



Testimony
Subcommittee on Health
Committee on Energy and Commerce
United States House of Representatives

**The Environment and Human Health:
The Role of HHS**

Statement of

Henry Falk, M.D., M.P.H.

Acting Director

*Agency for Toxic Substances and Disease Registry
and*

National Center for Environmental Health

Centers for Disease Control and Prevention

U.S. Department of Health and Human Services



For Release on Delivery
Expected at 9:30 a.m.
April 22, 2010

Introduction

Good morning Mr. Chairman and distinguished Members of the Subcommittee. On behalf of Dr. Thomas R. Frieden, Director of the Centers for Disease Control and Prevention (CDC) and Administrator of the Agency for Toxic Substances and Disease Registry (ATSDR), I would like to thank you for the opportunity to present this testimony. I am Dr. Henry Falk, Acting Director of ATSDR and CDC's National Center for Environmental Health (NCEH). I am particularly pleased to be here on Earth Day. As a physician, I've spent more than 30 years working to protect the public from environment-related hazards and diseases.

These are indeed exciting times for those of us in environmental health. The Department of Health and Human Services (HHS) is involved in several presidential initiatives related to environmental health.

HHS and the Environmental Protection Agency are joining with other federal departments and agencies to work towards reestablishing the President's Task Force on Environmental Health Risks and Safety Risks to Children, and with this group we will collaborate to address the most critical children's environmental health issues facing the Nation. HHS is also participating in the President's Task Force on Childhood Obesity. Through this Task Force, HHS is working with other federal departments and agencies to identify research priorities and opportunities to collaborate to address environmental factors that may contribute to childhood obesity.

In my dual role with NCEH and ATSDR, I have the opportunity to lead a highly dedicated group of scientists and public health practitioners working to serve the public through responsive public health actions to promote healthy and safe environments and prevent harmful exposures.

Work at NCEH and ATSDR focuses on our unique relationship to the environment and the ways in which the environment impacts human health. This work supports laboratory research, epidemiologic studies, environmental public health tracking, environmental public health capacity building, community public health assessments, other health impact assessments, and protecting communities from exposures related to Superfund hazardous waste sites. Our sister agency at NIH, the National Institute of Environmental Health Sciences (NIEHS), conducts basic, applied, and clinical research on the health effects of environmental exposures. ATSDR in particular, but also NCEH, are service agencies that identify strategies to translate and apply research. This work translates into suggested interventions that reduce the burden and threat of disease related to the environment. My testimony will highlight some areas where CDC and ATSDR have notable work in this area.

Protect the public's health from toxic substances from Superfund sites and other sources

ATSDR is the principal non-regulatory federal public health agency responsible for assessing health effects associated with toxic exposures. The Agency's mission is to serve the public through responsive public health actions to promote healthy and safe

environments and prevent harmful exposures. ATSDR and its basic authorities were established by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 (more commonly known as the Superfund law), as amended by the Superfund Amendments and Reauthorization Act (SARA) of 1986.

ATSDR focuses specifically on the human health effects of exposure to harmful substances in the environment and collaborates with other federal agencies like EPA and NIEHS. Although ATSDR is not a regulatory agency, ATSDR is able to achieve substantial impact by providing technical expertise, training, and funding to state public health agencies and by making recommendations to other agencies and communities on how to reduce or prevent exposures to hazardous substances.

Developing an understanding of the health effects associated with toxic exposures is challenging and takes a long time—from a need to analyze environmental samples over time, to reconstructing estimate of past exposures, to the long latency period of some diseases potentially related to exposures. For example, ATSDR has been examining health effects from exposure to amphibole asbestos in Libby, Montana since 1999. Since that time, ATSDR has worked closely with the community on a number of projects and activities, including a mortality review, a Tremolite Asbestos Registry, a health study of the effectiveness of using computed tomography scans in identifying related lung problems, and a recently announced five year initiative to examine the health effects of exposure to Libby amphibole asbestos.

A good example of ATSDR's work linking environmental exposure to disease using the latest technologies is our health study in Toms River, New Jersey. Working with the New Jersey Department of Health and Senior Services (NJDHSS), ATSDR confirmed that the overall childhood cancer incidence rate in Dover Township was statistically significantly elevated for the period of 1979 through 1995.ⁱ This increased rate was primarily related to excesses of leukemia and brain/central nervous system cancer in females residing in the Toms River section of Dover Township. ATSDR conducted sophisticated modeling of the water distribution system that mapped the percentage of water that each household received from each well field on a monthly basis. An association was found between prenatal exposures to a particular well field between 1982 and 1996 and leukemia in female children of all ages. At only a very few other sites has an association between an environmental pathway and a cancer cluster been documented. For this reason, the findings of the Toms River study are especially important.

Reduce the burden of asthma

Asthma is the fourth leading cause of work absenteeism and diminished productivity in the United States, resulting in nearly 12 million missed or less productive work days and 12.8 million missed school days annually. Many air pollutants, such as particulate matter (PM_{2.5}), can exacerbate asthma and cardiovascular disease. Surveillance data show that more than 16 million adults and nearly 7 million children in the United States currently have asthma. Additional data from the Asthma Call-back Survey, a component of CDC's Behavioral Risk Factor Surveillance System, revealed that two-thirds of adult

respondents who had ever had asthma met the criteria for active asthma. In addition, approximately one-third of adults who had ever had asthma had been advised by their health care providers to make changes to their environment to improve their asthma.

CDC's National Asthma Control Program funds 36 state, local, and territorial programs and conducts several activities in support of asthma control programs and interventions that will prevent and reduce illnesses, injuries, and mortality related to environmental risk factors of asthma, especially in vulnerable populations. These activities include: supporting state and local partners to improve monitoring, identifying and tracking those most affected by asthma, and implementing science-based programs and activities leading to the reduction of asthma.

The program also provides guidance for state monitoring and evaluation activities and assists in increasing the level of training for health professionals and the education of asthma patients and their families

Strengthen health by reducing risks within the home

Housing conditions can significantly affect public health. Childhood lead poisoning, injuries, respiratory diseases such as asthma, and quality of life issues have been linked to many of the more than 6 million substandard housing units nationwide. Residents of these units are also at increased risk for fire, electrical injuries, falls, rodent bites, and other illnesses and injuries. Other issues of concern include exposure to pesticide residues, indoor toxicants, tobacco smoke, combustion gases, and mold.

CDC's Healthy Homes program uses a holistic approach to address multiple health hazards in homes. The program also collaborates with U.S. Department of Housing and Urban Development (HUD), EPA, and Department of Energy (DOE) to provide coordinated federal approach to generate the greatest impact with limited resources. For example, CDC, HHS, DOE and HUD are working together on an effort so that when a weatherization crew enters a house to wrap a water heater or do an energy audit, the crew will check to see that the water heater is not set above 120 degrees F and if it is, reset the temperature to a safe level. Examples of hazards addressed collaboratively include asthma triggers, lead, improper waste water disposal systems, injury hazards, radon, mold, and vector-borne diseases. CDC provides state and local public health professionals with the training and tools necessary to address the broad range of housing deficiencies and hazards associated with unhealthy and unsafe homes. The potential for these programs is illustrated by the success of CDC's Childhood Lead Poisoning Prevention Program, which was established in 1990. Data from the National Health and Nutrition Examination Survey shows that the prevalence of elevated blood lead levels among children ages 1–5 years declined from 4.4 percent in 1991–1994 to 0.6 percent in 2005–2006. ⁱⁱ

Enhance environmental public health monitoring, tracking, and surveillance

Measuring amounts of hazardous substances in our environment, tracing their spread over time, and understanding how they may cause illness are critical functions to environmental public health. Public health tracking systems that capture accurate

exposure and outcome data can facilitate public health efforts to prevent and control disease and disability linked to environmental exposures. CDC's National Environmental Public Health Tracking Network helps the nation accomplish this goal.

The Tracking Network is a dynamic web-based data system that is used to track and report environmental hazards and the health problems that may be related to them. This system is unique, because for the first time, environmental data and public health data are available together in a central database and can be used to analyze the relationship between environmental hazards and health effects. The Tracking Network helps to facilitate efforts to monitor environmental public health trends on national and local levels. The Program partners with EPA and other federal, state, and local partners to include critical sources of data and information for the Tracking Network.

The program currently funds 22 states and New York City to build and maintain local surveillance systems for data on non-infectious health conditions and environmental hazards. The program also supports surveillance that will result in data-driven public health actions such as analyzing area cancer rates for concerned citizens or identifying trends of pre-term births in a particular county. These actions have led to development of pesticide reduction policies in New York City and providing data to inform carbon monoxide detector policy in Maine.

Use biomonitoring to inform health priorities related to chemical exposure

Biomonitoring is the science of directly measuring chemicals in human biological samples such as blood or urine. Biomonitoring data tell us the amount of a chemical from all sources combined (e.g., air, soil, water, dust, food) that is actually in a person's body. These data are valuable for a variety of public health purposes, such as identifying relative levels of exposure in the population, particularly in children or other vulnerable groups, and setting priorities for research into the health impacts of chemicals.

CDC recognizes that biomonitoring is an important tool for helping to prioritize environmental chemicals for public health research. Biomonitoring fills a major gap by providing human exposure information that allows us to better assess the effectiveness of public health efforts to reduce exposure of Americans to specific chemicals. Data have shown that exposure to secondhand smoke in nonsmokers has decreased about 70 percent, indicating that public health interventions to reduce exposure are working. Additionally, biomonitoring is an important component of ATSDR's exposure investigations. Understanding the potential for exposure and having the measurements of chemicals in the members of the concerned community allows for confirmation regarding whether or not a chemical, or naturally occurring compound, is being detected at levels that may be of concern.

CDC funds three states for state-based biomonitoring programs. CDC also funds capacity for biomonitoring through emergency preparedness programs, and the Tracking Network supplies funding for targeted biomonitoring activities.

Core environmental health services

CDC works to promote environmental public health by providing workforce training, supporting accredited academic programs, funding state and local capacity building, and providing scientific advice and expertise. These programs target environmental health professionals who work to ensure clean water, air, and food every day in communities across the country. Through programs such as the Environmental Public Health Leadership Institute, CDC provides leadership development and strengthens the environmental public health system's ability to provide high quality services. The Environmental Health Training in Emergency Response course provides state and local health departments with the skills to perform the many critical functions necessary following an emergency event, such as conducting shelter assessments, testing drinking water supplies, and controlling disease-causing vectors.

Support healthy community design

Designing and building healthy communities can improve the quality of life for everyone. Decisions about how to design communities have the potential to increase physical activity, reduce injuries and cardiovascular disease risk, and improve environmental health. The Healthy Community Design Program is an emerging component of CDC's work to strengthen the evidence base and practice of prevention. As an example, supporting work to promote safer built environments through collaborative partnerships

with the Safe Routes to School programs can ensure that kids have safe opportunities for physical activity as they go to and from school. CDC is also working with the Department of Transportation to provide health recommendations to transportation policy decisions.

Address the health impacts of climate change

World Health Organization estimates indicate that climate change claimed over 150,000 lives globally in the year 2000. Health impacts of climate change are related to heat stress, waterborne diseases, poor air quality, extreme weather events, and diseases transmitted by insects and rodents. A robust public health infrastructure can reduce the potential for negative impacts. Although scientific understanding of the health effects of climate change is still emerging, there is a need to prepare for potential health risks as well as promote health-supporting adaptation and mitigation strategies. As the Nation's prevention agency, CDC is prepared to anticipate, prevent, and respond to the broad range of impacts on the health of Americans and the Nation's public health infrastructure. CDC, along with NIEHS, represents HHS in 14 federal partnerships on climate change science. In FY2009, Congress appropriated \$7.5 million for CDC's Climate Change and Public Health Program. CDC's expertise and programs in environmental health, infectious disease and global health form the foundation of public health efforts in climate change. CDC's work addresses five broad areas: building climate change capacity at state and local health departments; developing partnerships; promoting workforce development; building the science base through research; and communicating health-related aspects of climate change.

Improve the public's access to safe drinking water

Environmental conditions greatly influence the relationship between water and health. Millions of Americans live with the health threat of contaminated drinking water, especially in rural areas where improperly used or operated septic systems can be a significant source of groundwater contamination leading to waterborne disease outbreaks and other adverse health effects. CDC's Clean Water for Health Program, which includes the Environmental Health Specialist Network (EHS-Net) Water Program, works to identify, prevent, and reduce exposure to environmental contaminants in water. CDC's safe water activities include identifying risks from eating fish and seafood from water sources contaminated with mercury, algal toxins, and persistent organic pollutants (POPs) and helping state and local public health officials identify vulnerable populations, implement interventions, and target funding to reduce the public's exposure. Currently, CDC is working to implement surveillance, research, and education related to small, sources (e.g., private wells), that are outside the scope of the Safe Drinking Water Act, and are thus unregulated by EPA.

Conclusion

In my dual role with NCEH and ATSDR, I have the opportunity to lead a highly dedicated group of people as they seek to provide answers on a wide variety of environmental issues related to human health. These issues range from identifying and addressing health risks related to hazardous substances, to developing an understanding of how the design of our communities impacts health. As we recognize

Earth Day, these activities provide us with an opportunity to appreciate the delicate relationship we have with our environment.

Thank you for the opportunity to provide this testimony to highlight ATSDR/NCEH's role in Environmental Health. I look forward to answering any questions you may have.

Endnotes

ⁱ <http://www.state.nj.us/health/eoh/hhazweb/dovertwp.htm>

ⁱⁱ http://www.epa.gov/envirohealth/children/body_burdens/b1-graph.html;
<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2569084/pdf/ehp-116-1285.pdf>; and
<http://pediatrics.aappublications.org/cgi/reprint/123/3/e376>