

Environmental Health

Assignment Description

The CSTE fellow would have the opportunity to participate in several different projects in the Alaska Department of Health and Social Services, Environmental Public Health Program and the Health Impact Assessment (HIA) Program. Both programs provide an exciting look into how human health is addressed within Alaska's unique environmental, cultural, social, and public health context.

The Environmental Public Health Program is tasked with evaluating exposures and potential health risks from environmental contaminants in the state. In partial fulfillment of this task, the program maintains two key environmental health surveillance systems: Hair Mercury Biomonitoring and Blood Lead Surveillance. These systems require strong working relationships with a variety of public health partners, including local, federal, state, and tribal health organizations. The fellow would coordinate aspects of the evaluation and continual implementation of these systems. Additionally, the program plans to expand heavy metal surveillance to include arsenic, cadmium, and cobalt. The program also intends to intensify its fish consumption rate surveillance and mercury exposure assessment efforts in the coming years. The fellow will have the opportunity to be heavily involved in the design and implementation of these programs.

HIA is a tool used to predict the human health effects of development projects, public policies, or new public programs. HIA has been practiced internationally for decades, but is a quickly growing field in the United States. Alaska has established one of the first institutionalized HIA programs in the country, which offers the CSTE fellow the opportunity to help further develop the HIA program. The fellow would be involved in several high profile and engaging HIAs for major projects in Alaska related to mining or oil and gas development.

Day-to-Day Activities

A portion of each day will be spent in project planning and reviewing project progress with the primary mentor. The fellow can expect to be involved with arranging and coordinating field studies in rural and urban locations, as needed for both the EPHP and HIA Programs. The fellow can also expect to be involved in exposure investigations, community outreach activities and toxicology risk assessment for the Environmental Public Health Program. The fellow will be critical to expanding the EPHP efforts to collect hair samples from women statewide, collecting information on fish consumption in the state, and disseminating fish consumption guidelines information to Alaskans through social media and other suitable methods. The fellow will have the opportunity to evaluate the Hair Mercury Biomonitoring Program or the Lead Surveillance system, and will become familiar with the associated databases, interpret laboratory results, and communicate data results via written reports and oral presentations.

The fellow will also spend a portion of each day interacting with HIA Program partners in various local, federal, state, and tribal health organizations. As part of HIA program activities, the fellow will be involved in developing an approach to gathering and analyzing health surveillance data from a variety of state and tribal sources.

Potential Projects

1. Managing the state's human Biomonitoring programs: The fellow will follow up with individuals who have hair, blood, or urine contaminant levels of concern in Alaska. The fellow will be responsible for expanding Biomonitoring efforts and disseminating the state's fish consumption guidelines and assessing the public's understanding of these guidelines.
2. Surveillance system evaluation: The fellow will have the opportunity to evaluate one or both of the Biomonitoring surveillance systems, as well as helping to expand the heavy metal surveillance efforts.
3. Project specific surveillance data analysis: Health data are collected and then summarized regionally in Alaska. This is often not relevant to the specific data needs for an HIA. The fellow would be given the opportunity to reorganize and reanalyze the data so that it provides useful information for the HIA Program.
4. Analysis of field survey information: The HIA Program routinely conducts nutritional surveys related to subsistence foods consumed by Alaska Natives and others in rural Alaska. The Program also routinely collects health data to fill specific data gaps related to an HIA. This often occurs in conjunction with sampling for various biomarkers of toxic substances. The fellow would be involved with field study coordination and data collection. Alaska provides unique field experiences because studies are typically conducted in extremely isolated communities only accessible by small plane. The fellow would also analyze and report the data to appropriate stakeholders and ensure its integration into the HIA.

Preparedness Role

The fellow would have access to emergency preparedness personnel in the Division of Public Health, as well as access to emergency preparedness related to sensitive development projects in the state. The fellow would have the opportunity to become involved with the Emergency Preparedness Workgroup within the Section of Epidemiology.

Assignment Location: State of Alaska, Department of Health and Social Services,
Division of Public Health
Anchorage, AK

Primary Mentor: Ali Hamade, PhD, DABT
Health Program Manager III

Secondary Mentor: Paul Anderson, MD, MPH
Staff Physician