

Community Epidemiology conducts active surveillance and disease investigation of 80 reportable conditions. This provides an excellent opportunity for a fellow to work with public health professionals including physicians, epidemiologists, biostatitians, public health nurses and communicable disease investigators. The Epidemiology program works closely with Environmental Health Food and Housing, Vector Control and Hazardous Materials program.

Proposed Project:

Rapid detection and reporting of suspected and confirmed human cases of West Nile virus (WNV) are crucial in planning and targeting control activities. In San Diego County, surveillance for WNV is carried out by investigating reported cases of unexplained viral encephalitis, aseptic meningitis, acute flaccid paralysis/atypical Guillain-Barré syndrome (GBS)/transverse myelitis (TM) and febrile illness lasting 7 days or more, and by offering WNV testing at the local and state public health laboratories.

Although physicians are required to report all suspect cases (*Viral encephalitis, aseptic meningitis, acute flaccid paralysis/atypical GBS/TM of unknown etiology) to Community Epidemiology, significant under-reporting of such conditions is likely. Last year, of > 550 reported cases*, >250 met the clinical criteria for WNV testing through the local PH laboratory (PHL); of those, only 2 or less than 1% were confirmed positive for WNV. To assess the completeness of last year's reporting, retrospective surveillance may be conducted at area-hospitals for patients discharged with a diagnosis of neurological illness due to possibly infectious causes. Hospital may be asked to search databases for patients discharged with selected ICD-9 codes. To capture additional suspected cases* that were not reported by clinicians, hospital laboratories may be asked to search databases for CSF and serum samples with parameters suggestive of arboviral etiology (e.g., pleocytosis, negative gram stain and culture, negative tests for herpesviruses and enteroviruses). Cases of neurologic illness may be mapped and compared to sites where animals and/or mosquito pool tests have been positive for West Nile virus.

The relevance to the State Preparedness plan is:

A. A Community Epidemiologist is available for consult and response 24 /7. The County of San Diego currently has a functional reportable disease system that is operational on a 24-hour-per-day, 7-day-per-week basis. The County of San Diego is currently contracting with Atlas Corporation to replace the existing system in order to improve, upgrade and enhance the reporting features. The following include some of the key activities:

- Acquisition of a system for the automatic notification of incoming faxed disease reports. The County IT contractor has identified an e-mail fax system that is Health Insurance Portability and Accountability Act (HIPAA) compliant. Cost estimates are in process.
- Evaluation of improvements in disease reporting using a case-capture study. Study is in process.
- Development of electronic versions of risk history forms.
- Web reporting of communicable diseases.

B. At least annually, assess the timeliness and completeness of your reportable disease surveillance system for:

Outbreaks of illness and/or key categories of cases of reportable diseases, particularly those that are caused by agents of bioterrorism concern or those that mimic agents of bioterrorism concern; and others, such as influenza, invasive bacterial diseases, vaccine preventable diseases, vector-borne diseases, and food- and water-borne diseases.

Fellowship Activity:

The timeliness and completeness of reporting of the VCMR reportable disease system will be assessed through review of time from diagnosis to report data, and as has been done in the past, a case-capture approach with a participating medical provider reporting facility.

C. Develop or enhance reporting protocols, procedures, surveillance activities, information dissemination, or analytic methods that improve the timeliness, completeness, and usefulness of the reportable disease system.

Fellowship Activity:

Improvements in the timeliness and completeness of reporting will be accomplished through the development of reporting protocols and procedures, providing information feedback to selected medical facilities, further development and testing of outbreak detection methods and the development of additional dissemination mechanisms (establishing information distribution mechanisms).

If the proposed retrospective review of hospital data yields a significantly large number of cases* (not previously reported), an active surveillance supplement may be considered. To improve the completeness of the current reporting system, beginning in 2005, ICPs or key medical staff in selected specialties such as infectious disease, neurology and intensive care could be contacted weekly to inquire about cases with suspected neurological illnesses. If additional suspected patients are identified, arrangements could be made for WNV testing through the local PHL. Hospital laboratories may be asked to save all CSF and serum samples that have parameters suggestive of arboviral etiology; collected on a weekly basis and submitted to the local PHL for WNV testing.

Assignment Location: San Diego, CA

Primary Mentor: Michele Michaels Ginsberg, MD
Chief, Community Epidemiology, San Diego County (present)

Advanced Degree: MD, State University of New York (1971)

Secondary Mentor: Louise Gresham, PhD, MPH
Senior Epidemiologist, San Diego County (1987-present)

Advanced Degrees: PhD, University of California San Diego (1996)
MPH, San Diego State University (1985)