



CALIFORNIA
ENVIRONMENTAL
HEALTH TRACKING
PROGRAM

OUR FIRST ISSUE

Hello and welcome to the inaugural newsletter of the California Environmental Health Tracking Program (CEHTP). This issue of *California Tracking* represents the first of what will be a series of quarterly updates aimed at keeping people informed about news and resources around environmental health tracking in California and promoting communication among organizations and stakeholders. To that end, we ask readers to help disseminate this newsletter to all relevant organizations and individuals. Everyone is also encouraged to send in ideas, comments, or focus topics for future editions.

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CALIFORNIA TRACKING

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NATION-WIDE DATA GAP

Gaps in environmental hazard, human exposure, and chronic disease data serve as impetus for environmental health tracking.

Chronic diseases are responsible for 7 out of 10 deaths in this country. More than a third of our population – over 100 million people – suffer from chronic diseases which cost the nation \$325 billion a year. By 2020, chronic diseases are estimated to afflict 134 million Americans and cost \$1 trillion a year.

The Centers for Disease Control and Prevention (CDC) estimates that 70% of those diseases are preventable.

Despite those facts, the ability to monitor and forecast chronic diseases has changed little in the past hundred years. We systematically track and respond to infectious diseases such as polio, yellow fever and typhoid – diseases that a national tracking and response system helped to eradicate over a hundred years ago. We have yet to modernize our public health system to respond to one of today's greatest health threats – chronic diseases.

Our country's public health system has been failing to adequately address this public health crisis, particularly when it comes to dealing with chronic diseases that may be associated with environmental factors. The public health sector must focus on environmental risk factors – hazards in our air, soil, and water. A key strategy in primary prevention should be to improve or develop new ways to track occurrence of diseases in addition to possible causes (hazards and exposures) of diseases.

Mounting scientific evidence links environmental factors to many chronic diseases such as asthma, birth defects, and cancers. However, there is a gap in critical knowledge in understanding the prevalence and incidence of chronic diseases in specific populations and potentially associated environmental factors. The Pew Environmental Health Commission calls this

lack of critical knowledge, "the environmental health gap."

Currently, there are no comprehensive systems at the state or national levels to track many of the exposures and health effects that may be related to environmental hazards.

California does monitor some diseases (such as cancer and asthma) and environmental hazards (such as air pollutants). But, there is little information about many other hazards, exposures, and diseases. Because current systems are not linked or standardized, it is difficult to compare the available information and to study and monitor relationships among hazards, exposures, and health effects.

In other words, it is currently very difficult to get complete information

about what hazards people are exposed to, how people are exposed to hazards, and what diseases these hazards may cause.

A statewide environmental health tracking system which integrates data systems and collaborative programs and partnerships, involving environmental and public health professionals and organizations may help us to do following: (see figure on page 2)

- Document current environmental and health conditions in California to provide a population health perspective;
- Investigate the relationship between environmental risk factors and the occurrence of disease by linking events in time and place;
- Develop policies to prevent or control environmental risk factors and/or control environmentally-related diseases;
- Evaluate the impact and effectiveness of public and environmental health policies; and
- Contribute to the public's right-to-know about environmental health.

MAKING THE CONNECTION

California takes steps toward better understanding link between environment and health.

What is the link between environment and health? There is no doubt that an association exists. Some associations are strong and well documented, some are suspected, and many have not been studied. However, considering the significance of these associations and the increasing burden – epidemic – of chronic diseases, we should keep in mind a premise of the precautionary principle that states, “Absence of evidence is not the same as evidence of absence.”

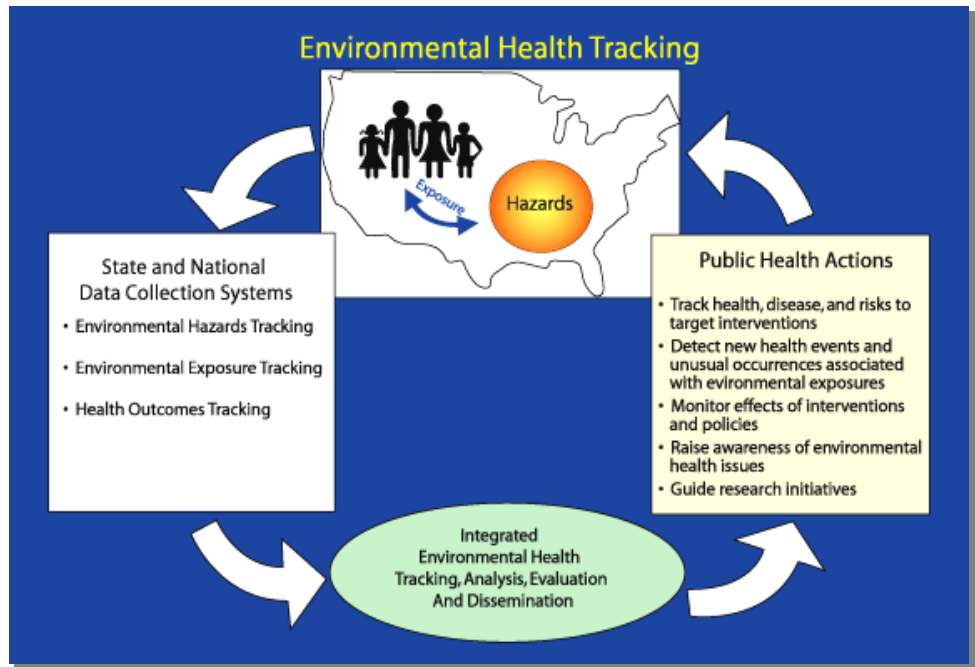
Understanding the extent of the link between environment and health has often proven to be difficult; however, along with monitoring and reporting health and environmental data, making that vital connection between the two should be a priority of public health systems today.

California is now poised to better examine that crucial but elusive link through several initiatives that are developing plans for a statewide system that would track environmental hazards and exposures and chronic diseases.

In October 2001, California became the first state to declare its intent to establish an Environmental Health Tracking Network (EHTN) for chronic diseases and environmental hazards and exposures, when Governor Gray Davis signed California Senate Bill 702 (Escutia).

Subsequently, as mandated by the bill and with funding from the Centers for Disease Control and Prevention (CDC) and The California Wellness Foundation, California convened a multidisciplinary Expert Working Group (EWG) to begin laying the groundwork for establishing an environmental health tracking system for California and propose recommendations to the state legislature.

That group is comprised of nationally recognized experts from a range of public and environmental disciplines. Members were selected from academic, government, public interest and private sector organizations and for expertise in



exposure assessment, environmental epidemiology, biomonitoring, chronic disease, occupational health, human subjects/bioethics, health economics, health informatics, and health policy. They will make recommendations on how to develop a statewide environmental health tracking system, the associated costs, and the health and environmental measurements that would be used in the system.

In 2002, Congress provided CDC with funding to begin developing a nationwide EHTN and to develop environmental health tracking capacity within state and local organizations. To that end, CDC awarded California a three-year grant to support the development of an EHTN. The resultant

collaborative initiative of the Division of Environmental and Occupational Disease Control of the California Department of Health Services (CDHS-DEODC), the Office of Environmental Health Hazard Assessment of the California Environmental Protection Agency (OEHHA-Cal/EPA), and the University of California is known as the California Environmental Health Tracking Program (CEHTP).

The goal of this initiative is to develop a comprehensive plan and a standards-based, coordinated, and integrated

environmental health tracking system at the state level that allows for linkage and reporting of health effects and environmental hazards data. Over the next three years CEHTP will undertake the following activities:

1. Convene a **Planning Consortium** of diverse stakeholders to identify and prioritize statewide environmental health tracking needs and issues, and to identify and evaluate existing data systems.
2. Build environmental health tracking capacity at the state and local levels by conducting a **needs assessment** to assess capacity, resources, gaps, and barriers in state and local agencies for developing and implementing an environmental health tracking network.
3. Conduct a **technical assessment** and develop plans for designing a standards-based electronic tracking network that would link environmental and health data in California.
4. Develop, implement, and evaluate an **outreach, education, and training** strategy – in collaboration with the University of California, Center of Excellence for Environmental Public Health Tracking – to educate the public on tracking and related health outcome information.
5. Implement a **pilot project** to link asthma prevalence, low birthweight data and traffic pollution data in Alameda County. (see page three for details)

ALAMEDA COUNTY FOCUS

California Environmental Health Tracking Program to study link between traffic exhaust and disease in Alameda County.

The pilot project in Alameda County is a key component of CEHTP. This pilot project will serve as a "road test" of the environmental health tracking system, focusing on a small number of diseases and environmental hazards in Alameda County. Information will be centralized, processed, and provided for use by public health officials and interested community groups. Scientists with the California Department of Health Services and the California Environmental Protection Agency will be able to examine the data for "hot spots" of disease and relationships with environmental hazards, and to test hypotheses about these diseases.

The pilot project will focus on health events and environmental data from Alameda County in 2001. Data will be collected and analyzed regarding:

1. Traffic patterns and the dispersal of traffic-related pollution;
2. Health care usage (such as hospitalizations and the purchase of asthma medications) by people with asthma;
3. Birth of low birthweight and pre-term infants, which may also be associated with pollution exposure.

This project involves collaboration with the [California Center for Health Statistics](#), the [Medical Care Statistics Section of the California Department of Health Services](#), and [Kaiser Permanente of Northern California](#). This collaboration will make anonymous data describing hundreds of thousands of health events available to project investigators. [Caltrans](#), the [California Air Resource](#)

[Board](#), and the [Oakland-based Pacific Institute for Studies in Development, Environment, and Security](#) will provide data on traffic patterns and pollution.

Intended Outcomes

With this information, researchers hope to make progress on a number of public health concerns, including:

1. Exploring the locations of populations "at risk" for asthma and assessing their exposures to traffic exhaust;
2. Examining possible connections between pollution caused by automobile and truck traffic and asthma, low birthweight, and pre-term birth;
3. Evaluating the best ways of measuring asthma in populations;
4. Assessing the potential and costs of this type of environmental health tracking system and how such approaches may be applied to other diseases and environmental hazards throughout California; and
5. Contributing to the public's right-to-know about environmental health and providing communities with an opportunity to address health concerns regarding traffic related exposures.

For research questions regarding the Alameda County Pilot Project, please contact:

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OF SPECIAL INTEREST

Asthma in the United States: The prevalence of asthma in the U.S. skyrocketed 70% from 1980 to 1994 and annual costs due to asthma now total over \$6 billion. As one of the most common chronic conditions in children, asthma is a leading cause of school absences and hospital admissions for children. There is growing evidence that exposure to air pollution is a risk factor for exacerbating asthma and may be a risk factor for both low birth weight and preterm birth. Air pollutants found near busy roads as a product of traffic exhaust have been shown to be associated with childhood respiratory illness, fetal growth retardation, and prematurity.

Asthma has been designated the top priority health outcome for environmental health tracking in the states surveyed by the [The Pew Environmental Health Commission](#). That should not come as a surprise to many – the heavy burden of asthma is becoming more apparent and opportunities to address asthma are slowly emerging.

Asthma in California: It is estimated that 1.8 million Californians have asthma, including half a million children. The cost of asthma in California was nearly \$1.3 billion in 1998. Asthma's burden on the individual and the society is immense and tragic – over 600 people die from asthma each year in California.

Asthma in Alameda County: Alameda County, the second most populous county in the San Francisco Metropolitan Area, has an overall low birth weight rate of 6.9% and rates over 10% in certain neighborhoods. The hospitalization rate for asthma for the county is 172 per 100,000, which is the fifth highest in the state. Alameda County is estimated to have 70 thousand people affected by asthma and associated annual costs of over \$52 million. For children, Alameda County has the second highest asthma hospitalization rate in the state (384/100,000).

