Chronic Disease

Assignment Description

The Fellow will primarily work in the Bureau of Health Promotion on chronic disease epidemiology projects. In addition, the Fellow will have the opportunity to conduct projects in other topical areas, including injury, communicable diseases, environmental epidemiology, and public health assessment, to compliment the chronic disease experience according to the interest of the Fellow. The Fellow will receive primary supervision from Dr. Herlihy and Mr. Friedrichs, but also receive specific project supervision from several other epidemiologists. Chronic disease surveillance depends on secondary analysis of data such as vital statistics, hospital discharge, and Behavioral Risk Factor Surveillance System data. The Utah Center for Health Data has developed a national model system (IBIS-PH) which enables easy access to those data. One aspect of the Fellow's assignment will be to help improve that system.

Day-to- Day Activities

The Fellow will work closely with chronic disease program staff and managers to evaluate and improve surveillance, identify and define important chronic disease epidemiology questions, and conduct analyses of data to support chronic disease program needs.

Potential Projects

1) It has been observed that the incidence of various types of cancer is variable from community to community in Utah. Similarly, certain cancer screening activities appear to be more common in certain areas of the state. The Fellow would have the opportunity to explore various data sources, including cancer registries, BRFSS, death certificate, and hospital discharge data, to identify geographic trends in cancer incidence and cancer screening in the state, and to measure population level associations between screening activities and cancer incidence, stage at time of diagnosis, and outcomes.

2) UDOH and clinical partners in the state have recognized that an unusually high proportion of fatal stroke cases in the case occur in the pre-hospital environment. Further investigation of this public health problem is important and possible with the linkage of existing data sources, including emergency room and hospital discharge databases, the Medical Examiner’s database, death certificate, and pre-hospital EMS data systems. The Fellow would have an opportunity to conduct a descriptive, hypothesis generating analysis of the deaths from the link data sources.

3) UDOH is partnering with the University of Utah Center for Excellence in Public Health Informatics to improve web-based tools for visualization and analysis of public health data. This will result in an improved Indicator-based Information System (IBIS-PH) community health assessment system. The Fellow will have the opportunity to evaluate the current system's ability to support chronic disease surveillance and epidemiology and guide improvements to better support those needs.

4) Utah has been awarded the Beacon Community grant to demonstrate how to use Electronic Health Records and clinical information exchange to improve healthcare, specifically diabetes

care. The Bureau of Health Promotion is a member of the Utah Beacon Community, which include HealthInsight, Utah Health Information Network, Intermountain Healthcare, and University of Utah Health Science Center. The Fellow will have the opportunity to participate in the diabetes care improvement project and translate best practices in diabetes care improvement to other disease areas.

5) Childhood fatality surveillance in Utah involves a number of data collection systems including birth and death certificate data, hospital discharge data, emergency department data, and police and medical examiner reports. The Fellow would have an opportunity to explore these data collection systems to gain a comprehensive understanding of childhood fatality in Utah and make recommendations on how to improve surveillance.

6) BRFSS data has been under-utilized in Utah for surveillance on certain conditions including substance abuse and HIV. In addition, Utah has recently begun using the Adverse Childhood Experiences module of BRFSS. The fellow would have opportunities for data analysis in these areas.

Preparedness Role

The State Epidemiologist and Deputy State Epidemiologist are both heavily involved in Public Health Emergency Preparedness. In addition to hostile threats, such as bioterrorism, Utah is required to respond to a number of natural or accidental emergencies. A recent example was an oil spill into Red Butte Creek with flows through several neighborhoods in the center of Salt Lake City. EEP has been working with the Local Health Department in assessing risk to the exposed population and in risk communication to the affected community. All epidemiology programs within the department are required to support these kinds of activities.

The Fellow would have opportunity to cross-train with communicable disease, injury, occupational and environmental epidemiologists in response to emergency or high impact response events (e.g., pandemic influenza, earthquake, refugee management, etc.) The Fellow would also have the opportunity to evaluate and help improve current operating procedures for data collection and analysis and activating emergency response services. In addition, the Fellow would be an active participant in a FEMA sponsored full-scale catastrophic earthquake response activity scheduled to take place in Utah in the spring of 2012.

Assignment Location:	Salt Lake City, Utah
Primary Mentor:	Rachel Herlihy, MD, MPH Deputy State Epidemiologist Utah Department of Health
Secondary Mentor:	Michael Friedrich, MS Lead Chronic Disease Epidemiologist Utah Department of Health