

# Tools to Evaluate Local Government Policies Related to Physical Activity Provisions and the Food Environment

Emily Thrun, MUPP (ethrun2@uic.edu), Jamie F. Chriqui, PhD, MHS (jchriqui@uic.edu), Sandy Slater, PhD, MS, Leah Rimkus, MPH, Dianne Barker, MHS, Frank J. Chaloupka, PhD

## METHODS

### Study Purpose

- 1.) To present three reliable and valid policy evaluation tools that can be used for evaluating local government policies and plans related to the built and food environment.
- 2.) To describe the prevalence of active living-oriented requirements included in the policies and plans and the extent to which food outlets are permitted in local zoning ordinances.

### Policy Instrument Development

Two policy assessment instruments (one for zoning and other policies; one for plans) were developed to evaluate the nature and extent to which zoning and plans specifically facilitate walking, biking, and active/passive recreation. Also, one instrument was developed to evaluate the extent to which zoning ordinances permit food outlets.

- The BTG-COMP Built Environment Local Zoning/Policy Audit Tool
- The BTG-COMP Built Environment Master Plan Audit Tool
- The BTG-COMP Food Code/Policy Audit Form

A pilot study was conducted in 2009 to assess the reliability of the instruments for 53 counties and municipalities surrounding 15 secondary schools nationwide.

### Policy Collection and Coding

Policies and plans were collected in 2010 (via the Internet with telephone follow-up) from 132 counties and 228 municipalities surrounding 154 secondary schools nationwide. Policies and plans were reviewed and double-coded by two Master's level researchers to identify requirements for provisions that would facilitate physical activity and identify permitted food outlets using detailed coding protocols developed following the pilot study.

### Analysis

Analysis of the data was conducted using STATA v. 11. The results only included data for jurisdictions in the study that had zoning regulations, a unified development code, or subdivision regulations (N=197 municipalities and 95 counties). The analyses for Figure 1 and 2 were based on provisions required for anywhere in the community (i.e., regardless of which zone(s) or district(s) or plan element(s) where the provision would be required). The analysis for Figure 3 was based on any food outlet permitted uses (either as-of-right or through conditional and/or accessory use) anywhere in the community regardless of which zones(s) or district(s) where the use was allowed.

## INSTRUMENTS

### Zoning/Policy Audit Form

Both the built environment policy and plan instrument evaluated the presence of items related to walkability (sidewalks, trails, bike lanes, bike parking, etc.). These are a few pages from The BTG-COMP Built Environment Policy Assessment Tool. It examines items across 20 different zones/districts (e.g. residential, commercial, mixed use, etc.) and the strength of those markers.

### Plan Audit Form

Both the built environment policy and plan instrument evaluated the presence of items related to active/passive recreation (playgrounds, sports fields, parks, open space, etc.). These are a few pages from The BTG-COMP Built Environment Master Plan Assessment Tool. It examines provisions across 20 different elements included in plans (e.g. land use, parks and recreation, transportation, etc.).

### Food Code/Policy Audit Form

The food policy instrument evaluated the extent to which food outlets are permitted in ordinances. These are a few pages from The BTG-COMP Food Code/Policy Audit Form. It examines food outlet uses (e.g. supermarkets, grocery stores, convenience stores, general retail stores, fast-food restaurants, formula restaurants, farmer's markets, fruit and vegetable carts, mobile food vendors, urban agriculture or community gardens, and produce stands) across 20 different zones/districts.

## DEFINITIONS

- **Pedestrian-oriented marker:** Any type of walking or bicycling provision mentioned in a code or plan that is oriented to active living such as trails, sidewalks, crosswalks, paths, bicycle lanes, bicycle networks, bike parking, or phrases including the word "pedestrian".
- **Active recreation marker:** Any type of recreation provision mentioned in a code or plan that is oriented toward recreation activities such as sport programs, constructed recreation facilities, playgrounds, athletic facilities, or sport fields.
- **Open space marker:** Any type of recreation provision mentioned in a code or plan that is oriented toward recreational activities that generally do not require a developed site such as nature preserves, open space, or generic parks. Open space markers are places not necessarily designed specifically for physical activity.

## RESULTS

Figure 1. Active Living Oriented Zoning Requirements

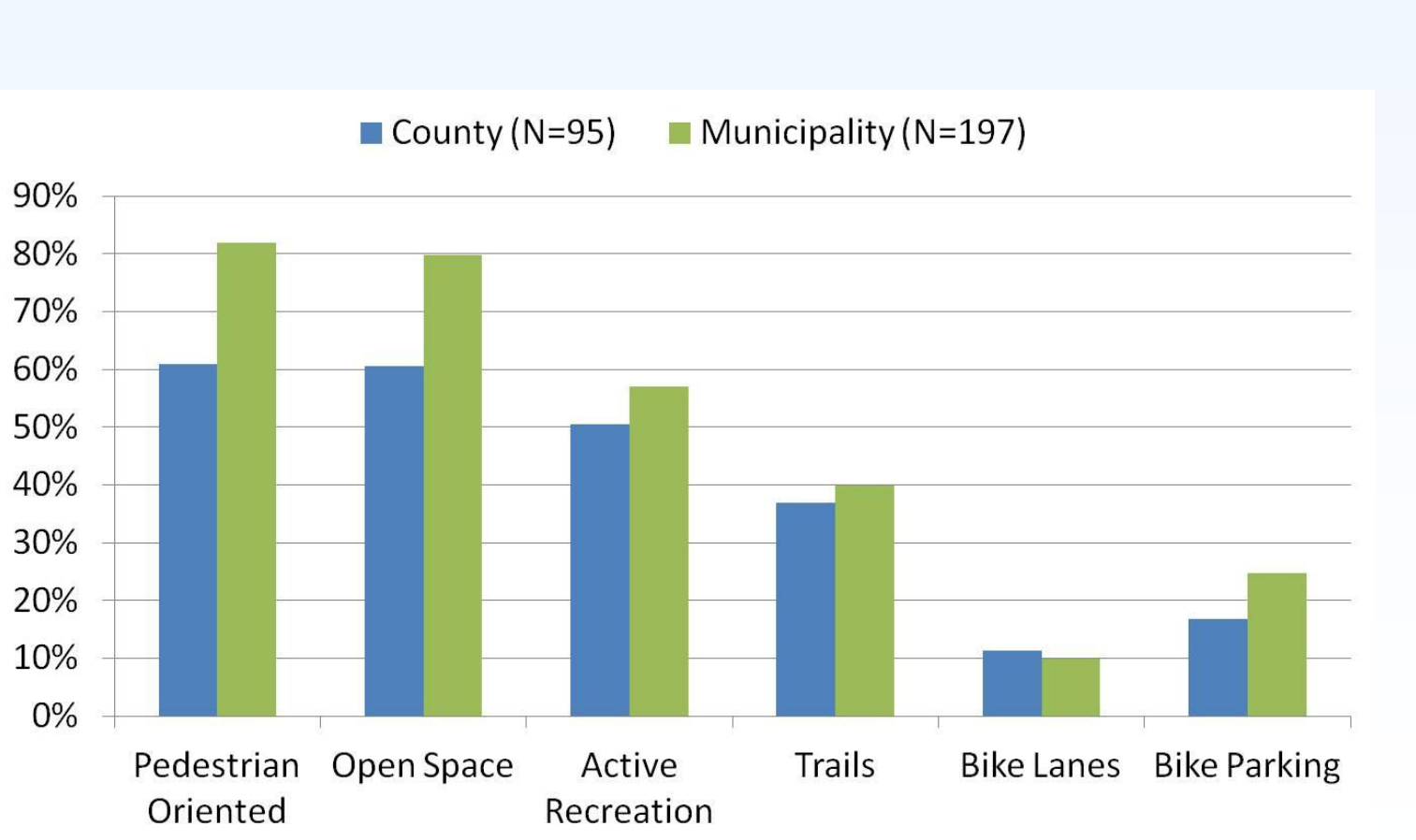


Figure 2. Active Living Oriented Plan Requirements

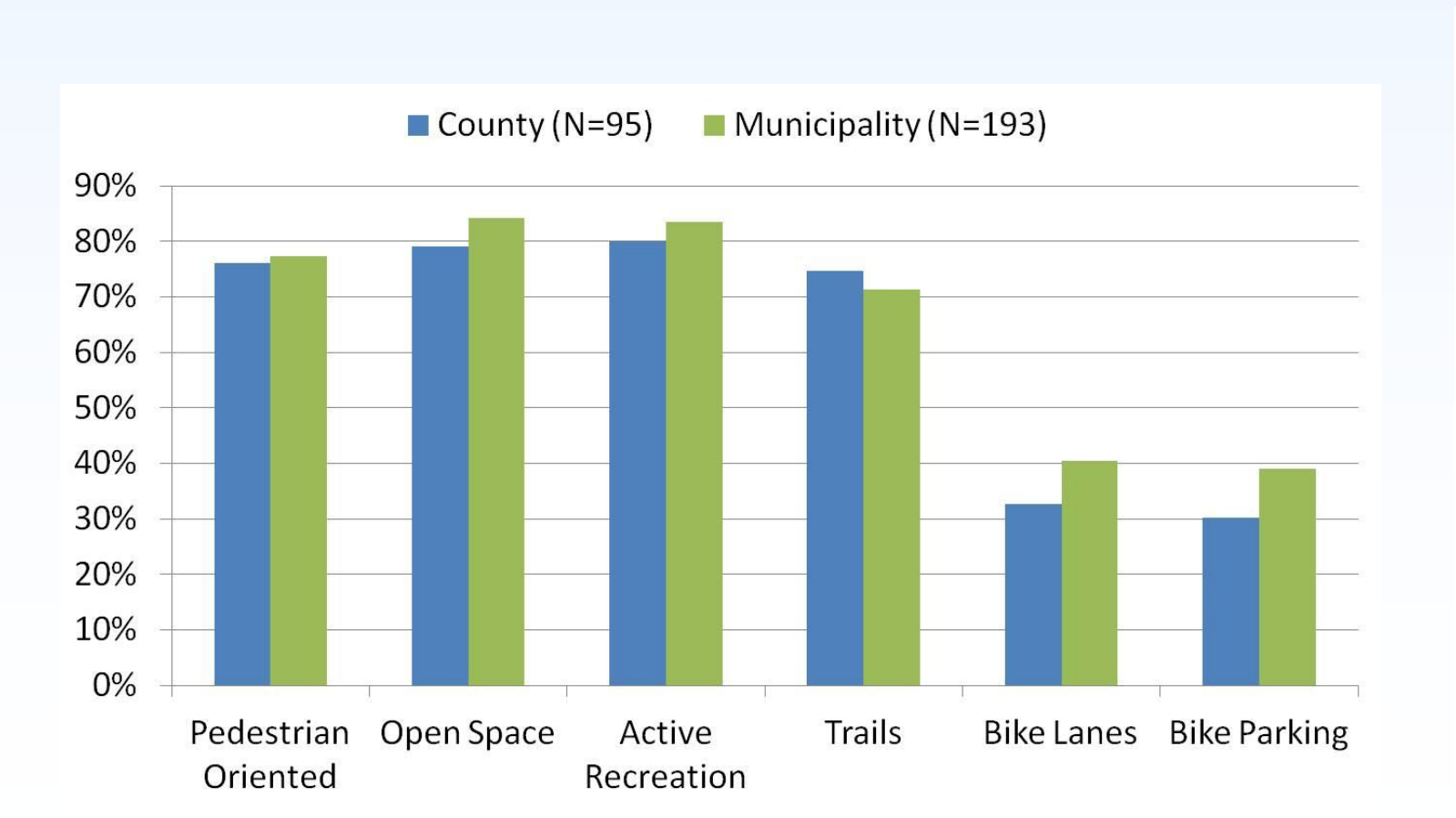
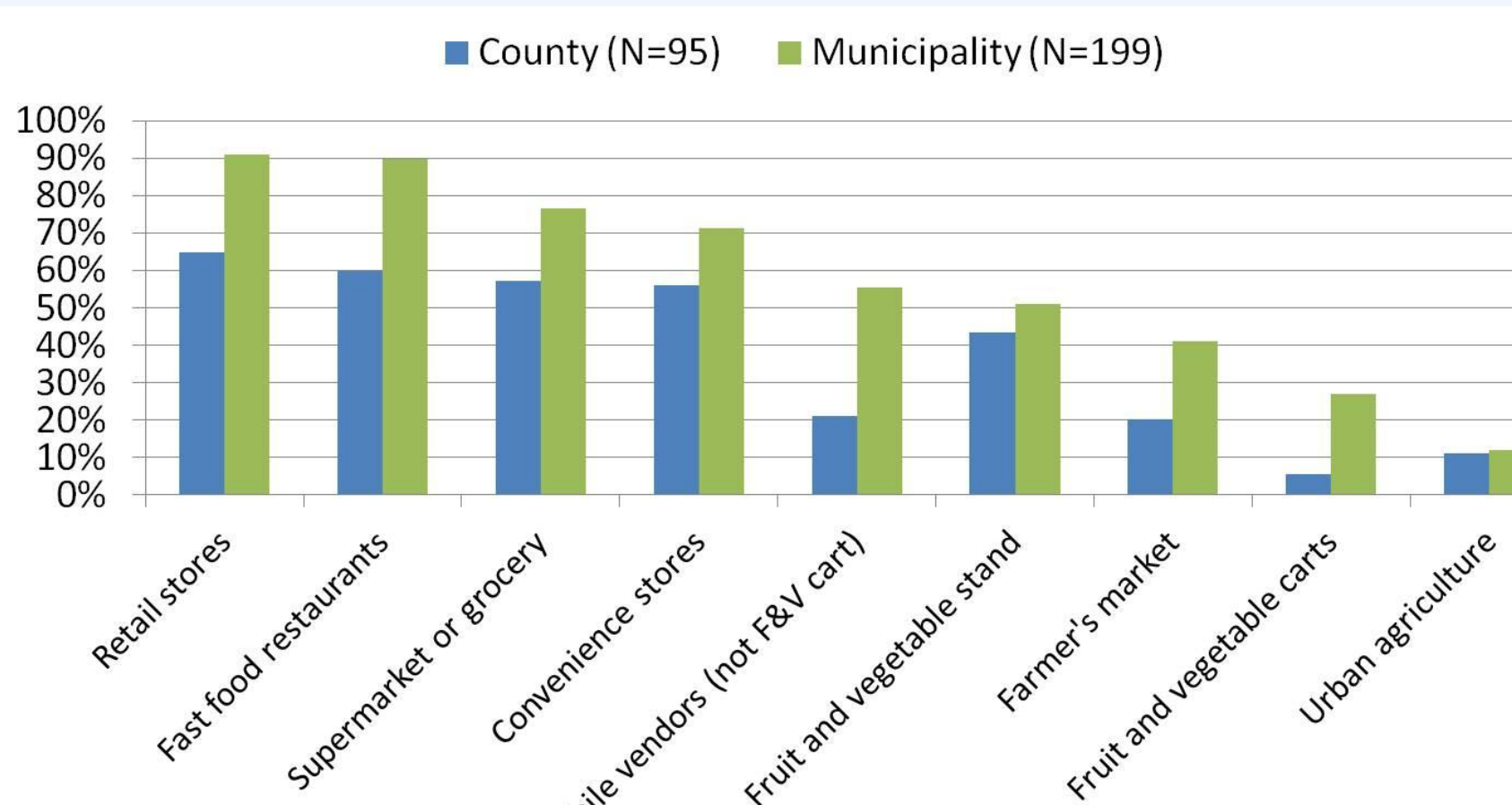


Figure 3. Food Outlet Zoning Permitted Uses by Jurisdiction



## RESULTS

Overall Pilot Reliability Results:

**Zoning form:**  
Proportion of agreement: 96%  
Inter-rater reliability (kappa): 91%

**Master Plan form:**  
Proportion of agreement: 92%  
Inter-rater reliability (kappa): 84%

**Food form:**  
Proportion of agreement: 89%  
Inter-rater reliability (kappa): 78%

## CONCLUSION

It is possible to create reliable tools to evaluate the extent to which policies facilitate or inhibit active living and to evaluate food environments.

### Local governments can:

- Modify/create plans to address future development that promotes physical activity and can be implemented through changes to zoning/land use laws.
- Modify zoning/land use laws to include requirements for structural improvements to increase opportunities for physical activity.
- Modify zoning/land use laws to permit a variety of food outlets to increase healthy food access (e.g. grocery stores, supermarkets, farmer's markets, community gardens, fruit and vegetable stands or carts)

## ABOUT BRIDGING THE GAP

*Bridging the Gap* is a nationally recognized research program of the Robert Wood Johnson Foundation dedicated to improving the understanding of how policies and environmental factors influence diet, physical activity and obesity among youth, as well as youth tobacco use. Bridging the Gap is a joint project of the University of Illinois at Chicago's Institute for Health Research and Policy and the University of Michigan's Institute for Social Research. For more information, visit [www.bridgingthegapresearch.org](http://www.bridgingthegapresearch.org)