimens

- Puncturing the fingers of infants less than age one year IS NOT recommended. Puncturing the heel is more suitable for these children (National Committee for Clinical Laboratory Standards, 1986).
- Collection personnel should wear examination gloves whenever the potential for contact with blood exists. If the gloves are coated with powder, rinse the powder off with tap water and detergent before use. Powder on gloves may contain lead.
- Wash the child's hands thoroughly with soap and then dry them with a clean, low lint towel. If water is unavailable, foam soaps can be used without water. Plain, unprinted, nonrecycled towels are best. If desired, a brush can be used for cleaning the finger; brushing during washing can increase blood circulation in the finger. Once washed, the finger must not be allowed to come into contact with any surface, including the child's other fingers.
- The finger to be punctured (often the middle finger) must be free of any visible infection or wound. Massage the finger to increase circulation before puncturing it with the lancet. This can be accomplished during or after washing (NYSDH, 1989; California Department of Health Services, 1990).
- Clean the ball or pad of the finger to be punctured with the alcohol swab. Dry the fingertip using sterile gauze or a cotton ball.
- If a silicone spray is used, shake the can vigorously to mix the contents and direct the spray away from the child and collector. Silicone does not dry, and the finger can be punctured immediately. A barrier material such as silicone will help a distinct "bead" of blood to form, which aids collection.
- Grasp the finger and quickly puncture the finger with a sterile lancet in a position slightly lateral of the center of the fingertip.
- Wipe off the first droplet of blood with the sterile gauze or cotton ball.
- If blood flow is inadequate, gently massage the proximal portion of the finger and then press firmly on the distal joint of the finger. A well-beaded drop of blood should form at the puncture site.
- Do not let the blood run down the finger or onto the fingernail. Blood that runs down the finger or around the fingernail is no longer suitable. Blood flows better if the punctured finger is kept lower than the heart. Inadequate blood flow can be improved by gently massaging the proximal portion of the finger (restricting blood flow out of the fingertip) and gently squeezing the sides of the fingertip. Excessive squeezing will cause tissue fluid to be expressed, and the fluid will compromise specimen integrity.

- Continuing to grasp the finger, touch the tip of the collection container to the beaded drop of blood.
- Draw the blood into the container maintaining continuous flow of blood.
- When full, cap or seal the container as appropriate.
- Agitate the specimen to mix the anticoagulant through the blood. This is especially important in blood lead testing as compared with other clinical tests. Microclots in the blood can make it impossible to obtain an accurate value.
- Check that the container is properly labeled, and place it in an appropriate storage area.

The proper procedure for filling and capping collection containers is somewhat specific to the container used. As a general rule, avoid contact between the skin and the container. To prevent clotting of the specimen, blood must be mixed with the anticoagulant after filling the container. Depending on the container and anticoagulant, the agitation needed can range from gentle rocking to vigorous shaking. Some procedures call for the collection container to be rotated during filling so that anticoagulant will be distributed quickly through the sample (Massachusetts Department of Public Health, 1990).

To facilitate blood flow, many procedures require the collection container be held nearly horizontal, with a slight downward angle. Blood flow into the container should be uninterrupted to avoid air bubbles in the specimen. Except for glass capillary tubes, containers come with appropriate caps and these caps should be applied immediately following collection. Specimens in glass capillary tubes are often collected in duplicate and then sealed with rubber caps or plasticine sealing clay, or both. Again, consulting with the laboratory and knowing the manufacturer's recommendations are important to ensure specimen integrity and suitability for analysis.

Table 704.1 **MANAGEMENT GUIDELINES FOR CHILDREN WITH ELEVATED BLOOD LEAD LEVELS (BLL)**

BLL	Testing and Retesting	Medical Management
<10 µg/dL	<ul style="list-style-type: none"> ▪ Rescreen at appropriate age, normally at ages 1 year and 2 years, unless circumstances change (confirmatory BLL not required) 	<ul style="list-style-type: none"> ▪ Evaluate nutrition and risk of lead exposure ▪ Provide anticipatory guidance to parents/caregiver on: lead poisoning, test results; lead hazards and prevention (e.g. nutrition, housekeeping, hand washing, controlling hand-to-mouth behavior, avoiding take-home lead)
10–14 µg/dL	<ul style="list-style-type: none"> ▪ Retest with venous BLL in 3 months This retest also serves to confirm an elevated BLL. 	<ul style="list-style-type: none"> ▪ History and physical ▪ Evaluate nutrition and lead exposure history ▪ Provide guidance to parents/caregiver on: lead poisoning, test results; lead hazards and prevention (e.g. nutrition, housekeeping, hand washing, controlling hand-to-mouth behavior, avoiding take-home lead); and importance of retesting
15–19 µg/dL	<ul style="list-style-type: none"> ▪ Follow-up venous BLL in 1-2 months (serves as confirmatory BLL, more rapid confirmation needed at higher levels) ▪ If follow-up venous BLL <15 µg/dL, repeat BLL in 3 months ▪ If follow-up venous BLL ≥15 µg/dL, treat as for 20-44 µg/dL 	<ul style="list-style-type: none"> ▪ History and physical ▪ Evaluate nutrition and lead exposure history ▪ Provide guidance to parents/caregiver on: lead poisoning, test results; lead hazards and prevention (e.g. nutrition, housekeeping, hand washing, controlling hand-to-mouth behavior, avoiding take-home lead); and importance of retesting ▪ Consider hematocrit or hemoglobin measurement; and WIC referral ▪ If follow-up venous BLL ≥15 µg/dL, treat as for 20-44 µg/dL

Table 704.1 **MANAGEMENT GUIDELINES FOR CHILDREN WITH ELEVATED BLOOD LEAD LEVELS (BLL)**

BLL	Testing and Retesting	Medical Management
20–44 µg/dL	<ul style="list-style-type: none"> ▪ Confirmatory venous BLL in 1 week to 1 month, depending on the initial level (the higher the screening BLL, the more urgent the need for confirmation) ▪ Further follow-up retesting by venous BLL in 1-2 months 	<ul style="list-style-type: none"> ▪ History and physical ▪ Evaluate nutrition, psychosocial and neurodevelopmental status, and lead exposure history ▪ Provide guidance to parents/caregiver on: lead poisoning, test results; lead hazards and prevention (e.g. nutrition, housekeeping, hand washing, controlling hand-to-mouth behavior, avoiding take-home lead); and importance of retesting ▪ Hct, Hgb, and WIC referral ▪ Consider FEP, ferritin, Fe/TIBC, and abdominal x-rays ▪ Refer to local health department or local Childhood Lead Poisoning Prevention Program (CLPPP) for case management and environmental investigation; http://www.dhs.ca.gov/childlead website has information on local CLPP programs or contact State of California Department of Health Services, Childhood Lead Poisoning Prevention Branch (510) 622-5000 ▪ Refer to CCS for eligibility determination and medical specialty services ▪ Refer family members (especially if pregnant) for evaluation and testing; test young children in family
45–69 µg/dL	<ul style="list-style-type: none"> ▪ If 45-59 µg/dL, confirmatory venous BLL within 48 hours ▪ If 60-69 µg/dL, confirmatory venous BLL within 24 hours ▪ Monitor chelation with venous BLLs ▪ Follow-up venous BLL as appropriate, at least within 1 month 	<ul style="list-style-type: none"> ▪ As above for 20-44 µg/dL plus refer to local health department or local CLPPP and CCS immediately ▪ Probably chelate, per protocol: CaNa₂EDTA in hospital or succimer as outpatient; repeat as needed, based on blood lead rebound ▪ Consider hospitalization to prevent further exposure, implement treatment, and monitor response
≥70 µg/dL	<ul style="list-style-type: none"> ▪ Confirmatory venous BLL stat ▪ Monitor chelation with venous BLLs ▪ Follow-up venous BLL as appropriate, at least within 1 month 	<ul style="list-style-type: none"> ▪ As above for 20-44 µg/dL and refer to local health department or local CLPPP and CCS immediately ▪ Chelate per protocol: combined therapy with BAL and CaNa₂EDTA; repeat as needed, based on blood lead rebound ▪ Immediate hospitalization to prevent further exposure, implement treatment, and monitor response

BLOOD LEAD TEST AND ANTICIPATORY GUIDANCE

SCREENING REQUIREMENTS

- Test for Blood Lead
 - On all children at 12 and 24 months of age.
 - Between 12 and 24 months, if no test was done at 12 months or thereafter.
 - On all children between the ages of 24 and 72 months, if the 24 month test was missed and no subsequent test has been done.
 - Any time thought indicated by the health care provider.

Note: Please see Appendix T of The Health Assessment Guidelines for considerations related to specimen collection for blood lead analysis. Both venous and capillary blood samples are acceptable for lead screening. Particular care must be taken to prevent sample contamination when taking a capillary sample. Venous blood specimens are less likely to be contaminated by ambient lead and should be used for all testing done to confirm or follow up a blood lead level. Elevated lead values must be confirmed by a venous sample before initiating treatment or referral for case management. Every child with a screening blood lead level of 10 µg/dL or greater needs additional follow up (see below and Table 704.1).

- Obtain a Blood Lead analysis through a laboratory participating in the California Blood Lead Proficiency Assurance Program. For a current list of proficient laboratories, visit the California Department of Health Services Environmental Health Sciences Laboratory website at www.dhs.ca.gov/ehlb/BioChem. Contact your local CHDP program for a current list of lead proficient laboratories enrolled as CHDP providers.
- Provide anticipatory guidance about creating an environment safe from lead poisoning, as part of each health assessment visit from six months to 72 months of age. There is no known safe lower level for blood lead values. It is important to provide families with information to prevent lead exposure. At a minimum, assist parents and caretakers to understand that children can be harmed by exposure to lead, especially deteriorating or disturbed lead-based paint and the dust from it, and are particularly at risk of lead poisoning from the time the child begins to crawl until 72 months. Note other sources of lead exposure as appropriate including, but not limited to, lead contaminated soil; use of imported pottery (Samovars or Jarros); ethnic remedies (Greta, Azarcon); cosmetics (Surma and Kohl); and certain imported foods (e.g., tamarind candies).

CONSIDERATIONS FOR REFERRAL, TREATMENT, AND FOLLOW-UP

- Evaluate blood lead laboratory test results and assess clinical conditions which may be associated with elevated blood lead (Pb) including, but not limited to, anemia,

developmental delay, unexplained seizures or neurologic symptoms, abdominal pain, behavioral problems, hearing loss, and learning deficits.

- Retest and refer for medical care management of children with elevated blood lead levels as outlined in Table 704.1.
- Provide appropriate nutritional guidance as the co-existence of iron or calcium deficiencies may enhance the uptake of lead from the gastrointestinal tract. Refer children less than five years of age to the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) (Appendix G) for supplemental foods and nutritional counseling and education.
- Refer children eligible for California Children's Services (CCS) (Appendix Q) with blood lead results ≥ 20 $\mu\text{g/dL}$ to CCS for authorization of services such as nutritional assessment, education, and other interventions as part of their treatment plan.
- Refer Medi-Cal eligible children who are not eligible for CCS to the local Medi-Cal Field Office to obtain authorization for medical nutritional therapy services.

RATIONALE

Childhood lead poisoning is one of the most common and preventable childhood environmental health problems in California. Young children are especially at risk because of their hand-to-mouth behavior, rapidly developing nervous systems, and increased capacity to absorb lead.

The most common source of lead poisoning is lead-containing paint in old housing. All children receiving health services through CHDP are considered high-risk for lead poisoning because they are much more likely to live in such housing and be exposed to lead hazards. A 1999 United States General Accounting Office report found that 77 percent of children age one to five years with elevated blood lead levels (≥ 10 $\mu\text{g/dL}$) were from low income families and participated in Federal health programs such as Medi-Cal or WIC. Children receiving care under these government assisted health programs were five times more likely to have elevated blood lead levels than children not served by these programs.

Although most lead burdened children are asymptomatic, diminished intelligence and impaired neuro-behavioral development are documented with blood lead levels as low as 10 $\mu\text{g/dL}$. Recent studies indicate that there are effects of lead at even lower blood levels. In addition to deficits in cognition, other sequelae include deficits in attention, increased aggression, hyperactivity, and sleep disturbance. Lead reduces iron utilization, results in anemia, and at very high lead levels can cause seizures and encephalopathy.

County	Phone Number	Fax Number	Lead Coordinator
Alameda County Health Care Services Agency	(510) 567-8294	(510) 567-8272	Maricela Narvaez-Foster, R.N., M.A. 2000 Embarcadero, Suite 300 Oakland, CA 94606 E-mail: mfooster@co.alameda.ca.us
Alpine County Health Dept.	(530) 694-2146	(530) 694-2770	Cindy Hannah 75 B Diamond Valley Road Markleeville, CA 96120 E-mail: channah@alpinecountyca.com
Amador County Health Dept.	(209) 223-6407	(209) 223-1562	Angel Le Sage, Director of Nursing 1003 Broadway, Suite 203 Jackson, CA 95642 E-mail:
City of Berkeley Health and Human Services Dept.	(510) 981-5289	(510) 981-5345	Lyn Dailey, P.H.N. 2344 Sixth Street, 2nd Floor Berkeley, CA 94710 E-mail: lidailey@ci.berkeley.ca.us
Butte County Dept. of Health	(530) 538-7829	(530) 538-7297	Diane Hoffman, R.N., P.H.N. 202 Mira Loma Drive Oroville, CA 95965 E-mail: dhoffman@buttecounty.net
Calaveras County Health Dept.	(209) 754-6460	(209) 754-6459	Jill Sullivan 891 Mountain Ranch Road, Gov. Ctr. San Andres, CA 95249 E-mail: jsullivan@co.calaveras.ca.us
Colusa County Health and Human Services	(530) 458-0380	(530) 458-4136	Jo Corbin, R.N., P.H.N., B.S.N. 251 East Webster Street, P.O. Box 610 Colusa, CA 95932 E-mail: jcorbin@colusadhhs.org
Contra Costa County Health Dept.	(925) 313-6217	(925) 313-6864	Joanne Genet, P.A. 597 Center Avenue, Suite 115 Martinez, CA 94553 E-mail: lpardini@hsd.co.contra-costa.ca.us
Del Norte County Health and Social Services	(707) 464-3191	(707) 465-1783	Linda Schutz, P.H.N. 880 Northcrest Drive Crescent City, CA 95531 E-mail: lschutz@co.del-norte.ca.us
El Dorado County Health Dept.	(530) 621-6109	(530) 626-4713	Patti Harmon 931 Spring Street Placerville, CA 95667 E-mail: ccarter@co.el-dorado.ca.us
Fresno County Human Services System	(559) 445-3330	(559) 445-3405	Sally Lopez, P.H.N. 1221 Fulton Mall, P.O. Box 11867 Fresno, CA 93775 E-mail: sallylopez@fresno.ca.gov
Glenn County Health Dept.	(530) 934-6588	(530) 934-6463	Grinnell Norton, P.H.N. 240 North Villa Willows, CA 95988 E-mail: gnorton@glenncountyhealth.net
Humboldt County Public Health Dept.	(707) 268-2121	(707) 445-6097	Jeff Arnold 529 I Street Eureka, CA 95501 E-mail: jarnold@co.humboldt.ca.us
Imperial County Health Dept.	(760) 482-4635	(760) 352-9933	Cheryl Turner, P.H.N. 935 Broadway Street El Centro, CA 92243 E-mail: cherylturner@imperialcounty.net
Inyo County Health Dept.	(760) 878-0231	(760) 878-0266	Tamara Cohen-Pound P.H.N. P.O. Drawer H 155 E. Market Street Independence, CA 93526 E-mail:
Kern County Health Dept.	(661) 868-0360	(661) 868-0493	Janie Yadon, P.H.N. 1800 Mount Vernon, 2nd Floor Bakersfield, CA 93306 E-mail: yadonj@co.kern.ca.us
Kings County Health Dept.	(559) 584-1401	(559) 584-5672	Patricia A. Harder, M.S.N. 330 Campus Drive Hanford, CA 93230 E-mail: pharder@co.kings.ca.us

Lake County Health Dept.	(707) 263-1090	(707) 262-4280	Julie Franson, R.N. 922 Bevins Court Lakeport, CA 95423 E-mail: julief@co.lake.ca.us
Lassen County Health Dept.	(530) 251-8183	(530) 251-4871	Rich Kanavel, P.H.N. 555 Hospital Lane Susanville, CA 96103-4808 E-mail: RKanavel@co.lassen.ca.us
City of Long Beach Dept. of Health	(562) 570-4203	(562) 570-4099	Kathy Ouchi, P.H.N. 2525 Grand Avenue Long Beach, CA 90815 E-mail: kaouchi@ci.long-beach.ca.us
Los Angeles County Health Dept.	(323) 869-7171	(323) 860-7974	Julia Richmond 5555 Ferguson Drive, Room 210-02 Los Angeles, CA 90022 E-mail: jrichmond@dhs.co.la.ca.us
Madera County Public Health Dept.	(559) 658-7456	(559) 642-0749	Shirley Finneman, P.H.N., M.P.H. P.O. Box 3018 Oakhurst, CA 93644 E-mail: sfinneman@madera-county.com
Marin County Health Dept.	(415) 499-3254	(415) 499-6002	Linda Mariscal, P.H.N. 555 Northgate Drive, Suite B San Rafael, CA 94903 E-mail: lamariscal@co.marin.ca.us
Mariposa County Health Dept.	(209) 966-3689	(209) 966-4929	Marna Klinkhammer, P.H.N. P.O. Box 5 Mariposa, CA 95340 5186 Highway 49 North Mariposa, CA 95338 E-mail: mklinkha@hotmail.com
Mendocino County Health Dept.	(707) 463-4130	(707) 463-6350	Cindy Melvin, P.H.N. 1120 South Dora Ukiah, CA 95482 E-mail: melvinc@co.mendocino.ca.us
Merced County Health Dept.	(209) 381-1124	(209) 381-1102	Mary Jo Rafferty, P.H.N., M.S.N. 260 East 15th Street Merced, CA 95340 E-mail: mrafferty@co.merced.ca.us
Modoc County Health Dept.	(530) 233-6311	(530) 233-5754	Kelly Crosby, P.H.N. 441 North Main Street Alturas, CA 96101 E-mail: kellymch@hdo.net
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Nevada County Health Dept.	(530) 265-7265	(530) 265-1426	Steve Roos 10433 Willow Valley Road, Suite B Nevada City, CA 95959-2399 E-mail: Steve.Roos@co.nevada.ca.us
Orange County Health Care Agency	(714) 834-8485	(714) 834-7948	Jan Shoda, Sr. P.H.N. 1725 West 17th Street, P.O. Box 6099 Santa Ana, CA 92706 E-mail: jshoda@hca.co.orange.ca.us
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San Bernardino County Health Dept.	(909) 387-6212	(909) 387-6348	Sara Hernandez 351 N. Mt. View Avenue, Suite 305 San Bernardino, CA 92415 E-mail: shernandez@dph.sbcounty.gov
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