

The NYC Department of Health and Mental Hygiene (DOHMH) Environmental and Occupational Disease Epidemiology Office (EODE) promotes the environmental and occupational health of New York City residents and workers through disease surveillance and investigation, risk assessment and communication, and policy research and development of effective intervention strategies. EODE conducts ongoing surveillance on lead poisoning in adults, pesticide poisoning, and responds to public inquiries regarding mold exposure, cancer concerns, and occupational health issues. EODE was also recently funded by CDC to develop a community needs assessment and plan for a comprehensive environmental health tracking program.

Day to day activities of fellow will include participation in ongoing analysis of adult lead poisoning data and pesticide poisoning data. Work as a member of an interdisciplinary team investigating outbreaks of occupational or environmental diseases in NYC workers or residents. Write policy analyses of proposed legislation. Evaluate existing surveillance databases for inclusion in NYC's Environmental Public Health Tracking network. The fellow will be trained in bioterrorism preparedness and response.

The Fellow will be offered the opportunity to participate in the ongoing Environmental Public Health Tracking grant-funded Environmental & Occupational Hazard, Exposure and Health Effects data linkage project – This project will enable the DOHMH to enhance the value of currently collected data systems by facilitating the:

- a. Calculation of rates of over-exposure to pesticides and heavy metals and potentially associated diseases or other medical conditions. The calculation of rates is enabled by geographic linkage of hazard data, exposure data, and health outcome data with census or other population-based data. The Fellow will conduct all relevant statistical analyses of this data.
- b. The Fellow will be provided training in GIS analysis and spatial statistical methods to enable the Fellow to map linked data to indicate potential spatial relationships, enhancing the clarity and meaning of otherwise abstract information, and engaging in interactive queries.
- c. The Fellow will assist EODE in improving the effectiveness of public health interventions by performing analyses of linked data to identify environmental hot-spots, high-risk neighborhoods and potential point-sources of exposure.
- d. The Fellow will assist EODE in providing a more accurate estimate of the burden of environmental exposure and disease by cross-referencing data, where appropriate identifiers exist and are accessible to EODE, using deterministic or probabilistic matching.

The Fellow will be given the opportunity to develop an occupational injury tracking and analysis system for a major employer and union representing workers at that employer in the New York City area. The steps might involve:

- a. Developing a Memorandum of Understanding between the employer, union and DOHMH regarding confidentiality, use of the data, and reporting expectations.
- b. Setting up data management systems for the data.
- c. Implementing the model surveillance system for occupational injuries.
- d. Analyzing the data on a periodic basis. The Fellow would perform all appropriate statistical analyses of this data, with supervision of a biostatistician.
- e. Developing reports, including recommendations for interventions to reduce injury rates among targeted work groups with highest rates.
- f. Evaluation of effectiveness of surveillance system and implementation of recommendations.

Assignment Location: New York City, NY

Primary Mentor: James E. Cone, MD, MPH
Director, Environmental and Occupational Disease Epidemiology (July 2002-present)

Advanced Degrees: MD, University of California, San Francisco (1978)
MPH, University of California, Berkeley (1978)

Secondary Mentor: Jessica Leighton, PhD, MPH
Assistant Commissioner, Office of Environmental Risk Assessment and Communication (September 2000-present)

Advanced Degrees: PhD, Columbia University (1991)
MPhil, Columbia University (1986)
MPH, Columbia University (1978)