

Infectious Disease

Assignment Description

This exciting opportunity will offer the Fellow an opportunity to work with the Division of Surveillance and Investigation within the Virginia Department of Health. Experienced mentors, the opportunity to work on a wide variety of communicable disease projects, collaboration with public health partners, and the flexibility to pursue projects of interest are strengths of a Fellowship with the Division. Several potential projects addressing Lyme Disease, school absenteeism surveillance, and meningococcal disease are also available for the Fellow to work on immediately. Overall, it is expected that the Fellow will acquire a range of practical public health skills and experiences useful in a wide variety of career paths. These activities may also lead to presentations, conference abstracts, and/or peer-reviewed publications. We expect that the Fellow will acquire a broad range of skills and experiences if an assignment is selected with the Division of Surveillance and Investigation at the Virginia Department of Health.

Day-to-Day Activities

The Fellow's day-to-day activities will involve active participation as a team member within the Division of Surveillance and Investigation (DSI). With support from VDH DSI staff, the Fellow will work on projects related to detecting, monitoring, and responding to communicable diseases of public health importance in Virginia. This may include collecting and analyzing epidemiologic data and reporting findings, working to improve syndromic surveillance systems, creating information for the public and healthcare providers, and giving presentations on public health topics. The Fellow will participate in weekly division staff meetings, where current outbreaks, investigations, and special projects are discussed. The Fellow will also participate in monthly statewide epidemiology conference calls, monthly journal club meetings, and semi-annual communicable disease training events.

Potential Projects

The Fellow will have substantial input in determining the projects that are pursued. Activities will include work on analytic projects, outbreak investigations, and planning and policy related activities. The Fellow will select one or more long-term projects to work on during the fellowship.

Examples that may be considered include: conducting a descriptive analysis of meningococcal meningitis data, reviewing multiple years of Virginia data and assessing factors such as age, fatality status, serogroup and seasonality; conducting quality assurance of incoming electronic laboratory reporting messages; and evaluating enteric disease clusters identified by the state laboratory through genetic testing.

In addition, DSI participates in a wide variety of statewide and national outbreak investigations each year. Through participation in the outbreaks, the Fellow would gain experience in all aspects of outbreak investigations, including formulating hypotheses, designing and administering questionnaires, entering and analyzing data, and generating reports. The Fellow will also work on program and surveillance system evaluations. One option would be to evaluate Lyme disease data reported from physicians and laboratories across the Commonwealth, assessing whether or not reported cases meet CDC surveillance case definitions, determining the percentage of cases that are missing follow-up information relevant to determining case status, and evaluating the Lyme disease surveillance system against CDC criteria of

timeliness, usefulness, etc. Information learned from the evaluation will be used to frame future Lyme disease policy guidance for local health districts. Another option would be to evaluate the current system for school absenteeism surveillance. The absenteeism surveillance system was implemented during the 2009 influenza pandemic. Absenteeism data reported from public schools are imported and evaluated in ESSENCE, Virginia's data management program for syndromic surveillance. The evaluation would focus on reviewing the usefulness, timeliness, and specificity of the data in the surveillance system.

Opportunities will also exist for the Fellow to work on projects with other divisions within the Office of Epidemiology. In the Division of Environmental Epidemiology (DEE) there are opportunities to work with staff on the surveillance and investigation of zoonotic diseases, including rabies and vector-borne diseases (e.g., West Nile virus). In addition, there are opportunities to work with the Division of Immunization on vaccine-preventable diseases, such as pertussis, measles, and mumps. Such opportunities will provide the Fellow with extensive practical experience and skills, a good understanding of the roles and responsibilities of state and local health departments, and access to significant projects related to the Fellow's interests and career goals.

Preparedness Role

The Office of Epidemiology plays a predominant role in emergency preparedness and response activities. Staff work closely with the VDH Office of Emergency Preparedness to conduct a wide range of activities, which the Fellow will have an opportunity to participate in, including: emergency preparedness exercises and drills, developing emergency response plans, creating educational resources and materials (e.g., fact sheets and provider guidance) for biological, chemical and radiological emergencies, and responding to public health emergencies. VDH DSI is also responsible for syndromic surveillance, an integral component of bioterrorism preparedness. Depending on the interests of the Fellow, there will be opportunities to evaluate syndromic surveillance data systems, participate in enhanced surveillance for special events, and participate on committees that develop statewide policy and procedures for enhanced surveillance.

Assignment Location: Richmond, Virginia

Primary Mentor: Katie Kurkjian, DVM, MPH
Career Epidemiology Field Officer
Virginia Department of Health

Secondary Mentor: Dianne Woolard, PhD, MPH
Director of the Division of Surveillance and Investigation
Virginia Department of Health