The Pennsylvania Department of Health’s Environmental Public Health Tracking program is no longer active as of September 2017. Some activities performed by the former EPHT program are conducted by other members of the Division of Environmental Health Epidemiology.

CHILDHOOD LEAD POISONING

The Pennsylvania Environmental Public Health Tracking (EPHT) program tracks a set of Nationally Consistent Data and Measures (NCDMs) in order to compare different states and over time. Childhood lead indicators, including levels of blood lead among children aged 15 and under and the extent of childhood blood lead testing in Pennsylvania, as well as measures of risk factors for childhood lead poisoning, including poverty and pre-1950 (and pre-1978) housing, are included in the set of NCDMs available on the Enterprise Data Dissemination Informatics Exchange website.

LEAD AND CHILD HEALTH

Lead is a naturally occurring element in the earth’s crust, and can be found in the air, soil, water and inside our homes.

Lead enters the body primarily through inhalation and ingestion. The leading cause of lead poisoning among children is dust from lead-based paint, which was used in many homes until 1978. The older a home, the more likely it is to contain lead paint. Paint that is chipping, flaking and peeling or paint disturbed during home remodeling contributes to lead dust. It contaminates bare soil around a home and makes paint chips and dust containing lead accessible to children, particularly babies and young children who often put their hands and other objects in their mouths.

Lead exposure may also come from drinking water traveling through lead pipes; hobbies such as making stained-glass windows, hunting, fishing and target shooting; and working with automobile batteries, painting and radiator repairs. Children may be exposed secondarily when their parents who work in lead-related industries bring lead home on their clothing. Also, previously, lead was included as an additive in gasoline, but the Clean Air Act banned the sale of leaded gasoline in the U.S. as of January 1, 1996.

Today, there are approximately half a million U.S. children aged 1–5 with blood lead levels above the 5 micrograms per deciliter (mcg/dL) reference level at which CDC recommends public health actions be initiated. No safe blood lead level in children has been identified. Lead is particularly dangerous to children because their small, growing bodies absorb more lead than adults do, and their brains and nervous systems are more sensitive to the damaging effects of lead. Even low levels of lead in blood have been shown to affect IQ scores, the ability to pay attention and academic achievement. Lead exposure can also cause ataxia (impaired coordination), coma, convulsions, hyperirritability and aggression, stupor, constipation, sleep problems and even death.

The longer a person is exposed to lead, the greater the likelihood that damage to health will result. Therefore, properly removing lead from a person’s environment helps to ensure a decline in blood lead levels. At very high blood lead levels, physicians may prescribe medications to lower blood lead levels in a treatment known as chelation therapy.
CHILDHOOD BLOOD LEAD MONITORING IN THE UNITED STATES

A blood test is available to measure the amount of lead in the blood and to estimate the amount of any recent exposure to lead. Blood tests are commonly used to screen children for lead poisoning and can be easily conducted in a physician’s office.

Each state is responsible for monitoring child blood lead levels according to their specific reporting requirements. In Pennsylvania, laboratories must report childhood blood lead levels, even undetectable levels, to the Pennsylvania Department of Health (DOH) Lead Surveillance Program. This program tracks and monitors childhood lead activity through the Pennsylvania National Electronic Disease Surveillance System (PA-NEDSS).

CDC’s Childhood Lead Poisoning Prevention Program provides technical and financial assistance to programs at the state level. These programs are working to ensure that screening, lead-hazard reduction, new legislation and other prevention mechanisms occur throughout the country.

Importance of Tracking Childhood Blood Lead

The key to preventing lead poisoning in children is to stop children from coming into contact with lead and treating children who have been poisoned by lead. By tracking children with lead poisoning and sources of lead, we can:

- Identify children at risk in order to target testing and resources
- Make case management services available to each child with lead poisoning
- Monitor progress towards eliminating childhood lead poisoning
- Identify and monitor trends in lead sources that are exposing children to lead
- Remove and reduce sources of lead
- Develop and evaluate interventions and additional programs to prevent lead exposure

PREVENTION

- Ask a doctor to test your child if you are concerned about your child being exposed to lead.
- Have paint and dust from your home tested for lead if you live in a house or apartment built before 1978, especially if young children live with you or visit you.
- Damp-mop floors, damp-wipe surfaces, and frequently wash a child’s hands, pacifiers and toys to reduce exposure to lead.
- Use only cold water from the tap for drinking, cooking, and for making baby formula. Hot water is more likely to contain higher levels of lead, and most of the lead in household water usually comes from the plumbing in your house, not from the local water supply.
- Avoid using home remedies (such as azarcon, greta and pay-loo-ah) and cosmetics (such as kohl, alkohl, kajal, al-Kahal, surma, tiro, tozali and kwalli) that contain lead.
- Take basic steps to decrease your exposure to lead (i.e., by showering and changing clothes after finishing the task) if you remodel buildings built before 1978 or if your work or hobbies involve working with lead-based products.
RELATED LINKS

Pennsylvania DOH Lead Surveillance Program
Pennsylvania DEP Lead in Drinking Water Webpage
CDC Childhood Lead Poisoning Prevention Program
State and Local Childhood Lead Poisoning Prevention Programs
EPA Lead Webpage
EPA Lead Hotline – National Lead Information Center
U.S. Department of Housing and Urban Development Office of Lead Hazard Control and Healthy Homes