UNMET NEEDS
Provide funding for CDC’s National Biomonitoring Program:
• Fund states to build laboratory capacity and capability to monitor chemicals in people
• Fund CDC to support state programs, develop methods, conduct studies and issue reports on chemical exposures in people
• Provide funding to ATSDR to improve the use of laboratory data in communities impacted by potentially-toxic exposures

BACKGROUND
Every day, we come in contact with thousands of chemicals while the public grows increasingly uneasy about these exposures. Though you would not knowingly breathe in air polluted with sulfur dioxide or drink water containing arsenic, chemicals in the environment often go unnoticed. Approximately 100,000 chemicals are currently registered for use in the US, yet we know very little about their effects on human health. At the same time, chronic diseases are on the rise and their causes are largely unknown. The public’s concern, combined with our inability to explain what causes the majority of illness and death in the US, emphasizes the need to understand which chemicals are getting into our bodies and what they are doing while there.

Biomonitoring remains essential for identifying what and the amount of chemicals getting into people’s systems on a regular basis. Biomonitoring data play a critical role in assessing people’s exposure to chemicals following both unintentional and intentional chemical events by identifying the chemical agent and determining which individuals were and were not exposed.

For the last 30 years, the National Biomonitoring Program at CDC’s Environmental Health Laboratory has measured hundreds of chemicals including lead, perchlorate, bisphenol A (BPA), cotinine (a measure of secondhand tobacco smoke), flame retardants, certain pesticides and other complex chemicals. The data are used to assess exposure to environmental chemicals in the US population and provide valuable information when analyzed in conjunction with 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.

STATE-BASED PROGRAMS
While CDC’s program is an essential national asset, state laboratories also need biomonitoring capability in order to respond to smaller, local concerns. Currently, CDC funds only six state laboratories. The requested funding would allow additional states to conduct targeted population-based biomonitoring studies, building on capabilities developed through preparedness efforts. Funding would allow CDC to provide technical assistance, transfer of methods and training to more states.
ENVIRONMENTAL PUBLIC HEALTH TRACKING

Rates of chronic diseases such as allergies, asthma, obesity, diabetes, heart disease and metabolic syndrome are all on the rise in the US. Although there are many theories with regard to cause, there are no definitive answers explaining these alarming rates. Past research has linked some environmental exposures with specific diseases, such as benzene exposure to leukemia. However, much work remains to determine whether or not exposure to certain chemicals, such as flame retardants, causes illness or disease.

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. Biomonitoring remains essential to such a tool since it serves as the most accurate method of determining human exposure to environmental hazards.

State laboratories should play an important role in the EPHT Network. The Connecticut EPHT Program, for example, works closely with the state’s public health laboratory, the Maine Health and Environmental Testing Laboratory and the Vermont Department of Health Laboratory to examine umbilical cord blood from newborns for mercury, lead, cadmium and related biomarkers.

In 2012, CDC added national biomonitoring data to the EPHT Network. This comprises a first step to track many of the exposures and health effects on a national level that may be related to environmental hazards. Although some states have made tremendous strides in biomonitoring, only a few have contributed biomonitoring data to the Network. APHL supports the expansion of the Environmental Public Health Tracking program to link environmental data with biomonitoring and health data in all states. Funding should increase the number of state laboratories doing biomonitoring and develop their ability to share data electronically with other agencies.

AGENCY FOR TOXIC SUBSTANCES & DISEASE REGISTRY (ATSDR)

ATSDR investigates community exposures related to chemical sites and releases; in the summer of 2014 they were able to fund 25 states to perform community outreach and health assessments. With additional funds, they could take their consultations to the next level by engaging experts from environmental health laboratories. For example, according to ATSDR’s calculations, 24% of sites had indeterminate findings due to a lack of data (impacting about 200,000 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 and 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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