

CALIFORNIA
ENVIRONMENTAL
HEALTH TRACKING
PROGRAM

Improving Public Health Through a Better
Understanding of Pollution and Illness

www.catracking.com

THE PROBLEM

Alarming Health Trends Are Poorly Understood

There is growing evidence that pollution causes, or makes worse, some types of chronic diseases. Alarmingly, some of these diseases are on the rise. The prevalence of adult asthma in California jumped 76 percent between 1984 and 2002. Other diseases with suspected environmental links, such as autism, neurological diseases, and testicular cancer, are also increasing. The costs to human health and our economy are serious: nine chronic diseases with environmental links cost California \$10 billion per year and contribute to thousands of premature deaths annually. Nationally, the costs are even higher.

Despite the seriousness of the problem, Californians lack the tools and data to understand the distribution of pollution and diseases, as well as the possible links between them. To address concerns raised by the public, health professionals, and scientists, the California Environmental Health Tracking Program has put together one of the first systematic efforts to track this needed information.



“Reliable information is the most basic tool for prevention of chronic diseases that are related to the environment.”

— California Senator Martha M. Escutia

Total Documented Cost of Nine Environmentally-Related Diseases in California

DISEASE	ESTIMATED COST (YEAR 2000)
Childhood Asthma	\$278,000,000
Cancer <i>(Prostate, Cervical, Ovarian, Uterine, Childhood)</i>	\$1,137,000,000
Neurodevelopmental Disorders	\$1,293,000,000
Birth Defects	\$1,829,000,000
Child Lead Poisoning	\$6,031,000,000
Total Cost	\$10,568,000,000

Note: This list includes only diseases for which reliable cost estimates are available. For more information on this table and its sources, see “Strategies for Establishing an Environmental Health Surveillance System in California, a report of the SB 702 Expert Working Group,” available on our website.

THE SOLUTION

Improving Public Health with Better Information

The California Environmental Health Tracking Program is working to improve public health by delivering science-based information on the trends and distributions of diseases, environmental threats, and the often complex relationship between them.

Innovative partnerships allow us to gather critical data from a wide variety of sources, analyze the data, and present the information in a fashion that policy makers, public health officials, and communities can use.

Some of the strategies we are using include:

- Collaborating with governmental agencies, health care providers, and community groups to gather information on health and environmental threats.
- Analyzing data using state-of-the-art techniques and creating high-resolution maps that eliminate traditional blind spots.
- Communicating our findings using conventional and web-based tools that allow broad use by interested groups.

By using state-of-the-art technology to analyze disease patterns and pollution, we can offer more useful data and give better guidance on how to protect the public's health. Our unique effort is already producing helpful information for a wide range of audiences.



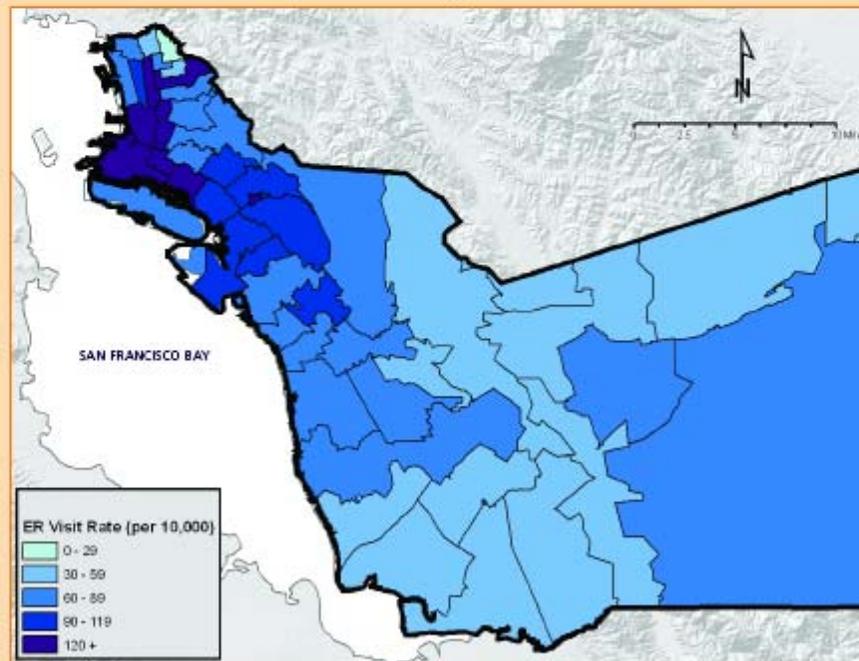
PILOT PROJECT

Finding New Asthma Hotspots

One example of this work is the Alameda County Pilot Project. This four-year project, funded by the Centers for Disease Control and Prevention, is tracking the rates of asthma events in Alameda County. Instead of using traditional methods of lumping information on asthma events by Zip Codes or county boundaries, our system is able to create “smooth” maps that are more accurate and allow a better understanding of the problem.

ASTHMA EMERGENCY ROOM VISITS FOR CHILDREN (RATES BY ZIP CODE)

Kaiser Permanente & Medi-Cal, Alameda County, 2001



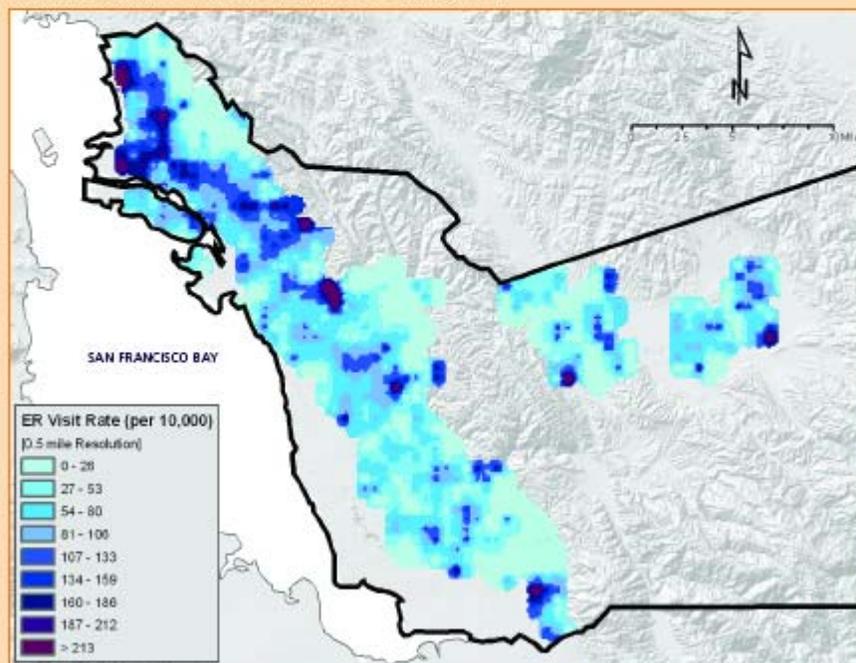
The map above shows a traditional mapping approach using Zip Codes.



For the first time, we can identify hidden hot spots and provide health workers, policy makers, and community members with more useful information so that they can take effective action to protect human health. In comparison to the Zip Code map, smooth mapping gives a more accurate picture of real-world conditions, allowing decision makers to more accurately assign resources to communities in need.

ASTHMA EMERGENCY ROOM VISITS FOR CHILDREN

Kaiser Permanente & Medi-Cal, Alameda County, 2001



This "smooth" map shows key asthma hotspots and provides a truer picture of the distribution.



CURRENT RESEARCH

The California Environmental Health Tracking Program, with funding from the Centers for Disease Control and Prevention, is conducting two pilot projects. The Alameda County Pilot Project is tracking preterm births and term low birth weight births, asthma, and traffic pollution.

In addition to reproductive outcomes, the Central Valley/South Coast Children's Environmental Health Pilot Project is looking at Sudden Infant Death Syndrome, Autism Spectrum Disorder, mental retardation, airborne hazards, and maternal and child blood lead levels.

KEY SKILLS

The California Environmental Health Tracking Program has developed core competencies in a wide variety of areas. Our strengths include:

- Creating partnerships to gather and track data.
- Analyzing and interpreting health, environmental, and social data using the most up-to-date tools.
- Communicating this information in ways that are useful to a wide range of stakeholders.

FUTURE WORK

Our current projects and tools are focused on health and environmental information. In the future, we hope to use similar approaches to incorporate various economic and social issues into our work.



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