Infectious Disease

Assignment Description

Primarily assigned to the Surveillance Program of the New York State Bureau of HIV/AIDS Epidemiology, the CSTE fellow will participate in disease surveillance and laboratory data quality activities, taking a major role in the analytic evaluation of HIV/AIDS reports submitted by diagnostic physicians, commercial and public health laboratories, and field surveillance case report data. Activities include evaluating the adequacy and completeness of demographic, identifying, and test results data for NYS, and will involve the development and execution of analytical procedures (e.g., capture/re-capture methodology) for monitoring and reporting of trends in HIV/AIDS related surveillance and laboratory testing within NYS.

The incumbent will be responsible for development and revision of new surveillance reports, contribute to research publications, and make program recommendations for BHAE. Additionally, the fellow will have the opportunity to actively participate in several national working groups (e.g., the CSTE HIV Surveillance Coordinator Work Group, the CDC HIV Case Definition Work Groups) as well as local AIDS Institute Workgroups with topics such as HIV and Aging. The fellow will participate in Bureau Research Seminars and HIV/AIDS data dissemination activities. 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. As Division Director, the Primary Mentor will seek opportunities within the Division for the fellow to participate in an acute outbreak investigation related to HIV, STDs, and/or Hepatitis C to develop outbreak-related competencies required by the fellowship.

Day-to- Day Activities

Anticipated 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 specific the surveillance program, the fellow will become involved in several discrete 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 monthly HIV Surveillance calls with our colleagues in NYC, 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 AIDS Institute monthly staff 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

Potential Projects include:

1) Surveillance System Evaluation: The New York State Department of Health (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 85 labs report more than a million tests results per year. NYSDOH staff review medical records for cases reported with medical providers located outside of NYC. Approximately 75-80% of the NYS HIV/AIDS epidemic is in NYC, and the NYC DOHMH participates in HIV/AIDS surveillance for city 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) Evaluation of the Algorithm for Partner Services Assignment: Surveillance data is shared with NYSDOH Partner Services staff for the provision of HIV partner services. CDC's recent focus on integration of HIV, sexually transmitted infection, hepatitis, and tuberculosis activities highlights the need for evaluation of our algorithm for identifying cases for referral. An analysis focused on optimizing the use of surveillance data for partner services with particular attention to acute HIV infection and new diagnostic paradigms is needed. In conjunction with BHAE, BSTDPE, and Field Services staff, the fellow will 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) Registry Matching Projects and Analyses: BHAE conducts multiple matching projects with other public health databases for purposes of enhancing disease surveillance; some are episodic (hepatitis, tuberculosis, etc.) and some recur annually (Medicaid, Vital Statistics, Department of Corrections). The opportunity exists for the fellow to take a lead role in two new match projects: 1) a match of the HIV registry to the registry of sexually transmitted infections; and/ or 2) a match of the HIV registry to the statewide Cancer Registry. Key surveillance and programmatic questions can be explored used the existing or proposed matching project data.

4) Resistance and Subtype Analyses: In 2005, NYS became the first state in the US 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) Surveillance Data and the National HIV/AIDS Strategy: The recently published National HIV/AIDS Strategy proposes extensive use of HIV/AIDS surveillance data to evaluate outcomes, including calculations of HIV Incidence Estimates, HIV transmission rate estimates, the proportion of newly diagnosed persons entering care, and the control of HIV viral loads in relationship to recognized health disparities. BHAE is well-positioned to evaluate the status of NYS markers through its participation in national HIV incidence surveillance and collection of extensive ongoing laboratory data; however, analyses need to be developed that will allow for accurate comparison of national, state, and local benchmarks.

6) Evaluation of 2010 HIV Testing Law: Implemented in September, 2010, Chapter 308 of the Laws of NYS 2010 authorized significant changes in HIV testing in NYS. This law was enacted to increase HIV testing and promote HIV-positive persons entering into treatment. The law stipulates that an evaluation of the impact of the law be conducted. The fellow will have the opportunity to participate in this evaluation, working with colleagues from across the department, including BHAE, OPER, BSTDPE, the AIDS Institute Office of the Medical Director, and others. Using BHAE surveillance data, the evaluation will focus on the following questions: 1. Was there an increase in the number of HIV tests conducted after implementation of the law? 2. Was there an increase in the number of HIV+ individuals identified? 3. Was there in increase in the number of new HIV+ individuals entering health care?

Preparedness Role

As members of the NYSDOH, BHAE staff are expected to contribute as needed to Emergency Preparedness efforts. In 2009, for example, selected staff participated in the NYSDOH H1N1 influenza efforts through medical record reviews of hospitalized patients, through membership in surveillance and Clinical Guidelines workgroups, and through 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, New York State
Primary Mentor:	Lou Smith, MD, MPH Director, Division of Epidemiology, Evaluation and Research NYS Department of Health
Secondary Mentor:	Bridget Anderson, PhD Director, Bureau of HIV/AIDS Epidemiology NYS Department of Health