

NEW YORK CITY

Keeping Track, Promoting Health

Building a Network

Without question environmental contaminants are affecting people's health. Environmental hazards are among parents' top health concerns for their children, according to the American Academy of Pediatrics. Understanding how these contaminants and other environmental factors are linked to chronic disease is essential to disease prevention—and to protecting the health of our communities.

The Centers for Disease Control and Prevention (CDC) is leading the initiative to build the National Environmental Public Health Tracking Network. The Tracking Network is being developed in response to calls for better understanding of how the environment can affect people's health. This Web-based system will integrate health and environmental data and provide information to address public health concerns, educating the public about ways to protect themselves from possible contamination and disease.

States and communities can act upon data generated through tracking. Today, because of tracking, public health officials in Washington State can do more than determine mercury levels in fish. They can also compile information from many sources and use the data to educate citizens about healthy fish choices with greater speed and accuracy. In Maine, tracking has allowed researchers to examine high arsenic levels in well water and its effects on reproduction. Consequently, state public health officials can now warn well users about the hazards of exposure to arsenic during pregnancy.

The Tracking Network will enable and encourage communities, health care providers, state and local health departments and others to take control of their health.

The building blocks of this network are grants to state and local health departments and universities around the country to build capacity and demonstrate just what tracking can do.

Building the Foundation: New York City (2002—2006)

In 2002, the New York City Department of Health and Mental Hygiene (NYC DOHMH) received funding from CDC to plan for a statewide Environmental Public Health Tracking Network that will be part of the national tracking network. New York City used the funding to build capacity, enhance infrastructure, and complete data linkage projects. The results range from improving surveillance to enabling faster responses to environmental public health questions and faster action to prevent disease.

Why Tracking Matters to New York City

Identifying hazards and exposures associated with the built environment is an environmental public health tracking priority in New York City. To characterize factors associated with pest infestations, pesticide use and exposure, carbon monoxide (CO) poisoning, and heavy metal exposures, New York City united a variety of data sources about the built environment, product usage, public agency activities, and individuals' pesticide use and exposures and linked them to the individual, address, and community levels.

Using this system, the New York City Tracking Program can now conduct surveillance on a variety of environmental topics, including the presence of pests, mold, carbon monoxide and other indoor air quality threats in housing, and the use of pesticides. The program now has a better understanding of the communities' exposure to these environmental contaminants and related health outcomes.



“So much has changed since the Pew Commission report,” says Shelley Hearne, Dr.P.H., founding executive director of Trust for America’s Health. “It’s phenomenal to see the rapid evolution from concept to implementation, from gap to engagement.”

Tracking in Action

What is the problem?

Cockroach and rodent infestations are widespread in New York City. Because a system was not previously in place, the city was not able to systematically identify factors that contributed to these problems or to track the health issues associated with them.

What did tracking do?

The New York City Tracking Program conducted surveys to determine the presence of pests in and around homes. 30 percent of survey respondents reported having cockroaches and 25 percent reported having mice in their homes. Pests are far more prevalent in lower income neighborhoods, and asthma is 1.5 times more prevalent in homes infested with cockroaches and twice as likely in homes with rodents.

Staff worked with the Bureau of Pest Control and the Asthma Initiative to modernize pest control to include integrated pest management techniques. Integrated pest management is a series of pest management evaluations, decisions, and controls that is used to manage pest damage by the most economical means and with the least possible hazard to people, property, and the environment.

Improved Public Health:

The New York City Tracking Program published and widely distributed an English and Spanish language guide to safer pest control in housing. Program staff have presented findings to numerous community groups in the most affected communities and worked with the New York City Asthma Partnership to advocate for integrated pest management in the homes of people with asthma. The program has also designed a new approach to pest control involving active surveillance of rodent conditions in neighborhoods throughout the city.

Understanding Infestations and New York City's Health

Guiding Policy on Pesticide Use

Commercial pesticide use in New York City was shown to be higher than that in agricultural counties on a per-acre basis. However, little was known about trends in commercial pesticide use, and even less was known about the use of off-the-shelf products that may pose even more significant health risks.

The New York City Tracking Program analyzed trends in both commercial and personal pesticide use. Tracking determined that lower income households are more likely to purchase off-the-shelf sprays, bombs, and foggers and less likely to use commercial services that are safer.

The findings of the pesticide tracking project demonstrated the need to increase the availability of less toxic pest control services in underserved areas and to decrease the use of the most toxic, and sometimes illegal, pesticides among the city's vulnerable populations. New York City has initiated new interventions in low-income and public housing that emphasize reductions in pesticide use and promote integrated pest management. The city has also become the largest municipality to implement governmental pesticide reduction laws. The laws will support the goals of tracking for many years to come. The tracking program was given the responsibility to implement and track compliance with the law, develop an electronic pesticide use reporting system, and annually report on the city's pesticide use.

Enhancing Carbon Monoxide Surveillance

In recent years, exposure to carbon monoxide (CO) has caused hundreds of deaths. CO is a colorless, odorless, poisonous gas that is produced by small gasoline engines, stoves, lanterns, gas ranges, and heating systems. New York City did not previously routinely track exposure to CO, which could be a useful source of information to target prevention and enforcement efforts.

By uniting a myriad of data sources, the New York City Tracking Program determined that more than 1,000 people are exposed to high levels of CO each year. Each year, nearly 100 New Yorkers are hospitalized due to severe poisoning as a result of accidental exposure. Tracking staff began evaluating the impact of the legislative changes requiring building owners to install CO detectors in dwelling spaces. This evaluation revealed a fivefold increase in fire department investigations for CO incidents where an alarm was activated.

During the 2004 legislative session, the New York City Council passed housing code changes requiring CO monitors in most residences. The Board of Health amended the health code to require immediate reporting of elevated carboxyhemoglobin levels to the New York City Poison Control Center and to the fire department for rapid follow-up. Elevated carboxyhemoglobin levels are an indicator that a person has been exposed to CO. Tracking has documented that the alarm law has led the fire department to respond to many more potentially hazardous CO events before hazardous exposure occurs.

Identifying Mercury-Containing Consumer Products

Existing surveillance of mercury exposure depends on voluntary testing, and NYC DOHMH only learned about the few cases where results were elevated.

NYC DOHMH completed the first ever community Health and Nutrition Examination Survey (HANES) in the United States. The tracking program supplemented an environmental biomonitoring component that tested 1,800 representative New Yorkers to understand population exposure to mercury. Findings demonstrated that elevated urine mercury levels in New York City were uniformly associated with the use of illegally imported skin lightening creams and disproportionately affected Hispanic women. Survey results suggest that approximately 25,000 New Yorkers may have elevated mercury levels from the use of these products.

Biomonitoring also revealed that blood mercury levels—generally associated with diet—were three times as high in New York City as in the United States overall, with 25% of New Yorkers exposed at levels reportable to the state. Higher mercury levels were strongly associated with frequent fish consumption.

Through tracking, New York City officials discovered that a total of 11 different skin lightening creams containing mercury were being sold in area stores. In response to this discovery, officials issued orders to 270 stores to cease the sales of these products. A media alert was issued with far-reaching results, and health alerts were distributed to 30,000 health care providers. In addition, tracking staff identified manufacturers and distributors and are continuing to work with other state and federal agencies to halt the importation and distribution of these products.

The tracking program launched a major educational campaign to educate the public on the risks of mercury in diet. Its "Eat Fish, Choose Wisely" campaign involved alerting health care providers, conducting a media campaign, and distributing more than 85,000 brochures in three languages to groups serving pregnant women and young children.

Centers for Disease Control and Prevention

1600 Clifton Rd.

Atlanta, Georgia 30333, U.S.A.

Tel: (404) 639-3311

Public Inquiries: (404) 639-3534 / (800) 311-3435

Web: www.cdc.gov

For more information about the National Environmental Public Health Tracking Program please visit: www.cdc.gov/nceh/tracking

