

DRAFT

CALIFORNIA: STRATEGIC PLAN FOR THE ELIMINATION OF CHILDHOOD LEAD POISONING (SUMMARY OVERVIEW)

I. BACKGROUND ON PLAN DEVELOPMENT

Childhood lead poisoning remains a major preventable environmental health problem, with potential lifelong sequelae. Lead poisoning causes a variety of

problems, including lowered intelligence and learning deficits. These adverse effects can be found when there are only small increments in blood lead levels.

A strategic plan is being developed in California to prevent childhood lead poisoning and to eliminate it as a public health problem. Over the past year, the Childhood Lead Poisoning Prevention (CLPP) Branch in the California Department of Health Services (DHS) has been working with a wide range of individuals, groups and agencies throughout the state to develop a plan that will achieve this mission. The strategic plan is intended to serve as a guidance for DHS. However, the goals and strategies that have been discussed require active collaboration between many diverse partners and it is hoped that the plan will also serve as a guidance for lead poisoning prevention activities undertaken by DHS partners and other stakeholders.

In developing the plan, California has considered the goals adopted by the U.S. Department of Health and Human Services', National Healthy People 2010 and the Centers for Disease Control and Prevention (CDC). Healthy People has as an objective to "eliminate elevated blood lead levels in children, " which has been defined as a target of zero percent children with an elevated blood lead level by 2010. A blood lead concentration of equal to or greater than 10 micrograms per deciliter ($\mu\text{g}/\text{dL}$) is considered an elevated blood lead level.

The CDC has stated "that a concerted effort, especially in the area of primary prevention..., could virtually eliminate this disease by 2010, and accomplish the nation's health objective." The CDC has asked states to develop strategic plans for activities over the next five years to move "to eliminate childhood lead poisoning as a major public health problem by 2010."

The overall goal discussed for elimination of lead poisoning in California is to minimize lead exposures and reduce blood lead values of children of all ages to as low as possible. While striving towards this overall goal, the emphasis discussed for the next five years, for this elimination plan, would be for no child under the age of 6 years to have an elevated blood lead level. However, it is recognized that, even with a successful prevention and elimination plan, there may continue to be occasional children detected who are inadvertently exposed to lead in California or who have received lead exposures elsewhere but who now reside in California.

II. CURRENT PROGRAM AND PREVALENCE OF LEAD POISONING IN CALIFORNIA

California enacted a series of legislative mandates, beginning in the late 1980s, that established a CLPP Program. The overall CLPP Program infrastructure

consists of the CLPP Branch in DHS and 46 local CLPP programs in local jurisdictions throughout the state. The CLPP Branch, through state and local level functions, carries out primary prevention, screening, case management and follow-up for lead exposures. The local programs contract with the DHS CLPP Branch to provide local case management and a wide range of lead activities.

California has a targeted screening policy that focuses on children believed to be at greatest risk for lead poisoning. Currently these are young children, under age 6 years, who receive services through a publicly funded program for low-income children and children who are exposed to a place built before 1978 that has peeling or chipped paint or has been recently renovated. Blood lead screening of these children is required at age 1 and 2 years and in children up to age 6 years, who were not appropriately screened.

California has medical provider regulations that were finalized in 2001, which delineate provider responsibilities for anticipatory guidance on lead hazards and blood lead screening. Universal laboratory reporting of blood lead tests to the state began January 2003.

In 2003, the first year of universal laboratory reporting, 456,960 blood lead test reports were submitted (as per data archived June 2004). There were 4,935 children identified with elevated blood lead levels (EBLLs) at or greater than 10 µg/dL. This would represent a prevalence of EBLLs of just over 1 percent, if numbers of tests were used to represent numbers of children tested. Of the children identified with EBLLs, 4,020 were new children who were not previously known to the state as having EBLLs.

In 2003, there were 715 children who met California's definition as new cases of lead poisoning (persistent blood lead values ≥ 15 µg/dL or a single value ≥ 20 µg/dL). The ethnicity of children identified as cases in 2002 and 2003 was 85 percent Hispanic, 5 percent African-American, 5 percent White and 4 percent Asian/ Pacific Islander.

California counties with the highest numbers of young children with EBLLs and young children who were cases of lead poisoning also tended to have the highest numbers of children in poverty and children eligible for Medi-Cal and they tended to have older communities, with larger percentages of old housing.

III. STRATEGIC PLANNING PROCESS

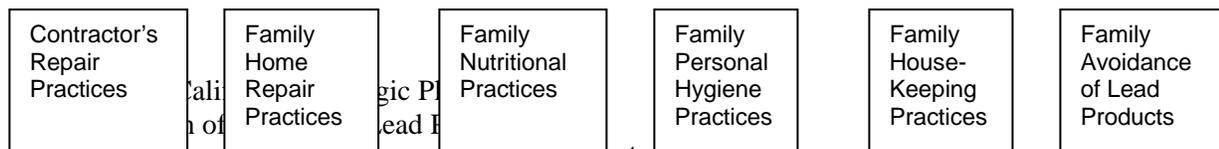
Over the past year, internal and external assessments have been made of: the status of lead poisoning prevention in California. This has included consideration

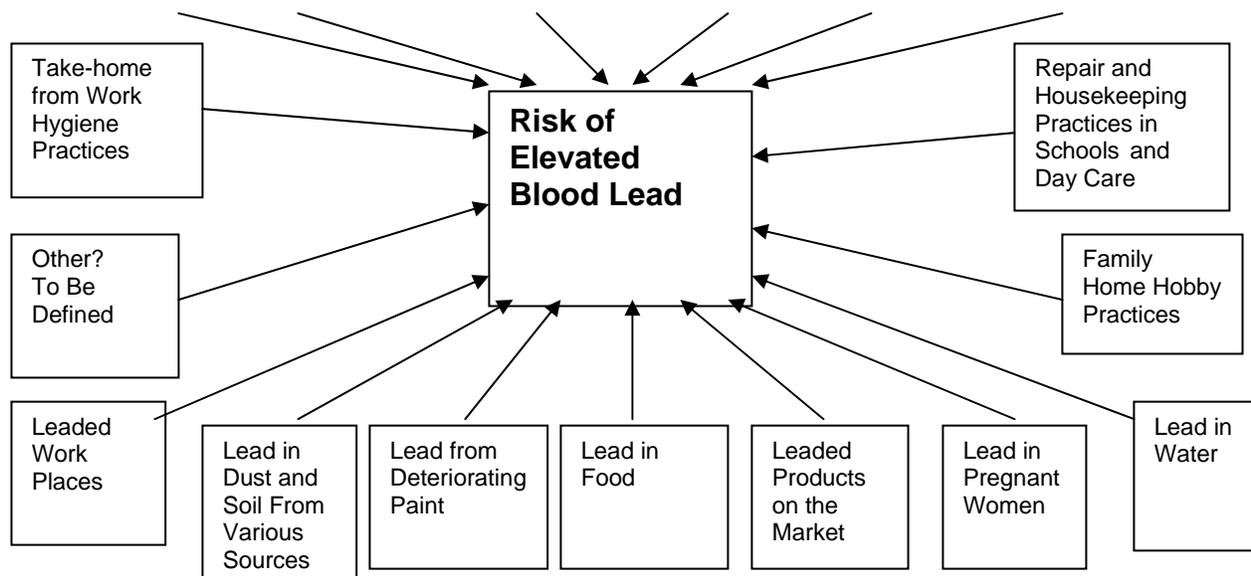
of a wide range of issues, such as: program capabilities; gaps that need to be addressed; communities at risk; improvements in program functions; and potential new directions. Partners in this process have included: public health departments; environmental health agencies; State Medicaid (Medi-Cal); housing and building programs; real estate and landlord organizations; other programs focusing on children – including WIC, Head Start, and Child Health and Disability Prevention; children’s advocacy groups and community-based organizations; medical managed care programs; border health representatives; nursing case management representatives; paint and motor vehicle fuel industry representatives; environmental advocacy groups; epidemiologists; doctors in medical practice; nurse practitioners; the California laboratory association; the Office of the California Attorney General; and a variety of state-level health and environmental programs.

The planning discussions have targeted major priorities for DHS actions and have emphasized the importance of primary prevention, that is, eliminating sources of lead exposure. However, secondary prevention components, for detecting and addressing elevated blood lead levels in children, have also been considered.

It has been recognized that progress has been made in understanding lead poisoning issues and in preventing childhood exposure to lead. It has also been recognized that considerable work remains to be done. An approach to judging the barriers that remain to eliminating lead poisoning, that has been considered in planning, is to determine: all the factors that contribute to risk for lead exposure and that influence blood lead levels; the extent to which we are accurately defining these factors; and the extent to which we are removing or ameliorating these factors through education, alteration of behaviors, environmental interventions, and regulatory and legislative changes. This is conceptually diagrammed in Figure 1.

Figure 1. Factors that a Public Health Program Could Influence To Lower The Incidence of Elevated Blood Lead Levels in Children





IV. STRATEGIC PLAN GOALS

A synopsis of the overall approach and major goals that have been discussed are presented here. The goals and plan are not yet finalized nor approved by California.

OVERALL APPROACH DISCUSSED: EMPHASIS ON PRIMARY PREVENTION

It has been emphasized in strategic planning discussion that to successfully eliminate childhood lead poisoning, we need to increase the focus on primary prevention. That is, we need to provide appropriate information and services to reduce a child's risk of exposure to lead, so that blood lead levels do not increase and lead poisoning does not occur.

To achieve this, we will have to address housing and non-housing sources of lead exposure, reach a wide variety of partners who care for children and/or influence the environments in which children live and who produce the products that children and families use. We must identify geographic and cultural factors that increase the risk of lead exposure, and messages need to be developed that are effective in altering practices and in preventing lead exposure. The messages will need to be culturally appropriate, community based, and community accepted. We will also need to develop strategies that limit lead exposure through environmental and regulatory changes. Further, it was discussed that

consideration should be given to preventing even the earliest lead exposure, i.e., fetal and perinatal.

Scaling back the program as lead poisoning is eliminated was brought up for discussion. Most stakeholders have considered it premature to discuss scaling back lead poisoning prevention efforts, when lead poisoning risks are being defined and there are a number of questions being raised on the blood lead levels that cause sequelae and on the numbers of children exposed to these levels.

The strategic planning goals discussed have encompassed seven planning areas. These goals, numbered 1-21 are given below, grouped by planning area and with the objectives discussed for each goal.

PRIMARY PREVENTION: PAINT, DUST AND SOIL

Goals:

1: Reduce exposure by assuring public informing on lead exposure from lead-based paint and lead-contaminated dust and soil.

Objective 1.1. Develop and disseminate materials and messages that are culturally and target-audience appropriate to inform families, communities, and other stakeholders about the risks of lead exposure from lead-based paint and lead-contaminated dust and soil.

2: Reduce exposure to lead hazards posed by lead-based paint and lead-contaminated dust and soil, through regulatory and corrective actions.

Objective 2.1. Assure that California's standards for housing-related hazards are at least as restrictive as federal U.S. Environmental Protection Agency (EPA) standards.

Objective 2.2. Maximize collaboration with other agencies and organizations working on lead hazard issues.

Objective 2.3. Facilitate remediation and abatement of properties with identified lead hazards.

Objective 2.4. Promote local agency compliance and enforcement capabilities to see that identified hazards are corrected.

3: Prevent lead hazard exposure through increased use of lead-safe work practices.

Objective 3.1. Increase numbers and types of lead-related construction (LRC) professionals trained through the LRC program.

Objective 3.2. Assure that California construction professionals achieve quality lead-related construction training and certification, as required.

Objective 3.3 Increase the use of lead-safe work practices during routine maintenance activities and throughout the construction, remodeling, and renovation industries.

PRIMARY PREVENTION: OTHER SOURCES

Goals:

4: Reduce exposure by assuring public informing on lead exposure from other sources.

Objective 4.1: Develop and disseminate materials and messages that are culturally and target audience-appropriate to inform families, communities, and other stakeholders about the risks of lead exposure from multiple sources.

5: Reduce exposure to lead hazards from diverse, other sources of lead through regulatory and corrective actions.

Objective 5.1. Develop a program to evaluate ongoing lead exposure from potential, known sources of lead exposure, such as imported candy and food.

Objective 5.2. Develop a collaborative infrastructure, including local programs and community-based organizations and programs, for identifying, evaluating, and eliminating these multiple sources of lead.

Objective 5.3. Develop a response plan for dealing with new, emerging, diverse sources of lead.

SURVEILLANCE

Goals:

6: Characterize geographic-specific prevalence of elevated blood lead levels in California and use information to develop program policy.

Objective 6.1. Achieve geographic information system tracking of blood lead tests.

Objective 6.2. Use information obtained to define surveillance, screening, and other program policy related to geographic risk factors.

7: Characterize demographic group-specific prevalence of elevated blood lead levels in California and use information to develop program policy.

Objective 7.1. Achieve population tracking through health programs (such as Medi-Cal), vital statistics, and census information, and through blood lead test results.

Objective 7.2. Use information obtained to define surveillance, screening, and other program policy related to associated population and health program risks.

8: Determine the extent to which lead hazards posed by paint, dust and soil, and by other identified sources relate to elevated blood lead levels in California.

Objective 8.1. Develop data infrastructure to relate paint, dust, and soil exposures to defined elevations in blood lead levels, geographic areas, and population and health program groups being defined as at-risk, and to identify any specific characteristics of housing or neighborhoods that put children at risk.

Objective 8.2. Develop data infrastructure to relate other exposures to defined elevations in blood lead levels, geographic areas, and populations and health program groups being defined as at-risk.

SCREENING

Goals:

9: Achieve maximal blood lead testing of groups currently targeted for screening.

Objective 9.1. Achieve full screening and reporting of information under current targeted screening plan for several years to achieve information on this population.

Objective 9.2. Expand data partnerships with health programs, such as Medi-Cal, CHDP, and WIC, to determine program screening rates.

10: Define whether the current targeted screening plan is the best model or whether the screening plan needs to be modified.

Objective 10.1. Determine if the childhood population groups currently targeted for screening are at greatest risk for lead exposure and elevated blood lead levels, or whether the target groups need to be further focused.

Objective 10.2. Determine whether targeting children age 1 and 2 years for screening is best model, or whether screening should be carried out earlier to allow intervention and prevent further rise in blood lead levels.

Objective 10.3. Determine if current medical model for carrying out screening is best approach for achieving screening.

11: Evaluate whether expansion of screening to pregnant women or women of child bearing age will improve identification of children and populations at risk and lead to prevention of fetal and early childhood exposure.

Objective 11.1. Use maternal and prenatal data to identify fetuses, children, and population groups at risk.

Objective 11.2. Use prenatal data to reduce fetal and newborn exposure to lead.

12: Use surveillance and screening data to assess progress in elimination of EBLLs, determine need for future widespread screening, and whether California should move to a sentinel screening approach.

Objective 12.1. Ongoing assessment of prevalence of lead poisoning and children and communities at risk, to assess effectiveness of elimination plan efforts.

Objective 12.2. Define point at which prevalence of lead exposure has decreased such that widespread targeted screening may no longer be warranted.

Objective 12.3. Develop strategies for estimating distribution of blood leads and sources of lead, if blood lead testing is no longer indicated (sentinel screening).

IDENTIFICATION AND MANAGEMENT OF LEAD-POISONED INDIVIDUALS

Goals:

13: Achieve a graded management response to the continuum of lead levels in children to provide needed informing, treatment, and support services.

Objective 13.1. Provide graduated levels of service to children based on their blood lead levels and to other children considered “at-risk” (e.g., neighbor children who live in same housing complex with lead exposure).

Objective 13.2. Provide flexibility to respond to identified lead hazards, not just in association with a “case” of lead poisoning, i.e., ability to intervene with investigation when risk situation warrants but a child has not yet been deemed a “case” of lead poisoning.

14: Facilitate neurodevelopmental and needed follow-up services for lead-exposed children.

Objective 14.1. Develop mechanism for assessing need for neurodevelopmental services and monitoring of neurodevelopmental sequelae as part of case management of lead-poisoned children.

Objective 14.2. Develop a coordinated response with other programs for needed follow-up services for lead-poisoned children, when these children are removed from childhood lead follow-up.

15: Facilitate follow-up to assure correction of hazards causing lead exposure.

Objective 15.1. Improve property owner compliance with remediation orders, to assure that appropriate remediation occurs when housing identified as source of lead exposure.

Objective 15.2. Institute follow-up procedures to assure correction of other environmental sources identified as source of lead exposure.

Objective 15.3. Institute protocols to assure correction of other diverse sources identified as causing lead exposure.

16: Explore whether public health response and case management of individuals with elevated blood lead levels, in population groups other than children, should be expanded to those whose lead burden may affect children.

Objective 16.1. Assess need for public health and environmental case management to include other, non-childhood groups, such as pregnant women, women of childbearing age, and family members who create lead exposures.

Objective 16.2. Use adult blood lead levels to inform and identify childhood exposure.

LONG-TERM SEQUELAE AND INTERVENTIONS

Goals:

17: Assess effectiveness of interventions for lead poisoning, using program information and information from other sources on long-term health, neurodevelopmental, and behavioral sequelae of lead poisoning.

Objective 17.1. Through collaborations, achieve better follow-up of individuals formerly lead exposed and better understanding of the long-term sequelae of childhood lead poisoning.

Objective 17.2. Determine whether case definition needs revision, based on information gained.

Objective 17.3. Provide information and education on these sequelae to the public and legislature.

18: Look at the feasibility of the CLPP Program conducting long-term follow-up of lead poisoning cases in California, to provide services and information, and do follow-up studies.

Objective 18.1. Look at resources available, to determine program capacity for conducting long-term follow-up.

Objective 18.2. Evaluate modification of data system needed to facilitate long-term follow-up.

PROGRAM INFRASTRUCTURE

Goals:

19: Build needed infrastructure to maintain and support program, as it continues to evolve from a secondary prevention focus on identification and treatment of lead-exposed children, to primary prevention.

Objective 19.1. Achieve a stable funding base for program and assure adequate program staffing.

Objective 19.2. Assure adequate data infrastructure to support the activities of surveillance, case management, analyses, laboratory reporting, and program evaluation, as needed for program functions.

Objective 19.3. Create flexible funding mechanism for local programs.

20: Develop collaborations and opportunities for integration with other agencies and programs.

Objective 20.1. Avoid duplication between state-level program and local programs and improve efficiencies.

Objective 20.2. Develop sustainable programs in local communities, which can continue if overall program funding adversely impacted.

21: Ensure the legal authority to carry out the program.

Objective 21.1. Consider expanding program mandate to include non-child groups that affect children, such as pregnant women.

Objective 21.2. Develop authority to address lead hazards that are identified, or reappearance of previously known hazards, if indicated.

Objective 21.3. Assure program participation by other programs and agencies, as needed, to assure lead activities and hazards are addressed.

V. EVALUATION OF STRATEGIES AND PROGRESS

To assess whether the strategies undertaken are being effective and we are achieving progress towards elimination of lead poisoning, there will need to be ongoing evaluation. We will need to look at both whether the strategies implemented are being carried out appropriately (whether we are doing things right) and whether they are inducing the desired outcomes (whether we are doing the right things). This evaluation framework is diagrammed in Figure 2.

Figure 2. Diagram of Framework for Evaluation of Plan Strategies

