Environmental Health Saves Lives, Saves Money and Saves the Future

This project builds on recommendations from a 2006 report that emphasized the need to explore the value of environmental health services. The Value of Environmental Health Services: Exploring the Evidence 2016 report summarizes the literature on economic evaluation of environmental health interventions. And it yielded a number of important findings.

A core part of public health, environmental health focuses on preventing disease and creating environments that support health.

Key Findings

- **For every $1 invested** in lead paint hazard control, a return of investment of $12–$155/household or a net savings of $124–188 billion was realized (Gould, 2009).

- Higher local health department spending on food safety and facility sanitation activities was linked to a lower incidence of restaurant related foodborne illness in Washington and a lower incidence of facility inspection-related waterborne disease in New York.

- Four major categories of chronic childhood conditions linked to the environment – lead poisoning and methylmercury exposure, childhood cancer, developmental disabilities, and asthma – cost the US $76.6 billion in 2008.

- Mercury-related losses of cognitive function in children, and decreased economic productivity, resulted in diminished intelligence over a lifetime. The annual estimated economic cost of births was $8.7 billion.

- Evidence suggests urban development strategies and reduction of pollution exposure from roadways would significantly cut health care spending, particularly in low-income neighborhoods.

- The cost of running a heat–health warning system for Philadelphia was relatively small ($210,000) compared with the benefits of saving lives ($468 million) from 1995–1998.

- Every $1 spent in CDC's National Asthma Control Program saved $71 in asthma-related expenditures.

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1 Harris et al (2006). Environmental health practitioners developing strategic partnerships and engaging public health policymakers.
The project identified a number of challenges in valuing environmental health interventions:

- The benefits of environmental health interventions are hard to measure.
  - Estimating benefits requires an understanding of the causal relationship between the environmental exposure (e.g., pollutant) and health outcomes, which is often uncertain.
  - Health impacts can either be directly related to exposure (e.g., anemia from lead poisoning) or indirectly related to exposure (such as school attendance, work productivity).
- Environmental health interventions cannot be evaluated within the same framework as other public health interventions, which have a more narrowly defined scope and range of costs and benefits.
- Economic evaluations of environmental health interventions are highly uncertain, due to methodological difficulties, lack of reliable and consistent data and an inability to generalize findings.

**Conclusion**

Despite significant findings, there is a critical lack of economic evaluation studies for the wide-ranging, complex discipline of environmental health. The country needs a framework for defining and evaluating environmental health interventions. This document/effort ought to help to clearly articulate the value of environmental health interventions, including reductions in health care costs and improvements in quality of life.