Tobacco Retailer Density and Proximity
What’s the difference and how to talk about it

Todd Combs, PhD
Assistant Professor, Associate Director
Center for Public Health Systems Science
Washington University in St. Louis
Goals

• Compare concepts of tobacco retailer density and proximity

• Tobacco retailer concentration with an equity lens

• Message framing and selecting measures

• Resources
ASPiRE

• **Goal:** to build a rigorous, scientific evidence base for effective tobacco control in the retail environment to reduce the public health burdens of tobacco use

• 3 research projects

• 3 support cores
  - Administrative core
  - Data core
  - D & I core
Tobacco retailer density measures
Tobacco retailer density measures

- 2 retailers
- 4 square miles
- 1000 people
- 10 kilometers of roadway
Tobacco retailer density measures

2 retailers
4 square miles
1000 people
10 kilometers of roadway

0.5 retailers per square mile
Tobacco retailer density measures

- 2 retailers
- 4 square miles
- 1000 people
- 10 kilometers of roadway

- 0.5 retailers per square mile
- 2 retailers per 1000 people
Tobacco retailer density measures

- 2 retailers
- 4 square miles
- 1000 people
- 10 kilometers of roadway

0.5 retailers per square mile
2 retailers per 1000 people
2 retailers per 10km roadway
Tobacco retailer density measures

Avg resident-to-retailer proximity
% pop within a 10-min walk to a retailer
% of retailers near schools
Distance between retailers
Tobacco retailer density measures

Avg resident-to-retailer proximity
% pop within a 10-min walk to a retailer
% of retailers near schools
Distance between retailers

Avg resident-to-retailer distance: 0.25 mi
Tobacco retailer density measures

Avg resident-to-retailer proximity
% pop within a 10-min walk to a retailer
% of retailers near schools
Distance between retailers

Avg resident-to-retailer distance: 0.25 mi
80% pop within 1km of a retailer
Tobacco retailer density measures

Avg resident-to-retailer proximity
% pop within a 10-min walk to a retailer
% of retailers near schools
Distance between retailers

Avg resident-to-retailer distance: 0.25 mi
90% pop within 1km of a retailer
75% of retailers within 1km of a school
Tobacco retailer density measures

- Avg resident-to-retailer proximity
- % pop within a 10-min walk to a retailer
- % of retailers near schools
- Distance between retailers

Avg resident-to-retailer distance: 0.25 mi
90% pop within 1km of a retailer
75% of retailers within 1km of a school
Avg retailer-to-retailer distance: 0.30 mi
Density v Proximity in ASPIRE Cities
## Tobacco retailer concentration correlates

<table>
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<tr>
<th>Smoking and cessation behaviors</th>
<th>Youth initiation, current smoking, impulse purchases&lt;sup&gt;1-3&lt;/sup&gt;</th>
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<tr>
<td>Health outcomes</td>
<td>COPD hospitalizations, life expectancy, mortality&lt;sup&gt;4-5&lt;/sup&gt;</td>
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<td>Neighborhood sociodemographics</td>
<td>Socioeconomic status, racial composition&lt;sup&gt;6-9&lt;/sup&gt;</td>
</tr>
</tbody>
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Context matters

• No one size fits all solutions

• Retailer density and proximity vary at the neighborhood and community levels

• Importance of local control for equity\(^1,2\)

Equity-increasing policy potential

Baseline: Baltimore, MD

School-to-retailer buffer: 2,000 ft
So which measure do I choose?

**Considerations**
- Data availability
- Policymaker familiarity
- Community familiarity
- Equity
- Multiple measures
- Goals

**Examples**
- **Youth**
  - “90% of tobacco retailers are within a 10-minute walk of a school”
- **Historical disadvantage comparisons**
  - “Low-income neighborhoods in our city have 10 tobacco retailers per mi², compared to 2/mi² in high-income neighborhoods”
  - “On average, Black residents live within 0.2 miles of a tobacco retailer, while the average distance for white residents is 0.5 miles”
Resources

• **The ASPiRE Center:** [http://aspirecenter.org/](http://aspirecenter.org/)

• **Tobacco Swamps Dashboard:** [https://aspirecenter.org/tobacco-swamps/](https://aspirecenter.org/tobacco-swamps/)

• **Other ASPiRE resources:** [https://aspirecenter.org/resources/](https://aspirecenter.org/resources/)

• **Recent articles on tobacco retailer concentration and equity:**


