

## **Infectious Diseases**

### **Assignment Description:**

The main assignments will involve assisting in, developing and taking the lead on data analyses of HIV/AIDS surveillance data available to HEFSP's Surveillance Unit.

HEFSP's surveillance unit investigates and reports approximately 3,500 new HIV diagnoses a year and receives about 2,500 AIDS diagnoses annually. The Bureau's epidemiology staff is also responsible for investigation of any identified clusters of HIV infections or HIV cases of special public health interest. Several new surveillance systems are being implemented to identify recent HIV infections in close to real time and antiretroviral-resistant infections among the newly infected. The Bureau administers over 200 million dollars of programmatic funding for HIV prevention, treatment and other services for HIV-infected persons.

The fellow would join a committed group of public health professionals working to address this highly preventable, life-threatening, prevalent infectious disease at the population level through innovative surveillance and programmatic interventions. The fellow would specifically concentrate on areas where epidemiologic analysis can impact the Bureau's understanding of the state of the epidemic in ways that inform its programmatic interventions.

### **Day-to- Day Activities:**

The CSTE fellow will assist in and conduct analyses and dissemination of HIV Surveillance data. The analyses will include descriptive analyses of outcomes in each outcome domain and by demographic and other relevant variables, comparisons of these outcomes across sample years, and inferential analyses of specific research questions. The inferential analyses will involve developing and testing explanatory models using multivariate statistical techniques. Analyses will be conducted using SAS and other analytic software. In addition to assisting in ongoing analyses, the CSTE fellow will develop analysis concepts and take the lead in implementing analyses.

Dissemination activities will include responding to data requests from the HIV Epidemiology and Field Services Program and other Programs in the Bureau of HIV Prevention and Control, and from elsewhere in the Department of Health and external sources. In addition to working on journal-quality articles, the CSTE fellow will develop and produce slide presentations, reports, and fact sheets, and will participate in oral and poster presentations of data analyses.

Other day-to-day activities would be tailored to the fellow's interests but could include:

- Attending weekly Surveillance unit meetings;
- Attending meetings with the Bureau of Sexually Transmitted Disease Control and other disease programs regarding ongoing programmatic collaborations;
- Monthly surveillance conference calls with New York State regarding issues with surveillance data transfers and data flow;
- If the fellow has a specific interest in an area of HIV prevention and control, this could be accommodated (e.g. anti-stigma campaigns; sex harm reduction/condom distribution; needle exchange; prevention in women, people of color or transgender persons, etc);
- Attending DOHMH's many formal educational opportunities including Epidemiology Grand Rounds, research seminars, and trainings;
- Participating in collaborations with HIV researchers outside the Bureau and outside of DOHMH, including academic public health partners (e.g., Columbia University and Hunter College).

### **Potential Projects:**

1. Surveillance or programmatic evaluation projects

- a. Develop a program to identify persons in real-time in the HIV surveillance registry who have evidence of sustained high HIV viral load (SHVL) and a recent gap in receipt of HIV-related medical care (via CD4 and viral load tests) for referral to the Field Services Unit (FSU) for partner services and return-to-care services.
  - b. After implementation, conduct an evaluation of FSU's program for persons with SHVL and a gap in care. The evaluation could include: a longitudinal analysis using surveillance data of the frequency of clinical monitoring (via CD4 /VL tests) and achievement of viral suppression after intervention by FSU; and analysis of FSU partner services outcomes for persons with SHVL, for example the number of named partners with a new HIV diagnosis and care status of newly named HIV-infected partners.
  - c. Evaluate electronic health record (EHR)-based reporting system to be developed with major NYC HIV clinic, including assessment of completeness of reports and data quality.
2. Data analysis projects:
  - a. Analyze the demographic, behavioral and clinical characteristics of persons in the SHVL program described above, and compare them with all persons living with HIV/AIDS in NYC.
  - b. Analyze correlates of reported social media use and its effect on partner services outcomes among FSU patients.
3. Outbreak/field investigation projects
  - a. Investigate identified clusters of HIV infection.
  - b. Investigate a foodborne outbreak with DOHMH's Bureau of Communicable Disease.

**Preparedness Role:**

We fully anticipate being able to engage the CSTE Fellow in the agency's emergency preparedness activities to the extent that they are interested and/or required to do so. Our current CSTE Fellow has been able to attend emergency preparedness meetings in which tabletop exercises are conducted. She has been able to participate in a communicable disease outbreak response, which provided her with many experiences relevant to emergency preparedness.

Assignment Location: New York City, New York

Primary Mentor: Sarah Braunstein, PhD, MPH  
Assistant Director of HIV Surveillance  
New York City Department of Health and Mental Hygiene

Secondary Mentor: Angelica Bocour, MPH  
Senior Analyst  
New York City Department of Health and Mental Hygiene