Alaska_Environmental Health

Environmental Health

The Fellow will be assigned to the Section of Epidemiology within the Alaska Division of Public Health, Department of Health and Social Services. The Alaska Section of Epidemiology protects and promotes the health of all Alaskans by preventing infectious diseases and reducing environmental health threats. We fulfill that mission by conducting disease surveillance, by performing disease outbreaks investigations and epidemiological analyses, and by developing and promoting measures and policies to reduce the health risk of infectious diseases and environmental toxicants. More information about the Section of Epidemiology can be found at http://www.epi.hss.state.ak.us

The Fellow will work mainly within the Section of Epidemiology's Environmental Public Health Program (EPHP). Staff from this program evaluate and minimize public health impacts associated with exposure to environmental contaminants in Alaska. The fellow will also participate in the Section of Epidemiology's Outbreak Response program and Emergency Preparedness program. These three programs encompass a broad range of public health practice that includes outbreak investigation, surveillance, emergency response planning, data analysis, public health research, and working with interdisciplinary teams. The Fellow will be able to choose from the following options, participating in those that meet their interests.

- A state-funded human biomonitoring program directly measures contaminant exposures in Alaskans. This includes a Statewide Hair Mercury Biomonitoring program to measure mercury exposures in women of childbearing age (mainly from fish consumption), and targeted biomonitoring activities in communities at high risk.
- A federally-funded Adult Blood Lead Epidemiology and Surveillance program monitors occupational and non-occupational sources of lead exposure. Follow-ups are conducted for cases of elevated blood leads, to ascertain and control the lead exposure source.
- Fish consumption advice is developed and disseminated. In a collaborative effort, contaminant data from the Alaska Department of Environmental Conservation's Fish Monitoring Program is shared with the EPHP for public health interpretation.
- Subsistence food safety is evaluated, assessing both the risks of contaminant exposures and the nutritional, cultural and other benefits of these foods, to develop balanced consumption advice.
- A federally-funded program assesses the public health implications of contaminated sites.
- Response to a wide variety of environmental health-related questions and concerns posed by the public.
- Outbreaks of foodborne illness are investigated. From 2000 to 2005, the Section of Epidemiology investigated an average of eight foodborne outbreaks per year, many of which occurred in remote rural villages. Nineteen of these outbreaks were caused by Botulinum toxin, and five were caused by paralytic shellfish poisoning.

- Emergency Preparedness and Response. The EPHP collaborates with chemists at the State Public Health Laboratory to perform chemical terrorism preparedness activities. This includes development and maintenance of a response plan, frequent interaction with hospitals, Hazmat teams, poison control centers and other partners, and participation in training and exercises.

As resources permit, the EPHP also engages in public health research activities to address Alaska-specific environmental health issues. Some potential topics of inquiry the Fellow could pursue include:

- Arsenic exposures among private well users in Alaska, as measured from arsenic concentrations in residential tap water and in urine.
- Cadmium exposures and toxicity biomarkers among consumers of marine mammal organs, to help answer questions about whether these foods are safe to eat.
- Many Alaska Native villages have a perception that cancer rates are very high in their communities. Opportunities continually arise to investigate perceived clusters of cancer or other chronic illnesses in Alaskan communities.

There are many sources of data, either within the Division of Public Health or among our collaborators, to support the needs of the Fellow depending on their areas of interest. These include databases for morbidity, blood lead, Medicaid, hospital discharge, vital statistics, and contaminants in fish, registries for cancer, birth defects, trauma, and firearm injuries, and collaborative opportunities with our poison control center, NIOSH, or environmental health programs of the Municipality of Anchorage or the Alaska Native Tribal Health Consortium.

This fellowship presents an opportunity to learn and apply epidemiologic skills in a unique environment. Alaska has a small population, and each governmental program is responsible for delivering a wide variety of services using a small number of staff. This fellow will not be pigeon-holed into a single function, but instead will be given an opportunity to try on quite a few hats. When the fellow finds a topic they are keenly interested in, they will then have the opportunity to take the reins of that project within EPHP. The fellowship provides the opportunity for adventurous travel to remote Alaska Native villages, and profound intercultural experiences.

Assignment Location:	**Anchorage, Alaska**
Primary Mentor:	Lori Verbrugge, Ph.D. Environmental Public Health Program Manager
Advanced Degrees:	PhD, Michigan State University (1997) MS, Michigan State University (1994)
Secondary Mentor:	Joe McLaughlin, MD, MPH

	State Epidemiologist and Chief, Section of Epidemiology
Advanced Degrees:	MD, University of Minnesota (1999) MPH, Tulane (2001)