Infectious Diseases
New York City Department of Health and Mental Hygiene, Bureau of STD Prevention and Control
Long Island City, New York

Assignment Description
The Fellow will be placed with the Bureau of STD Prevention and Control (BSTDC). The mission of the BSTDC is to improve the sexual health of all New Yorkers. To achieve this, we provide direct clinical services and partner services; monitor disease trends; provide education and training to providers and community groups, conduct research and develop policies to improve sexual health and wellness. BSTDC is an ideal setting for a Fellow to build a strong foundation in applied epidemiologic research and also understand the wide spectrum of roles a Bureau might serve.

Through eight STD clinics the Bureau also provides low- to no-cost HIV and STD services to the public. Clinic services include STD services for patients with symptoms or at risk of exposure, Post-Exposure Prophylaxis (PEP) for patients at risk of HIV exposure, emergency contraception, HIV counseling and rapid testing. STD clinics also offer vaccines for Meningitis, Hepatitis A and Hepatitis B, as well as screening, brief intervention, and referral to treatment (SBIRT) for alcohol and drug use.

NYC DOHMH also works closely with the NYC STD/HIV Prevention Training Center (PTC), which is dedicated to increasing the sexual health knowledge and skills of medical health professionals in the prevention, diagnosis, screening, management and treatment of sexually transmitted diseases. Understanding disease trends and other research findings help guide both clinical and training programs.

The Fellow would be placed in the Epidemiology, Surveillance, Data Management, Research and Partner Services Unit, which collects, analyzes, interprets and disseminates disease and behavioral data. It releases quarterly STD surveillance reports and conducts research in order to guide programs and policy. He/she would support surveillance, program evaluation and epidemiologic research projects. In particular, we have also identified at least three specific projects that the CSTE Fellow will be able to lead. The Fellow will also have the opportunity to disseminate his/her work through presentations and reports.

Day-to-Day Activities
Although the nature of the Fellow’s daily activities will differ based on the stage of a project, he/she will collaborate and communicate with colleagues within BSTDC and NYC DOHMH on a daily basis. He/she will support ongoing surveillance activities, including monitoring and conducting quality assurance on electronic case reports; generating surveillance reports; and conducting statistical analyses. As much as possible, the Fellow will be invited to attend a wide range of research and methods seminars.
Potential Projects

Surveillance Activity
Enhanced Gonorrhea Surveillance to Improve Proportion of Cases with Documented Treatment in NYC

The Bureau of STD Control and Prevention reports approximately 14,000 cases gonorrhea (GC) per year. The emergence of GC with reduced susceptibility to cephalosporins makes it critical for public health programs to monitor appropriate gonorrhea treatment in the community. In New York City, two-thirds of GC cases reported by laboratories and/or providers do not have treatment reported. NYC is seeking to enhance our current GC surveillance activities to improve the proportion of GC cases with documented treatment. The Fellow will conduct an enhanced surveillance project to better estimate the proportion of treated GC cases.

Surveillance Evaluation
Evaluating the Patient and Case Deduplication Algorithm Used in the NYC STD Surveillance System

The Bureau of STD Control and Prevention maintains a high-volume surveillance program. We report nearly 80,000 STD cases per year to CDC, and our surveillance system (Maven) houses records of over 1.1 million unique patients. Automated methods for de-duplicating patients and cases are crucial to the functioning of such a large system. Maven has a very sophisticated, customizable patient de-duplication algorithm, refinement and evaluation of which is critical to ensuring accuracy of NYC surveillance estimates. The CSTE Fellow will conduct an evaluation of the Maven deduplication algorithm to determine the appropriate weights and settings which achieve optimal sensitivity and specificity.

Major Project
Characterizing Sexual Transmission of Enteric Pathogens

Anal-oral contact is associated with the sexual transmission of certain enteric pathogens, such as shigella, giardia, and hepatitis A. In NYC, a total of 6537 shigella cases were reported between 2000 and 2013. Using cross-matched data from the Bureaus of Communicable Diseases, Sexually Transmitted Disease Control, and HIV Prevention and Control, we aim to quantify the proportion of persons with reported shigella who may have acquired those infections through sexual contact, and characterize cases with regard to demographic factors and HIV status.

Surveillance Evaluation
Review of Reported Congenital Syphilis Cases in NYC, 2000-2011

Congenital syphilis (CS) is a devastating yet preventable disease. To ensure that jurisdictions use a consistent approach to reporting cases, CDC and CSTE develop standard case definitions. Since the application of the CS case definition can be complex, the CDC also developed an algorithm to help public health workers with case determination (the "old algorithm"). However, use of the old algorithm resulted in case classifications that differed significantly from those arrived at using the case definition. The old algorithm misses many cases, but more importantly, substantially over counts cases. Inconsistent methods of CS classification may have occurred across jurisdictions, potentially affecting national trends in CS data. In 2013, the CDC released a revised algorithm that is consistent with the case definition. New York City currently uses the case definition; however, it is unclear if the
algorithm was ever used. We propose to review all reported CS cases between 2000 and 2011 using the revised algorithm to determine the accuracy of the NYC classification system.

**Preparedness Role**

Improving preparedness and response efforts and assuring the implementation of strategic agency-wide initiatives is an important goal of NYC DOHMH. As such, the Fellow will have the opportunity to participate in Agency-wide emergency preparedness and response activities.

**Additional Activities**

NYC DOHMH offers extensive opportunities for professional development and networking. The Fellow would be offered the opportunity to enhance his/her experience through weekly outbreak updates, scientific journal clubs, and public health seminars. The Fellow could participate in additional cross-cutting research in the Division of Disease Control.

**Mentors**

**Primary** Neil Vora, MD  
Director of Special Projects

**Secondary** Robin Hennessy, MPH  
Surveillance Coordinator