

Lead Poisoning Prevented

SUMMARY:

Local Public Health Agencies (LPHAs) LPHAs are at the forefront of monitoring and managing lead poisoning among children up to the age of six. Lead poisoning is preventable and numerous studies show that the benefits far outweigh the costs of prevention. Nationally, for every dollar spent on controlling lead hazards and preventing exposure between \$17 and \$221, or a net of \$181-\$269 billion, would be returned in health benefits, increased IQ, higher lifetime earnings, tax revenue and reduced spending on special education. LPHA lead program costs include outreach, educating families about lead poisoning, lead screening, testing, and case management services as well as required random lead testing.

Gould E. 2009, Childhood Lead Poisoning: Conservative Estimates of the Social and Economic Benefits of Lead Hazard Control, Environmental Health Perspective 117:1162-1167

DETAILED STORIES:

Kansas City:

The State of Kansas had no funding available for an Environmental Lead Program due to budget deficits. So what does one doctor do when a routine check-up for an 18 month old child reveals positive results for lead poisoning? Across the state line in Missouri, there was an expert team of public health staff and nurses which existed to prevent childhood lead poisoning every single day...and that is who the doctor turned to. The Kansas City Health Department's (KCHD) Childhood Lead Poisoning Prevention team was informed of this particular case and headed across the state line to intervene and provide services. After investigating the family's apartment complex and interviewing family members, the team narrowed their focus on the father's profession. He worked in the manufacturing industry, specifically with lead based paint. Lead-based paint and lead contaminated dust are the main sources of exposure for lead in U.S. children. The investigative team took samples of the father's work clothes, shoes, the couch, and family vehicle and screened them for lead. What they found was astounding.

Normal lead levels for floors should be no more than 40 micrograms per deciliter; the father's pants had ten times that amount. Levels of lead in blood should be no more than 5 micrograms per deciliter. The 18 month old in this case had a level of five times that amount, placing the child at high risk for neurological damage.

St. Louis City:

We have reduced our lead poisoning rate 80%, from 33% to 2.8% - and from 3300 children to 300 children. There are 3000 fewer children poisoned per year in St. Louis than there was in 2002.

Jefferson County Case Study

In 2009, a ten month old female was tested by the Jefferson County Health Department (JCHD) and was found to have an elevated blood lead level twice what was considered lead poisoning. JCHD conducted a comprehensive environmental investigation of the home environment and found no likely lead sources. An alert Environmental Specialist suggested testing a bracelet worn by the little girl since four months of age. The bracelet had a high lead content and the parents removed the bracelet. JCHD contacted the store where the bracelet was purchased as well as the US Consumer Product Safety Commission. In February, 2010 the company voluntarily recalled 900 bracelet and pacifier clip units due to high lead content. The little girl has been retested periodically and as of February, 2011 her lead level had decreased from 20 to 1.5 micrograms per deciliter.

Citizen's Perspective

"I recently had a visit from Sharon and Thelma (local public health agency staff) to test for lead in my home. I found the experience to be very helpful and positive. It's difficult to hear that your child has high lead test results and I felt that these ladies made a difficult time easier to deal with and very encouraging. I appreciate their time and efforts in helping make our home safe. Thank you!"

Jessica W., Mother

School Nurse Perspective

"I have worked with a student who was lead poisoned (53 micrograms per deciliter) and chelated (intravenous treatment in a hospital) as an infant. This student has been in a self-contained classroom all of their academic life, receiving extensive help with academics and behaviors. This student has been treated for ADHD with medication since second grade. The student has difficulty with peers due to slow processing, retaining information and difficulty following directions. This student will be a victim of this preventable disorder all their life."

Sue Van Patten, RN, Bayless School District, St. Louis

Caldwell County: "Environmental Lead Case Management has made a positive difference in children's lives, especially to the life of a 2 year old in our county. Upon receiving his initial elevated blood lead level of 24 micrograms per deciliter (which peaked at 38 micrograms per deciliter), the health department found it to be very critical to network with consultant resources, who, with local health department nurses, investigated the home. Follow-up involved education and cleanup prevention. The landlord cooperated by performing foundation dirt removal as well as painting at his expense. The health department networked with many community resources to assist the family with transportation, gas money, and educational materials. After consulting with Children's Mercy Hospital staff and the Missouri Department of Health and Senior Services, they found that the child's blood lead levels were decreasing. Soon thereafter, the mother informed them that she was pregnant, and now the risk had greatly been decreased. The mother also recognized that the health department was a resource for prenatal case management and WIC services.