

CDC Response to Advisory Committee on Childhood Lead Poisoning Prevention
Recommendations in “*Low Level Lead Exposure Harms Children: A Renewed Call of*
***Primary Prevention*”**

BACKGROUND

In late 2010, the Centers for Disease Control and Prevention’s (CDC) Advisory Committee for Childhood Lead Poisoning Prevention (ACCLPP) formed a workgroup to evaluate new approaches, terminology, and strategies for defining elevated blood-lead levels (BLLs) among children. ACCLPP established the ad hoc Blood Lead Level workgroup on November 10, 2010.

The charge of this workgroup was to:

1. Recommend how to best replace the term, ‘level of concern,’ regarding accumulating scientific evidence of adverse effects of BLLs at < 10 µg/dL in children.
2. Consider laboratory capability for measuring BLLs in establishing new guidance on childhood BLLs.
3. Advise ACCLPP on how CDC should communicate advisories to groups affected by policy changes concerning:
 - a. Interpretation of childhood BLLs and trends in childhood BLLs over time;
 - b. Screening and follow-up screening intervals;
 - c. Requirements and procedures for notifying parents or guardians concerning BLL test results; and,
 - d. Interventions known to control or eliminate lead exposure.

On November 16–17, 2011, the ACCLPP met and deliberated on the ad hoc workgroup draft report. On January 4, 2012, the ACCLPP met and a majority approved the report, including the recommendations.

In brief, the ACCLPP recommendations include:

- Elimination of the use of the term “blood lead level of concern” based on the compelling evidence that low BLLs are associated with IQ deficits, attention-related behaviors, and poor academic achievement. The absence of an identified BLL without deleterious effects, combined with the evidence that these effects appear to be irreversible, underscores the critical importance of primary prevention. This strategy emphasizes preventing lead exposure rather than responding after the exposure has taken place. ACCLPP recommends specific actions that CDC and other local, state, and federal agencies should take to shift priorities to primary prevention and provides guidance to respond to BLLs < 10 µg/dL in children. The ACCLPP recommends that CDC collaborate with these and other stakeholders, and provide advice and guidance. ACCLPP also recommends using a reference value based on the 97.5th percentile of the BLL distribution among children 1–5 years old in the United States (currently 5 µg/dL) to identify children with elevated BLLs using data generated by the National Health and Nutrition Examination Survey (NHANES). Approximately 450,000 children in the United States have BLLs higher than this reference value.
- Additional research is needed to develop and evaluate interventions that effectively maintain BLLs below the reference value in children. Other research priorities should include efforts that better use data from screening programs; develop next-generation,

point-of-care lead analyzers; and improve the understanding of epigenetic mechanisms of lead action.

Herein we describe CDC's response to each of the ACCLPP recommendations. The proposed methods to address recommendations are contingent on the availability of resources. In FY 2012, funding for CDC's Childhood Lead Poisoning Prevention activities was reduced significantly from FY 2011. As a result, funding is not available for state and local Childhood Lead Poisoning Prevention Programs (CLPPPs). In many instances, these reductions limit CDC's ability to fully implement many of these recommendations in the short term. This draft response was prepared by CDC's National Center for Environmental Health (NCEH).

For the purpose of these responses:

Concur – We agree, and we have the funding, staff, and control over the means to implement the recommendation. The response provides potential strategies which are achievable within current FY 2012 or proposed FY 2013 resources.

Concur in principle – We agree, but we do not have the funding, staff, or control over the means to implement the recommendation. The response highlights strategies that have been shown to be effective, however a commitment to implement actions cannot be made due to our lack of control over available resources.

Nonconcur – We disagree with the recommendations and provide the reasons for the disagreement.

CDC concurred or concurred in principle with all of the recommendations approved by the ACCLPP.

RECOMMENDATIONS

I. Recommendation: Based on the scientific evidence, the ACCLPP recommends that (a) the term, “level of concern”, be eliminated from all future agency policies, guidance documents, and other CDC publications, and (b) current recommendations based on the “level of concern” be updated according to the recommendations contained in this report.

Concur

Specific Means to Address or Implement

- a. CDC will emphasize that the best way to end childhood lead poisoning is to prevent, control or eliminate lead exposures. Since no safe blood lead level in children has been identified, a blood lead “level of concern” cannot be used to define individuals in need of intervention.
- b. In FY2012, CDC will discontinue using the term ‘level of concern’ in future publications and replace it with the reference value and the date of the NHANES that was used to calculate the reference value. CDC also will make this standard language available to operating divisions across CDC and use the cross-clearance procedure to ensure that authors adopt this language.
- c. Publications on the Web site (www.cdc.gov/nceh/lead) will use the terminology in place at the time of their publication. The CDC Lead statement 1975–1991 includes

an asterisked note that “these documents are being kept on this website for historical purposes and are no longer in print.” In FY2012, CDC will add the asterisk to the 2005 statement and the footnote will be edited to include the words “These documents refer to various blood-lead thresholds and levels of concern for adverse health outcomes in children. This terminology is outdated and readers are referred to the ACCLPP recommendations of 2012.” A similar note will be applied to the document, “Managing Elevated Blood Lead Levels Among Children” (CDC, 2002) that states: “This document refers to a blood-lead level of 10 µg/dL as the CDC level of concern for adverse health outcomes in children. This terminology is outdated and readers are referred to the ACCLPP recommendations of 2012. However, the 2012 document does not recommend changes to the guidelines for the evaluation and treatment of children requiring chelation (BLLs \geq 45 µg/dL) published here.”

Status: The statement will be placed on www.cdc.gov/nceh/lead no later than two weeks following agency clearance. A joint publication summarizing the ACCLPP recommendations and CDC’s response will be submitted jointly to the *Morbidity Mortality Weekly Review* and the journal, *Pediatrics*, no later than May 2012.

II. Recommendation: *CDC should use a childhood BLL reference value based on the 97.5th percentile of the population BLL in children aged 1–5 years (currently 5 µg/dL) to identify children living or staying for long periods in environments that expose them to lead hazards. Additionally, the reference value should be updated by CDC every 4 years based on the most recent population-based–blood-lead surveys conducted among children.*

Concur in principle

Specific Means to Address or Implement

In FY12, CDC will:

- a. Use the reference value in recommendations that involve follow-up evaluation of children after BLL testing.

- b. Use the reference value as defined to identify high-risk childhood populations and geographic areas most in need of primary prevention.

- c. Provide this information, including specific high-risk areas, to a wide variety of federal, state, and local government agencies and nongovernment organizations interested in lead-poisoning prevention.

In addition, CDC will update the value every 4 years using the two most recent NHANES surveys. The updated reference value will be posted at www.cdc.gov/nceh/lead and widely distributed through various Web-based LISTSERV sites, pediatric associations, and partners at the federal, state, and local level. Updated reference values will be reported in the National Report on Human Exposures to Environmental Chemicals and other relevant journals.

Status: CDC's National Center for Health Statistics (NCHS) will continue to monitor BLLs in the United States and make data tapes available on its Web site for public use at 2-year intervals.

CDC publications will use the reference value to provide guidance to clinical health care providers and others as these publications are prepared. Broader dissemination through Web sites, notices to clinical pediatric care providers, and the MMWR will be considered by CDC in the future.

III. Recommendation: CDC should develop and help implement a nationwide primary-prevention policy to ensure that no children in the United States live or spend significant time in homes, buildings, or other environments that expose them to lead hazards.

Concur in Principle

Specific Means to Address or Implement

CDC recognizes the value of primary prevention. As feasible, CDC will develop strategies and guidelines for primary prevention. Implementation of primary-prevention programs is not currently practicable.

Status: CDC may examine the possibilities of working with the U.S. Department of Housing and Urban Development (HUD), the Health Resources and Services Administration (HRSA), state and local governments, and philanthropic organizations to identify opportunities for collaboration on primary prevention in the future.

IV. Recommendation: Clinicians should be a reliable source of information on lead hazards and take the primary role in educating families about preventing lead exposures. This includes

recommending environmental assessments PRIOR to blood lead screening of children at risk for lead exposure.

Concur in Principle

Specific Means to Address or Implement

Although this recommendation is directed to clinicians, CDC may play a supportive role in enhancing the recommendation by working with providers to provide educational material. Some currently available resources can be used to update CDC/ATSDR documents to reflect the primacy of clinical health care providers in educating families about preventing lead exposure. For example, revisions to the ATSDR Lead Toxicity Case Study (available at <http://www.atsdr.cdc.gov/csem/csem.html>) are scheduled for 2012, and these changes can be incorporated.

Status: Full implementation contingent on funding

V. Recommendation: Clinicians should monitor the health status of all children with a confirmed BLL ≥ 5 $\mu\text{g}/\text{dL}$ for subsequent changes in BLL until all recommended environmental investigations and mitigation strategies have been completed. Clinicians also should provide BLL test results to the families of all affected children in a timely and appropriate manner.

Concur in Principle

Specific Means to Address or Implement

Although this recommendation is directed to clinicians, CDC may play a supportive role in enhancing the recommendation by working with clinical care providers and professional organizations to achieve this goal. Ensuring that children with BLLs > 5 µg/dL can be retested is feasible within the current resources because these tests are covered by Medicaid and many private health care insurance providers. As discussed earlier, some provider training will be conducted.

Status: Full implementation contingent on funding

VI. Recommendation: Clinicians should ensure that BLL values at or higher than the reference value are reported to local and state health or housing departments if no mandatory laboratory reporting exists. Clinicians also should collaborate with these agencies to ensure that the appropriate services and resources provided to children and their families.

Concur in Principle

Specific Means to Address or Implement

Although this recommendation is directed to clinicians, CDC may play a supportive role in enhancing the recommendation through CDC's continued work with testing laboratories, point-of-care instrument manufacturers, and clinical health care providers to ensure the availability of high-caliber laboratory services. In addition, most of the state CLPPPs funded by CDC have

mandatory reporting laws in place, and those that do not are required to implement such laws during this year of funding.

Status: Full implementation contingent on funding

VII. Recommendation: Educate families, service providers, advocates, and public officials on the primary prevention of lead exposure in homes and other child-occupied facilities to ensure that lead hazards are eliminated before children are exposed.

Concur in Principle

Specific Means to Address or Implement

In FY12, CDC will provide available educational materials through its Web site, and seek the assistance of partner agencies and organizations to implement this recommendation. In FY 2012, funding is not available for state and local CLPPPs.

Status: Implementation contingent on funding

VIII. Recommendation: CDC should encourage local, state, and other federal agencies to: (a) facilitate data-sharing between health and housing agencies, (b) develop and enforce preventive lead-safe housing standards for rental and owner-occupied housing, (c) identify financing for lead hazard remediation, and (d) provide families with the information they need to protect their children from hazards in the home.

Concur in Principle (a.-c.)

Specific Means to Address or Implement

- a. In FY12, CDC will continue to recommend that health and housing agencies share data that can be used to identify geographic areas where lead-exposure risk is high. In the future, CDC can explore strategies to facilitate data sharing between health and housing agencies. If funds for CLPPPs become available, CDC will require data sharing between CLPPPs and housing agencies in all CLPPP grant programs.
- b. CDC has developed guidelines for lead-safe housing and in FY2012 will encourage local, state, and federal agencies to enforce these standards.
- c. HUD Lead Hazard Control Program provides approximately \$100 million annually and is the most easily identifiable and largest source of federal funding for lead-hazard remediation. Many CLPPPs help property owners complete the HUD application process, help to identify alternative funding sources, and negotiate with local banks. In FY 2012, however, funding is not available for state and local CLPPPs.

Concur (d.)

Specific Means to Address or Implement

- d. These materials currently exist and are distributed through a wide variety of networks. Future development of new materials could be considered by CDC in the future.

Status: Implementation contingent on funding

IX. Recommendation: Elected officials and the leaders of health, housing, and code enforcement agencies can help protect the children in their jurisdictions from lead exposure in their homes through many activities. CDC should work with officials to ensure adoption of a suite of preventive policies.

Concur in Principle

Specific Means to Address or Implement

In the future, CDC could consider educating state and local elected officials about the importance of primary prevention and evidenced-based strategies at a national level. In FY 2012, funding is not available for state and local CLPPPs.

Status: Full implementation contingent on funding

X. Recommendation: CDC should (a) emphasize the importance of environmental assessments to identify and mitigate lead hazards before children demonstrate BLLs at or higher than the

reference value and (b) adopt prevention strategies to reduce environmental lead exposures in soil, dust, paint, and water before children are exposed.

Concur (a.)

Specific Means to Address or Implement

- a. For more than 20 years CDC has emphasized the importance of environmental assessment and mitigation of lead hazards before children are exposed (before their BLLs are at or higher than the reference value) through policies, cooperative agreements, interagency agreements, and publications. CDC will continue these efforts.

Status: Ongoing

Concur in Principle (b.)

Specific Means to Address or Implement

- b. In FY12 and FY13, CDC will work with federal agencies that may also be affected by these recommendations including, but not limited to, HUD and the Environmental Protection Agency (EPA). The goal of the summit will be to develop primary prevention strategies. In FY 2012, funding is not available for state and local CLPPPs.

Status: Full implementation contingent on funding

XI. Recommendation: If a lead hazard that requires a response is found in any unit in a multi-family housing complex, the same response must be applied to all similar untested units in the complex. However, if a previous risk assessment demonstrated that no lead hazards are present in the other units; they do not need to be retested.

Concur in Principle

Specific Means to Address or Implement

CDC concurs with the evidence that a building that houses one child with lead poisoning is an indication that other children in that building are likely at risk. In the future, CDC may explore implementing recommendations for increased inspections.

Status: Implementation contingent on funding

XII. Recommendation: CDC should encourage additional research directed towards developing interventions capable of maintaining children's BLLs lower than the reference value.

Concur in Principle

Specific Means to Address or Implement

CDC will work with the National Institute of Environmental Health Sciences (NIEHS) and academic partners to encourage research. This research will be designed to develop and evaluate effective, broadly useful interventions that are effective in the complex lead-exposure situations that are commonly encountered. In the future, CDC may explore strategies to support additional research.

Status: NIEHS is working with other partners to foster collaboration on developing a research agenda that will address the spirit of the recommendation. In the future, CDC may explore strategies to support additional research.

XIII. Recommendation: Additional research priorities should include improving the use of data from screening programs, developing next generation point-of-care lead analyzers, and improving the understanding of epigenetic mechanisms of lead action.

Concur

Specific Means to Address or Implement

As funding permits, CDC will work with NIEHS, academic partners, and laboratory instrument manufacturers to encourage research in these important areas.

Status: There is ongoing interaction with NIEHS and others to foster collaboration on developing a research agenda.