ABLES Occupational II Session

Wednesday, June 27: 10:30 am – 12:00 pm

Abstract ID: **2209**

Title of Presentation **A Closer Look at State Certified Lead Abatement Workers and Supervisors and the Adult Lead Registry**

Committee **Occupational Health**

Topic **Linking occupational health surveillance with workplace interventions**

Abstract Submitted By **AMY SIMS** Email Address **Amy.Sims@ht.msu.edu**

Background: Occupational exposure is the predominant source of lead exposure in Michigan adults. Approximately 80% of all individuals in Michigan with blood lead >10 µg/dl, were exposed to lead at work. Individuals certified to conduct lead paint remediation are potentially a high risk group for lead exposure.

Methods A listing, as of March 2006, of state certified lead abatement workers and supervisors was compared against the Michigan ABLES registry for the years 1997 to 2006. The initial comparison was carried out via computerized matching followed by manual matching. Definite matches were those that matched on both social security number and name. Possible matches were those that matched on name only when social security number was missing from one or both of the databases.

Results: Seven and seven tenth percent of supervisors and 12.6% of workers definitely and 17.3% of supervisors and 17.0% of workers possibly had their blood lead measured. The blood lead levels of the 163 definite matches ranged from non detect to 31 µg/dl with six (3.7%) greater than or equal to 25 µg/dl.

Conclusions: Relatively few individuals certified to do lead abatement have had their blood lead tested (<30%). Most individuals tested had blood lead levels less than 10 µg/dl (84%). These results will be discussed in the context of whether controls to protect lead abatement workers are generally adequate and how frequently blood testing of such workers is indicated.

Abstract ID: **2164**

Title of Presentation **Lead Exposure among Women of Child-bearing Age-- United States, 2004** Committee **Occupational Health**

Topic **Occupational health and safety for special populations**

Abstract Submitted By **Sara Luckhaupt** Email Address **pks8@cdc.gov**

Background: Elevated maternal blood lead levels (BLLs) are associated with neurobehavioral deficits in children. Since many births are unintended, we determined the magnitude of elevated BLLs among all women of child-bearing age.

Methods Using laboratory data reported to the ABLES program in 2004, we calculated rates of BLLs >=25 ug/dL among women aged 16-44 in all 37 participating states; we calculated rates of BLLs >=5 ug/dL and BLLs >=10 ug/dL in the 10 states that reported all BLLs.

Results: Population-based rates of BLLs among women were 11.1 per 100,000 >=5 ug/dL, 3.8 per 100,000 >=10 ug/dL, and 0.7 per 100,000 >=25 ug/dL. Occupational rates of BLLs >=25 ug/dL were 244 per 100,000 women in battery and related manufacturing, 7.1 per 100,000 in all manufacturing, and 0.6 per 100,000 overall.

Conclusions: Many women of child-bearing age have BLLs that put unborn children at risk. ABLES likely underestimates the true prevalence of lead exposure because most women do not have their blood lead measured. Clinicians and public health practitioners should identify and counsel women at risk of exposing children to lead prenatally. Please also see: http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5616a4.htm.

Abstract ID: **2016**

Title of Presentation **Evaluating California's Adult Blood Lead Surveillance System** Committee **Occupational Health**

Topic **Evaluating results of occupational health surveillance**

Abstract Submitted By **Susan Payne** Email Address **mdibarto@dhs.ca.gov**

Background: Occupational lead poisoning is a persistent problem despite the existence of well known preventive measures. California has maintained a laboratory-based surveillance system for adult blood lead levels (BLLs) since 1987. The system allows lead poisoning cases and clusters to be identified for immediate investigation, targeted prevention efforts, and enforcement referrals. However, the efficiency and effectiveness of our surveillance system have not been evaluated since universal reporting and electronic reporting were enacted in 2003.

Methods We attempted to collect complete information on all (n=1180) BLLs drawn between 7/1/06 and 7/15/06. Telephone calls were made to analyzing laboratories and requesting physicians to obtain missing information and ascertain the reason for testing. We tracked each call made, staff time required, and documented the information acquired from each follow-up.

Results: As of 11/15/06, we completed 60% of the calls. Each report averages 15 minutes of staff time and we have a success rate of 85%. Of the 589 completed and categorized reports, 41% were occupational exposures, 4% were non-occupational exposures, and 47% were non-lead-exposed persons who had their BLLs tested as part of a "routine" physical (e.g., pregnancy, heavy metals screening). We will present final results including BLL distribution by reason for test, resources required to complete reports, and suggested methods for excluding "routine" tests from the calling list.

Conclusions: Resources utilized to obtain complete information on BLL reports > 10 µg/dL are justified and provide valuable information; not all BLLs should be categorized as either occupational or non-occupational lead exposures.

Wednesday, June 27: 1:30 pm – 3:00 pm

Abstract ID:	2455
Title of Presentation	Medical Management Guidelines for Lead-Exposed Adults
Committee	Occupational Health
Topic	Medical management of adults with lead exposures
Abstract Submitted By	Kathleen Fagan
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Abstract	Overexposure to inorganic lead continues to be an important problem worldwide. While the clinical care of lead-exposed children has been well established in the pediatric and public health communities, similar clinical recommendations for adults have not been widely available. The purpose of this document is to provide useful advice to clinicians caring for adult patients. This document is derived, in part, from the input of an expert panel convened by the Association of Occupational and Environmental Clinics (AOEC). However, this paper reflects the clinical views of AOEC members, not necessarily the expert panel, particularly in areas where the expert panel had been unable to come to consensus. The following points are emphasized: 1) Medical care serves as an adjunct to public health and industrial hygiene exposure control. Clinicians who evaluate patients with potential lead exposure should have appropriate referral mechanisms in place for prevention of further exposure to lead. Although one goal of health care is to remove the patient from exposure, the social consequences of potential disruption of housing or of income may be important and must be considered by the clinician. 2) Current occupational standards are not sufficiently protective and should be strengthened. 3) The clinical guidelines presented here are appropriate for adults, recognizing that younger adults, particularly those in workplace settings, may share developmental risks that place them closer to pediatric populations, and that maternal exposure, whether in the workplace or in the general environment, places the developing fetus at risk for exposure. Please also see: http://www.aoec.org/documents/positions/MMG_FINAL.pdf.

Abstract ID:	2456
Title of Presentation	Recommendations for Medical Management of Adult Lead Exposure
Committee	Occupational Health
Topic	Medical management of adults with lead exposures
Abstract Submitted By	Michael Kosnett
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Abstract	Research findings regarding the hazards of lead at low dose support a reappraisal of the levels of lead exposure that may be safely tolerated in the workplace. These findings, summarized in a recently published Environmental Health Perspectives mini-monograph on adult lead exposure, establish the potential for hypertension, effects on renal function, cognitive dysfunction and adverse female reproductive outcome in adults with whole blood lead concentrations less than 40 mcg/dL. This presentation will discuss the recommendations of an expert group that workers undergo removal from occupational lead exposure if a single blood lead concentration exceeds 30 mcg/dL, or if two successive blood lead concentrations measured over a four week interval equal or exceed 20 mcg/dL. Removal from lead exposure should be considered to avoid long-term risk to health if exposure control measures over an extended period do not decrease blood lead concentrations below 10 mcg/dL, or if selected medical conditions exist that would increase the risk of continued exposure. Medical surveillance for lead exposed workers is recommended to include quarterly blood lead measurements for individuals with blood lead concentrations between 10 to 19 mcg/dL, and semiannual blood lead measurements when sustained blood lead concentrations are less than 10 mcg/dL. Pregnant women are advised to avoid occupational or avocational lead exposure that would increase blood lead concentrations above 5 mcg/dL. Chelation may have an adjunctive role in the medical management of heavily exposed adults with symptomatic lead intoxication, but is not advised for asymptomatic individuals with low blood lead concentrations. Please also see: http://www.ehponline.org/members/2006/9784/9784.pdf.