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From the Office of the Chief



Screening Young Children

Mary Jean Brown, ScD, RN

With warm weather approaching, many Childhood Lead Poisoning Prevention Programs are preparing for summer screening programs. Screenings will be conducted door-to-door, at health fairs, daycare centers, and out of screening vans strategically located in high-risk areas and other places frequented by small children.

As you plan your summer events, I hope you will consider the following suggestions:

- Review the last few years of summer screening data to determine how many children were tested and how many children with elevated blood lead levels were identified.
- If these numbers are low, consider using other services that you could provide using these screening strategies that would emphasize the importance of lead poisoning prevention and tell families how they can help protect their children from exposure to lead.

For example, a number of programs now have the capacity to test toys and other items. Families may be reluctant to have their young children tested at a health fair for fear they will cry, but those families may appreciate the opportunity to bring items for testing. Families also may be interested in bringing items to the screening venues for testing paint samples before they begin summer renovations... or maybe they would like to receive dust wipe kits. This would provide a good opportunity for telling parents about your program's recommendations for testing children who live in specific neighborhoods or who have other risk factors and about where and how they can get the test done.

Some Childhood Lead Poisoning Prevention Programs have done in-depth analyses of their blood lead data at the neighborhood or census tract level to compare the screening rates in areas where children are at high, moderate, or

low risk for elevated blood lead levels. A few programs have been able to demonstrate that children living in areas where the risk for lead poisoning is thought to be highest are less likely to be screened compared with children living in more affluent areas where the risk for lead poisoning is lower. Such analyses should be an integral part of your planning for door-to-door screening or placement of a screening van. Your CDC project officer will be happy to discuss this with you in detail.

You have had a tremendous impact on lowering the blood lead levels of children in the United States. I expect that within the next few years, the National Health and Nutrition Examination Survey (NHANES) estimate of children with blood lead levels greater than or equal to 10 µg/dL will fall below 1% and that it will continue to decline. Over the coming year, I would like to begin serious discussions about lead poisoning prevention surveillance that may not depend solely on routine blood lead testing. While it is unlikely that any community will become lead-free in the foreseeable future, what are the criteria for considering a community lead-safe? And, if a community meets these criteria, what kinds of sentinel surveillance systems should be in place to ensure that lead safety is maintained?

I welcome hearing your thoughts on this issue. Send your feedback to our newsletter e-mail box at Leadinfo@cdc.gov or directly to me mjb5@cdc.gov. I also hope we will have the opportunity to discuss this issue further at the upcoming National Healthy Homes Conference September 15–17, 2008, in Baltimore, Maryland.

Best Wishes,

A handwritten signature in cursive script that reads "Mary Jean".

Mary Jean Brown, ScD, RN

Current Research

Measuring Progress Toward Screening of High-Risk Populations – In *Screening Young Children for Lead Poisoning: Guidance for State and Local Public Health Officials* (CDC, 1997), Dave Homa, PhD,

MPH, places an emphasis on providing screening and follow-up care to children most at risk for lead poisoning. Most of us working in lead poisoning prevention know the standard indicators of high-risk for exposure:

- living in a pre-1950s housing unit,
- living in poverty,
- being on Medicaid,
- having refugee status (particularly from countries where lead exposure is still endemic), and
- being a member of a cultural or ethnic group where use of certain products or practices results in lead exposure (e.g., use of certain cosmetics, cookware or tableware, traditional remedies, or foodstuffs).



States and localities differ in the representation of these high-risk groups within their population. Often, more than one high-risk group is present in sizable numbers. To move toward screening all high-risk children, CDC has set a goal for its partners to screen 85 percent of their high-risk children by 2010. CDC partners will need to develop a strategy to measure their progress toward this benchmark quantitatively.

Because states and localities differ in what high-risk groups are and what data are available, no single algorithm or strategy is appropriate for every situation. CDC does not intend to prescribe a formula or method at this time; however, successful strategies will have these common characteristics: sound scientific-and-assessment principles, numerators and denominators based on clearly defined data, and data which are available on an ongoing basis. Data sources that may provide the appropriate information are

- data collected at time of screening,
- data available through merging surveillance data to other data sources such as Medicaid data and tax assessor data, and
- U.S. Census data can include data publicly available through the Census Web site (www.census.gov) as well as data available through special tabulations (requests to Census for tables and cross-tabulations not publicly available).

Of particular interest as a measure of progress of particular interest in screening high-risk children is the 2008 Health Effectiveness Data Information Set (HEDIS®), which includes the percent of children who have had one or more capillary or venous blood lead tests for lead poisoning by their second birthday.

For states that define children on Medicaid as a high-risk population, CDC is considering allowing HEDIS® to be used as a measure of progress. A decision on this is forthcoming. Please keep your CDC project officer informed as you work on developing your criteria for assessing progress in screening high-risk children. The project officers work with assigned staff epidemiologists, so also keep them in mind as a resource.

Dr. Homa's contact information is 770-488-3626, dhoma@cdc.gov.

Policy Development

Legislation Updates

On May 14, 2008, **H.B. 1043** was signed into law by the governor of Georgia. The bill relates to the enforcement of lead hazard abatement found in conjunction with a child with elevated blood lead level in rental housing with 1 or more units. The previous law addressed hazards found in more than 12 units only. Critical to making the case for the law, was the development of maps using GIS that detailed the amount of older housing, number of children at risk and with elevated blood lead levels in individual committee member's district, showing them how the issue affected their constituents.

On March 21, 2008, **S.B. 143** was signed into law by the governor of Indiana. The bill

- specifies certain requirements for laboratories (penalty for incomplete reporting), the state Department of Health (create Lead-Safe Housing Advisory Council, order lead tainted products be removed in stores), local health departments (inspect retail stores), residential rental property owners (develop *Lead Safe Work Practices* training program), child care providers (increase blood lead screening), and retail establishments (prohibit sale of lead in toys, provide lead paint testing kits, provide EPA safety information) related to childhood lead poisoning prevention;
- provides for a civil penalty to be assessed by the state Department of Health for noncompliance with certain provisions; and,
- establishes the Childhood Lead Poisoning Prevention Fund.

In addition, the new law states that “before enrollment of a child who is at least nine months of age in a child care program, a provider shall obtain from the parent or guardian of the child, documentation of a blood lead level test of the child.”

On March 26, 2008, **S.B. 2111** was signed into law by the governor of Iowa. The bill

- relates to the school enrollment and notice requirements for blood lead testing and dental screening of a child who is enrolled or enrolling in a school district or accredited nonpublic school;
- requires school districts and schools by the start of the school calendar to give notice of the blood lead testing and dental screening requirements to parents; and,
- replaces the deadline by which schools must provide evidence that each child enrolled in elementary school had a blood lead test or a dental screening.

On April 8, 2008, **H.B. 1546** was signed into law by the governor of Maine. The bill directs the Maine Department of Health and Human Services to

- identify areas at high risk of having children with elevated blood lead levels,
- attempt to achieve universal blood lead level screening for certain children,
- report annually to the joint standing committee having jurisdiction over health and human services matters, and
- report, along with the Maine Department of Education, on the feasibility of including blood lead level assessment information in school records.

Program Administration

Branch Staff and Activity

- Dr. Mary Jean Brown, Branch Chief; Barry Brooks, Team Leader for Administrative Services; Joy Gulliksen, Public Health Analyst; and, Charlotte Cloud-Williams, Branch Secretary, received an award from the Atlanta Federal Executive Board (FEB) for **partnership efforts with EPA on the**

What do you think of the LPPB Newsletter? What topics would you like to see in the LPPB Newsletter?

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For other Lead Poisoning Prevention information, go to <http://www.cdc.gov/nceh/lead/lead>

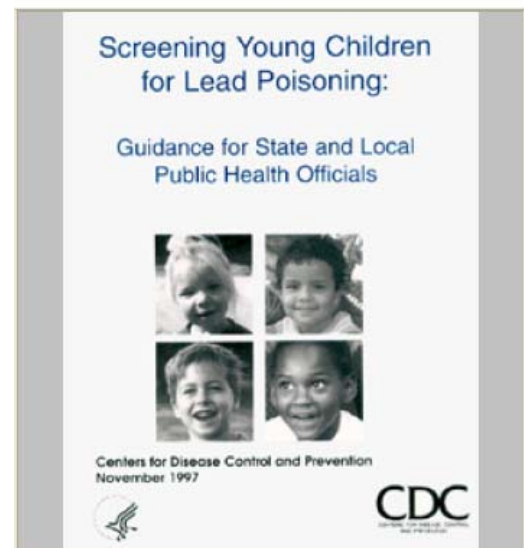
2008 Harvard Program Evaluation Project. The award was presented to the team on May 8, 2008, at the 35th Annual FEB Award Luncheon held at the Georgia World Congress Center in Atlanta, Georgia.

- This summer, Tim Dignam will begin working on a project titled **Prenatal Lead Exposure and Newborn Hearing**. The project will examine the relationship between prenatal blood lead exposure and infant auditory brainstem response patterns. The study will be conducted in two New York City hospitals. Hearing loss is one of the most common major abnormalities present among infants. Two to four infants per 1,000 in the United States are born with severe to profound newborn hearing loss. Undetected hearing loss delays speech, language, and cognitive development. Numerous studies have shown that prenatal lead exposure is associated with a variety of neurobehavioral and electrophysiologic abnormalities; however, knowledge about the effects of maternal lead exposure at current U.S. levels (i.e., blood lead levels <10 µg/dL) on the neonatal auditory system function is limited.

This study will consider the role of the apolipoprotein E (APOE) genotype as a genetic effect modifier. APOE makes an intracellular protein that transports cholesterol and fatty acids and plays an important role in the structure of cell membranes and myelin. Cholesterol and the protein are important in the neurodevelopment of the fetus (cholesterol is used in neuronal metabolism) and may serve as modifiers of the response to maternal nutrient intake or maternal exposure to neurotoxins. Thus, genetic variants may make a shift in the dose-response relationship to environmental toxins such as lead. The overall goal of this study is to examine gene-environment interactions between prenatal blood lead exposure and APOE polymorphism while examining infant auditory brainstem response pattern.

- The **National Lead Poisoning Prevention Training Center (LPPTC)** is a partnership with CDC through Healthy Housing Solutions, Inc. and the National Center for Healthy Housing to provide federal, state and local agencies, and private sector organizations with professional services related to residential environmental health and safety issues. One of the LPPTC plenary session highlights is the discussion by Tom Schlenker, MD, MPH, titled, “Secondary Prevention: Screening and Follow-Up Care” in which Dr. Schlenker discusses the charge of health care providers and childhood lead poisoning prevention programs in partnering with organizations such as the Special Nutrition Program for Women, Infant, and Children (WIC) and Medicaid to screen and test young children for lead. He also discusses the importance of providing a “safety net” of services for uninsured children. Other important points Dr. Schlenker presents are Medicaid screening policies, screening logistics (capillary vs. venous, filter paper, hand held analyzer, and staff support), and strategies to maximize screening efforts.

Dr. Schlenker is a pediatrician and chief medical officer at Children’s Hospital of Wisconsin-Kenosha. His professional interests include developing collaborations with local public health and community agencies and physician services. Dr. Schlenker served as consultant on the CDC’s advisory committee that produced *Screening Young Children for Lead Poisoning: Guidance for State and Local Public Health Officials* (November 1997).



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Spotlight on Healthy Housing

- On July 22–23, 2008 an invitation-only **Healthy Homes Fundamentals** meeting will be held in Atlanta, Georgia to bring together federal, state, and local partners who work on healthy homes activities. The following topics will be discussed:
 - Utilizing lessons learned
 - Transitioning from childhood lead poisoning prevention to healthy homes
 - Determining cost benefits of a healthy homes program; and,
 - Generating a how-to guide for an efficient transition from a childhood lead poisoning prevention program to a healthy homes program.

A synopsis of the meeting proceedings should be posted October 2008 on the LPPB Web site: <http://www.cdc.gov/nceh/lead/lead.htm>. Ms. Karen Gavin is the contact person for this meeting. She can be reached at 770-488-3638, keg3@cdc.gov).

- On April 4, 2008, Drs. Mary Jean Brown and Pam Meyer attended a meeting in Washington, D.C. to discuss the formation of a federal agency work group to assess *Living in Safe and Healthy Manufactured Structures*. The work group, led by Dr. Howard Frumkin, Director, National Center for Environmental Health and the Agency for Toxic Substances and Disease Registry, included CDC, FEMA, HUD, U.S. Department of Education, and the Office of Emergency Management for New York. The work group will produce a white paper with recommendations of their findings.
- On December 11–12, 2007, CDC and the National Center for Healthy Housing cosponsored a meeting of more than 30 national and international experts in the broad field of healthy housing to weigh the strength of scientific evidence on **housing interventions that have an impact on health and safety**. A forthcoming report of the findings from this meeting will describe the housing interventions with sufficient evidence, in terms of health outcomes, to warrant widespread promotion. The report also will identify gaps in existing research and prioritize the need for additional or formative research. The report will address issues such as biologic and chemical agents within housing, structural deficiencies, external exposures, and the intersection between housing and community. The findings of this report will enforce and promote the need for policy and program practice changes among federal, state, and local government agencies and community-based organizations and promote the need for additional or formative research. A draft of the report will be provided to attendees at the National Healthy Homes Conference in September 2008. Attendees will have the opportunity to offer comments and suggestions on the draft.
- On April 24th, Misha "Nikki" Walker, Public Health Advisor, gave birth to Katharine Mei Walker. Kate's stats: weight 9lb 2 oz and length 20.5 inches. Mom, Kate and rest of family are doing well. Nikki plans to return to work the end of June 2008.



Partner Program Highlights – Screening

CDC believes that an effective way to ensure blood lead testing of high-risk children is to provide this screening service at Women, Infant, and Children (WIC) clinics. In addition, agencies must work together to develop mechanisms to reimburse WIC clinics that test Medicaid-eligible children for lead poisoning.

City of Chicago Childhood Lead Poisoning Prevention Program (Chicago CLPPP) partners with Medicaid and local WIC clinics to test young children for lead poisoning. All of Chicago is considered at high-risk for lead poisoning; although, some communities have higher rates of children with elevated blood lead levels. Therefore, lead screening questionnaires are not used to determine the need for blood lead testing.

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The program’s phlebotomist provides free blood lead testing to children in local WIC clinics in high-risk areas. As a result of this collaboration, the City of Chicago has increased WIC-Medicaid screening rates by 67%. The elevated blood lead levels decreased from 5 to 2 percent from 2006 to 2007.

Data analysis is used to determine the number of Medicaid children tested for lead on a regular basis. The Chicago CLPPP regularly matches its lead surveillance database with Medicaid eligibility and billing data (two separate Medicaid databases) to track and analyze screening and elevated blood level rates. In addition, because the data are geocoded by address, Chicago CLPPP uses the data to validate high-risk areas for HUD funds and to generate “good visuals” (i.e., mapped data) to help mobilize partnerships for prevention in problem areas.

The lead program currently uses a global data system to enter reimbursable services such as blood lead testing. The reimbursement amount is credited to the Chicago Department of Public Health. In addition, the Chicago CLPPP collaborates with Medicaid to identify children never tested for lead poisoning and with other health department programs providing services to the same population of children. The lead program staff trains other outreach workers about lead poisoning prevention and the importance of blood lead testing of all children, especially Medicaid-enrolled children.

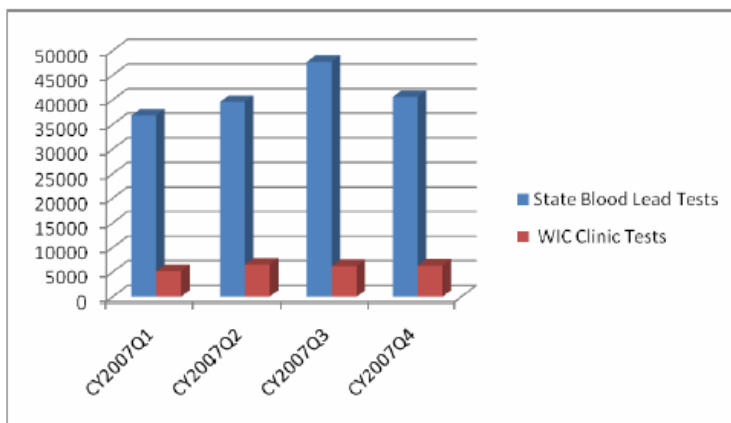


A young child is tested for lead poisoning.

Ohio CLPPP has a successful collaboration with WIC clinics. In 2003, the Ohio Department of Health (ODH) conducted a pilot to determine the effectiveness of offering a blood lead test at WIC clinic sites. The testing sites demonstrated a 28% increase in the number of children who received a blood lead test when compared to a control group.

In 2006, ODH began the WIC lead testing project. ODH identified WIC clinics located in high-risk areas that serve large numbers of children. In 2007, these targeted WIC clinics tested 24,211 of Ohio’s children statewide. Of this total, 15% received their blood lead test in a WIC clinic. To date, the project has expanded its testing program to 41 WIC sites.

CY2007 Ohio Blood Lead Tests Completed



Wisconsin CLPPP has partnered with WIC clinics since 1989 and has established several mechanisms for reimbursing WIC clinics for lead testing: memoranda of understanding with managed care providers, direct Medicaid reimbursement to WIC agencies, and provider report cards. These techniques have resulted in a 64% increase in testing of Medicaid-eligible children from 2000 to 2007.

Coming Events

- **Healthy Homes Fundamentals Meeting** (invitation only); July 22–23, 2008, Atlanta, GA.
- **Lead Poisoning Prevention Training**; July 28–August 1, 2008; Chicago, IL; Contact: Mr. Kimball Credle, 770-488-3643, kfc2@cdc.gov.
- **2008 National Healthy Homes Conference** (formerly the Tri-Agency Conference) September 15–17, 2008; Baltimore, MD.
- **National Lead Poisoning Prevention Week**; October 19–25, 2008.
- For more calendar activities, go to <http://www.cdc.gov/nceh/lead/> and click on *Calendar of Events*.



**LEAD POISONING IS A
PROBLEM WE CAN FIX**



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