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Speeches And Congressional Testimony

Testimony of

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Good morning, Mister Chairman and Members of the Committee. I am Dr. Thomas Sinks of the Centers for Disease Control and Prevention (CDC) where I am the Associate Director for Science within the National Center for Environmental Health. I am pleased to review CDC's assistance to the Nevada State Health Division's investigation of acute lymphoblastic leukemia (ALL) in Fallon, Nevada. I will discuss how CDC provides the technical assistance and infrastructure in responding to disease investigations, and briefly characterize cancer clusters, the roles of state and federal agencies in investigating them, and coordination between agencies.

I want to begin by assuring the parents of Fallon, and all parents whose children are diagnosed with cancer, that we at CDC are deeply concerned about the health and well being of children. We are encouraged by the wonderful improvements in the clinical treatment of ALL - today 80% of children with ALL will have healthy and productive lives. However, we need to identify the causes of ALL to prevent it and decrease the number of children who suffer from it.

State health departments are on the front line in responding to cancer clusters and other disease clusters, and the CDC plays an important role in providing infrastructure and technical assistance. CDC has a close relationship with our sister

agency ATSDR (the Agency for Toxic Substances and Disease Registry) and we coordinate our response to cancer and disease cluster inquiries. Cancer and disease cluster activities at CDC have included field investigations, convening a national conference on the clustering of health events, publishing recommendations for the epidemiologic investigation of disease clusters, and providing technical assistance to health departments involved in specific cluster investigations.

Last month CDC released the first National Report on Human Exposure to Environmental Chemicals, an important new research tool that will provide better information on levels of exposure to environmental chemicals, and over time what these levels mean for public health. Using a technology known as biomonitoring, CDC's environmental health laboratory measures chemicals directly in blood and urine samples rather than estimating population exposure using measurements from air, water or soil samples. By showing what the U.S. population is exposed to under "normal conditions," the report can become a vital tool for epidemiologists to compare blood and urine levels of chemicals in suspected disease cluster areas to the baseline exposure data for the general population. We will be using this same type of biomonitoring technology to assist the Nevada State Health Department in investigating these cases of ALL. We are working to be able to transfer this technology to state public health laboratories so that they can do their own biomonitoring of chemical exposures.

TECHNICAL ASSISTANCE TO NEVADA

CDC has worked with the Nevada Health Division since July 2000, providing technical assistance in each phase of the investigation. CDC helped plan, and participated on, the expert panel review last February 15th. The panel commended the Nevada Health Division's work and recommended six follow-up steps; four of which involve active assistance from CDC and ATSDR. I recently met with CDC and ATSDR staff to coordinate our agencies' assistance to the state. CDC and ATSDR will help the state complete: 1) a cross-sectional exposure assessment of environmental contaminants in drinking water, house dust, and the blood and urine of county residents, 2) an assessment of environmental contaminants and possible pathways leading to human exposure, 3) the establishment of a tissue bank for future research into the causes of ALL, and 4) the continuation of the expert panel to provide independent review of the investigation.

CANCER CLUSTERS

Cancer clusters provide opportunities as well as challenges for public health agencies. The phrase "cancer cluster" implies

that more cancer cases or cancer deaths have occurred in a specific geographic region than expected. A cancer excess may, or may not, be the result of an exposure to a unique carcinogen.

Public health agencies are challenged by cancer clusters because of the number of public inquiries--probably thousands of perceived cancer clusters have been reported. For example, more than 2000 published newspaper articles from January 1990 to January 2000 contained the words "cancer cluster." A survey of 41 state health departments found they registered about 1900 cancer inquiries in 1996 alone. An additional challenge is the unrealistic expectation placed upon public health officials to identify and remove the cause of each cancer cluster. In reality, 85 to 90% of evaluated cancer cluster inquiries do not find an excess number of cancer cases. Although 10 to 15% of cancer clusters have involved an excess in cancer cases, only a handful led to important discoveries of preventable causes of cancer.

Cancer clusters can provide an opportunity for cancer prevention and control. Cancer education and screening programs are important tools in the fight to prevent and control cancer and can be used effectively in some cancer cluster circumstances. Scientific investigations of cancer clusters and local environmental concerns, however, may take years to complete and the findings are often inconclusive. If a cancer cluster and hazardous levels of an environmental contaminant coexist, removal of the health hazard seems prudent, regardless of its role in causing cancer.

CDC AND STATE ROLES IN RESPONDING TO CANCER CLUSTERS

At CDC, three centers are involved in responding to cancer clusters. Our National Center for Chronic Disease Prevention and Health Promotion supports statewide, population-based cancer registries through the National Program of Cancer Registries (NPCR.) Cancer registries and their use to identify and monitor cancer trends are an essential tool for evaluating cluster inquiries. The Nevada Cancer Registry (NCR) received more than $1,480,000 from CDC's NPCR from1994 through 2000 to track cancers including ALL. CDC's National Center for Environmental Health conducts exposure assessments and epidemiologic studies that evaluate how people are exposed to environmental hazards and identify preventable environmental causes of cancer. The CDC's environmental health laboratory measures known and suspected cancer causing agents in human blood and urine. CDC's National Institute for Occupational Safety and Health (NIOSH) addresses exposures to cancer causing agents in the workplace by conducting

to cancer causing agents in the workplace by conducting laboratory science and epidemiological investigations in fields like toxicology and immunology. NIOSH also responds to requests from employers, employees, and other government agencies for investigations involving possible work-related cancer. Finally, CDC's sister agency ATSDR plays a critical role in responding to clusters as you will hear from ATSDR Assistant Administrator, Dr. Henry Falk.

ENHANCING CANCER CLUSTER EVALUATIONS

Three key ingredients needed for an adequate response to public concerns about cancer clusters are sufficient infrastructure, assurance of scientific credibility, and coordination between agencies. State infrastructure requirements include cancer registration and tracking, cancer prevention and control, and a mechanism for rapidly identifying hazardous levels of environmental contaminants; recommendations supported by The Pew Environmental Health Commission. A significant advance in children's cancer surveillance is taking place with the consolidation of pediatric cancer specialists within the Children's Oncology Group with funding from the National Cancer Institute. Scientific credibility requires that experts from many fields work together. Independent review by expert panels also ensures the credibility of state investigations. Scientific credibility could be further enhanced by developing investigative priorities from hypotheses for why certain cancers might cluster. A work group to establish such investigative priorities is needed.

Coordination between agencies is essential. The successful collaboration in Fallon, Nevada involves multiple departments within the state, the federal government, and academic institutions. Agencies involved from the Department of Health and Human Services include not only CDC, but also ATSDR and the National Cancer Institute. Representatives of the Fallon Naval Air Station have also volunteered their complete cooperation in the investigation.

CDC is currently in the process of assessing the nation's public health infrastructure and its needs. CDC has convened an agency-wide workgroup, along with ATSDR, to review and respond to the Pew Environmental Health Commission Report. This report recommends the strengthening of federal, state and local public health capacity to tackle environmental health problems and establish a Nationwide Health Tracking Network to identify and track chronic disease and potential environmental factors. CDC is working to establish a nationwide laboratory network to assist communities in

evaluating toxic emergencies and human chemical exposure. This will help communities monitor disease trends and evaluate whether these are linked to exposures in the environment. In addition, CDC has recently released a report focusing on a broader perspective of the current status of public health infrastructure. The report is entitled Public Health's Infrastructure: Every health department fully prepared; every community better protected, and is available on CDC's website. Assessment of the nation's public health infrastructure will help us to determine how to best target resources to build capacity at the state and local level, and will enhance our ability to interact with communities to address their local public health needs.

I applaud the people of Fallon for their positive response during this stressful time. Strong communities are strengthened by people drawing together to help one another through difficulty. I assure you that the CDC will continue to collaborate with our federal partners and assist the state of Nevada. Thank you, Mister Chairman and members of the Committee, for the opportunity to testify before you today. I would be happy to answer any questions you might have.

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