

Infectious Disease

The Division of Epidemiology in the New York State Department of Health (NYSDOH) is responsible for surveillance and control of infectious diseases in New York State (NYS). The Division contains four Bureaus: Bureau of Communicable Disease Control (BCDC), Bureau of HIV/AIDS Epidemiology, Bureau of Sexually Transmitted Disease Control, and the Bureau of Tuberculosis Control. Within the Bureau of Communicable Disease Control (headed by Dr. Noyes, Secondary Mentor), there are the following programs: regional epidemiology and infection control, immunization, public health emergency epidemiology, emerging infections, arthropod-borne infections, and zoonoses. Although the Primary Mentor for the Applied Epidemiology Fellowship directs the Zoonoses Program (Dr. Eidson) and many exciting projects are available in this area, the Fellow is able and encouraged to undertake projects in any of the Bureaus or Programs within the Division of Epidemiology. There is ample opportunity for the interested Fellow to experience hands-on epidemiologic field investigation work.

Opportunities within the Zoonoses Program are typical of those throughout the Division. The Program is responsible for surveillance and control of zoonotic diseases in NYS. On interdisciplinary teams with local, state, and federal partners, including the other key programs of BCDC, the Zoonoses Program conducts epidemiologic surveillance, data collection and analysis, outbreak field investigations, oral presentations and training, prevention and control activities, assessment and development of regulations and statutes, and scientific publications. Within the responsibilities of the Zoonoses Program, there are a large number of health problems available for the perspective and involvement of a Applied Epidemiology Fellow, depending on his or her individual interests. The assignment will not require addressing all of these health problems. Instead, the issues provided below are examples of the types of health problems the Applied Epidemiology Fellow could choose from in determining specific training and program activities.

NYS has a unique program, established for more than 50 years, requiring the reporting of rabies postexposure prophylaxis (PEP) and paying for those treatments to avoid human rabies deaths due to prohibitive treatment costs. Thus, the State has the best data in the U.S. on PEPs and the reasons for them. Particularly in a time of national rabies vaccine shortages, further epidemiologic analysis of the factors influencing PEP and associated costs can be beneficial to state and federal planning. With most of the rabies PEPs due to non-bite exposures, with the animal's rabies status not determined, these studies would allow the Applied Epidemiology Fellow to contribute to important multi-state and CDC initiatives to reduce exposures, PEPs, and costs. The Zoonoses Program is also considering a study to address concerns among pregnant women about rabies treatments, using vital statistics and pregnancy outcome data.

NYS also conducted ground-breaking research on the use of geographic information systems (GIS) for analysis of rabies and West Nile virus disease patterns, to identify predictive factors. The Applied Epidemiology Fellow would have the opportunity to continue with this work.

The Applied Epidemiology Fellow may also have the opportunity to take the lead on zoonotic disease outbreak or epidemiologic investigations for other diseases that the Zoonoses Program coordinates,

such as brucellosis, glanders, hantavirus, melioidosis, monkeypox, psittacosis, Q fever, and tularemia. Within BCDC, opportunities will be available for participation in such investigations for the broad array of communicable diseases. For the Fellow's surveillance system evaluation component of the training, the surveillance systems for any of these diseases could be evaluated. Such evaluations would be helpful in determining the quality of the surveillance systems, because they have not been evaluated previously for a number of diseases.

With the Public Health Emergency Epidemiology Program being part of BCDC, and responsible for the communicable disease aspects of the State Emergency Preparedness plan, the Applied Epidemiology Fellow will have the opportunity to participate in updates to the plan, training, and exercises. In addition, the Zoonoses Program plays a key role in avian influenza (AI) planning, including coordinating with wildlife and agriculture agencies surveillance for AI in birds and other animals.

Assignment Location: Albany, New York

Primary Mentor: Millicent Eidson, MA, DVM

State Public Health Veterinarian

Director, Zoonoses Program, New York State Department of Health

Advanced Degrees: DVM, Colorado State University (1983)

MA, University of Colorado (1979)

Secondary Mentor: Kimberly Noyes, MD, MPH

Interim Director, Bureau of Communicable Disease Control

New York State Department of Health

Advanced Degrees: MPH, University of Albany (2007)

MD, Albany Medical College (2003)