Infectious Disease

The Communicable Disease Epidemiology Section, Washington State Department of Health supports local health jurisdiction surveillance and investigations for most acute communicable conditions, excluding sexually transmitted diseases and tuberculosis which are handled by offices in Olympia.

Additional activities in the Communicable Disease Epidemiology Section relate to public health emergency preparedness and response. Washington State has a population of 6.5 million living in diverse communities ranging from its largest city Seattle to rural agricultural regions. On a daily basis the Communicable Disease Epidemiology Section handles consultations with the state's 35 local health jurisdictions regarding case investigations or outbreaks in three general areas:

1) Foodborne diseases such as E. coli O157:H7 infections, salmonellosis, and campylobacteriosis represent the largest numbers of cases and outbreaks reported annually. Communicable Disease Epidemiology Section maintains close contact with Centers for Disease Control and Prevention in identifying and investigating multi-state outbreaks. Activities for the Fellow could include daily monitoring of the laboratory database, conducting interviews for local health jurisdictions when additional interviewing is necessary, and analyzing exposure data.

2) Vaccine-preventable diseases (VPDs) including pertussis, measles, mumps, and meningococcal disease constitute ongoing challenges for disease prevention. Communicable Disease Epidemiology is closely associated with the Immunization Program, which tracks vaccination distribution in Washington. Activities for the Fellow could involve classifying reported VPD cases and providing consultations to local health jurisdictions on investigation of suspected or confirmed outbreaks, as well as undertaking projects related to immunization issues including working with state immunization registry (CHILDProfile) data.

3) Zoonotic diseases such as West Nile virus, Lyme disease, and hantavirus have been of been lower volume but of high interest. Activities for the Fellow could include arranging laboratory testing, descriptive analysis of cases, and monitoring animal testing for rabies at the Washington State Public Health Laboratories.

   Other areas covered by the Communicable Disease Epidemiology Section are acute viral hepatitis, botulism, and Creutzfeldt-Jakob disease. Beginning in April, 2009, there has also been considerable activity related to influenza surveillance and control due to the recognition of a new pandemic influenza virus. The current CSTE Fellow tracked influenza case counts, facilitated testing at Public Health Laboratories, assisted with laboratory based surveillance for influenza, summarized case information, coordinated data entry, and performed descriptive analyses of the case data.

The Communicable Disease Epidemiology Section is co-located with the Washington State Public Health Laboratories. Laboratory staff include a PhD molecular biologists and frequent post-doctoral microbiology laboratory fellows. Routine laboratory techniques include pulsed-field gel electrophoresis, PCR, serotyping, and rapid testing for a variety of agents. Collaboration with the Public Health Laboratories is possible depending on the interests of the Fellow. In addition to case and outbreak investigations, a wide range of projects are possible in communicable disease epidemiology, bioterrorism response, and emergency preparedness. Communicable Disease Epidemiology Section provides local health jurisdictions with detailed guidelines for surveillance and investigation. The Fellow could be responsible for the review and update of selected guidelines:
http://www.doh.wa.gov/notify/forms/

Day-to-Day Activities:
The CSTE day-to-day activities will include attending daily office meetings to discuss current case and outbreak investigations, reviewing notifiable condition cases reported to the section, participating in emergency response preparedness and exercises, and working on long term projects. CSTE Fellows in Washington State have attended and been encouraged to present talks at training meetings for local health jurisdictions, the regional West Coast Epi Conference, and the state's Joint Conference on Health. Attendance is also encouraged at any local lectures and training including at the University of Washington.

Potential Projects:

Program or surveillance system evaluation could be done within the section or in another part of the Department of Health. Communicable disease surveillance data are available in an electronic database that includes core data for 30 years and detailed case investigation information since 2005. Influenza surveillance underwent considerable expansion in 2009. Besides receiving data on hospitalized and deceased persons with lab-confirmed influenza, the Department of Health currently receives electronic data from approximately 35 emergency rooms and over 20 commercial labs, and will soon be receiving electronic absenteeism data from two-thirds of the school districts in the state. This enhanced system needs to be evaluated to determine which components should be continued in the future. Another surveillance system in need of evaluation is our Creutzfeldt-Jakob Disease (CJD) surveillance system. This surveillance system was started by our CSTE Fellow in 2006, but has never been evaluated. One aspect of this evaluation would involve using our electronic death registry to determine the sensitivity of our system.

Emergency Preparedness Role:

The CSTE Fellow would be expected to take a role in emergency response training, exercises, and actual events based on the State Emergency Preparedness plan. Specific responsibilities will be assigned within the Section's incident command structure. The current CSTE fellow has been involved with conducting two annual surveys of local health jurisdiction preparedness and preparing final reports. These surveys will need to be repeated in 2010.

Assignment Location:	Seattle, Washington
Primary Mentor:	Kathy Lofy, MD Medical Epidemiologist Washington State Department of Health
Secondary Mentor:	Tony Marfin, MD, MPH State Epidemiologist Washington State Department of Health