

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), which evaluates and minimizes public health impacts associated with exposure to environmental contaminants in Alaska. The Fellow will play a lead role in EPHP's efforts to reduce exposures to the toxic elements lead and mercury, through surveillance, case investigation, health education, outreach to the public and health care providers, data analysis, and public health research. The Fellow will gain experience managing a public health program, and will frequently work in interdisciplinary teams. The fellow will also be given an opportunity to participate in an infectious disease outbreak response and an emergency preparedness activity, in order to receive a well-rounded, broad-based training experience in the field of epidemiology. More information about EPHP can be found at <http://www.epi.hss.state.ak.us/eh/default.stm>

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.

Day-to-Day Activities:

Day-to-day activities of the Fellow will be somewhat dependent on the projects he/she chooses to focus on. The following are the day-to-day activities of similar Fellows who have worked for EPHP in the present or past:

- Perform case follow-up for individuals with elevated blood lead or hair mercury test results, to determine and mitigate the source of exposure;
- Perform outreach with the public and with health care providers, to increase participation in blood lead and hair mercury testing;
- Deliver oral presentations about lead and mercury exposure reduction to diverse types of audiences;
- Travel to villages throughout Alaska to conduct targeted biomonitoring investigations;

- Analyze biomonitoring data from statewide programs and/or targeted investigations, and prepare publications such as Epidemiology Bulletins and/or peer-reviewed journal articles;
- Evaluate a public health surveillance system; develop recommendations and implement strategies for improvement;
- Perform a health needs assessment to identify risk factors for environmental exposures and/or identify health service gaps in Alaskan communities.

Potential Projects:

The Fellow will lead at least one of the following EPHP projects:

1. 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.
2. 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. Funds are also available to conduct targeted blood lead screening activities in children from Alaskan villages, and analyze the data to identify important risk factors for lead exposure. Data from these studies will influence future blood lead screening policies in Alaska. Both of these programs are surveillance systems and have an associated database, so there is ample opportunity for data analysis and surveillance system evaluation.

Emergency Preparedness Role:

The Alaska Division of Public Health is involved in all-hazards emergency preparedness and response. The Fellow will have opportunities to participate in emergency response activities as they arise. For example, the Fellow could work shifts at the Emergency Operations Center (EOC) if it is active. Currently, public health's EOC is activated to respond to the H1N1 influenza outbreak. More information about Alaska's public health preparedness program is available at <http://www.hss.state.ak.us/prepared/>. 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. The Fellow will have an opportunity to participate in these activities.

Assignment Location: Anchorage, AK

Primary Mentor: Lori Verbrugge, PhD, MS
Environmental Public Health Program Manager
State of Alaska DHSS, Division of Public Health

Secondary Mentor:

Nim Ha, MPH

Environmental Health Educator

State of Alaska DHSS, Division of Public Health