S501: Local Policies and Healthy Living Environments: Evidence from the Bridging the Gap Research Program

American Planning Association 2013 National Planning Conference
April 14, 2013
Session Learning Objectives

1. Describe the extent to which local land use policies affect the food environment and built environment. Examine if certain types of food outlets are likely to be addressed in codes or certain types of communities.

2. Examine socio-economic disparities related to access to physical activity opportunities and park amenities. Examine the extent to which living in more walkable communities is associated with reduced prevalence of adolescent obesity.
Today’s Session

• **Brief** overview of Bridging the Gap and the Community Observation Measures Project (BTG-COMP)
• Four research presentations:
  - Emily Thrun, MUPP: “Using Local Land Use Policies to Facilitate Physical Activity and Healthy Food Access”
  - Christopher Quinn: “The Landscape of Local and Regional Public Parks in the U.S.”
  - Jamie Chriqui, PhD: “How Zoning and Land Use Laws Influence Community Walkability and Healthy Food Access”
  - Sandy Slater, PhD: “Walkable Communities and Adolescent Weight”
Bridging the Gap
An Overview
Bridging the Gap is......

• A collaborative effort to assess the impacts of policies, programs & other environmental factors on the health behaviors of children and adolescents

• An RWJF initiative begun in 1997
  • Initial focus on youth alcohol, tobacco and other drug use
  • Adapted in 2003 to focus on both sides of the energy equation---diet and physical activity---and weight outcomes
    • RWJF BTG obesity-related commitment to date: $26.8 million

• Leverages the ongoing NIDA-funded Monitoring the Future study
National Policy and Environment
- Ongoing monitoring of relevant federal policy changes
- Analyses of trends in TV food and beverage advertising

State Policy
- Annual updating of database of state-level obesity-related laws in all 50 states and in Washington DC

Community Environment
- Community Obesity Measures Project (COMP) - observational data collection in food stores, fast food restaurants, parks, physical activity facilities, and on street segments in 150+ communities surrounding MTF schools

Local Policy
- Collection and coding of local ordinances, zoning codes, master plans, and School District Wellness Policies in 150+ communities surrounding MTF schools

School District Policy
- Collection and coding of Wellness Policies from 600 school districts

School Environment
- YES! survey of school administrators in 200 MTF schools
- YES! survey of administrators in 600 public middle and high schools
- Food & Fitness survey of administrators in 1,000 public elementary schools

Individual Behaviors/Outcomes
- NIDA-funded MTF survey of 50,000 students in 420 middle and high schools
Bridging the Gap products include...

- Research briefs
- Monographs
- Peer reviewed journal articles
- Book chapters
- Presentations
- Public-use databases
- Data collection tools/methods
- Testimony
- Web site
For more information: www.bridgingthegapresearch.org

Follow us on Twitter: @BTGresearch

Sign up for our email list!!!
Bridging the Gap: Community Obesity Measures Project
BTG-COMP
BTG-COMP

Study Design
2012 BTG-COMP sites
BTG-COMP Community Definition

• School Enrollment Zone

• 2nd year Monitoring the Future public middle and high schools
  • 2008 Focus Groups confirmed adolescents stay pretty close to school and home to eat and exercise

• May be multiple policy jurisdictions surrounding the school enrollment zone

<table>
<thead>
<tr>
<th>Year</th>
<th># Communities</th>
<th># Policy Jurisdictions</th>
</tr>
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<tbody>
<tr>
<td>2010</td>
<td>154</td>
<td>360</td>
</tr>
<tr>
<td>2011</td>
<td>157</td>
<td>378</td>
</tr>
<tr>
<td>2012</td>
<td>160</td>
<td>~420</td>
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</tbody>
</table>

• Environmental observations in food stores, tobacco stores, fast food restaurants, parks, physical activity facilities, school grounds and on streets

bridging the gap
## Characteristics of the 2010 Sites

<table>
<thead>
<tr>
<th>Variable</th>
<th>Categories</th>
<th>Northeast</th>
<th>South</th>
<th>Midwest</th>
<th>West</th>
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<tbody>
<tr>
<td>Census Region</td>
<td></td>
<td>19.4%</td>
<td>32.8%</td>
<td>27.1%</td>
<td>20.7%</td>
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<tr>
<td>Racial/Ethnic Composition</td>
<td>≥ 66% White</td>
<td>70.3%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>≥ 50% Black</td>
<td>4.0%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>≥ 50% Hispanic</td>
<td>6.6%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other make-up</td>
<td>19.1%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urbanization</td>
<td>Urban</td>
<td>20.6%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Suburban</td>
<td>33.6%</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Rural</td>
<td>45.8%</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Variable</td>
<td>Mean (Std Error)</td>
<td>$59,161 (2231)</td>
<td>$54,780</td>
<td>$15,432</td>
<td>$194,295</td>
</tr>
<tr>
<td>Median Household Income</td>
<td>Median</td>
<td>$54,780</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population density (per sq. mile)</td>
<td></td>
<td>2366.54 (438.32)</td>
<td>320</td>
<td>1.93</td>
<td>67949.00</td>
</tr>
</tbody>
</table>
BTG-COMP: Types of Environments Being Observed

- Fast Food Restaurants
- Food Stores
- Food Policy Environment
- Parks
  - Survey of Park and Rec Departments
- Physical Activity Facilities
  - Survey of Instructional “Schools”
- School Grounds
- Streets
- Policy for the Built Environment

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Using Local Land Use Policies to Facilitate Physical Activity and Healthy Food Access

American Planning Association 2013 National Planning Conference
April 24th, 2013
Function code: S501

Emily Thrun, MUPP
Objectives

• Describe the prevalence of active living-oriented requirements included in local governments’ policies and plans and the extent to which food outlets are permitted in local ordinances.

• Examine the socio-demographic characteristics associated with such policy/plan provisions.

Source: www.pedbikeimages.org / Dan Burden
Zoning and its Relationship to Public Health

• Zoning, subdivision regulation, and building codes are exercises of the states’ police powers under the 10th Amendment

• Zoning authority granted to county and municipal governments by states to promote the health, safety, morals, and general welfare of their citizenry

• Traditional, Euclidian zoning establishes land use zones/districts based on use and density
  • The protection of public health lies at the heart of zoning – zoning offers a regulatory scheme to address public health problems caused by urbanization\(^1\)
Long-range Plans

• Majority of states with enabling legislation for plans, the plan lacks the force of law and is merely a suggestion in land use planning.

• However, in some states plans are becoming legally binding documents.²

• Plans can be implemented through zoning changes.
Zoning and Land Use Laws as Strategies to Support Healthy Food Access and Active Living-oriented Environments

- Modify zoning/land use laws to include requirements for structural improvements to increase opportunities for physical activity.
  - New Urbanist, SmartCodes, form-based codes, zoning code reforms

- 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)
Study Methods
Methods

Policy Collection and Coding

• Policies and plans were collected in 2010 from local governments (132 counties and 228 municipalities) surrounding 154 secondary schools nationwide (aka, “secondary school catchments”).

• Items collected included:
  - Zoning Ordinances
  - Subdivision Regulations
  - General Ordinances
  - Master/Comprehensive/General Plans

• Policies 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.
Both the 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.
Both the policy and plan instrument evaluated the presence of items related to active/passive recreation (playgrounds, sports fields, parks, open space, etc.). These are pages 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.).
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.
Active Living-oriented Policy and Plan Provisions
Active Living Oriented Zoning Requirements by Jurisdiction

- Pedestrian Oriented
- Open Space
- Active Recreation
- Trails
- Bike Lanes
- Bike Parking

N=95 counties, 197 municipalities nationwide

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Active Living Oriented Planning Requirements by Jurisdiction

- County
- Municipality

N=95 counties, 193 municipalities nationwide
Zoning Requirements by Master Plan Requirement and Jurisdiction

County Level

Municipality Level

N=95 counties, 193 municipalities nationwide
Requirements for Provisions that Promote Physical Activity in Community Zoning/ Land Use Laws\(^1\) Vary by Community Income\(^2\)

1. Includes zoning ordinances and subdivision regulations.
2. Communities are grouped in tertiles based on the median household income of the community. One-third of communities were grouped in each of three categories: lower-, middle- and higher-income.
3. Pedestrian-oriented provisions require sidewalks, crosswalks, paths or other features that would facilitate pedestrian access.
4. With the exception of bike lanes, required provisions were significantly lower (at p<.05 or lower) for lower- and middle-income communities than higher-income communities. For bike lanes, only middle-income communities were significantly lower (p<.05) than higher-income communities.
Food Outlet Policy Provisions
Percentage of Municipalities Permitting* Food Outlets in Their Zoning Codes, 2010

- Supermarkets or Grocery Stores: 78%
- Grocery Stores: 76%
- Convenience Stores: 71%
- Supermarkets: 63%
- Retail Stores (General)†: 95%
- Fast-Food Restaurant: 93%
- Mobile Vendors‡: 55%
- Fruit and Vegetable Stands: 52%
- Farmers’ Markets: 40%
- Fruit and Vegetable Carts: 28%
- Urban Agriculture: 12%

N=175 communities nationwide
*For this analysis, “permitted use” includes permitted and/or conditional uses.
†Retail stores include big box and warehouse stores.‡Mobile vendors include food trucks.
Prevalence of Store and Fast-Food Restaurant Permitted Uses by Community Income, 2010

N=175 communities surrounding a national sample of public middle and high schools.

#Communities in the top one-half of median household income in the sample.

##Communities in the lower one-half of median household income in the sample.

†Retail store include big box and warehouse stores.

*Difference in permitted use by income status was significantly different at p≤.05.

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Prevalence of Mobile Vending and Fruit and Vegetable Outlet Permitted Uses by Community Income, 2010

N=175 communities surrounding a national sample of public secondary schools.

# Communities in the top one-half of median household income in the sample.

## Communities in the lower one-half of median household income in the sample.

†Mobile vendors includes food trucks.

*Difference in permitted use by income status was significantly different at p≤.05.

Type of Outlet

- Produce/Fruit and Vegetable Stands*: 60% Higher-Income, 43% Lower-Income
- Mobile Vendors†: 54% Higher-Income, 56% Lower-Income
- Farmers’ Markets*: 54% Higher-Income, 24% Lower-Income
- Fruit and Vegetable Carts: 30% Higher-Income, 26% Lower-Income
- Urban Agriculture*: 17% Higher-Income, 6% Lower-Income
Conclusion
Conclusion

• Local government active-living zoning requirements are more likely at the municipal then the county level and they are most likely to require pedestrian-oriented infrastructure, open space, and active recreation areas.

• Active-living planning requirements do tend to be implemented through the zoning code.

• Lower- and middle-income communities are less likely than higher-income communities to require pedestrian-friendly improvements, active recreation areas, open space, trails and bike lanes in their local land use laws.

• Local zoning ordinances were more likely to allow supermarkets, grocery stores, convenience stores, fast-food restaurants and retail stores than alternative outlets, such as farmers’ markets or fruit and vegetable carts.

• Permitted uses for food stores and other food outlets varied by the median household income of the community.
Policy Implications

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).

Source: www.pedbikeimages.org / Dan Burden
Resources/Contacts

For more information, visit: http://www.bridgingthegapresearch.org/

Contact: Emily Thrun: ethrun2@uic.edu; Jamie Chriqui: jchriqui@uic.edu

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References
