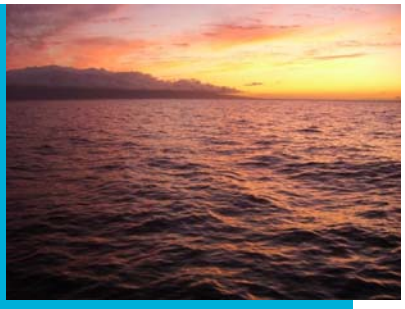
Environmental Public Health Tracking



ISSUE 21 SUMMER 2010

UTAH DEPARTMENT OF HEALTH

TNAC UPCOMING MEETING:

- TBA

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Principle Investigator/Project Manager Summer Conference

Greg Williams and Sam LeFevre attended the National Environmental Public Health Tracking Network's annual strategic planning meeting in July at CDC in Atlanta, Georgia. As we move into the final year of our current 5-year implementation budget, we are required to evaluate Utah's Tracking Network. The Utah EPHT team has been working to make sure all of the requirements—Nationally Consistent Data Measures (NCDM)-- have been met. We will be working with the Tracking Network Advisory Committee (TNAC) in the near future to evaluate how the tracking network is impacting decision making, policymaking and public health practice in Utah.

The Content Workgroup co-chairs presented a new model for the next phase of growing tracking. The new model retains the eight core topic areas (air pollution monitoring, asthma hospitalizations, birth defects, cancer, child blood lead biomonitoring, drinking water pollution monitoring, myocardial infarction hospitalizations, and vital birth records). A series of approximately twenty additional topic areas was recommended and approved for addition however, states will only need to participate in a certain number of these. To some extent, Utah has already advanced in some of those areas, for example, we have already been including asthma and myocardial infarction emergency department (ED) visits and carbon monoxide hospitalizations and ED visits. Other topics that might be of interest in Utah include: selected indicators on climate change (non-recreational heat and cold injury hospitalizations or ED visits); other chronic obstructive pulmonary disease (COPD) hospitalizations or ED visits; renal and neurologic diseases potentially associated to environmental exposures. We would like to work with our TNAC to make a tool available to allow tracking partners/users to provide us feedback on Utah specific priorities.

The meeting participants reviewed the objectives recommended by the PEW Commission recommended objectives. The initial directive PEW provided to congress included objectives of turning data into information, information into knowledge and knowledge into action. The implementation phase has been focused on the first step. We need to move into the next steps which will include data linkage. A new data linkage workgroup has been organized and the academic partners have been assigned to develop data linkage models and methods, and to pilot at least one data linkage project with partner states. Some areas of linkage interest include linking land use data to our geographic views of disease indicators, linking exposure data to disease indicators, and linking other socio-economic indicators of health to our disease indicators.

Finally, a big discussion occurred around the idea of sustainment. Most states, like Utah, continue to be very reliant on federal support to sustain and grow the Tracking Network. With the current funding levels, it is all we can do just to maintain the current content of the Tracking Network, even with all of your help. While CDC has indicated they will be able to continue to support the state tracking efforts, that support is likely to be level funding for the next cycle. CDC needs to use any increases in their budget to bring on additional states. For us to grow the Tracking Network, we will need to evaluate our current tracking management processes to identify areas where we could be more efficient. We will need your help to do this.

Utah part of a multi-state / academic partner linkage investigation

In addition to funded states, the National Environmental Public Health Tracking Network funds a number of academic partners to help states develop methodology as part of the tracking infrastructure. Recently, the Centers for Disease Control and Prevention asked the academic partners to work with a small forum of states to develop a linkage demonstration project using public health and environmental data. The Utah tracking network was asked to join the project lead by the University School of Medicine and Dentistry of New Jersey (UMDNJ). This project will demonstrate a linkage between birth outcomes and the National Air Toxics Assessment data (NATA; http://www.epa.gov/ttn/atw/natamain/). NATA data is modeled from reports of monitoring stations, emissions and other inventories of air pollution.

Over the last decade, environmental research has clearly demonstrated a linkage between adverse birth outcomes (e.g., low birth weight or small-for-gestational-age) and exposure to ambient pollution. More particularly, maternal exposure to excessive levels of air pollution increases the risk of poor birth outcomes. Birth defects have also been associated to maternal exposure to ambient air pollution. While the risk has been documented, little progress has been made to link air pollution data to birth outcomes beyond the specific population or study area applied by the researcher. Consequently, the public remains largely uninformed about immediate risks.

Utah, working with Dr. Dan Wartenberg and his team at UMDNJ and several other tracking states, will explore linkage of birth data and NATA data at county-level geography. Specifically, Utah will explore whether birth records data is sufficient in establishing this linkage and controlling for other risk factors that may interfere with the linkage (confounding and interaction). For example, maternal smoking or diabetes could confound the linkage. In addition, Utah will be looking at how to use this linkage to generate indicators that could better inform the public about local risks.

We are asking for your help and response

We would like you to tell us what you think the emerging environmental health concerns are in Utah and Nationally. Please respond by email to Emily Stembridge estembridge@utah.gov. Thank you.

Rapid Inquiry Facility

The Rapid Inquiry Facility (RIF) application is an extension for ArcGIS mapping software developed by the U.K. Small Area Health Statistics Unit (SAHSU) at the Imperial College London.

The RIF provides functionality to link environmental risks, cases of diseases, population counts and other factors together to evaluate risk in small geographic areas. In 2004, the Utah Environmental Public Health Tracking Network (UEPHTN) became interested in the RIF and collaborated with SAHSU to re-engineer the extension to run on the latest versions of ArcGIS and to accommodate U.S. data structures. Since the implementation of the RIF, UEPHTN staff has continued to collaborate with the SAHSU both in developing RIF and exploring its utility.

Recently, SAHSU and UEPHTN staff co-authored a paper describing how the RIF can be employed in conducting risk assessment. For this paper, the Utah EPHTN contributed, as an example, an investigation of the rates of leukemia, myeloma and lymphoma in populations near the five petroleum refinery sites located in northern Salt Lake County and southern Davis County. In 2004, these five refineries reportedly released 161,000 kg of hazardous air emissions including benzene, cyclohexane, ethylbenzene and ethylene. In an occupational setting, Benzene has been associated with the development of blood cancers such as chronic myeloid leukemia. Since the refineries have been at their current locations for more than 50 years, this investigation looked at all years (1973 - 2006) of available data combined among the populations in two geographic bands around the refinery locations. One band extends from the refinery out to 2.5 km and the second extends from 2.5 to 5 km. Census derived median income for populations at the census block group level was used to control for socio-economic and behavioral risk factors. The results of this investigation revealed a potential increased risk among those populations for non-Hodgkin's lymphoma that might warrant further investigation.

Beale L, Hodgson S, Abellan JJ, LeFevre S, Jarup L. Evaluation of Spatial Relationships between Health and the Environment: The Rapid Inquiry Facility. **Environmental Health Perspectives.** September 2010; 118(9):1306-1312.
http://www.ehponline.org/ambra-doi-resolver/10.1289/ehp.0901849

Utah Environmental Public Health Network Logo

Emily Stembridge and Julia Shumway worked with a graphic designer to develop a new logo for Utah's Tracking Network, in part to celebrate the 1 year anniversary launch of the National Tracking Network. The desire was to create a unique, recognizable logo to better represent Environmental Public Health Tracking. To assist in the logo's memorable design, an effort was made to create a logo similar to the Utah Department of Health's logo. It's hoped people will connect health with the new logo. Please feel free to provide any comments and feedback on the new logo to estembridge@utah.gov.

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New Faces in EPHT

Stacey Anderson

Stacey Anderson, an epidemiologist, joined EEP in August 2010. She has a B.S. in Biology from Saint Joseph College in Connecticut and an MPH from Westminster College in Salt Lake City. Stacey has an interest and background in infectious disease, cancer biology and epidemiology. She completed an internship for the National Toxic Substance Incidents Program at the Utah Department of Health this past summer. She currently works in Health Hazard Assessment investigating potential cancer clusters. When she's not at work, Stacey can be found hiking up in the Wasatch mountains, reading a good book or cooking up a storm for her husband and three children.

Brook Dorff

Brook Dorff, a California native, reluctantly left her prized warm weather and moved to Utah to attend school at Brigham Young University. Upon graduating with a Bachelor of Science in Public Health Education in 2008, she immediately began work as a liaison between the Utah Department of Health Asthma Program and the American Lung Association in Utah. After working in that capacity for two years, she joined the Environmental Epidemiology Program (EEP) in September of 2010 as a Health Program Specialist. Although health and the human body are her passions, she also enjoys: traveling, playing field hockey, attempting to play other sports, learning new words, blogging and tweeting, cheering on the Cougars and Real Salt Lake, and going on humanitarian trips.

Camille Roundy

Camille Roundy, an epidemiologist, recently joined EEP as the UEPHTN Data Manager. She received her BS in Public Health Education and MPH from Brigham Young University. She was a cancer research fellow at the National Cancer Institute in Maryland and conducted epidemiologic research on the association of specific soils with classic Kaposi's Sarcoma and Kaposi's Sarcoma-related Herpes Virus. Before joining EEP, Camille worked at the Institute for Global Tobacco Control at Johns Hopkins University as a research program coordinator. She enjoys traveling, spending time with family, watching college football, camping, swimming and playing games.

UTAH DEPARTMENT OF HEALTH

Utah Department of Health

Environmental Epidemiology
288 N 1460 W
PO Box 142104
Salt Lake City, UT 84114

Phone: 801-538-6191
Fax: 801-538-6564
www. health.utah.gov/epi
www.ibis.health.utah.gov

Tracking Network Contacts

Greg Williams, Project Manager
gregwilliams@utah.gov

Brittney Carver, Technical Support
blcarver@utah.gov

Brook Dorff, Health Program Specialist
bdorff@utah.gov

Mark Jones, Epidemiologist
markejones@utah.gov

Camille Roundy, Epidemiologist
Croundy@utah.gov

Emily Stembridge, Health Program Specialist
estembridge@utah.gov

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