LEAD CONTAMINATION IN URUGUAY – AN ECOHEALTH APPROACH

A. Cousillas, L. Pereira, C. Alvarez, T. Heller and N. Mañay

Toxicology & Environmental Hygiene Department, Faculty of Chemistry, University of the Republic of Uruguay

Abstract: The ecohealth approach gives equal importance to environmental management, economic factors, and community aspirations. This approach recognizes that there are inextricable links between humans and their biophysical, social, and economic environments that are reflected in an individual's health. Uruguay’s Lead contamination became a matter of public concern in 2001, when cases of children with blood lead levels (BLL) higher than 20 micrograms/dL appeared in some areas of a low-income-neighbourhood of Montevideo. The aim of this presentation is to show the results of multidisciplinary actions taken to prevent lead exposure risks (since 2001), as a response from decision makers through political actions, regulations and health risk management with an ecohealth approach. We evaluated changes in blood lead levels of different populations (children, exposed adults and non exposed adults) before and after the actions were taken (1992 and 2004-2008 respectively). We considered also variables such as age, sex, area of residence, available environmental lead data and the leaded gasoline phasing out process, completed in 2004. All BLLs evaluated in this study were performed with QA/QC associations. BLLs and single variables were assessed using statistical analysis. For exposed adults we found that occupational BLLs were still high, although the new laws concerning lead workers have been approved and now BLL must be controlled in the health certificate protocol once per year. For children populations and non exposed adults there is a significant decrease of BLL values (almost 50%) in comparison with studies done before the changes. We conclude that the observed results are mainly due to the public sensitisation together with the integration of the multidisciplinary actions promoted.

Key words: Lead, ecohealth, community