Assessing Built Environment Features Linked to Physical Activity

Marlon Boarnet
Kristen Day
Daniel Stokols
Mariela Alfonzo

Department of Planning, Policy, and Design
University of California, Irvine

Objective

- Devise a reliable, objective instrument to measure built environment features linked to physical activity

Research Design

- Developed draft instrument
  - Reviewed literature on physical activity & urban form
  - Reviewed existing instruments

Research Design

- Conducted 3 focus groups to gauge thoroughness of the instrument
  - Teenagers
  - Low income population
  - Multiple ethnicities

Research Design

- Convened a Delphi panel of 5 experts with backgrounds in planning, public health, urban design, transportation, geography, and GIS
  - Susan Handy, University of California, Davis
  - Harvey Miller, University of Utah
  - Jack Nasar, Ohio State University
  - Dan Stokols, University of California, Irvine
  - Craig Zimring, Georgia Technological University

Field Testing

- Tested instrument in 26 settings throughout So. Cal. including:
- Iterative process of continuous revision to fit all settings

Unit of Analysis

- Settings divided into segments
- Alternate for places with non-linear organization
- Will measure a sample of segments in each setting

The Instrument

- Setting and segment level questions
- Four scales – 113 items total
  - Accessibility – 16 items
  - Perceived Safety from Crime – 18 items
  - Perceived Safety from Traffic – 19 items
  - Pleasurability – 60 items
- Quantitative, objective measurements
- Most in-person observations with some GIS data

Reliability Testing

- Currently conducting reliability testing
- 3 observers
- Separate observations
- 20 settings (subset of existing settings)