

Consortium for Education and Social Science Research 2010-2011 Workshop in Methods

A workshop in spatial analysis: Measuring exposure to location-based risk factors during daily activities in urban landscapes

by

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Friday, March 4, 2011 – 2:00 - 4:30 – Woodburn Hall 200



We are conducting a population-based case-control study in the City of Philadelphia to investigate how the nature and whereabouts of adolescents' daily activities relate to the likelihood of being shot in an assault. Each subject is interviewed using portable, computerized mapping technology, to create a dynamic graphic that provides a minute-by-minute record of how, when, where, and with whom the subject spent time over the course of the past 24 hours as he or she walked or otherwise traveled from location to location and activity to activity. Afterward, characteristics of streets, buildings, and neighborhood populations are linked into each subjects' space-time activity path. The ultimate goal is to inform communities of place-based risk factors and to identify opportunities to make communities safer. Implications of the methodologic approaches to this innovative space-time analysis will be presented.

Dr. Wiebe is Assistant Professor of Biostatistics and Epidemiology at the University of Pennsylvania Medical School. He received his BA from University of Calgary, his PhD from UC-Irvine, and did post-doc work on violence prevention at the UCLA School of Public Health. His research interests include environmental risk factors for injury, the impact of daily routines on health-related behavior, and innovative ways of measuring environmental exposures and difficult-to-detect outcomes (e.g., domestic violence).

Financial support for the Workshop in Methods (WIM) provided by the Office of the Vice Provost for Research.
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