

Border Air Quality Strategy Western Initiative

- Funding Dates: April 2004 thru March 2007
- Institutions; University of British Columbia, University of Victoria, University of Washington
- Objectives; As air knows no borders, this study is designed to compare and contrast PM exposures and their health effects across the Georgia Basin/Puget Sound airshed. (www.cher.ubc.ca/baqs.html)

Project Summaries

- UBC: Children's Cohort Study to address respiratory health outcomes and otitis media; Birth outcomes study; Exposures of Pregnant women and infants; CV cohort study; Building land use-transportation study--Brauer, Demers, Koehoorn
- Uvic: Exposure data development and model refinement--Keller
- UBC: Enhanced exposure assessment--Bruzzelli

Project Summaries-2

Koenig, Karr, Larson

- UW: Construction of Puget Sound region birth cohort using linked and geocoded birth records/hospitalization records.
- Estimate individual exposure to traffic and woodsmoke
- Assess risk of bronchiolitis hospitalization, post neonatal mortality, and adverse birth outcomes (prematurity, IUGR)

Exposure assessment – modeling

Construct predictive temporal-spatial model of $PM_{2.5}$ incorporating:

- Local traffic characteristics (volume, proximity)
- Local woodsmoke characteristics
- Topography & Meteorological characteristics
- Population & household density characteristics
- Seasonal characteristics

Model Validation

- Construct spatial / temporal model from 2000-01 Seattle panel study data
- Predict subject site concentrations in 2002-03 panel study

BAQS: Puget Sound Component

Summary

Cohort study of effect of ambient particulate matter on infant bronchiolitis hospitalization, infant mortality, and adverse birth outcomes (prematurity, IUGR)

Individualized exposure assessment using geographic information sources on traffic and woodsmoke