

Prenatal Lead Exposures in Pakistan: A Prelude to Prevention

Department: Community Health Sciences

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Lead toxicity remains a major environmental health risk throughout the world. Pakistan and South Asian countries consider phasing-out of leaded gasoline as an adequate measure for control of lead. However, lead deposited in environmental media and maternal bone continues to expose fetuses and children. In this study, a pioneer study on lead exposure in South Asia. The specific aims are: (1) to estimate the mean umbilical cord blood lead level and the proportion of newborns with high cord blood lead levels ($>5\mu\text{g/dl}$); (2) to determine sources and levels of environmental lead exposure in children's homes and surroundings. We have recruited mothers presenting for delivery at the study hospitals, interviewed and collected their blood for blood lead levels, serum ferritin and hemoglobin, and have collected umbilical cord for lead levels. We have conducted environmental source measurements in homes and surrounding environment. This study will contribute to understanding the sources of lead in environment that will provide a basis for which to inform issues of lead abatement and environmental risk reduction in Pakistan and serve as a model intervention for other countries in the region. This study is a collaborative study with University of Alabama USA.