

BIOMONITORING

UNDERSTANDING HOW ENVIRONMENTAL EXPOSURE AFFECTS HUMAN HEALTH

UNMET NEEDS

- Provide funding for CDC's National Biomonitoring Program to 20 states
- Increase funding to the Environmental Public Health Tracking Network to create a true national environmental health surveillance system
- Provide funding to ATSDR to improve the use of laboratory data in communities impacted by potentially-toxic exposures

BACKGROUND

Every day we risk coming into contact with thousands of chemicals, some of which may damage our physical health or mental development. Though you would not knowingly breathe in air polluted with methane gas or drink water containing lead, toxic chemicals in the environment often go unnoticed.

The public's concern about chemical exposure rose steadily this past year due to incidents like lead-contaminated water in Flint, release of heavy metals into the Animas River and a methane gas leak in Aliso Canyon, CA. Yet to date, **the US has no environmental health surveillance system**, although such a system may have helped to prevent these events from occurring.

Environmental emergencies such as these, combined with a lack of a national environmental health surveillance system, and our current inability to establish the causes of many chronic illnesses, developmental disorders & deaths in the US, stresses the **need to understand and document which chemicals are getting into our bodies** and what they are doing while there.



For the last 30 years, the **National Biomonitoring Program at CDC's Environmental Health Laboratory measures hundreds of chemicals** including lead, cotinine (a measure of secondhand tobacco smoke), flame retardants and certain pesticides. The data are used to assess exposure to environmental chemicals in the US population and provide valuable information when analyzed alongside health outcome data. Additionally, information from CDC about background levels of exposure serves as a reference to determine when people have elevated levels of chemicals in their bodies. **The US needs similar systems at the state and local levels.**

STATE-BASED PROGRAMS

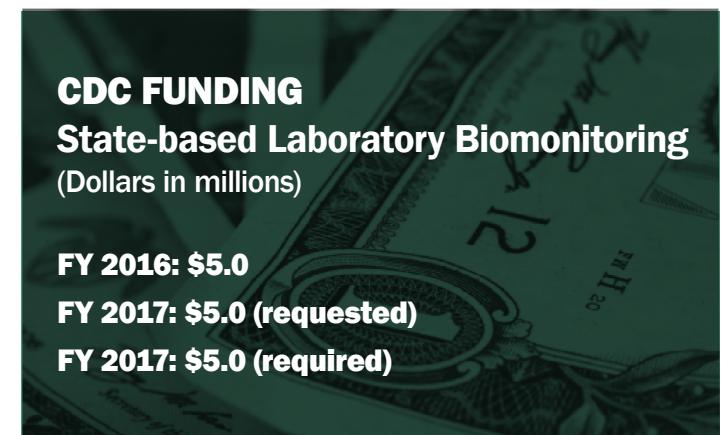
State and local health departments need to integrate biomonitoring into public health surveillance. Currently CDC funds only six biomonitoring laboratory programs. The requested funding would allow 10 additional states to conduct population-based biomonitoring, establish a baseline for local chemical exposure and leverage capabilities developed through preparedness efforts.

ENVIRONMENTAL PUBLIC HEALTH TRACKING

Rates of chronic diseases such as allergies, asthma, diabetes and heart disease are all on the rise in the US, with no definitive answers as to why. Past research has linked some environmental exposures with specific diseases, such as leukemia. However, much work remains to determine how exposure to certain things, such as flame retardants, may cause illness or disease.

Addressing this evidence gap the **Environmental Public Health Tracking (EPHT) Network allows existing environmental hazard, exposure and disease tracking systems to be viewed together** by researchers as well as the public. As national exposure assessment capability grows, more and more local data will become available. The Network could serve as an ideal, central, national database to display this information. The best place to begin the establishment of a US environmental health surveillance system is through expansion of the EPHT Network to include local exposure data and therefore, **state laboratories should play an important role in the EPHT Network.**

APHL supports the expansion of the EPHT program to link environmental exposure data in all states. Additional funding would increase the number of state laboratories doing exposure testing and analysis, enhance their ability to share data electronically with other agencies and become the basis of a nationwide environmental surveillance system that could also respond to local concerns.



AGENCY FOR TOXIC SUBSTANCES & DISEASE REGISTRY (ATSDR)

ATSDR investigates community exposures related to chemical sites and releases. With additional funds, they could take their consultations to the next level by engaging experts from environmental health laboratories. For example, according to their own calculations 22% of sites had indeterminate findings due to a lack of data (impacting about 210,000 people). New funding would allow ATSDR to better connect over 40 communities with their state or local environmental health laboratories, whose advanced capabilities may provide additional answers and data. Such an investment would improve the quality & timeliness of community health assessments and increase our ability to protect the public from exposure at the federal, state & local levels. ■

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