Infectious Disease

Description:
Primarily assigned to the Surveillance Program of the NYSDOH Bureau of HIV/AIDS Epidemiology (BHAE), the fellow will participate in HIV/AIDS disease surveillance and laboratory data quality activities, taking a major role in the analytic evaluation of HIV/AIDS reports submitted to NYS by diagnostic physicians, commercial and public health laboratories, and field surveillance staff conducting medical record review. Activities will include the development and execution of analytical procedures (e.g., capture/re-capture methodology) for monitoring and reporting of trends in HIV/AIDS related surveillance within NYS. The fellow will develop and/or revise surveillance reports, contribute to research publications, and make program recommendations for BHAE. Additionally, the fellow will have the opportunity to join BHAE staff in active participation in several national workgroups (e.g., the CSTE HIV Surveillance Coordinator Workgroup and the CDC HIV Case Definition Workgroups on 1) New testing algorithms; 2) Acute HIV infection; 3) Physician-documented diagnosis). Participation in bureau research meetings and HIV/AIDS data dissemination activities will be expected. The CSTE fellow will be expected to attend NYSDOH Institutional Review Board Human Subjects training, so s/he will be able to fully participate in various BHAE projects.

Day-to-Day Activities:

Day-to-day activities will depend on the particular projects assigned to the fellow. After an extensive orientation to the general workings of the bureau and more specifically the surveillance program, the fellow will become involved in several discrete projects (potential projects outlined below) with daily work time allocated to individual projects, collaborative research, and data analyses. The fellow should expect to meet with Dr. Anderson weekly and Dr. Smith biweekly to review and plan the current work tasks. The fellow will actively participate in the monthly HIV Surveillance calls with our colleagues in NYC, with our CDC assigned epidemiologist, and our national CSTE affiliated colleagues as part of the CSTE HIV Surveillance work group. Additionally, the fellow will attend the larger Division of Epidemiology biweekly Program Status meetings and may be tasked with updating the group regarding current MMWR reports or research/reports pertaining to HIV/AIDS surveillance. As a member of the Surveillance Program team, the fellow will be invited to all monthly and quarterly surveillance program meetings and conference calls and, as needed, will attend other internal BHAE working group meetings (e.g., Improving Provider Reporting, Data Analysis, eHARS Status, and various registry matching meetings). The fellow will be expected to participate in the semi-monthly BHAE Bureau Seminar Meetings, a collaborative environment through which the research and various data products of the bureau are presented and refined.

Potential Projects:

1) Surveillance System Evaluation: The NYSDOH HIV/AIDS Surveillance system is comprehensive and complex. By law reporting of HIV/AIDS is to the state DOH rather than local health departments. In addition to provider reporting, the NYSDOH requires that laboratories report all confirmed HIV antibody results, all values of CD4 lymphocytes, all HIV viral loads, and nucleic

acid sequences from genotypic resistance results. Thus, over 70 labs report more than a million test results per year. NYSDOH staff review medical records for reported cases diagnosed by medical providers outside of NYC. Approximately 75-80% of the NYS HIV/AIDS epidemic is in NYC, and the NYCDOHMH participates in HIV/AIDS surveillance for city residents and providers under a Memorandum of Understanding with the NYSDOH. Data exchanges between the NYSDOH and the NYCDOHMH are extensive and allow the state to maintain a statewide HIV/AIDS registry. Within this complex array of activities the fellow will have multiple options for evaluating a component of the HIV/AIDS surveillance system.

2) Surveillance data is shared with NYSDOH Partner Services staff for HIV partner notification activities. CDC has recently focused on integration of HIV, sexually transmitted infection, hepatitis, and tuberculosis activities. An analysis is needed to assess optimal use of surveillance data for partner services with particular attention to acute HIV infection and new diagnostic paradigms. In conjunction with BHAE and BSTDC staff, the fellow may participate in the refining of procedures to identify and follow up on high priority cases of acute HIV infection (AHI), including the development of case definitions and protocols to detect and investigate AHI cases. AHI cases are in the earliest stage of infection and represent a critical need for partner services intervention and an important opportunity for HIV prevention.
3) BHAE has several matching projects with other public health databases for purposes of enhancing disease surveillance; some are episodic (hepatitis, tuberculosis, cancer, etc.) and some recur annually (Medicaid, vital statistics, Department of Corrections). Key surveillance and programmatic issues such as developing enhanced case finding techniques and defining co-morbidities can be explored using the matched data.
4) In 2005, NYS became the first state in the United States to implement comprehensive HIV resistance and subtype surveillance through laboratory reporting of nucleic acid sequences from genotypic resistance tests. Opportunities exist for detailed analysis of resistance and subtype patterns among the newly diagnosed and among persons known to have been living with HIV/AIDS for many years.
5) BHAE participates in national HIV Incidence Surveillance, which produced the first national HIV incidence estimates in August 2008. Projects are warranted that explore the potential of HIV Incidence Surveillance for enhancing understanding of the epidemic at the local and state level.
6) A 2009 NYS law mandates that the NYSDOH review HIV and Hepatitis C prevention and treatment in the state prisons and in local jails. An assessment is needed of the potential contributions of surveillance data analyses to our understanding of disease detection and management in these settings, as well as a review of correctional facility disease reporting and surveillance policies and procedures.

Emergency Preparedness Role:

As members of the Division of Epidemiology of the NYSDOH, BHAE staff is expected to contribute as needed to Emergency Preparedness efforts. For example, select staff has participated in NYSDOH 2009 H1N1 influenza efforts through medical record reviews, membership in surveillance and Clinical Guidelines workgroups, and participation in phone banks taking vaccine orders. The fellow will be well-

positioned to participate in structured emergency preparedness planning activities and to lend temporary assistance in urgent/emergent public health surveillance activities.

Assignment Location:	Albany, NY
Primary Mentor:	Lou Smith, MD, MPH Director, Bureau of HIV/AIDS Epidemiology New York State Department of Health
Secondary Mentor:	Bridget Anderson, PhD HIV Surveillance Manager New York State Department of Health