



ENVIRONMENTAL AND SOCIAL INTERVENTION STRATEGIES IN LEAD EXPOSURE IN CHILDREN

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Abstract

Exposure to heavy metals, even to small amounts can have a wide range of effects on children development and behavior. There are three areas located in Transylvania (North West of Romania) with high nonferrous metals concentration in the environment: Baia Mare, Copsa Mica and Zlatna. Copsa Mica is one of the areas of major interest in soil lead and cadmium contamination, soil being the major source of exposure for children aged 0 to 7 years old, as the population group with the highest susceptibility. Dispersion models and GIS are proposed for further use in order to assess the exposure of the children with the highest susceptibility along with some very specific intervention strategies. The goal is to implement a social marketing program in Copsa Mica in order to reduce lead and cadmium exposure by cutting the pathways (access to soil and dust). To accomplish this goal, a cross-sector working group was established, including a multidisciplinary team with local teachers, community, physicians from local and regional Public Health Authority, the municipality, environmental health specialists from the Environmental Health Centre in Cluj-Napoca. A tremendous decrease of blood lead level was recorded in Copsa Mica, but there are still many children with lead poisoning, which do require additional intervention efforts to avoid exposure and associated risks.

Key words: cadmium, children, environmental distribution, intervention strategies, lead

Received: November, 2010; Revised final: January, 2011; Accepted: January, 2011

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