Children’s Health and Climate Change

Perry E. Sheffield, MD, MPH

Icahn School of Medicine at Mount Sinai

New York City, 3/16/16
PEDIATRIC ENVIRONMENTAL HEALTH 101
1. Pathways of exposure

2. Different physiology

3. Subtle effects
Reducing The Staggering Costs Of Environmental Disease In Children, Estimated At $76.6 Billion In 2008

ABSTRACT A 2002 analysis documented $54.9 billion in annual costs of environmentally mediated diseases in US children. However, few important changes in federal policy have been implemented to prevent exposures to toxic chemicals. We therefore updated and expanded the previous analysis and found that the costs of lead poisoning, prenatal methylmercury exposure, childhood cancer, asthma, intellectual disability, autism, and attention deficit hyperactivity disorder were $76.6 billion in 2008. To prevent further increases in these costs, efforts are needed to institute premarket testing of new chemicals; conduct toxicity testing on chemicals already in use; reduce lead-based paint hazards; and curb mercury emissions from coal-fired power plants.
Health Effects of Climate Change
Health Effects of Climate Change
Impacts on children globally

- Over 80% of climate GBD on children

Sheffield and Landrigan. EHP, 2011.
Ziska et al. "Rising CO2 and Pollen Production of Common Ragweed...Implications for Public Health."

Rising CO2 poses significant threat to human nutrition

Reduction in dietary zinc and iron already evident

High CO2 cuts crop nutrients

Percentage under co2 levels expected in 2050,

- Wheat: Zinc -9.3, Iron -6.3, Protein -5.1
- Rice: Zinc -3.3, Iron -5.2, Protein -7.8
- Maize: Zinc -5.2, Iron -5.8, Protein -4.6
- Soybean: Zinc -5.1, Iron -4.1, Protein 0.5

SOURCE: NATURE

http://www.theguardian.com/environment/2014/may/07/climate-change-food-crops-nutrition
SUCCESES IN PROTECTING CHILD HEALTH
Lead level reduction since 1970s...
Estimated annual benefit: $110 - 319 billion

Innovations in Transportation

Acknowledgments

National Institute of Environmental Health Sciences Grant 5K23ES024127-02

This material was supported by the American Academy of Pediatrics and funded under cooperative agreement award 1U61TS000237-01 from the Agency for Toxic Substances and Disease Registry (ATSDR).

The US Environmental Protection Agency (EPA) supports the PEHSU by providing funds to ATSDR under Inter-Agency Agreement number DW-75-92301301-0.

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