

**ENVIRONMENTAL PUBLIC HEALTH TRACKING ASTHO FELLOWSHIP
REPORT**

Submitted by

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Introduction

Background

In 2012, Idaho had the opportunity to be part of the Association of State and Territorial Health Officials (ASTHO) Tracking Fellowship Program. As part of the fellowship a state representative (Dr. Norka Paden) traveled to Denver to get more insight about tracking at a national workshop and performed a site visit to Olympia, WA. This report provides details about lessons learned at the national workshop and site visit as well as an overview of the pilot project. This pilot project focuses on childhood lead poisoning prevention in Ada County, Idaho using GIS methodology as a mapping tool to determine areas of high risk for lead exposure to lead paint coming from old housing. This project will be beneficial to target screening efforts in Ada County and to inform health officials and state representatives on where to target future lead prevention programs.

Report on tracking activities

Tracking-related National Conference-Denver, 2012

Learning experience

General

- Tracking at the national level has helped improve networking across states, agencies, and academic institutions.
- Tracking provides a wide variety of opportunities to health professionals working in grantee states to inform the public, legislators, and health managers in charge of decision making.
- Tracking goes beyond displaying surveillance data; it constitutes an important tool and source of information to generate scientific publications and public health assessments.
- Tracking at the national and state level gathers a multidisciplinary team and works cooperatively to identify health hazards that may be affecting human health in a particular location and better inform citizens.
- Several states had overlapping projects. The most common environmental contaminants among all the groups were: lead, benzene, arsenic, ozone, mercury, PM2.5, and radon. The most common health outcomes were asthma, birth defects, cardiovascular disease, cancer, and neurological defects.

Topic Discussions (Lead issues)

- It was interesting to find out that Maine had a similar project to the one outlined in this report. They are planning on displaying data at the community level.

- The University of Pittsburg is developing an interesting lead project that comprises data on lead exposures from smelters in different states.
- Other states with lead issues that participated in our round table were New Mexico and Missouri. New Mexico gets electronic data reporting from labs for child lead blood levels even below the recommended level of 10 µg/dL.

ASTHO Fellowship Recipients Meeting

- ASTHO 2012 Tracking fellows in attendance were from Virginia, Alabama, Idaho, Nebraska, and Oklahoma. Virginia presented a similar pilot project to the one outlined in this report. Nebraska is looking at radon concentrations and lung cancer.
- ASTHO 2012 Phase II grantees from the District of Columbia and Cincinnati were in attendance.
- Suggestions from former grantee mentor states included: avoid automating systems until later on in the process, communicate properly with IT people, anticipate struggles during contract preparation, develop partnerships with data stewards, and build a portal to support local needs.

Workgroup Meetings

- The four workgroups included: content, program management & outreach, standards & network development, and geospatial. Topics discussed within the content workgroup were hospitalization, biomonitoring, water, climate change, pesticides, and vital statistics. The program management & outreach workgroup had several sessions in which grantee states showcased projects of interest and lessons learned. This group also shared ideas of dissemination and success stories in outreach to local and health departments. The major topic of discussion of standards and network development workgroup was to manage standards in secure portals and the need to find finer resolutions to display data. The geospatial workgroup discussed the development of a guidance document to display multiple measures, visualization, and the creation of subgroups for dissemination and implementation aspects.
- Some of the take home messages from these group discussions were:
 - By having an Environmental Public Health Tracking (EPHT) portal and performing a quality assurance on data submitted to the state, some random errors were identified, which otherwise would have gone unnoticed and may have resulted in negative health effects on citizens.
 - Data stewards felt that their efforts of monitoring and compiling data were being used when added to the network.
 - Successful EPHT programs are being used to meet urgent needs of local health departments (e.g., in New York City).
 - EPHT is providing opportunities to establish partnership with academia. For example, it has recently been incorporated as part of the curriculum in the Department of Physical Education, School of Public Health at Central Washington University in Washington State.

- Contaminants to be included in future EPHT networks are radon and pesticides. Another topic discussed was the usefulness of tracking contaminants associated with the natural gas hydraulic fracturing process around the country.

Host state site-visit

Background description

Ms. Paden visited the Washington Department of Health in Olympia on April 10-11, 2012. This site visit was part of ASTHO's State-to-State Peer Fellowship Program. Idaho was partnered with the Washington Department of Health. The site visit allowed for one-on-one interaction between the two programs, including presentations and discussions of many components of the Washington Tracking Network Program (WTNP). Glen Patrick, Manager of the Division of Environmental Public Health Washington State Department of Health, gave an overview of the WTNP. Washington's EPHT staff provided various presentations that covered several topics including:

- EPHT Information Technology
- Communications Development and Implementation
- Web Portal Demonstration
- Indicator Development and Data Manipulation and Analysis
- Lead Program Overview

Learning experience

One of the objectives of the site visit was to learn about the WTNP. The second objective was to learn about Washington's lead program and identify ways it could inform the implementation our lead pilot project. Lessons learned from the WTNP are summarized below:

- Tracking fosters new and improved collaborations within and between environmental and public health entities, provides an added value to existing data, and contributes to a new public health culture and policies that benefit various partners including the public.
- The technical aspects of the portal demonstrated that the portal must fit into WA State's and WA DOH IT infrastructure and must be able to display nationally consistent data measures (NCDM). To accomplish these requirements IT Tracking staff are active participants of national workgroups (i.e., Standards and Network development, Content, Program Marketing Outreach).
- Communication within the WTNP is a key component that entails development of strategies to disseminate information to different audiences (i.e., community in general, academia, tribes, departments of health) to guide policy makers and decision makers. To accomplish this goal, the WTNP has a steering committee with data stewards that meets regularly and discusses better ways to disseminate the data.
- Reviewing the public and secure portals and all the work behind its launch provided a good example of using the tracking network for different users (i.e., public, academia, etc.) The secure portal relies on CHAT (Community Health Assessment Tool) which provides a secure web-based access to a repository containing a variety of data collections including environmental disease (poisoning from carbon dioxide) and

environment-related disease outcomes (asthma, cancer incidence, and reproductive outcomes). The portal allows for flexibility by allowing various types of users to create new queries to better filter and interpret the data. Data can be retrieved in various forms (i.e., statistical tables, charts and graphs, and maps showing geographic distributions).

- To have access to data the WTNP has developed confidentiality sharing agreements for CHAT, birth data, hospital discharge information, and a memorandum of agreement with the WA Department of Ecology for the environmental data. Partnerships and ongoing communication within the WA DOH and other state agencies have played an important role for the success of the WTNP.
- The WA Childhood Lead Poisoning Prevention Program uses the child blood lead registry to prevent poisoning from lead paint and non-lead paint sources (i.e., water, soil, and occupational exposure, shooting ranges, among others). Available sources WA uses to minimize or prevent exposure include the Department of Commerce grant program to assess and remediate health hazards, partnerships with Ecology, the Masters Home Environmentalist Program (partnership between the American Lung Association and Ecology), pediatric health providers, early school interventions (lead versus learning ability), and Health Consultations and Health Assessments through the ATSDR program.
- The lead presentation provided useful insights for our pilot project. For example, the information shared from the lead poisoning housing study in WA revealed that the value of the house was not a good predictor for high blood lead levels in children living in those houses; however housing age was a good predictor for high lead blood levels in children according to their sensitivity analysis.

Pilot Project

Project Abstract

Lead-based paint was used in more than 38 million homes until it was banned for residential use in 1978. More than half (62%) of Idaho homes were built before 1978 and could have lead-based paint. Environmental and health information on childhood lead poisoning is crucial for the community, particularly to health professionals (e.g., health managers, epidemiologists, public health assessors, and health educators) to implement more targeted lead poisoning education prevention programs at the local, county, and state levels. Ada County is the most populated County in Idaho with the highest percentage (23%) of children under 5 years of age. To address the ongoing concern of childhood lead poisoning in Idaho, the BCEH proposes to design and implement a pilot project to link blood lead levels (≥ 10 $\mu\text{g}/\text{dL}$) in children (0-5 years of age) and older housing (pre-1978) in Ada County. Data for this pilot project was collected from various sources: US Census Bureau, tax collector office information, and Medicare. BCEH used GIS technology to create a lead risk map for Ada County based on the year that the house was built high risk (pre-1950, intermediate risk (1951-1978), low risk (1978-2010). Results will be published in a web-based format on IDHW's website (Environmental Health Information link).

Specific Aims

The purpose of this report will be twofold: to inform regulators about the current situation concerning childhood lead poisoning in Ada County and to prevent childhood exposure to lead in houses built before 1978. This report will also be an important tool for BCEH staff and their partners so they can implement more targeted lead poisoning prevention and education programs.

Research Design, Methods, Key Personnel

Results

A final GIS map is provided in the supporting material section as a result of this pilot project. As expected the highest risk area for childhood lead poisoning is the downtown Boise area in the older neighborhoods. The lead risk map provides information at the block level. GIS has the capabilities to identify specific locations of these high risk areas.

Expected Outcome of Pilot Project

In addition to the map itself, a list of geographic areas to prioritize for lead screening (e.g., block groups with >80% of homes built pre-1978) will be shared with local agencies involved in childhood lead screening such as Medicaid, local health districts, and local Head Start programs.

It is anticipated that this map and additional ones at the micro level will result in the development of more efficient and cost-effective lead screening efforts by local agencies, in which higher risk areas are systematically targeted for screening. It is also hoped that the mapping project will enhance relationships with local agencies and result in the project being expanded to other counties.

Planned Activities

Action Plan for future tracking activities

We plan to generate similar lead risk maps for other counties in Idaho. Findings of this pilot project were presented at the Idaho Department of Health and Welfare Epidemiology Spring Conference organized by the Office of Epidemiology, Food Protection and Immunization on May 22, 2012.

Specific short term and long term goals

The next step after the pilot project completion and demonstration will be the development of a draft plan for EPHT in Idaho. In preparation for future CDC and EPHT call for applications, we will initiate an Idaho EPHT workgroup with representatives of potential data stewards including the Idaho Department of Health (Bureau of Community and Environmental Health, Bureau of Vital Statistics, and IT representatives), Idaho Department of Environmental Quality (water quality monitoring, and air quality monitoring) and two universities with public health programs (Boise State University and Idaho State University). The goals of the workgroup will be to:

- Develop likely information technology infrastructure needs.
- Identify key data trading partners.
- Create a memorandum of agreement template.

The first meeting of the workgroup will be held by the end of 2012. In the spring of 2013, a meeting will be held with each identified data providers, to explain the EPHT scope and the ASTHO Tracking Program. In addition, the workgroup will begin collecting data as specified in the NCDMs for submission to the EPHTN Secure Access Management System. The IT representative will research what infrastructure, software and hardware will best serve to build the Idaho EPHT public and secure web portals and the secure database needed to store and transmit data to the national network.

Conclusions

The ASTHO Fellowship Tracking Program through the national conference provided a better perspective of tracking efforts in the 24 grantee states that are striving to provide relevant information to meet the needs of their communities, and to inform policy makers, health managers, and the community in general. Washington State's Tracking Network Program can be used as a model. The take-home message from the site-visit was that tracking opens a wide range of opportunities for the development of partnership within and outside the Department of Health. Although Idaho currently lacks access to hospitalization data, Idaho has access to data for core information required by the National Tracking Network such as birth outcomes (fertility, infertility, low birth weight); and cancer (all types of cancer needed). Idaho can also gain access to: drinking water quality data (arsenic, nitrates), air quality data (particulate matter, ozone), childhood lead poisoning data (levels above 10 µg/dL), climate change data (several indicators are being developed for Idaho), pesticide data (trace amounts of different pesticides in groundwater collected by the Department of Agriculture), and population information data (demographics and socioeconomic). Idaho will benefit from the implementation of an Environmental and Public Health Tracking Program taking current activities at the Bureau of Community and Environmental Health one step forward. By geographically representing ongoing health issues, it can provide direction for current programs that are working to reduce impact from contaminants in the environment and other factors that can affect human health.

Supporting Material

Lead Exposure Risk Priorities by Census Block Group:
Ada County, Idaho, 2011

