Infectious Diseases
Allegheny County Health Department, Bureau of Assessment, Statistics, and Epidemiology
Pittsburgh, Pennsylvania

Assignment Description
The Fellow will be assigned to the Bureau of Assessment, Statistics, and Epidemiology (BASE) and will work as part of the epidemiology team. BASE is responsible for collecting, analyzing, and interpreting data that provides actionable information on a variety of conditions of public health importance and on the health status of County residents. The Epidemiology program works closely with ACHD's Infectious Diseases program and conducts disease surveillance, investigates disease outbreaks, and initiates disease control activities.

The focus of the Fellow's work will be assessing risk factors for hepatitis B and C and evaluating our Lyme disease surveillance system. The Fellow will be involved in investigations of disease outbreaks as they arise. The Department will provide all necessary resources and supervision, access to data, introductions to community partners, and opportunities for professional development.

Day-to-Day Activities
Every day may be different. Analyses of a wide variety of data will involve working with many different persons at the health department and at other county and state agencies. Hepatitis risk factor analysis and Lyme disease surveillance system evaluation will involve discussions with health care providers, persons with hepatitis B and C and community based organizations. Outbreaks may be reported at any time. Preparedness for emerging diseases and other health hazards may also require the Fellow’s attention.
Potential Projects

Surveillance Evaluation of environmental surveillance for Legionella Activity
Allegheny County has a much higher incidence of Legionnaire’s Disease than the United States. Reasons for the high incidence are unclear. Most infections are community acquired, but we also see single cases and clusters acquired in health care facilities. The Fellow will assess both routine environmental testing and enhanced surveillance activities in response to cases in hospitals and long term care facilities.

Surveillance Evaluation of Lyme disease surveillance based on sampling methodology Evaluation
For the past several years, the health department has been receiving an increasing number of positive lab results for Lyme disease. From 2009-2013, no investigations of lab reports were done because of lack of resources. In 2014, providers of all reported cases were contacted and asked to provide the clinical information necessary to classify reports as confirmed, probable, or suspect cases. As a result, hundreds more confirmed cases were recorded. In 2015 we are investigating a random sample of the positive lab reports submitted and then extrapolating to estimate the total number of confirmed cases. The Fellow will evaluate the usefulness and accuracy of our sampling method for assessing the burden of Lyme disease in the county.

Major Project Risk factors for hepatitis B and hepatitis C in Allegheny County, PA
The Fellow will analyze surveillance data on all acute and chronic hepatitis B and hepatitis C cases. Characteristics of cases and risk factors will be described. More in-depth investigations will be conducted as needed to pinpoint any ongoing sources of infection. Access to care and completion of treatment will also be assessed for hepatitis C patients.

Additional Investigation of clusters of health-care associated infections (HAIs) Project
During the past year, ACHD has been involved in investigations of several HAI clusters, including multiple cases of Legionnaire’s disease in a nursing home, fungal infections in transplant patients, and MRSA infections in an outpatient clinic. The Fellow will have an opportunity to assist with and lead health-care related outbreak investigations.

Preparedness Role
Role of the Fellow in Emergency Preparedness (required competency of fellowship):
The fellow will attend monthly meetings of the ACHD Preparedness group and occasional meetings of the Region 13 Health and Medical Committee. The fellow will participate in training exercises as they arise. The fellow will participate in preparedness and response activities centered on emerging infections, such as novel influenza strains, MERS, and other newly identified agents.
**Additional Activities**

1) The fellow will be able to participate in all major outbreak investigations by conducting interviews, entering and analyzing data, and presenting results.

2) We are currently working on becoming an accredited health department, which has involved developing a Community Health Assessment and Improvement Plan. The fellow will be able to participate in activities focusing on the five priority areas outlined in the Plan.

**Mentors**

| Primary | Kristen Mertz, MD, MPH  
Medical Epidemiologist |
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| Secondary | LuAnn Brink, PhD, MPH  
Chief of Epidemiology |