Testimony before the
Subcommittee on Investigations and Oversight
Committee on Science and Technology
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Preventing Harm—Protecting Health: Reforming CDC's Environmental Public Health Practices

Statement of

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Introduction

Good morning Chairman Miller, Ranking Member Broun, and other distinguished members of the Subcommittee.

On behalf of Dr. Thomas 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 Captain Robin Ikeda, a physician board-certified in both internal medicine and preventive medicine, as well as a member of the U.S. Public Health Service Commissioned Corps. Since February 2010, I have served as CDC Deputy Director for Noncommunicable Diseases, Injury, and Environmental Health. I am responsible for providing guidance and leadership to the four noncommunicable disease centers at CDC, including the National Center for Environmental Health (NCEH) and ATSDR. I have had the privilege of serving at CDC for nearly two decades, during which I have held key leadership positions including as Associate Director for Science in CDC's Epidemiology Program Office, and later in the same role at the National Center for Injury Prevention and Control. I began my CDC career as a member of the Epidemic Intelligence Service, assigned to the New York State Department of Health.

This experience provides a solid foundation for the responsibilities I have in my current position, particularly during this important time for ATSDR and NCEH, when we are

actively searching for a new director to lead our environmental health programs. We are committed to finding a director who will assure and facilitate excellence at NCEH/ATSDR in achieving our mission.

Today I will focus my remarks on several areas in which the Subcommittee has expressed interest: changes underway within NCEH and ATSDR to improve the ways in which we protect the health of the public; CDC's work related to lead poisoning prevention, including that related to elevated lead in Washington, D.C. drinking water; and the fresh look that ATSDR is taking to evaluate potential health effects of exposures to hazardous substances on the Island of Vieques in the Commonwealth of Puerto Rico.

ATSDR Improvements

ATSDR is a small agency with a large mission. CDC/ATSDR's senior leadership, and Dr. Frieden in particular, understand the need to improve ATSDR's ability to address concerns of communities related to potential exposures to hazardous substances.

Recently, a team from the Government Accountability Office (GAO) completed a review of ATSDR's management processes related to preparation of scientific documents, and provided us with a draft report, *Agency for Toxic Substances and Disease Registry: Policies and Procedures for Public Health Product Preparation Should be Strengthened (GAO-10-449).* We appreciate GAO drawing attention to areas where ATSDR can improve the documentation and functioning of our processes and controls. ATSDR has undertaken several efforts to formalize and improve its processes in fulfilling its public

health mission. Several improvements are underway. Some of these changes are in response to the report, and others were initiated prior to our receipt of the draft report.

- ATSDR is working to ensure that scientific principles and approaches are consistently applied across all of our divisions—and that all documents that are prepared for public dissemination receive an appropriate level of review and clearance.
- ATSDR has moved away from paper-based tracking and record keeping systems to computer or electronic based systems. This ensures review and clearance by the appropriate chain-of-command, and precise documentation of the process. ATSDR is working to greatly improve project tracking, to ensure projects stay on track, are completed in a timely fashion, and receive scientific and management review and input on a consistent basis.
- As recommended by GAO, ATSDR is working to strengthen its project management and priority-setting processes, to make them more explicit and consistent across the Agency. It is important, given the scope of ATSDR's mission, that we have a sound system for handling and triaging requests and that management and staff roles and responsibilities are clearly defined and understood from project inception to publication of findings.

In addition to these improvements in processes for preparation of scientific documents, ATSDR is actively reviewing other ways to further strengthen its scientific approach. These include:

- Reviewing areas where ATSDR work has been particularly effective, and the needs of federal, state, and community partners, in order to identify a clear set of priorities that emphasize the activities that are achievable and best meet the needs of our partners.
- Adjusting the scope or volume of ATSDR's scientific activities to ensure consistently high quality.
- Leveraging both NCEH and ATSDR programmatic and scientific strengths to improve environmental public health practice.

National Conversation on Public Health and Chemical Exposures

Many agencies and organizations—governmental and nongovernmental, regulatory and non-regulatory—carry out public health functions related to chemical exposures. These functions include exposure and health surveillance, investigation of incidents and releases, emergency preparedness and response, regulation, research, and education.

In June of 2009, with the collaboration of ATSDR and NCEH, other government agencies, national experts and members of the public, the National Conversation on Public Health and Chemical Exposures was launched.[1] The National Conversation is a two year project that aims to identify strategies that many stakeholders, including ATSDR, can take to better protect the public from harmful chemical exposures. The National Conversation currently is at the mid-point in the process.

[1] www.atsdr.cdc.gov/nationalconversation

Through the National Conversation, public health professionals and others who contribute the experience and perspectives of government, communities, business, NGOs, and academic institutions, are engaging in a collaborative effort to recommend measures based on consideration of the broad range of related programs and activities. Many knowledgeable individuals from dozens of organizations are represented on one of the National Conversation's six work groups or Leadership Council. The work groups are organized around key components of public health action on chemical exposures, including Monitoring, Scientific Understanding, Policies and Practices, Chemical Emergencies, Serving Communities, and Education and Communication, and each group is currently developing a report of prioritized recommendations. We anticipate that these recommendations will be provided to the project's Leadership Council within the next year.

Among the issues currently being discussed as part of the National Conversation are several that relate directly to current CDC/ATSDR programs and activities, including:

- Building state biomonitoring capacity;
- Enhancing ATSDR's community-based environmental health activities; and
- Advancing ATSDR's efforts to characterize risks from exposure to multiple chemicals.

NCEH Work Related to Lead Poisoning Prevention, Lead in Washington, D.C., Drinking Water.

Substantial improvements have been made in reducing lead in the environment: during 1999–2004, 1.4 % of children in the United States aged 1–5 years had blood lead levels above 10 ug/dL, compared with 8.6% of children during 1988-1991.[2] These improvements are the result of population-wide prevention strategies to reduce the incidence of lead poisoning. Collaborative public health efforts by CDC, the Environmental Protection Agency, the Department of Housing and Urban Development and others contributed to this dramatic reduction.

However, lead paint hazards in residences and public buildings, and lead in water, consumer products, and as a result of take-home exposure by parents who work with lead, continue to contribute to children's blood lead levels.

Since 1990 CDC has designed and implemented programs that identify the children most likely to have elevated blood lead levels and helped ensure that they receive timely and appropriate care; identify the houses most likely to have lead hazards and ensure that the lead hazards are controlled or eliminated before more children are exposed; provide information to health care providers, educators, and advocates to support lead poisoning prevention; and provide information to parents to empower them to protect their children from lead exposure. CDC also supports 40 state and local

[2] Jones, Robert L., David M. Homa, Pamela A. Meyer, Debra J. Brody, Kathleen L. Caldwell, James L. Pirkle, and Mary Jean Brown. Trends in Blood Lead Levels and Blood Lead Testing Among U.S. Children Aged 1 to 5 Years, 1988-2004; Pediatrics, March 2, 2009, 123(3); e376-385. http://pediatrics.aappublications.org/cgi/content/abstract/123/3/e376

health departments through funding and technical assistance to eliminate elevated blood lead levels in children.

Between 2000 and 2003, the District of Columbia (D.C.) detected very high lead concentrations in its drinking water. Upon learning of this in February, 2004, CDC immediately began working with the D.C. Department of Health to ensure that the public was alerted to this exposure and that alternative sources of drinking water were made available. Within six weeks, CDC analyzed all available surveillance data, and, in April 2004, reported in the CDC publication, the Morbidity and Mortality Weekly Report (MMWR)[3], that between 2000 and 2003, lead in tap water contributed to a small increase in blood lead (BPb) levels in D.C. among those living in homes with lead water service lines. The report also advised that there is no safe level of exposure to lead and all sources of lead exposure should be eliminated.

Concerns have been raised over whether the MMWR report accurately characterized the impact of lead in water on blood lead levels. We take those concerns seriously. Over the past 8 months, we have taken a number of additional steps to improve our understanding of the impact of elevated lead levels in tap water on the levels of lead in the blood of D.C. residents. Today I can report to you that, as a result of a more comprehensive analysis, we have concluded that CDC's initial reports did not understate the magnitude of the problem.[4]

[3] Stokes L, Onwuche NC, Thomas P, et al., Blood Lead Levels in Residents of Homes with Elevated Lead in Tap Water – District of Columbia, 2004; MMWR Weekly, April 2, 2004, 53(12); 268-270.

[4] CDC's reanalysis is available at: http://www.cdc.gov/nceh/lead/leadinwater/

Since the initial analyses attracted much interest, I would like to provide a little more detail about our reanalysis here. CDC conducted a more intensive data recovery and reanalysis because data reported in the 2004 MMWR did not include a substantial number of test results from blood specimens collected in 2003. Scientists outside CDC, lead poisoning prevention advocates, and Members of Congress have raised concerns that the missing test results might have resulted in an underestimation of the effect that elevated drinking water lead levels had on blood lead levels. To evaluate this potential bias, CDC recently collected all known 2003 blood lead test results and compared them to the subset of tests included in the MMWR article. This reanalysis was peer reviewed by experts from outside of CDC.

CDC received 2003 blood lead test results from D.C. on three occasions. In March 2004, CDC received 9,765 test results from surveillance data and included these in the analysis for the MMWR article. An additional 1,753 tests from 2003 surveillance data (that had not been received previously) were reported by July 2006. In the fall of 2009, CDC received 21,324 test results reported by the laboratories that ran tests for D.C. children. Of these tests, 7,701 had been reported previously as surveillance data, while 12,168 tests had not been previously reported to CDC. Of these, 1,455 were not included in analyses because they were either duplicates, not from 2003, or not from a D.C. address.

CDC found that the percent of 2003 blood lead tests that were elevated were actually lower when using all known 2003 blood lead tests compared to the subset of tests used previously in the 2004 MMWR article. The only variable that systemically predicted whether or not a test had been reported as part of the DC surveillance datasets was the reporting laboratory processing the test. Previously missing but now-available 2003 data did not cause an underestimation for 2003 of the association between elevated blood lead levels and lead water service lines.

Nonetheless, CDC recognizes the importance of better understanding the contribution of lead in water to blood lead in children. CDC recently completed an epidemiological study, and the preliminary results suggest a relationship between partial replacement of lead water service lines and elevated blood lead levels in children. That is, when public water service lines are replaced but the portion of the service lines belonging to the homeowner are not, the preliminary results suggest that blood lead levels increase, at least for some period of time. Due to the significance of the preliminary findings, even though publication of the study results was still pending, on January 5, 2010, CDC sent letters to lead program grantees (state and local departments of health) and water departments across the Country, and posted this information on our website.[5]

In the wake of the MMWR article we have learned a great deal about how we work with state and local governments to gather surveillance data, how we communicate our findings, and how we ensure appropriate response when questions are raised about the

[5] http://www.cdc.gov/nceh/lead/waterlines.htm

quality of our science. We are applying these lessons to our ongoing work in NCEH and ATSDR, and we have new organizational structures and leadership in place across CDC to help ensure that appropriate steps are taken.

ATSDR Evaluation of Potential Human Health Hazards on Vieques

In 1999 ATSDR received a petition from a resident of Vieques, who was concerned about potential health effects related to the Navy bombing range and other military training activities. ATSDR has worked extensively on the island to evaluate the extent of exposures to hazardous substances, and potential health effects. As part of this work, ATSDR used available data collected from the Commonwealth of Puerto Rico, the U.S. Environmental Protection Agency, the U.S. Navy, and published scientific reports, as well as gathering additional data to supplement areas where needed. ATSDR also convened expert scientific panels to gather more information on specific areas. From 2001 to 2006, ATSDR published four public health assessments, as well as reports on several specific topics of health concern to the community. In general, these reports found that residents of Vieques had likely been exposed to contaminants. However, the levels of exposure were sufficiently low that the available scientific methods could not establish a link to negative health effects. Notwithstanding, ATSDR could not say with certainty that the low level of exposure did not cause harmful effects in some people.

In 2009, ATSDR pledged to take a fresh look at the island of Vieques in response to members of Congress, who expressed concerns voiced by the community. ATSDR outlined an aggressive course of action to thoroughly review its previous work on the

island and to gather any new scientific data that has become available. In August 2009, ATSDR leadership and staff visited the island and met with representatives of EPA, the Puerto Rico Environmental Quality Board, the Puerto Rico Department of Health, and the Puerto Rico Cancer Registry to determine what additional information was available. We also met with elected officials, health officials, and members of the community on Vieques to better understand community concerns related to health and the environment.

Since then, ATSDR has convened a face-to-face scientific consultation with independent scientists who have conducted research work related to health and environmental issues on Vieques. The consultation included scientists from Puerto Rico as well as from academic institutions on the mainland, and focused on the strengths and weaknesses of many environmental health studies conducted in Vieques. ATSDR is currently in the final stages of completing a draft report—*A Fresh Look at Environmental, Biological, and Health Data from the Island of Vieques, Puerto Rico*—which will be submitted for external peer review. Once the peer review and clearance processes have been completed, ATSDR will release the document for public comment.

Conclusion

NCEH and ATSDR work to address environmental public health concerns, including the needs and concerns raised by communities. Although we have assembled a strong record of accomplishment—protecting health near hazardous waste sites, advancing science through our health studies and the work of the environmental health laboratory,

and educating health professionals and the public-- NCEH and ATSDR constantly seek to strengthen our ability to prevent harmful exposures and protect the public.

For example, ATSDR reviews and updates health assessments based upon significant additional data that it obtains, and based on advancements in scientific knowledge. At Camp Lejeune, North Carolina, ATSDR has been gathering data, refining methods, and amending findings as additional information has come to light. I appreciate the Committee Members' interest in ATSDR's work at Camp Lejeune, and support in responding to the concerns of the service men and women who served there. We look forward to working with you in the future as ATSDR continues to work at Camp Lejeune and at other sites across the Country.

ATSDR also seeks to maximize the effectiveness of our internal processes and appreciate the recommendations from GAO for improving processes at ATSDR.

I am committed to applying my 19 years of experience at CDC, and in particular my service as Associate Director for Science in different parts of the Agency, to guide and contribute to this ongoing improvement in our work, and look forward to working with the new Director of NCEH/ATSDR to achieve the goal of protecting the public from dangerous environmental chemical exposures.

Thank you Mr. Chairman and Members of the Subcommittee for the opportunity to testify before you today.