



NEISA Regional Stakeholders Meeting on Air Quality and Asthma

Held at the Brown Center, University of New Hampshire, Durham, NH
October 22, 2001

Tom Kelly presented a conceptual framework for this project with health as an integrator in the ecosystem/climate/social system paradigm. He spoke of the areas of convergence (temporal, spatial, response) and the area of divergence in the climate change and public health communities. This was followed by a brief sketch the project design, with the qualifier that it was a work in progress, stressing the importance of the input from the public health stakeholders. The potential role of climate research to assist the public health communities in prevention was acknowledged.

Cameron Wake gave an overview of the trends in climate research, highlighting the variability found in New England with respect to temperature and precipitation. He spoke of the region's susceptibility to air pollutants due to it's end of pipe location and the special vulnerability of the coastal communities to poor air quality events. Cameron also spoke of the project's spatial and temporal capacity to measure pollutants.

The meeting was then opened to the participants for a discussion of asthma surveillance...at the regional, state and local levels. The following is a synthesis of the remarks made by the participants:

- ◆ There is minimal asthma surveillance at the state level. The Asthma Regional Coordinating Council, a coalition of health, housing, environmental, educational and other non-profit partners developed 25 criteria as a "gold standard" for asthma surveillance. However, ARCC realized that this model is too ambitious for the public health infrastructure at this juncture.
- ◆ ARCC: focussing on surveillance through schools – relatively inexpensive for relatively good data.
- ◆ There are pockets of surveillance, particularly pediatric surveillance of asthma, utilizing the schools
 - ◆ NH Dept of Ed Survey of NH school children (Katherine Rannie)
 - ◆ Self reported ...case defined by diagnosis of asthma by MD/ NP
 - ◆ also asked re: missed school days
 - ◆ The Dept of Ed has access to ~600 school nurse/300 on a LISTSERV and access to school superintendents
 - ◆ K. Rannie mentioned that there was the potential to collect high resolution/timely data via the LISTSERV
 - ◆ ATSDR study in Merrimack valley school (MA)...60 schools, 35, 000 kids (Bob Knorr)
 - ◆ 1 page survey w/ demographic questions, whether an asthmatic, and missed school days

- ◆ validation of the self reported asthmatics via other data sources (school medical records, physician records, hospitalization data)...
- ◆ confidentiality issues arise once a medical record is accessed
- ◆ plug for working with school nurses and stressed need to work more with parents
- ◆ Manchester Health Dept/American Lung Assoc of NH (Rosemary Caron, Rick Rumba, Scott Bristol)
 - ◆ 2 projects:
 1. Air Quality ...Indoor and Outdoor Air Quality w/ monitors in and atop a school ...correlating criteria pollutants, PM, ozone with hospital admission data (air quality data collected only)
 2. Asthma Surveillance Study
 - ◆ Manchester schools...7100 kids surveyed, grades K-5...72% response
 - ◆ School nurses work for Manchester Health Dept...advantageous
 - ◆ Interested in capturing diagnosed as well as undiagnosed asthma
 - ◆ Questions re: severity, # days missed from school, medical visits, triggers etc
 - ◆ Rumba mentioned NH DHHS applying for CDC surveillance grant
- ◆ Constraints of these school-based studies: personnel (time) and \$\$.
- ◆ Other data sources discussed...hospital data, insurance data, and pharmacy data.
 - ◆ Each has a temporal element associated w/ it but no one data source captures everyone
 - ◆ School data more "local" than hospital data?
- ◆ Other nuances of study design discussed:
 - ◆ how to use environmental/health data
 - ◆ e.g. average vs peak readings
 - ◆ e.g. temporal data...lag time between the weather event and the health event→does the weather event trigger a response, or does it sensitize the individual to a response to other triggers or both?
 - ◆ case definition
 - ◆ too much focus on criteria pollutants?
 - ◆ Should other pollutants be measured?
 - ◆ ability to collect school-based data dependent on school size, age/grade of child
 - ◆ The SUMMER ...exclusive focus on schools would eliminate summer for data collection
 - ◆ Use of camps...many school nurses become camp nurses
 - ◆ Asthma camps
- ◆ Maine-New Brunswick Collaborative
 - ◆ Established to examine health and environmental data between these 2 entities
 - ◆ ME is working on establishing relational database....prevalence [hospital data], claims, pharmacy data

- ◆ The BRFSS (ME) found a difference in the prevalence of diagnosed asthma between males and females. This difference was reversed with undiagnosed asthma...the implication being that it is important to understand both diagnosed and undiagnosed asthma.
- ◆ Norm Anderson noted that poor air quality may not only impact asthmatics but also those with other disease processes such as cardio-vascular disease, Chronic Obstructive Pulmonary Disease, Cystic Fibrosis, and infectious diseases
 - ◆ This raised the question whether a broader dependent variable should be examine
 - ◆ Asthma ...Discrete variable, although captures the interest of policymakers
 - ◆ Pulmonary Function Tests...continuous variable with broader implications beyond one disease entity
 - ◆ Examples peak flow meters,
 - ◆ Spirometric Lung Function Tests: FVC and FEV
 - ◆ What are other researchers using as a health outcome variable?
 - ◆ Eileen Storey in CT
 - ◆ John Spengler in Mass.
 - ◆ Meghan Sandel in Mass
 - ◆ What are the pros and cons of these variables
 - ◆ Importance of collaboration ...sharing of resources (personnel, \$ data)