

Infectious Diseases/ Environmental Health

Assignment Description

The Clark County Department of Public Health offers a broad experience in applied epidemiology with emphasis in Environmental Health and Communicable Diseases. The Fellow will have the opportunity to develop comprehensive skills through participation in investigative fieldwork, program design, implementation and evaluation, statistical analysis and interdisciplinary teamwork.

Day-to-Day Activities

Day-to-day activities will be dictated by the Fellow's goals and interests and will be a mix of long and short-term projects. The Fellow will work closely with the Communicable Disease Unit which investigates notifiable conditions in Clark County as well as the Environmental Public Health Program, which oversees water systems, hazardous waste, septic systems, and food establishments. As Clark County Public Health wants to give the Fellow experience in the full breadth of public health at the local level, the Fellow will be included on many agency teams and committees according to the Fellow's interests and agency needs.

Daily activities, particularly early in the Fellowship, will be related to notifiable disease surveillance, influenza surveillance, outbreak investigations, the Fellow's surveillance evaluation, and the Fellow's major project. The Fellow will have the opportunity to conduct patient interviews during routine surveillance of notifiable conditions as well as during outbreaks. With progressive gains in expertise, the Fellow will be encouraged to identify additional projects of interest. The Fellow will be immersed into the daily activities of Clark County Public Health including serving on multiple decision-making committees. The Fellow will be a member of the Clark County Public Health Assessment and Evaluation team and will work with the Health Officer and Emergency Preparedness and Response staff in developing the Health Department's capacity to detect and respond to bio-terrorism and other mass disasters. Under the supervision of the Health Officer and Clark County Public Health epidemiologists, the Fellow will participate in the development of geographic information system tools that will enable health department and community partners to assess health issues at the neighborhood level. Activities will include collaboration with other local health departments throughout

Southwest Washington and the Portland metropolitan area, the Washington Department of Health and other local and state agencies and research institutions involved in the monitoring and control of infectious diseases and environmental health hazards.

Potential Projects

The Fellow will have significant flexibility and numerous opportunities to fulfill fellowship core competencies. The following list of potential projects, which are designed to provide maximum rigor and breadth of training, also allow significant flexibility to accommodate the specific interests and talents of the fellow:

- A. **Outbreak Investigations** – Participate in local outbreak investigations; design questionnaires, databases and data collection tools, conduct interviews, analyze data; write reports and present results at local and regional meetings.
- B. **Environmental Health** – Work with county, regional and state interdisciplinary teams to improve tracking, storing and integrating electronic information about environmental hazards, exposures and health outcomes; assist with site hazard assessments. For example, a previous CSTE Fellow generated maps of predicted ground water arsenic concentrations.
- C. **Data Analysis/Geographic Information Systems** – The Fellow will advance the work done by previous CSTE Fellows in developing a County Public Health Geographic Information System application capable of depicting a variety of health indicators at the neighborhood level. Vital statistics data, infectious disease data and environmental health data will be available for analysis. In addition, the Fellow will have an opportunity to participate in a funded multisite (Seattle, Olympia and Vancouver) randomized clinical trial adding a contraceptive dispensing component to a public health home visiting program(the primary mentor is Principal Investigator). A previous CSTE Fellow generated local maps of obesity using driver's license data with the intent of investigating the social, behavioral and environmental determinants of obesity. The Fellow will have the opportunity to supplement this system with disease surveillance data and data from other county sources.
- D. **Health Data** - The Fellow will evaluate local health databases and make recommendations for improvement, provide staff training to enhance quality, collection procedures, comprehensiveness and ease of georeferencing/linking data. In addition, the Fellow will assist with health research using inferential and spatial statistics and prepare reports and graphical presentations for public and professional meetings.
- E. **County Health Element** - When the new Fellow arrives, Clark County Public Health will have completed the Health Element for the Clark County comprehensive plan. The Health Element describes the ways the built environment influences health, assesses existing conditions, examines current plans and regulations as they relate to health, and identifies policies and strategies for growing healthier over the next 20 years, along with performance measures to track progress. The Fellow can play a key role in monitoring how well health considerations are included in the comprehensive plan and will also help Clark County Public Health evaluate health outcomes related to implementation of specific recommendations.
- F. **Community Transformation Grant** - Clark County Public Health, along with 10 other Washington counties and in partnership with the Washington Department of Health, is a recipient of one of the Community Transformation Grants. Clark County Public Health will serve as one of the five Community Health hubs. The Fellow will have an opportunity to participate in project activities focused on four strategic directions—Tobacco-free Living, Active Living and Healthy Eating, High Impact Quality Clinical Preventive Services and Healthy and Safe Physical Environments.

- G. **Research** - Currently Clark County Public Health has a three-year, Sodium Reduction in Communities grant from the Centers for Disease Control and Prevention which the Fellow will have opportunities to work on. Previous fellows have done original research comparing disease surveillance systems, using cross-disciplinary methods to model STD incidence, and evaluated novel methods of tuberculosis DOT. We anticipate continuing to submit research proposals related to our work on environmental and social determinants of health, and we anticipate involving the Fellow in project activities.

Preparedness Role

The Fellow will have the opportunity to be a member of the Clark County Public Health Incident Management Team (IMT) and will assist with an assessment of health department emergency preparedness policies, procedures and implementation efforts and participate in local, regional and state emergency response activities, exercises and drills. Clark County PH will arrange training for the Fellow is ICS 300 and ICS 400.

The primary mentor collaborates with the Portland metro area Health Preparedness Organization Steering Committee and is a member of the Washington Region IV Governing Council (The Council oversees public health preparedness planning efforts in Clark, Skamania, Cowlitz and Wahkiakum Counties in SW Washington) and the Portland Urban Areas Security Initiative (UASI). The primary mentor is the Health Officer for all counties in Region IV. The primary and secondary mentors are integrated into the command staff during incidents, and will involve the Fellow in response activities.

Assignment Location: Clark County Public Health
Vancouver, Washington

Primary Mentor: Alan Melnick, MD, MPH
Director of Public Health

Secondary Mentor: Catherine Kroll, MPH
Communicable Disease Control Program Manager