US ERA ARCHIVE DOCUMENT

Using Children's Environmental Health Indicators To Identify Disparities in Exposure and Health

Daniel A. Axelrad¹, Julie Sturza¹, Onyemaechi Nweke², Gregory G. Miller³, and Louis D'Amico⁴

Office of Policy, Economics and Innovation, ²Office of Environmental Justice, ³Office of Children's Health Protection, U.S. Environmental Protection Agency, Washington, DC; ⁴AAAS Science and Technology Policy Fellow, Office of Children's Health Protection, U.S. Environmental Protection Agency, Washington, DC

Background and Objectives: Children's environmental health indicators are useful for monitoring trends and identifying disparities in exposure to critical environmental contaminants and related childhood health effects. *America's Children and the Environment* is the U.S. Environmental Protection Agency's (EPA) compilation of children's environmental health indicators, presenting information on environmental contaminants in air, water, food, and soil; contaminants measured in the bodies of mothers and children; and childhood diseases that may be influenced by environmental factors. EPA is currently preparing several new indicators along with updates to the indicators previously published. Many of the indicators provide interesting information on differences in exposure or health status for different groups of children defined by race/ethnicity or household income.

Methods: Topics for the updated *America's Children and the Environment* were selected based on their importance to children's environmental health and the availability of nationally representative data suitable for indicator development. For each indicator, the ability to assess differences by race/ethnicity and income was evaluated based on the characteristics of the data source.

Results: Indicators of body burdens and childhood illnesses, drawn from national surveys such as the National Health and Nutrition Examination Survey and the National Health Interview Survey, provide extensive opportunities for evaluating disparities in exposure and health. Indicators of environmental contaminants, drawn from national monitoring databases such as the Air Quality System, also can be useful for evaluating differences by race/ethnicity or income.

Conclusion: Children's environmental health indicators provide important information to illustrate the cumulative impacts of multiple exposures and disparities in children's exposures and health outcomes by race/ethnicity and income.