

**ENVIRONMENTAL PUBLIC HEALTH TRACKING
ASTHO FELLOWSHIP**

Phase 1 Report

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Submitted by:

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Environmental Public Health Tracking Fellowship Program

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I. Introduction and background

Project description

The mission of the Virginia Department of Health (VDH) is to promote and protect the health of all Virginians across the state. While Virginia's overall state health system ranking, as measured by the Commonwealth Fund¹, shows a slight increase from 27th rank in 2009 to 24th rank in 2014, out of 50 states, this masks significant areas where the population does not experience the same health opportunities as the rest of the state. While no single person or program can address the challenge of health inequities in isolation, the Environmental Public Health Tracking fellowship program presented a unique opportunity to acquire and share hospital discharge and emergency room visit data on four health outcomes with the Centers for Disease Control and Prevention's (CDC) National Environmental Public Health Tracking (EPHT) network, a national network that includes more than 25 participating states.

In December 2014, VDH applied for a nonmonetary EPHT fellowship award from the Association of State and Territorial Health Officials (ASTHO); VDH received a fellowship award in January 2015. To meet the objectives of the fellowship, VDH proposed to submit statewide hospitalization and emergency department (ED) data for years 2000-2013 on three health outcomes of public health interest – asthma, carbon monoxide poisoning, and heat-related illness. VDH also proposed to submit hospitalization discharge data on heart attacks from all inpatient hospitals across the state. The two VDH applications being used to generate the data for this project are:

- The Electronic Surveillance System for Early Notification of Community-based Epidemics (ESSENCE), a syndromic surveillance system that captures chief complaints from emergency department and urgent care center visits in near-real time, and
- Virginia Health Information (VHI), a healthcare services database including hospitalizations for asthma, heart attack, carbon monoxide poisoning, and heat stress.

Benefits/significance to the state and tracking network

VDH believes that it is in the interest of public health to make hospital outcome and emergency department data on environmentally-influenced health outcomes as widely available as possible. Only when this data is provided at the state and national level can VDH assure that policy and decision-makers will have facts to serve as the basis of population health-based decisions that affect health equity. Often policies and decisions are driven by anecdotal perceptions that do not provide a true picture of the burden of chronic disease or inequity. Assuring that public health data related to these health outcomes is valid, verifiable, and accurate is critical to VDH. We intend to utilize this data as part of the agency's Health Opportunity Index which is another means of identifying socio-economic factors that affect individual and community health.

II. Lessons Learned

Collaborations

VDH is on track to submit data on these four health outcomes from years 2000-2014 to the National EPHT portal as indicated in Table 1 *Data Intentions*. To meet this objective, several partnerships and collaborations were established during Phase 1 of this project. Representatives

¹ Commonwealth Fund, <http://commonwealthfund.org>

from four distinct VDH work units are contributing to this project and have provided collaborative input throughout phase 1. These representatives include Chris Gordon (Operations Director of Public Health and Health Equity, Office of the Commissioner), Rebecca LePrell (Director of Environmental Epidemiology, Division of Environmental Epidemiology), Graham Truelove (Data Warehouse Supervisor, Office of Information Management), and Erin Austin (Enhanced Surveillance Epidemiologist, Division of Surveillance and Investigation).

Table 1. Data Intentions

State	Content Area	Years to Submit
VA	Asthma Emergency Department Visits	2005-2014
	Carbon Monoxide Emergency Department Visits	2005-2014
	Heat Stress Emergency Department Visits	2005-2014
	Asthma Hospitalizations	2000-2014
	Heart Attack Hospitalizations	2000-2014
	Carbon Monoxide Hospitalizations	2000-2014
	Heat Stress Hospitalizations	2000-2014

Meetings

At least three of four VDH project contributors have participated in every bi-weekly ASTHO check-in meeting since January 22, 2015. In addition to the bi-weekly check-in meetings, staff announced and discussed the project with all 35 VDH Health Directors at their regularly scheduled meeting on January 28, 2015. Another project update for the Health Directors is planned for July 22, 2015. Additionally, staff working on the EPHT fellowship project plan to meet with the VDH Advisory Council on Health Disparity and Equity on July 15, 2015 to discuss complementary projects and identify any potential opportunities for collaboration. Earlier this month, Rebecca LePrell was able to attend a full-day EPHT learning session titled “Keeping it Real: Use of EPHT for Broader Application, Including Enhancing Situational Awareness” at the pre-conference sessions of the 2015 Council for State and Territorial Epidemiologists meeting. At the session, acute and real-time data sources were explored to evaluate the health impacts of natural disasters or extreme weather events and New York City Health Department provided an informative presentation on real time data used to track adverse health events during and after Hurricane Sandy.

Acquiring and formatting data

Patient-level hospital discharge for 2000-2014 was provided to VDH by VHI. Emergency department data was acquired through ESSENCE. Erin Austin and Graham Truelove have been primarily responsible for acquiring and formatting all hospital discharge and ED data for this project. A data use agreement with VHI already existed prior to this tracking project and no modifications to the contract were needed. For ED data, VDH initiated modifications to existing

memoranda of agreement with ED data stewards. The current draft is pending review by the Virginia Office of the Attorney General. A data use agreement with CDC has been fully executed (see attachments).

Metadata creation

As of June 28, 2015, metadata for patient-level hospital discharge data has been created. Metadata for ED data is nearly complete. As an in-kind contribution to the fellowship project, VDH purchased new SAS licenses to help prepare hospitalization and ED metadata for this project. VDH anticipates participating in the metadata test submission and validation process during July, 2015.

III. Conclusion

This project allowed VDH to identify errors in the county-level FIPS codes recorded in the patient-level hospitalization discharge data that otherwise would not have been identified. In collaboration with the data steward, VDH has corrected four years of recent hospitalization data and initiated discussions with the steward to correct the FIPS data for the reporting years prior to 2010.

While the resources on the Sharepoint site have been helpful, VDH recommends keeping Sharepoint resources up-to-date and in easily identifiable folders. Navigating Sharepoint to find resources relating to the ASTHO fellowship project (for these four health outcomes of interest) has been challenging.

Another challenge with the nonmonetary grant has been tracking time and effort associated with the project. VDH will identify ways to improve time and effort tracking during phase 2 of this project.

IV. Attachments

- CDC and VDH Data Use Agreement



COMMONWEALTH of VIRGINIA

Department of Health

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State Health Commissioner

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Data Use Agreement for CDC National Environmental Public Health Tracking Network

In this agreement, the person or organization acquiring the data is referred to as the "Recipient." The Recipient provides the following attestations with respect to the use of Virginia's Hospital Discharge and Emergency Department Data:

- 1) The Recipient will not release any patient-level data or individual patient records or any part of them to any person who is not a subcontractor or employee of the Recipient, unless otherwise required by law;
- 2) The Recipient will not attempt nor permit others to attempt to identify individuals;
- 3) The Recipient will not attempt nor permit others to attempt to link the individual records of patients in this data with any other individual level data from any other source;
- 4) The Recipient will adhere to the data protection methods described in the most current *National Environmental Public Health Tracking Network Data Re-release Plan*;
- 5) The Recipient will not copy, sell, rent, license, lease, loan, or otherwise grant access to the individual record level data covered by this Agreement to any other person or entity, except as set out in the *National Environmental Public Health Tracking Network Data Re-release Plan* or as otherwise required by law;
- 6) The Recipient will make no statement nor permit others to make statements indicating or suggesting that interpretations drawn from the data are those of the Virginia Department of Health;
- 7) If cited in a publication or presentation, the source of the data shall be acknowledged as VDH and a copy of the publication or presentation will be provided to VDH. Publications using VDH data aggregated with data from other states or obtained via the public portal are excluded from this provision.

This agreement pertains to the following:

Data Type: Hospital Discharge and Emergency Department

CDC/NEGH/ENTR
Recipient Organization Name

4770 Burkhead Hwy
Address

Atlanta, GA, 30341
City, State, Zip

Luca Balluz Branch Chief
Recipient Representative Name & Title (Print)

770-481 3998
Phone

770-488 1538
Fax

www.cdc.gov
Organization Web Address

lballuz@cdc.gov
E-mail Address

Recipient has the authority to enter into this Agreement and agrees to abide by all provisions set out in this Agreement, as indicated by signature below.

[Signature]
Recipient Representative Signature

6/10/15
Date