

Information about the program area:

The Environmental Health Epidemiology Bureau (see the org charts) is housed within the Epidemiology and Response Division (ERD) of the New Mexico Department of Health. That Division includes the Infectious Disease Epidemiology Bureau, the Bureau of Vital Records and Statistics, the Injury and Behavioral Epidemiology Bureau, Community Health Assessment Program and the Office of Health Emergency Management. There is close collaboration and excellent collegial relationships among the different disciplines. ERD also has the strongest tribal epidemiology program of any state health department.

The fellow's anticipated day-to-day activities:

The Environmental Health Epidemiology Bureau (EHEB) is intensively engaged in several projects that interface and overlap. A brief listing of these will help reveal the wide range of activities the Fellow will be engaged in. EHEB is a recent recipient of a 5 year Cooperative Agreement from CDC to implement an Environmental Public Health Tracking Network (Tracking) linked to a national network. The Fellow will be heavily involved in environmental public health surveillance or tracking, including developing health and environmental data sets for tracking, integrating, and analyzing these data, as well as planning activities for the Network development and implementation. Involvement in Tracking could also include assistance with assessing data requirements for the Network and implementing data sharing agreements, or risk communication planning.

EHEB is lead for a six-state Biomonitoring consortium. Daily activities may include the design of surveys and activities to assess biomonitoring participants' exposure and fieldwork to collect needed information and/or biological and/or environmental samples.

EHEB is in its 7th yr of asthma surveillance and public health planning for asthma prevention. The Fellow may be involved in assisting with on-going Tracking studies to link asthma surveillance data with air quality data. This project provides opportunities for developing risk communication and community outreach to explain the study results.

A Joint Powers Agreement exists with the New Mexico Environment Department (NMED) to conduct water-borne disease surveillance and prepare reports. Several water-related task forces exist and the Fellow may be involved in these.

EHEB has also received staff support from the Office of Health Emergency Management to help focus planning for public health response to chemical terror threats or accidents.

There is also an active lead poisoning prevention and surveillance program and staff responds to public inquiries regarding environmental health (EH) issues statewide and on a daily basis; given staff resource limits, we assist communities with environmental health investigations.

The Fellow's daily activities will principally be focused on the Tracking project but since this Project connects with all of the other efforts mentioned here, the range of activities will be broad. The excitement here is fueled by pressures to provide accurate and timely evaluation reports on our activities, respond to EH concerns like floods, mold, and advocacy concerns, and get the work outlined above done. Teamwork is the hallmark. A Fellow will never hear "that's not my job." In addition to teamwork, all of the efforts require a high degree of comfort with collaboration and coordination across many agencies, organizational and community lines.

Examples of potential projects that demonstrate opportunities for data analysis, outbreak field investigations, and opportunities to work on interdisciplinary teams: As mentioned above, the Fellow will have numerous opportunities for data analysis and EH field investigations. These will arise mainly from specific Tracking projects. In addition to the linking of air/asthma data mentioned above, conducting exploratory analyses of health outcome and environmental data sets, including spatial and space-time analyses; data integration and analysis will also be on-going for adverse pregnancy/reproductive outcomes, a wide range of birth defects, lead poisoning surveillance data, short-latency cancers data, linking arsenic exposure from drinking water with certain cancers, developing registries for neuro-developmental and neurodegenerative diseases and other health outcomes that are likely related to environmental exposures. Outbreak and field investigations opportunities will be plentiful given also the Biomonitoring, Waterborne Disease surveillance activities and response-to-public-inquiries that are significant parts of the Bureau's work. In terms of interdisciplinary opportunities other than "exposure and health outcomes integration" (as outlined above), the Division and the EHEB are structured for interdisciplinary work. Each person has her/his assignments but all of the assignments include working across the individual assignments as a team member. A statewide Environmental Health Coordinating Council is one example for building capacity for EH and it is staffed by EHEB. This also provides an opportunity for interdisciplinary work.

Program or surveillance system evaluation component:

The Fellow will be able to complete a surveillance system evaluation on either the Asthma, Biomonitoring or Tracking projects. The Fellow will spend the first several weeks of the assignment meeting with Department of Health staff and then, along with his/her supervisors, will develop the work plan for the assignment to include the surveillance system evaluation as a foundation of the assignment.

Role of fellow in State Emergency Preparedness plan:

As mentioned above in #2, EHEB has responsibility to assist with the coordination of planning for public health response to chemical threat, attack or accident. This effort continues and it indicates that EHEB and the Office of Emergency Health Management are earnestly collaborating and intend to build and enhance existing capacity on this collaboration.

Barbara Toth – Primary Mentor

- Has been working in occupational and environmental health epidemiology and toxicology since 1980. This includes leading multidisciplinary health risk assessments, developing health-based documentation and recommendations for setting environmental and occupational standards for various pollutants, and conducting health care utilization and epidemiological analyses and investigations.
 - o Malczewska-Toth, B., O. Myers, C. Shuey, and J. Lewis: “Recommendations for a Uranium Health-Based Ground Water Standard.” Report to New Mexico Environment Department. University of New Mexico Center for Population Health. 2001
 - o Chabowska-Biazik, M., W. Jaraczewska, B. Malczewska, and S. Szymanska: Analysis of Frequency and Dynamics of Acute Poisonings with Pesticides in the 1970-1980 Period, *Przegląd Lekarski*, Vol. 40, No. 6, pp.495-498, 1983
 - o Szeszenia-Dabrowska, N. and B. Malczewska: Occupational Hazard from Exposure to Chemical Carcinogens in the National Economy, *Ochrona Pracy*, Vol. 39 No. 1, 5-6, 1985
- Currently supervises three environmental epidemiologists within EHEB, oversees contracts and coordinates tracking grants.
- Understands the necessity of a quality mentorship and has an interest in mentoring of graduate and postgraduate students or fellows.
- Currently an affiliated faculty member at the University of New Mexico, Master in Public Health Program.

Michael Landen – Secondary Mentor

- Has been working in the epidemiology field since 1995.
 - o Drewette-Card RJ, Landen MG. The disparity change score: A new methodology to examine health disparities in New Mexico. *J Public Health Manag Pract*. 2005;11(6):484-492.
 - o Shah N, Lathrop S, Landen M. Unintentional methadone-related overdose death in New Mexico and implications for surveillance, 1998-2002. *Addiction*. 2005;100(2):176-88.
 - o CDC. Health risk behaviors and conditions among persons with depression – New Mexico, 2003. *MMWR* 2005;54:989-91.
- Currently the Deputy State Epidemiologist and oversees the several bureaus within ERD, including the Environmental Health Epidemiology Bureau.
- Having been an EIS officer himself, Michael understands the necessities of good mentorship and the needs of many past EIS officers that have come to NMDOH.

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- Has supervised a CSTE Epidemiology Fellow (Amy Robbins) and several EIS Officers and PHPS fellows.