

12th Nursing and Healthcare Congress

October 03-05, 2016 Vancouver, Canada



Howard W Mielke

Tulane University School of Medicine, USA

Pediatric lead exposure intervention: Official statements vs. scientific review

Background: Human morbidity is strongly influenced by lead exposure. If blood lead (BLL) is equal or above 5 mcg/dL then medical intervention occurs based on CDC's statement protocols: "The most common highly concentrated source of lead for children is lead paint." Accordingly, education and household dust cleanup is conducted to reduce exposure. Cochrane Collaboration review reveals that education and household dust cleanup is ineffective at reducing children's BLL. A critical question concerns the role of soil Pb in exposing children.

Objective: Exploiting the 2005 Hurricane Katrina-related flooding of New Orleans as a defining environmental event, New Orleans spatial-temporal dynamics of clinical blood lead levels were evaluated before and after the storm surge.

Design/Methods: Hurricane Katrina flooded eighty percent of New Orleans. The before and after Katrina BLL results were provided by the Louisiana Healthy Homes and Childhood Lead Poisoning Prevention Program for 2000-2005 and 2011-2015. The results are organized temporally and spatially by Census Tracts (CTs).

Results: There were profound reductions in BLL in all areas post-Katrina with large disparities between Orleans and outlying areas. The effectiveness of soil Pb intervention as a method for reducing clinical blood lead levels of young children was similar to results described in 1997.

Conclusions: Reductions in children's Pb exposure occurred in Metropolitan New Orleans after the Hurricane Katrina flood. Soil Pb intervention complements home cleaning in reducing clinical BLL in young children.

Biography

Howard W Mielke teaches and researches in Pharmacology on the topic of Environmental Signaling in Medicine. His work focuses on the "metabolism" of cities which concerns the inputs, transformation and outputs of materials and energy and their influence on human health in urban environments. He conducted his first soil lead study in Baltimore, Maryland in 1976. His early studies assisted with Congressional action for the January 1, 1986 rapid phase-down of lead additives in US vehicle fuels. He began a series of studies in New Orleans as a faculty member of Xavier University of Louisiana and joined the faculty of Tulane University after Hurricane Katrina.

howard.mielke@gmail.com