Biomonitoring and Newborn Screening: Information to Save Lives

Unmet Needs

► Provide state laboratories with an additional $20 million in FY 2007 to monitor humans for potentially toxic chemicals, such as lead.

► Expand the Environmental Public Health Tracking program in order to link environmental data with biomonitoring data and health data in all states.

► Support states’ efforts to collect data on levels of environmental contaminants in their populations.

► Provide $6.5 million to the CDC Environmental Health Laboratory’s Newborn Screening Quality Assurance Program budget.

► Support the Newborn Screening Saves Lives Act of 2007 (S. 634) to increase funding of newborn screening grant programs in education, outreach, follow-up care, quality assurance and contingency planning.

Background

As part of its biomonitoring program, CDC’s laboratory measures the levels of toxic substances in humans. Since there are tens of thousands of chemicals in circulation, it is important to understand how they impact our health. Currently, CDC measures only 450 of these chemicals in humans; we know the health effects of even fewer.

Biomonitoring is also critical in responding to intentional and unintentional chemical events. We need to know background levels of chemicals in order to detect elevated levels either due to an incident or related to an area with high disease rates, such as cancer. Additionally, we need to monitor those exposed in order to ensure they receive the proper care and treatment, such as the first responders at the World Trade Center.

With prior funding, 36 laboratories developed plans for increasing biomonitoring capacity. However, in 2007, CDC only had sufficient funds to support partial implementation of those plans for three grantees.

APHL supports an additional $20 million in FY 2007 for the Environmental Health Laboratory’s biomonitoring program. Over half of this would enhance state laboratory biomonitoring capabilities, including upgrading facilities and equipment and bolstering workforce capacity to ensure proficiency in lab techniques. The

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remaining half would be used by CDC to provide adequate technical assistance and training to states, support studies needed to interpret the health significance of these chemical exposures and develop rapid laboratory methods that are more readily transferable to states.

The Environmental Public Health Tracking program at CDC works with states to measure, monitor and link human exposure to environmental hazards with their potential subsequent health effects. APHL supports the expansion of this program to all of the states.

Technical Assistance to State and Local Health Departments

Newborn Screening
Worldwide, CDC’s Environmental Health Laboratory is the only comprehensive source for ensuring the accuracy of newborn screening tests. Newborn screening is an essential, life-saving and effective preventive public health program for early identification of medical conditions that can lead to catastrophic health problems. It identifies thousands of babies born in the US each year with a genetic or metabolic disorder. The cost of these conditions if left untreated is enormous, both in human suffering and in economic terms.

Funding the Newborn Screening Quality Assurance Program at $6.5 million will allow:

1) the provision of technical assistance and technology transfer to state newborn screening laboratories, particularly with regard to promising and sophisticated techniques capable of identifying a host of disorders currently not diagnosable in newborns;

2) the testing of new screening tools to ensure the highest possible analytic validity and utility;

3) the research and development of new laboratory screening methods that expand the number of disorders babies can be screened for; and

4) population-based pilot testing to ensure the effectiveness of new screening tools.

During the past several years, states have experienced newborn screening service interruptions due to both natural disasters and manufacturer inability to provide testing materials. Contingency planning is needed to lessen the effect of disasters that involve newborn screening program operations. APHL supports legislation and funding for newborn screening contingency planning to ensure the availability of newborn screening during an emergency.

Other Critical Functions
The Environmental Health Laboratory:

- Trains state laboratories in the analysis of potential chemical threat agents in clinical samples.
- Ensures reliable measurements to identify risk for cardiovascular disease and other related chronic diseases.
- Supports state laboratories during chemical emergencies, such as the methyl parathion incidents in Mississippi.