

# poster ABSTRACT



## **TITLE**

Linkage Studies of Incident Cancers and Environmental Hazards in New Jersey

## **THEME**

Advance Environmental Public Health Science and Research

## **KEYWORDS**

cancer, environmental health, tracking, surveillance

## **BACKGROUND**

Environmental factors are believed to play an important role in the etiology of many cancers. This demonstration project develops environmental exposure metrics, evaluates geographic and temporal patterns in incident cases of selected cancers, and examines relationships among cancer incidence and environmental hazards or exposures.

## **OBJECTIVE(S)**

To conduct ecologic epidemiologic studies of the relationships among selected cancers and specific environmental hazards.

## **METHOD(S)**

New Jersey identified environmental data sources that could be used to develop meaningful environmental exposure metrics, including the U.S. EPA's National Air Toxics Assessment (NATA), NJDEP's integrated database on facility location and emissions information, and public drinking water supply monitoring data. New Jersey also conducted temporal and/or geographic analyses of fourteen cancers with potential environmental risk factors. Demonstration studies were designed based on the availability of environmental data and plausibility of an exposure-disease hypothesis.

## **RESULT(S)**

Three ecologic epidemiologic studies are underway: 1) Benzene in Ambient Air and the Incidence of Leukemia; 2) Vinyl Chloride Emissions and the Incidence of Brain Cancer and Angiosarcoma of the Liver; 3) Disinfection By-Products in Drinking Water and the Incidence of Bladder Cancer. The poster will graphically display study designs and maps of exposure metrics.

## **DISCUSSION/RECOMMENDATION(S)**

Ideally, asthma data should provide an accurate and continuous picture of respiratory health in each of NH's cities and towns. The most complete local public health data currently used are for mortality and hospitalizations. However, these data must be aggregated to provide meaningful information due their infrequency and NH's relatively dispersed population density. Also, by focusing on mortality and hospitalization, we are only seeing the "tip of the iceberg" of the actual relationships between asthma and environmental exposures. Evaluation of additional health data such as provider



claims, physician office visits, and school-based asthma surveys; together with information on additional environmental factors including exposure to ETS, indoor air quality, and allergens, will be investigated. These datasets can provide the basis for a more comprehensive analysis of asthma in the state that may lead to improved respiratory health outcomes for NH's citizens.

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