State Health Data Availability and Access For Environmental Public Health Indicator

Jean Johnson, PhD
Minnesota Department of Health
Chronic Disease and Environmental Epidemiology
Environmental Public Health Tracking and Biomonitoring Program
Accessing Public Health Data

- State public health agencies hold many datasets with potential application for EPHI research
- Barriers to data access and use are significant
  - Programs are “siloed”
  - Lack of clear path for making data requests
  - Laws governing data sharing and use vary by state and by program
  - Most “public” data are aggregated and de-identified
National EPHT Network

- 23 states and NYC

State EPHT Programs

- provide a portal for access to state and local level data
- add data unique to the state
- negotiate data use agreements with data stewards to ease data sharing
- build environmental epidemiology capacity
“Deconstruction of data silos will be a chief and lasting outcome of EPHT”
Minnesota Public Health Data Access

Topics in development: pesticides, climate change, environmental tobacco smoke, radon, private well data
Secure Portal Concept

Secure DATA Access

Email Address

Password

Sign In

Custom Data Sets?
Data Privacy vs. Public Health Protection

- Balance of public good vs. individual rights
- Mn Government Data Practices Act
  - Data are classified and separated
  - All government data are public unless....
    - Classified otherwise under a specific law
    - Health data on individuals is private
    - Epidemiological investigations for public health protection
    - Commissioner of Health has broad authority
    - Research uses
State Collaborations with Academic Partners

Data “linkage” studies

- Dan Wartenburg, UMDNJ
  - Birth outcomes and air pollution

- Leslie Staynor, U. Illinois- Chicago
  - Birth records and childhood cancers and state drinking water information systems (SDWIS) data on agricultural chemicals (nitrate and atrazine)
EPHI Research Project in Minnesota

- US EPA STAR grant

- Partners:
  - Minnesota Dept. Of Health
  - Minnesota Pollution Control Agency’
  - Olmsted Medical Center, Rochester Epi Project

- Purpose: Develop outcome-based environmental health indicators for tracking public health impacts of particulate matter reduction strategies
PM reduction strategies

2003-2009

Baseline Period

Early Implementation

Baseline Period

Implementations

2003-2009: Project Green Fleet retrofits

2005-2009: more anticipated 2010

State Agency Executive Order
2004

Heavy Duty Diesel Rule
2007

Ultra Low Sulfur Fuel
late 2006

Clean Air Interstate Rule
2008

MERP: Riverside
operational: 2009

MERP: High Bridge
offline: 8/07-12/07; operational: May 2008

MERP: Allen S. King
offline: 8/06-4/07; operational: early 2008

Project Green Fleet retrofits
2005-2009; more anticipated 2010
Population exposure data

- Ambient PM$_{2.5}$ (MPCA)
  - Continuous monitors
  - Daily 24-hr averages
  - Avg. of 6 monitor stations for MSP metro
Health outcomes data

- Hospitalizations (MDH)
  - Asthma
  - Chronic Lower Respiratory Disease
  - Total respiratory disease
  - Cardiovascular disease

- Mortality (MDH)
  - All-cause
  - cardiopulmonary

- Rochester Epi Project (linked health care records)
  - Asthma clinic cluster visits
  - Oral steroid prescription data

- Ambulance data (EMS runs)
For more information

Environmental Epidemiology Unit
Chronic Disease and Environmental Epidemiology Section
Minnesota Department of Health

http://www.health.state.mn.us/divs/hpcd/cdee/enviroepi.html

Program Director, Jean Johnson, PhD
Email: jean.johnson@state.mn.us
phone: 651-201-5902