

Environmental Health

Assignment Description

The Wisconsin Environmental Public Health Tracking program works with a broad range of partners to bring together data and expertise for ongoing surveillance and linking of environmental and health data. As this program reaches out to so many other programs, it forms the "home base" for the fellow's activities. The fellow will have the opportunity to meet with partners from other programs within the Bureau of Environmental and Occupational Health, additional health agencies including local health departments, the state's two primary environmental agencies (Department of Natural Resources and Department of Agriculture, Trade & Consumer Protection), and the University of Wisconsin School of Medicine - Department of Population Health Sciences. Working with these partners will provide opportunities to learn more about the impact of epidemiological work outside of the state health department. These experiences, coupled with guidance from the primary and secondary mentors, will allow the fellow to choose from a wide variety of activities for completing the core competency requirements, as well as broaden his/her perspective and understanding of environmental and occupational health. The fellow will have the opportunity to work with large datasets and develop statistical and geo-spatial analytic skills.

Additionally, as the opportunities arise, the fellow will be invited to participate in field experiences such as environmental inspections, preparedness exercises, other emergency situation simulations and outbreak investigations. The fellow is strongly encouraged to present and publish results from surveillance or research activities. The mentors work with the fellow to identify such opportunities, and support, such as funds for travel to local conferences and workshop, is provided as needed. Within the Bureau there are experts in environmental health surveillance, lead poisoning and abatement, asthma, occupational health, superfund site characterization and revitalization, indoor air quality, food safety and inspections, radiation safety and inspections and ground water quality. These experts have many years experience in science, public health education and outreach, public health policy, and regulatory activities, and are readily available to work with fellow to provide information and guidance. Additionally, both mentors work with researchers at the University's Department of Population Health Sciences and can facilitate collaborations between the fellow and these experts.

Day-to-Day Activities

While there will be cases where the fellow will need to work out in the field as part of an investigation or exercise, a large majority of the time is spent in the home office. From there the fellow will work with data to develop analytic skills, create oral and written presentations to summarize work and disseminate findings, and correspond with partners to develop and implement project ideas. As partnerships are key to effective environmental health work, the fellow will also attend a variety of meetings with partners. While there are a number of resources and experts readily available to guide the fellow's activities, it is also expected the fellow demonstrate a reasonable amount of independence and initiative to identify areas of interest, seek out additional resources as necessary and complete tasks.

Potential Projects

The Environmental Public Health Tracking program has established partnerships with a number of data stewards which will greatly facilitate the fellow's access to a variety of datasets. In particular, the fellow can develop data analysis projects related to cancer, birth defects, asthma, acute myocardial infarctions,

lead poisoning, carbon monoxide poisoning, reproductive outcomes, ozone, fine particulate matter, carcinogenic emissions, criteria air pollutant emissions and public and private well drinking water quality. For a sample of the types of data that are readily available, please visit the program's public data portal (<http://www.dhs.wisconsin.gov/epht/>). The large majority of these datasets are components of individual surveillance systems and can be the source for the fellow's surveillance system evaluation. The site includes County Environmental Health Profiles for all counties in the state. One evaluation project may include a review of these profiles to assess their utility and how well they represent the environmental health in that area.

Some current areas of interest that may serve as a major project are: pilot testing in an area of the state to determine the difference in data quality that results from active versus passive reporting of birth defects; ecological analyses of air emissions and chronic diseases such as cancer, birth defects or low birth weight; more clearly defining public drinking water supply boundaries to improve exposure estimates; and, developing environmental health measures at a community level versus the current county-level measures.

Preparedness Role

The state's emergency preparedness program funds staff in many different areas of public health, including the Bureau of Environmental and Occupational Health. The fellow will have the opportunity to meet with these staff to learn more about the program, and will be invited to participate in simulations and table-top exercises. If actual events occur, the fellow will be invited to be an active participant in the response.

Assignment Location:	Madison, Wisconsin
Primary Mentor:	Henry Anderson, MD Chief Medical Officer Wisconsin Bureau of Environmental and Occupational Health
Secondary Mentor:	Marni Bekkedal, PhD Research Scientist Wisconsin Bureau of Environmental and Occupational Health