

Infectious Disease

The Virginia Department of Health's Office of Epidemiology is responsible for a broad range of disease surveillance and control activities in Virginia. The Fellow would work mainly within the Office's Division of Surveillance and Investigation (DSI). Responsibilities of the division include investigating communicable disease outbreaks; developing and implementing disease database and surveillance systems; developing guidelines for communicable disease management; and assisting in the development of public health law, regulations, and policy. Additional activities include interacting with stakeholders (e.g., public, healthcare providers, local health departments, government) to promote health education and disease prevention through presentations, the media, and reports.

The Fellow's day-to-day activities will involve active participation as a team-member within the Office of Epidemiology. With support from VDH staff, the Fellow will work on projects related to detecting, monitoring, and acting on communicable diseases of public health significance 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 also participate in unplanned activities, such as epidemiologic consultations (e.g., to the public or healthcare providers), outbreak investigations (e.g., foodborne outbreaks), and responses to public health emergencies (e.g., hurricanes, bioterrorism) as situations arise. In addition, the Fellow will participate in planned activities, such as weekly division staff meetings, semi-annual public health training, and a monthly journal club.

Depending on interests and experience, the Fellow will select one or more long-term projects to work on during their fellowship. Examples that may be considered include evaluating enteric disease clusters detected through PulseNet or developing approaches to the use of community containment strategies for reducing the impact of pandemic influenza. In addition, DSI participates in a wide variety of state and national outbreak investigations (e.g., influenza, norovirus, salmonellosis, etc.) each year. As a result, 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. Other options could include participating in the development and implementation of the Commonwealth's a healthcare-associated infection (HAI) database.

The Fellow would also work on program and surveillance system evaluations. One option would be to review automated syndromic surveillance systems (e.g., ESSENCE, BioSense) being used as supplements to traditional detection systems for quality, value, and timeliness of alternative data sources (e.g., HMO ambulatory care, school absenteeism, pharmacy sales), and developing guidance on the appropriate public health response and recommendations to improve the systems. Another option would be to evaluate the timeliness and completeness of records in NEDSS as compared to paper-based systems.

The Fellow may also work in areas related to Virginia's public health emergency preparedness. This could include participating in the implementation and evaluation of an Outbreak Management System (OMS). In addition, the Fellow will work on resource development (e.g., facts sheets and provider

guidance) for biologic, chemical, and radiological emergencies. Finally, the Fellow could participate in disaster preparation (e.g., pandemic influenza training, developing community containment measures such as isolation and quarantine, statewide exercises) and in the response to public health emergencies.

Opportunities will also exist for the Fellow to work on projects with other divisions within the Office. Within the Division of Environmental Epidemiology (DEE) there are opportunities to work with the State Public Health Veterinarian and the State Public Health Entomologist on surveillance and investigation of zoonotic diseases, including rabies and vector-borne diseases (e.g., West Nile Virus, Lyme disease). In addition, there are opportunities to work with the Division of Immunization on vaccine-preventable diseases and with the Emergency Preparedness and Response (EP&R) program within the Office of the State Health Commissioner on issues such as bioterrorism and pandemic influenza preparedness. 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.

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 have the time and autonomy to initiate and develop projects of interest, while participation in the Office of Epidemiology's many activities will provide opportunities to acquire a broad range of skills and experiences.

Assignment Location: Richmond, VA

Primary Mentor: Christopher Novak, MD, MPH
Medical Epidemiologist, VA Department of Health

Advanced Degrees: MPH, Loma Linda University (1999)
MD, University of Manitoba, Manitoba, Canada (1996)

Secondary Mentor: David Gaines, PHD
Public Health Epidemiologist, VA Department of Public Health
State Public Health Entomologist

Advanced Degrees: PhD, VPI & SU (1997)
MS, VPI & SU (1992)