

ASTHO Environmental Health Tracking: State-to-State Peer Fellowship Program

Final Report

Fellowship Participant:

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Introduction/ Background

The Division of Environmental Health (DEH), Michigan Department of Community Health (MDCH) is actively involved in assessing the effects of environmental exposures on health. Before applying for the ASTHO Fellowship Program, Michigan was not funded by the Centers for Disease Control and Prevention (CDC), National Environmental Public Health Tracking (EPHT) Program to conduct Environmental Public Health Tracking (Tracking) activities; however, because we recognized the importance of tracking environmental exposures and health, we applied for and were awarded federal grants on three separate occasions. This includes funding from ATSDR to study air pollutant effects on adverse birth outcomes, funding from Mickey Leland National Urban Air Toxics Research Center (NUATRC) to study exposures to urban air toxics and asthma, and current funding from an EPA STAR grant to study the effects of air pollutant exposure and proximity to traffic and industry on asthma. Robert Wahl was the principal investigator (PI) on the ATSDR study and the co-PI on the NUATRC study; he is currently the PI for the STAR grant. Furthermore, Robert currently participates with the State Environmental Health Indicators Collaborative (SEHIC). He and other MDCH colleagues are active participants on the Asthma and the Climate Change Workgroups of SEHIC.

These activities are important in bridging the gap between exposure to environmental compounds and adverse health outcomes. However, Michigan must also establish a public health tracking system that integrates existing environmental hazards monitoring programs, exposure data, and existing health outcomes data. This will enable us to determine the role environmental contaminants play in the morbidity and mortality of adverse health outcomes within the state and subsequently determine trends in incidence, identify locations of increased disease, and ultimately link them with information on levels of environmental contaminants. Armed with this knowledge, we will be in a position to institute changes in public health policy with the goal of preventing some of these conditions.

Results

Initially, with funding from the ASTHO Fellowship Program, Robert attended CDC's National Environmental Public Health Tracking Conference, February 24-26, 2009. At this conference, Robert attended a lunch time session sponsored by ASTHO titled "Bridging the gap between funded and unfunded [by the EPHT Program] states. This lunch time session brought together epidemiologist from states funded and states not funded by the EPHT Program, with the goal of discussing methods for unfunded states to participate in Tracking.

The primary purpose of this Fellowship was the site visit. The Environmental and Occupational Health Program, Division of Environmental Health, Maine Center for Disease Control and Prevention (Maine CDC) agreed to host Robert for a three-day site visit. Maine CDC was a perfect match for Robert, due to mutual interests in surveillance of CO poisoning, arsenic exposure in groundwater, and air pollutant exposure and health. Originally, for his Fellowship project, Robert was planning to calculate six carbon monoxide (CO) indicators for the state of Michigan. The Carbon Monoxide Content Work Group (CO-CWG) of the EPHT Program, with significant DEH assistance, developed and tested indicators suitable for routine and disaster-related carbon monoxide (CO) poisoning surveillance. However, soon after Robert was paired with Maine CDC, it became known that the EPHT Program was planning to release a request for applications titled "Network Implementation Program Announcement." Knowing that MDCH

would be applying to the EPHT Program in response to this RFA, which, if successful, would incorporate Michigan into the EPHT Program, Maine CDC restructured the agenda for Robert's visit to concentrate on developing a strong application. The following was the approximate agenda:

Day 1

- a) Demonstration of the Maine CDC Tracking portal, including the CO poisoning surveillance pages.
- b) Demonstration of the computation of Nationally Consistent Data Measures (NCDMs) for CO poisoning.
- c) Discussion of the Maine CDC case-based active surveillance system for CO poisoning.
- d) Dr. Wahl to discuss Michigan outreach and education on CO poisoning.

Day 2

- a) Appropriate follow-up work on CO (from Day 1).
- b) Dr. Wahl to talk about his work on arsenic and cardiovascular disease, diabetes, and kidney disease.
- c) Review of the Maine CDC work on arsenic and low birth weight, and residual exposure to arsenic in homes with point-of-use treatment systems.
- d) Academic partner presentation (University of Southern Maine epidemiologist Doug Thompson) on the use of ecological studies in epidemiology.

Day 3

- a) Review of the Maine CDC work on air pollution, including their study involving case-cross over analysis of ozone and ED visits for asthma.
- b) Review of Dr. Wahl's work on ozone and low birth weight, and ozone and asthma.
- c) Discussion of approaches to this type of work as a surveillance measure.

Discussion

Attendance at CDC's National Environmental Public Health Tracking Conference was extremely informative and helpful. Robert's understanding of Tracking was significantly improved through participation in conference sessions and through discussions with colleagues from Tracking states. Especially important were the sessions and discussions on the National and individual state portals and the lunchtime ASTHO discussion. Until this conference (and the following visit to Maine CDC), MDCH was not aware of the extreme importance of information technology and the development of Tracking Portals to the CDC EPHT Program and participating states.

Receiving assistance from Maine CDC colleagues was critical to our ability to write a strong grant in response to the EPHT Program RFA (which was released soon after Robert returned from his Maine CDC visit). MDCH welcomed the knowledge and first-hand experience gained from visiting and learning from the Maine EPHT Program staff. In addition, this project strengthened peer networks across these two state agencies, including networks of colleagues working in other areas such as asthma, environmental toxicology, and information technology. Whether funded by the EPHT Program or not, this project provided a significant opportunity to explore ways to integrate Michigan's environmental epidemiology and data collection activities into the national Tracking Network. Unfortunately, despite writing a solid, competitive grant

application, Michigan was not funded by the EPHT Program. However, thanks to this Fellowship, MDCH will be able to continue to collaborate with EPHT funded and non-funded states to conduct Tracking projects.

Activities beyond year 1 of the Fellowship include continued participation with SEHIC, including active participation in the Climate Change and the Asthma Work Groups. In addition, during discussions with Tracking state colleagues, Robert was invited to participate on the Air Team CWG of the EPHT Program. We hope to begin collaborating with this group soon. We also hope to continue to collaborate with the Maine CDC on projects related to air pollutant exposure and health, arsenic exposure from ground water, and CO surveillance.