

Environmental Health Saves Lives, Saves Money and Saves the Future

This project builds on recommendations from a 2006¹ 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.

Environmental public health program areas covered in the project include:

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



Food Safety



Water Quality



Lead Exposure



Mercury Exposure



Climate Change



Housing



Special populations, including children and environmental justice communities

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.**

¹ Harris et al (2006). Environmental health practitioners developing strategic partnerships and engaging public health policymakers.



When we heal the earth, we heal ourselves

- David Orr, Special Assistant to the President of Oberlin College
on Sustainability and the Environment, Oberlin College

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.