



JOHNS HOPKINS
BLOOMBERG
SCHOOL of PUBLIC HEALTH

Department of Biostatistics

BIOSTATISTICS SEMINAR

The Combination of Ecological and Individual Level Data

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ABSTRACT

In an ecological study outcome and exposure/confounder data are available on groups of individuals, rather than on the individuals themselves. Such studies are logistically appealing, since they may make use of routinely-available data and offer increased power and exposure contrasts, but suffer from a number of problems due to within-group variability in exposures and confounders, an umbrella term for which is ecological bias. Ecological bias can appear in very simple situations, and the only solution is to supplement the ecological data with individual level data. In this talk, after detailing different sources of ecological bias, various study designs and estimation methods will be described and compared. In particular, the aggregate data design of Prentice and Sheppard (1995) and the ecological embedded case-control study of Haneuse and Wakefield (2007) will be described.

**The Johns Hopkins Bloomberg School of Public Health
Department of Biostatistics, Wednesday, October 14 2009
Room W2030 School of Public Health, 4:00-5:00pm (Refreshments: 3:30)**

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