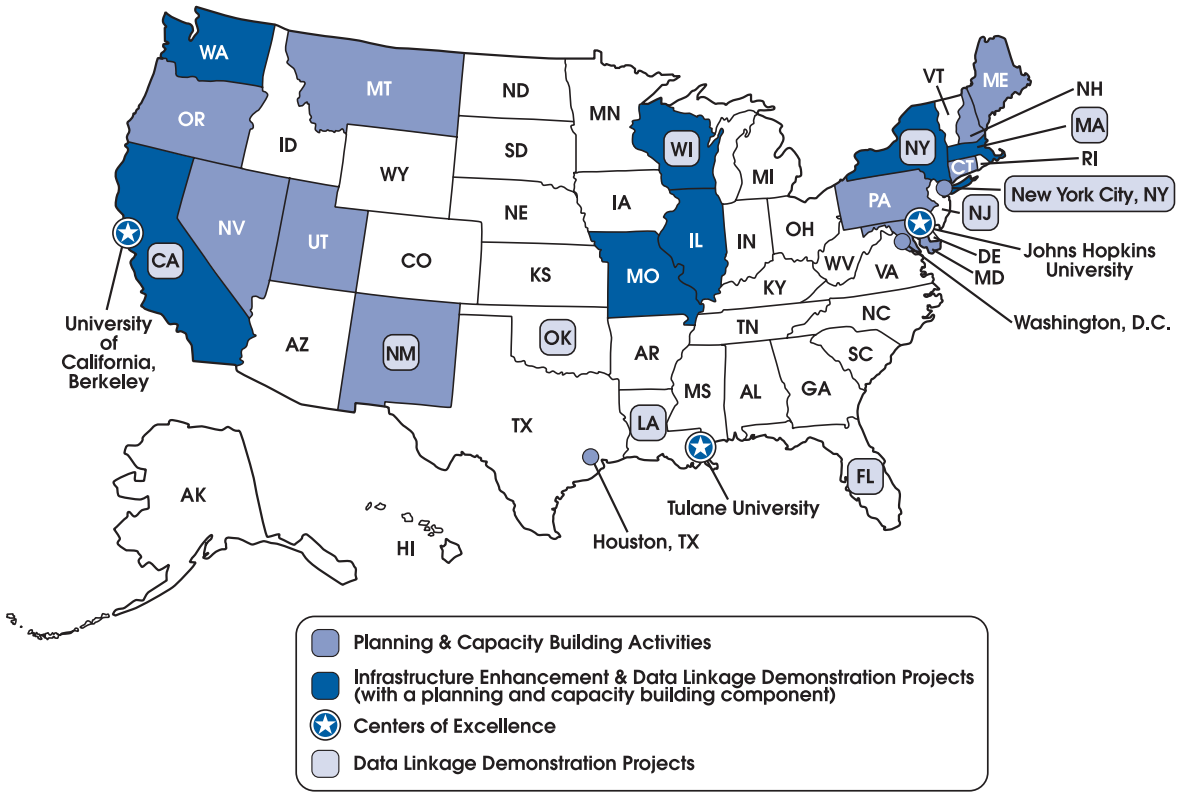
AT A GLANCE

Environmental Public Health Tracking Program:

Closing America's Environmental Public Health Gap

2004

CDC's Environmental Public Health Tracking Program Grantees



"CDC's National Environmental Public Health Tracking Program is building a national integrated environmental and public health information system that supports national efforts to standardize and facilitate the electronic exchange of information. Linking environmental and health data will enable a timely response to potential public health problems related to the environment."

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

DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION
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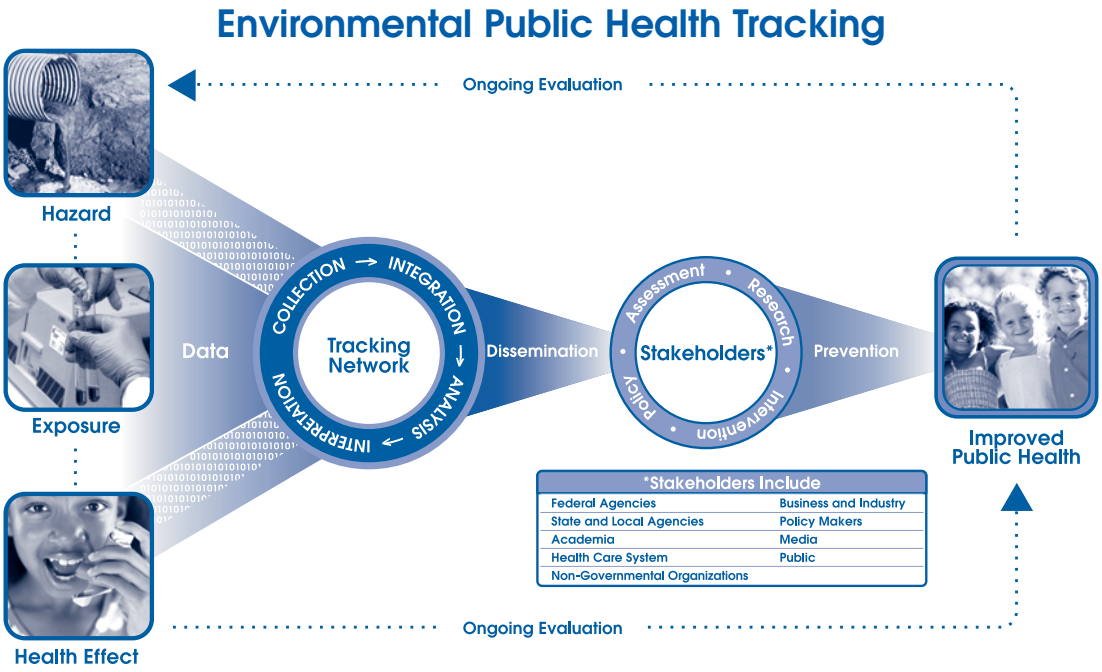
Environmental Public Health Tracking: Linking Hazards, Exposures, and Health Effects

The environment plays an important role in human development and health. Researchers have related exposures to some environmental hazards with specific diseases; for example, exposure to asbestos and lung cancer. Other associations between environmental exposures and health effects are suspected, but need further research; for example, the association between exposure to disinfectant by-products and bladder cancer. Currently, few systems exist at the state or national level to track many of the exposures and health effects that may be related to environmental hazards. Tracking systems that do exist are usually not compatible with each other, and data linkage is extremely difficult.

Environmental public health tracking (EPHT) is the ongoing collection, integration, analysis, and interpretation of data about environmental hazards, exposure to environmental hazards, and human health effects potentially related to exposure to environmental hazards. It includes dissemination of information learned from these data.

The mission of EPHT is to improve the health of communities. Using information from an environmental public health tracking network, federal, state, and local agencies will be better prepared to develop and evaluate effective public health actions to prevent or control chronic and acute diseases that can be linked to hazards in the environment. Health care providers can provide better care and targeted preventive services. In addition, the public will have a better understanding of what is occurring in their communities and what actions they may take to protect or improve their health.



CDC's Environmental Public Health Tracking Program

In fiscal year (FY) 2002, CDC established its National Environmental Public Health Tracking Program. The program's goals are to (1) build a sustainable national EPHT network, (2) increase EPHT capacity, (3) disseminate credible information, (4) advance environmental public health science and research, and (5) bridge the gap between public health and the environment. Congress appropriated $17.5 million in FY 2002, $27.5 million in FY 2003, and $27.4 million in 2004 for the program. Since FY 2002, CDC has supported 20 state and local health departments and three schools of public health to (1) build environmental public health capacity, (2) increase

collaboration between environmental and health agencies, (3) identify and evaluate environmental and health data systems, (4) build partnerships with non-government organizations and communities, and (5) develop model systems that link environmental and health data and that other states or localities can use. CDC is funding schools of public health to support state and local health departments and investigate possible links between health effects and the environment. In FY 2003, CDC also began supporting nine states and New York City to conduct projects that will link environmental, exposure, and health effect data. CDC has awarded funding to professional national organizations to develop educational materials and tools to promote environmental public health tracking among state 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 environmental public health tracking-related initiatives. CDC's internal workgroup that coordinates EPHT activities includes CDC expertise in environmental health, epidemiology, chronic disease prevention, birth defects and developmental disabilities, health statistics, integrated health information systems, injury prevention, and occupational safety and health.

Examples of Funded Program Activities

Part A Grantee The Maine Department of Human Services (MDHS) (http://www.state.me.us/dhs/boh) will use data from public health and environmental systems to monitor environmental hazards, human exposure to the hazards, and progress in reducing exposure to the hazards. In the future, this environmental public health data will be included on the Maine Public Health Information System (MPHIS). The priority environmental public health indicators that will be tracked are ambient air ozone and rates of emergency room visits for acute asthma events, carbon monoxide poisoning, and hair mercury levels and fish consumption among Maine residents. As a result of ongoing environmental health concerns, Maine has an extensive and unique set of environmental databases that will be available for assessment and possible inclusion in a larger public health tracking system.

Part B Grantee The Missouri Department of Health and Senior Services (MODHSS) (http//www.dhss.state.mo.us/EPHT/) is developing the Missouri Health Surveillance Information System (MOHSIS), a transactional application that provides a centralized and integrated database for the entry, update, and retrieval of surveillance information. Conversion of the childhood lead database into a MOHSIS application containing screening data, case management activities, and electronic laboratory reporting is close to completion. This project is facilitating linkage of data on children exposed to lead with multiple databases on sources of lead in the environment. MODHSS has developed methods using this information to determine levels of risk in different Missouri communities.

Data Linkage Demonstration Grantee The New Jersey Department of Health and Senior Services (NJDHSS) (http://www.state.nj.us/health/eoh/) is demonstrating and evaluating methods for linking data from existing health effects surveillance systems with data from existing environmental hazard monitoring systems. NJDHSS is using hazard and exposure data from Photochemical Assessment Monitoring Stations, designed to predict ozone formation, the Urban Air Toxics Monitoring Program and the EPA Air Toxics Model to assess air toxic concentration, and the Childhood Lead Poisoning Surveillance System. NJDHSS will implement three demonstration projects to (1) link pediatric and short-latency cancer data with drinking water contamination data and air toxic modeling data, (2) link childhood blood lead data and adult heavy metal exposure data; and link adverse reproductive and developmental outcome data using the State Birth Defects Registry, and (3) link vital statistics and other sources with drinking water contamination data and air toxic modeling data.

Centers of Excellence Grantee The University of California Berkeley's (UCB) School of Public Health (http://sph.berkeley.edu/) has established a Center of Excellence in Environmental Public Health Tracking (http://coeh.berkeley.edu/) in collaboration with the University of California at Los Angeles (UCLA) School of Public Health. The Center provides expertise and support to state and local health departments conducting environmental public health tracking projects. The Center facilitated information sharing among funded

states in the West, assessed and developed training tools, and coordinated an evaluation of commercial software that may be useful for tracking. UCB staff are developing methods for improving population-scale exposure assessment using biomarkers, conducting school-based asthma surveillance, assessing exposure to traffic-related pollutants, assessing disparities in environmental exposures and health effects, and identifying trends and geographic variation in environmental exposures and disease rates. UCLA collaborators are leading an epidemiologic research study of the relationship between air pollution and asthma.

Examples of CDC's External Partners

- Association of Public Health Laboratories
- Association of State and Territorial Health Officials
- Council of State and Territorial Epidemiologists
- Environmental Council of the States
- National Aeronautics and Space Administration
- National Association of County and City Health Officials
- National Environmental Health Association
- Physicians for Social Responsibility
- U.S. Environmental Protection Agency

Environmental Public Health Indicators Project

Several state and local health departments that have been funded as part of the National Environmental Public Health Tracking Program are evaluating the utility of environmental public health indicators (EPHIs). Health indicators are used to measure the health of a community, county, city, state, or the nation. Indicators may be used to assess baseline status and trends, track progress toward program goals and objectives, and build core surveillance capacity in state and local agencies. An EPHI framework was designed to be needs-based and to assist the states in meeting Healthy People 2010 objectives. The best indicators reliably predict the relationship between human health and the environment, are routinely collected, and have well-accepted definitions and data collection standards.

EPHIs provide information about a population's health status with respect to environmental factors and may be particularly useful when measurable links are not clear. As such, they can be used to measure health or a factor associated with health in a specific population. For example, because the amount of lead in paint in older homes is difficult to measure, we 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.

Future Directions

As additional funding becomes available, CDC plans to strengthen the program in the following ways:

- Fund additional state, local, territorial, and tribal health departments to increase their capacity building and demonstration projects
- Fund technical development activities required to support a nationwide network
- Expand training and education activities in collaboration with national and professional organizations
- Expand collaboration with national partners to coordinate technologic standards development efforts for the network

For more information or additional copies of this document, please contact
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