



The National Environmental Public Health Tracking Program: Healthy Informed Communities 2007

“The National Environmental Public Health Tracking Program is a giant step towards fulfilling one of CDC’s overarching goals, and that is that people in all communities are protected from infectious, environmental, and terrorist threats. By integrating environmental and public health information systems, CDC will be better able to protect the nation’s health by responding in a more timely manner to public health problems related to the environment.”

Julie Louise Gerberding, MD, MPH Director, Centers for Disease Control and Prevention

Environmental Public Health Tracking: Providing Information to Drive Actions to Protect Health

Uses of Tracking Data	
<ul style="list-style-type: none"> • Quantify the magnitude of a problem • Detect unusual trends and occurrences • Document the distribution and spread of a hazard or health event and identify populations at risk • Plan and evaluate protective and preventive measures • Facilitate research • Develop information that can inform clinical care providers and stimulate individual-health action • Detect changes in health practice 	
Program Funding	
Fiscal Year	Appropriation (millions)
2002	17.5
2003	27.5
2004	27.4*
2005	24.4
2006	24.2
*In 2004, CDC instituted a new budget structure	

Americans are concerned about hazards and health impacts related to environmental exposures. Citizens and policy makers want access to current, relevant, and accurate information about environmental exposures and health outcomes to facilitate individual, community, state, and national decision-making about adopting strategies to reduce the burden of disease attributable to the environment.

The U.S. Congress appropriated funding to the Centers for Disease Control and Prevention (CDC) in Fiscal Year (FY) 2002 to develop the National Environmental Public Health Tracking Program (Tracking Program). The Tracking Program, with the National Environmental Public Health Tracking Network (Tracking Network) as its cornerstone, is CDC's response to calls for better understanding of how the environment can affect people's health.

CDC's National Environmental Public Health Tracking Program

The mission of the Tracking Program is to provide information communities can use to improve their health. This information will come from a nationwide network that integrates health data and environmental data. Over the last four years, CDC's Tracking Program has laid the foundation of this national system by making grants to state and local health departments.

In FY 2006, CDC moved from planning and capacity building to the implementation of the Tracking Network. CDC funded 16 state and 1 local health departments to build and implement state-based tracking networks. The state and local data systems will feed into the Tracking Network. These grants will improve information technology but will also expand environmental public health tracking capacity. They will continue training public health workers and develop better ways to make information accessible on the Tracking Network to those who need it to take action.

In addition, CDC is funding four schools of public health to support state and local health departments and investigate possible links between health effects and the environment. CDC has also awarded funding to professional national organizations to develop educational materials and tools to build environmental public health tracking capacity among state and local health officials and other critical partners. CDC also has established a memorandum of understanding with the National Aeronautics and Space Administration and, through the Department of Health and Human Services, with the Environmental Protection Agency to promote collaboration on tracking-related initiatives. A list of state and local program grantees and their activities is available at <http://www.cdc.gov/nceh/tracking/projects/home.htm>, and information about partners in the Tracking Program is available at <http://www.cdc.gov/nceh/tracking/partnerships.htm>.

A Picture of America: Our Health and Environment

Starting in 2008, the Tracking Program plans to release a report every two years. The report will present a broad view of the status of and emerging trends in the relation between health and the environment from the perspective of environmental public health practice and service. It is expected to include an overview of priority environmental hazards, exposures, health effects, and interventions, and it will describe tracking accomplishments and how data can be used locally and nationally to measure, evaluate, and set goals to reduce environmental exposure. These goals may involve regulations, policies, public health interventions, or other measures.

Environmental Public Health Indicators Project

Tracking uses environmental public health indicators (EPHIs) to measure the health of a community. EPHIs provide information about an environmental hazard, exposure, or health outcome, or a relationship among them. When observed over time or across geographies, an EPHI may show patterns or trends, and is intended to inform policy and guide action. For example, because the amount of lead in paint in older homes is difficult to measure, practitioners use blood lead measurements in children to indicate both the lead paint hazard and the risk for childhood lead poisoning. For more information about EPHIs, visit <http://www.cdc.gov/nceh/indicators>.

Tracking in Action

CDC and its partners have made great strides in laying the foundation for an information network that can guide health protection decisions. Since 2002, 21 states and 3 cities have used CDC grants to expand tracking capacity and demonstrate to the public what tracking can do.

By September 2006, state and local tracking grantees had completed more than 50 projects linking health and environmental data. Projects looked at asthma, cancer, birth defects, pesticide poisoning, and autoimmune and neurodegenerative diseases. About 60% of programs specifically examined how air quality affects health conditions, such as asthma, cancer, and birth outcomes. Almost 50% of state and local tracking programs conducted water-related projects.

These pilot programs and collaborations have already begun to pay off in faster responses to environmental public health questions and in action to prevent disease. Since FY 2002, tracking has led to 38 public health actions to prevent or control potential adverse health effects from environmental exposures. The following are examples of grantee tracking activities and how grantees are using tracking data to protect health.

Massachusetts: The Massachusetts Tracking Program found a statistically significant association between the presence of moisture problems in a school and the prevalence of pediatric asthma, indicating a need for public health follow-up or intervention and providing information for policy changes aimed at reducing mold and moisture in schools. The Tracking Program is working with school officials to identify how to remediate the moisture problems.

New Hampshire: After a local physician told a local newspaper about a suspected cancer cluster, New Hampshire Gov. John Lynch asked the state health and environmental services departments to investigate. The pilot tracking program gave investigators access to 14 years of health and environmental data that showed the cancer incidence in Claremont was actually less than expected for similar communities and for the state as a whole.

New Mexico: The New Mexico Tracking Program is helping determine whether action is necessary to reduce drinking water exposure to arsenic at a municipal level or at individual wells. The New Mexico Tracking Program identified populations at risk for arsenic exposure in their drinking water and provided a method to treat and remove arsenic at the tap.

Utah: The Utah Department of Health received a call from a citizen concerned about cases of cancer in his neighborhood. In the past, a similar call would have prompted a study that would have taken a year to complete, with most of that time spent waiting for data. Using an analytic tool developed with tracking funds, the Utah Tracking Program was able to conduct two independent investigations of the rates of cancer centered on the citizen's residential location and prepare a short report in an afternoon. The Utah Tracking Program then could assure the resident that the likelihood of cancer in his vicinity was no greater than in the state as a whole. This is a substantial improvement in the time and cost required for cancer investigations in the past and in the services Utah is able to provide to the public.

Wisconsin: Data from the Wisconsin Tracking Program on exposure to trichloroethylene (TCE) from an industrial plant prompted the facility's owner—who was in compliance with all applicable emission permit requirements—to voluntarily agree to change the manufacturing process in the plant to eliminate TCE emissions. This project reduced community TCE exposure and serves as a model for how the use of air pollutant data to identify high-risk communities can translate into reduced exposure to air toxics.

Future Directions

The pilot projects have established a proof of concept and can serve as models for the next round of the nationwide effort. The challenges they have overcome are providing guidance for the implementation phase of the Tracking Program. Next steps in building the Tracking Network are the following:

- FY 2007, implementation and testing of a Web-based version of the Tracking Network, which includes tools for searching, selecting, analyzing, exchanging, displaying, and visualizing data.
- FY 2008, Web-based Tracking Network deployed making information accessible to researchers, public health and environmental practitioners, policy makers, and the public.

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