

Tulane Center of Excellence in Environmental Public Health Tracking

Tulane Center for Applied Environmental Public
Health

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Role Tulane COE

- Provide assistance to states/cities
 - Develop and validate methods
 - Provide technical assistance

- Conduct research
 - Study the interactions among hazards, exposure and health outcomes
 - Advance the science to support EPHT

Partnerships and Technical Assistance

Joint Demonstration Project:

- Missouri – Building Demolition and Childhood Lead Levels

Assistance to Part A City

- Houston
 - Developing surveillance systems
 - Community Advisory Board

Partnerships and Technical Assistance

Technical assistance on Demonstration projects

- Wisconsin – Exposure questionnaires
- Louisiana – Creosote sites and cancer
- Florida – Statistical Methods
- Illinois – Feasibility PCE Study
- Oklahoma – Cancer and registries

Method Development

- Approaches and framework for linking disparate data
 - Database structure, format, data type
 - Adapting and using statistical methods
 - Biological plausibility of linking data types
- Demonstration projects
 - St. Louis Demolition Study
 - Risk communication - Community health status and air quality
 - Mercury FIN

EPHT: A Multi-Step Framework

1. Tracking

Compile data for baseline information



Describe trends over time and area



Generate hypotheses

2. Ecological descriptions

Describe relationships among environment and health

3. Research

Examine causation among Environment and health parameters



CAEPH

The Center for Applied Environmental Public Health
Tulane University School of Public Health and Tropical Medicine

GIS/Stats Guidance

- Disease Mapping – spatio-temporal trends
 - Crude rates
 - Standardized (age,gender,race) rates
 - SMRs or SIRs
 - Small rates have large variability -- smooth/shrink them (Bayes)
 - Methods for controlling for covariates (Bayes, HGLM)
 - Identification of clusters (SaTScan)
 - Estimation of surfaces (Bayesian)
 - Colorbrewer

Tools for EPHT

Database Structure

- Develop best practices, methods and tools for adapting databases for tracking and analysis
- Applying principles for effective and efficient use of data sources for EPHT
 - Normalization of data bases
 - Tools to adapt databases for tracking data

St Louis Demolition Study

Joint project with Missouri

- Ecological Study that follows up on observation of a trend by Missouri

Goal: Examine relationships between the demolition older buildings in St. Louis City and blood lead levels of children

St Louis Demolition Study

Data Sources

- 2000 Census
- St. Louis City Childhood Lead Poisoning Prevention Program (CLPPP)
- St. Louis City Demolition Database
- City of St. Louis Tax Assessor Records

Partners

- Tulane COE
- Missouri Department of Health and Senior Services
- City of St. Louis Health Department
- City of St. Louis Building Division

St. Louis Demolition Study

Preliminary Results

- When controlling for other known risk factors, proximity to multiple demolitions (more than 1) appears to be related to an increase in blood lead levels.
- Next Step
 - Further analysis of additional data sets.
 - Examine spatial relationship between distance to a demolition site and children's blood lead levels.

Air Monitoring - Norco

Goals:

- Compare the perceptions of community health status and environment with health and environmental monitoring data
- Examine statistical methods for using small-area statistics to describe health status in populations
- Design risk communication messages to close the gaps between perception and data.

Air Monitoring - Norco

Partnership with Norco, a fenceline community

- Community Health and Environmental Perception Study
- Survey of fenceline (Norco, LA) and non-fenceline (Pride, LA) communities using questions adapted from CDC BRFSS
- Air Monitoring in Norco – 53 air toxic compounds
- DEQ air toxic monitoring – Pride, LA
- Risk Communication messages geared to community concerns and questions

Mercury FIN

- Proposed network to demonstrate and implement EPHT
- Goal: Asses the feasibility of establishing a multi-state topical network to demonstrate the steps, processes and methods for implementing EPHT

Value of Mercury FIN

- Test and validate guidelines from the Standards and Network Development (SND) Workgroup.
- Establish methods and systems for interfacing and exchanging data for national networks
- Building a foundation for systems to exchange, analyze and/or link data

Mercury FIN

- Phase I - Explore the feasibility of establishing the EPHT Mercury FIN Network.
- Phase II - Determine and test methods for compiling and standardizing data, and using it to track trends over time and geography
- Phase III - Data analysis using multi-state sources and examining methods for linking data.

Training

- Using CAEPH'S distance learning technology to hold seminars for EPHT partners via the Internet
 - Demonstration session with all partners to test feasibility of using LearnLinc for training
- EPHT Training Committee Modules
 - Developing training modules
 - Examining best methods for delivering training across the EPHT network

■ Questions and Comments

