



# Tobacco Control in the 21st Century: Policies to Address Traditional and Emerging Tobacco Products

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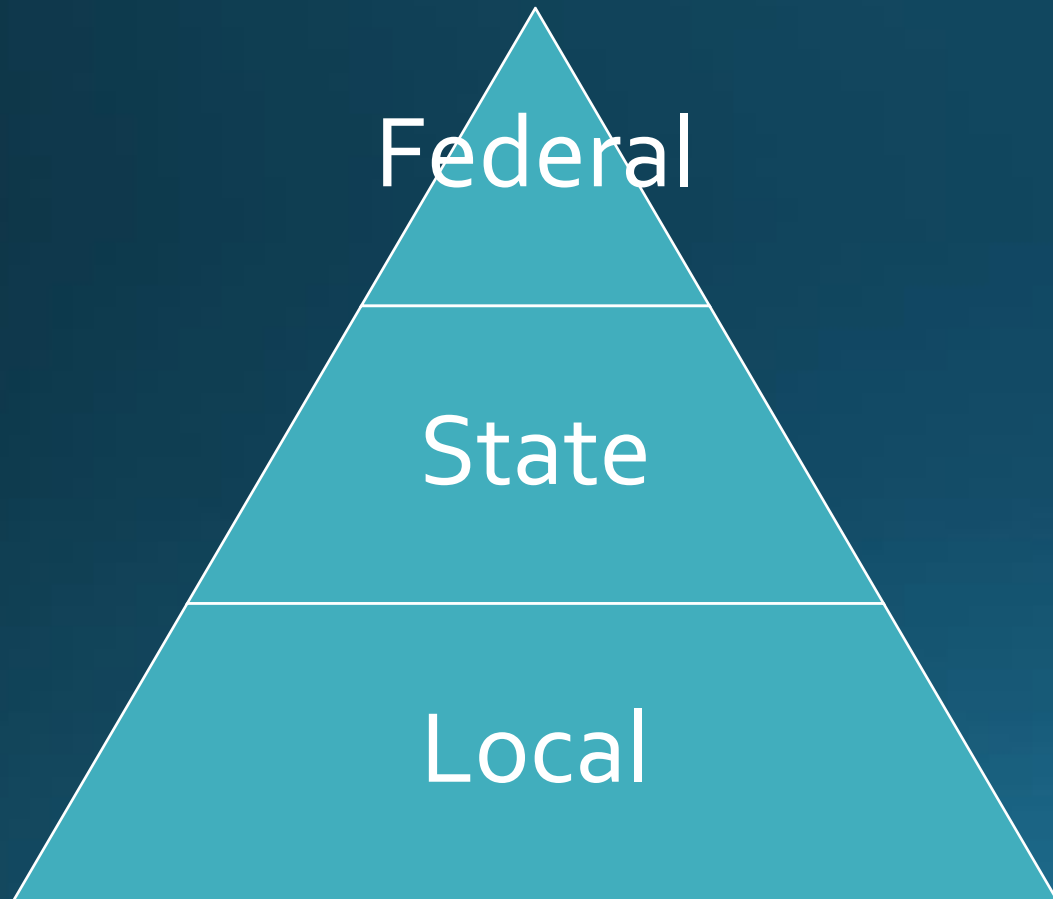
Department of Health Management & Policy | University of Michigan

# Motivation



- Tobacco remains the **largest cause** of preventable death in the United States
- Nearly **1 in 5** Americans currently use a tobacco product
- E-cigarette have **replaced** cigarettes as the most-used product for youth
- **All levels of government** seek to address this issue through policy and regulation
  - **Tobacco 21** and **flavor policies**

# What is the Impact of Recent Policies on Implementation?



## Overarching Questions:

1. How are recent tobacco control policies such as Tobacco 21 or flavor restrictions implemented at ground level?
2. What are the features of the US political system that shape and characterize this implementation?

# Three Paper Model



Point-of-Purchase  
Advertising and  
Menthol Product  
Availability



Politics of Local and  
State Tobacco 21  
Policies



Enforcement of  
Minimum Legal Sales  
Age



*Menthol Product Availability, Placement, and  
Advertisement Across Neighborhoods in Michigan*

# Impact at Point-of-Sale

# Point-of-Purchase Advertising and Menthol Product Availability

- Question
  - Are neighborhood sociodemographic factors associated with menthol product availability and advertisement in Grand Rapids and Detroit?
- Methods
  - Structured observations of retail environment
  - Characteristics of zip codes selected vary by income level, racial makeup, and rurality
- Why it's important
  - History of tobacco industry targeting menthol products to certain racial groups- unclear if this is happening across products
  - Retail environment has not been reviewed since COVID-19
  - Many areas are considering menthol bans and there are health equity concerns



# Funding and Partners



Recipient of Advancing Science & Practice in the Retail Environment (ASPiRE) Center Dissemination & Implementation (D&I) pilot award



# Retailer Identification and Mapping



There is no licensing for tobacco products in Michigan, so other sources were utilized



Stores known to not sell tobacco were excluded (i.e., CVS, Trader Joe's, etc.)

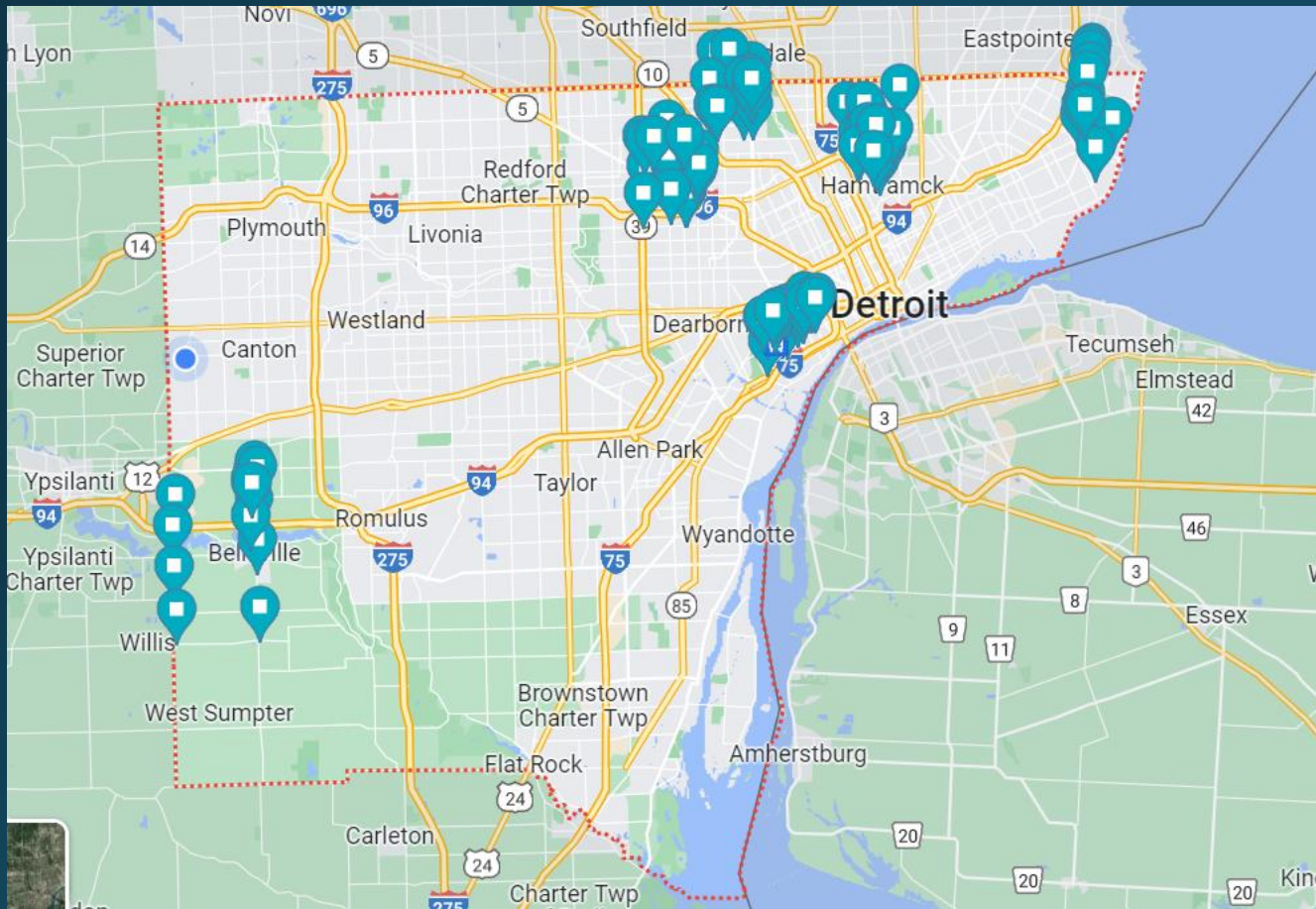


Data was deduplicated, cleaned, and connected with zip-code level demographics

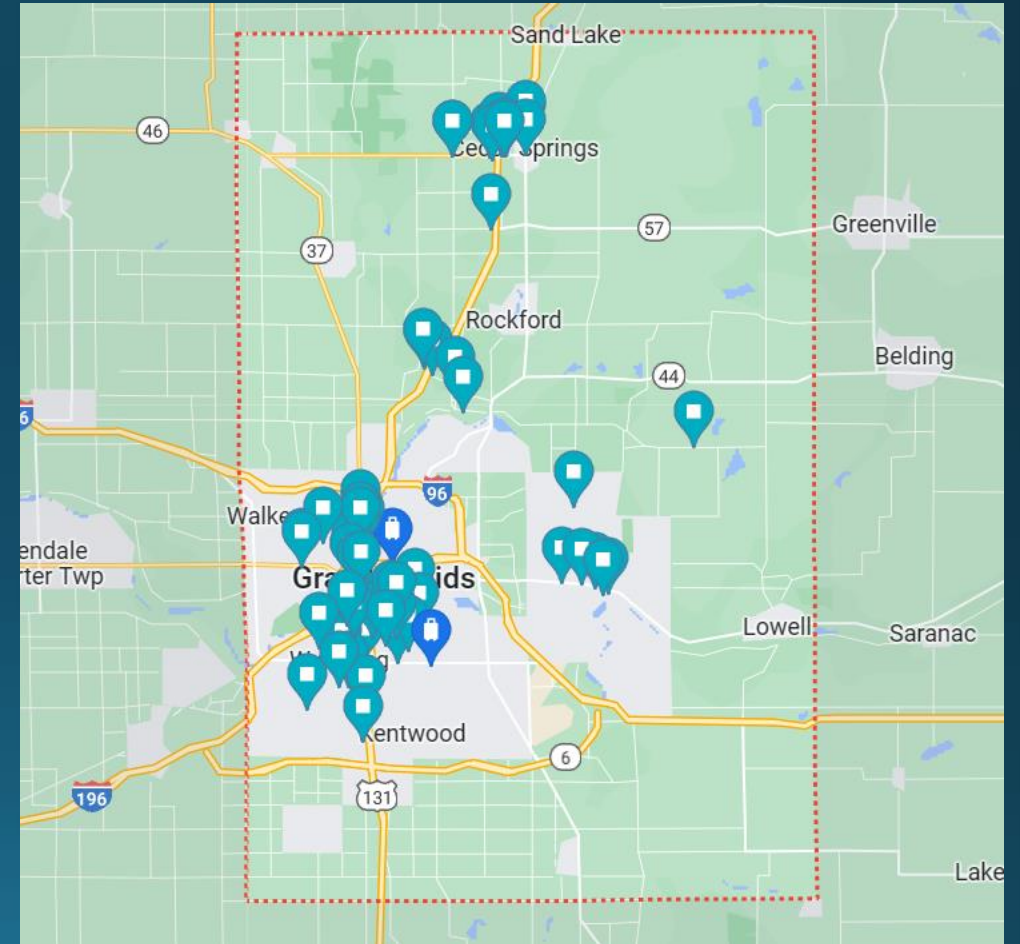




# Wayne County



# Kent County, Michigan

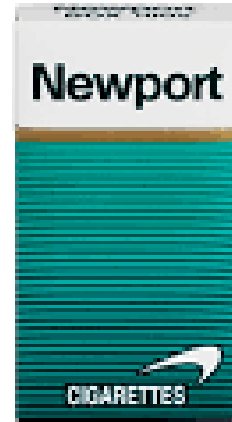


# Sample Summary

Store Characteristics	Grand Rapids	Detroit	Total
<b>Convenience store with gas</b> (e.g., Exxon, Shell)	<b>18</b>	<b>18</b>	<b>36</b>
<b>Convenience store without gas</b> (e.g., 7-Eleven)	9	3	12
<b>Drug store or pharmacy</b> (e.g., Walgreens, Rite Aid)	2	4	6
<b>Beer, wine, liquor store</b>	<b>14</b>	<b>19</b>	<b>33</b>
<b>Grocery store</b> (e.g., deli, small grocer, Kroger)	7	7	14
<b>Mass merchandiser</b> (e.g., Walmart, Meijer, Costco)	0	1	1
<b>Discount store</b> (e.g., Dollar General, Family Dollar)	6	4	10
<b>Tobacco shop</b> (e.g., Wild Bill's, cigar shops, hookah bars)	2	6	8
<b>Vape shop</b> (or head shop with vaping products)	1	1	2
<b>Total</b>	<b>59</b>	<b>63</b>	<b>122</b>

# Products are Widely Available

- Over 90% of stores sold Newport cigarettes
- Over 70% sold capsule cigarettes
- Over 80% sold cigarillos, with over 75% selling flavored cigarillos
- Over 60% sold flavored e-cigarettes
- E-cigarettes and cigarillos were the products most likely to be placed by candy
- 99% of stores had no age restriction posted



# ... And are Low Priced

- 58% of stores surveyed sold single cigarillos
- 67% of stores sold cigarillos for less than \$1
- Newport cigarettes were \$9.40 on average, cheapest cigarettes were ~\$7.20
- Smoker's Choice was as cheap as \$2



The most common menthol e-cigarette brand was **Breeze**  
Prices were: \$9.99, \$11.99, \$15.00, \$15.11, \$17.00  
(\*depends if it is Breeze Plus or Breeze Pro)



# Race/Ethnicity: Non-Hispanic Black Neighborhoods

- Hypothesis: Non-Hispanic Black neighborhoods will have greater menthol flavored product availability and advertising for cigarettes and cigarillos.

	Non-Hispanic Black
Newport Price	<b>0.05#</b> (p-value 0.009; CI 0.01, 0.09)*
Product Availability	
Mint Cigarillos	<b>0.69</b> (p-value 0.043; CI 0.49, 0.99)*
Menthol Pipe Tobacco	<b>0.59</b> (p-value 0.017; CI 0.38, 0.91)*
Any Pipe	<b>0.73</b> (p-value 0.023; CI 0.55, 0.96)*
Mint Chew	<b>0.54</b> (p-value 0.044; CI 0.29, 0.98)*
Any Chew	<b>0.71</b> (p-value 0.005; CI 0.55, 0.90)*
Menthol E-cigs	<b>0.81</b> (p-value 0.032; CI 0.68, 0.98)*

	Self-Service (SS)
SS Yes/No	<b>0.50</b> (p-value 0.028; CI 0.27, 0.93)*
Any Cigarillo SS	<b>0.21</b> (p-value 0.018; CI 0.57, 1.56)*
Any Cigar SS	<b>0.29</b> (p-value 0.048; CI 0.09, 0.99)*
Any SS	<b>0.38</b> (p-value 0.019; CI 0.17, 0.85)*
Marketing	
Any Ad3ft	<b>0.80</b> (p-value 0.033; CI 0.65, 0.98)*
Any E-cig Promo	<b>0.02</b> (p-value 0.034; CI 0.01, 0.74)*
Any Promo	<b>0.81</b> (p-value 0.014; CI 0.69, 0.96)*

\*Controlled for median income, rurality, store type, and county

# Race/Ethnicity: Non-Hispanic White Neighborhoods

- Hypothesis: Non-Hispanic White areas will have greater availability and advertisement of all flavors of smokeless tobacco as well as menthol e-cigarettes.

	Non-Hispanic White
Menthol Pipe Tobacco	1.53 (p-value 0.009; CI 1.11, 2.11)*
Mint Chew	2.43 (p-value 0.005; CI 1.31, 4.51)*
Any Chew	1.62 (p-value 0.004; CI 1.17, 2.25)*
Menthol Capsules	1.67 (p-value 0.014; CI 1.11, 2.52)*

\*Controlled for median income, rurality, store type, and county

# Race/Ethnicity: Non-Hispanic Asian Neighborhoods

- Hypothesis: Asian neighborhoods will not be more or less likely to have menthol flavored product availability or advertising.

	Newport Sold
Non-Hispanic Asian	<b>0.22</b> (p-value 0.020; CI 0.06, 0.79)*
*Controlled for median income, rurality, store type, and county	

# Race/Ethnicity: Hispanic Neighborhoods

- Hypothesis: Hispanic neighborhoods will not be more or less likely to have menthol flavored product availability or advertising.

Newport Price	<b>-0.05#</b> (p-value 0.048; CI -0.10, 0.01)*
Product Availability	
Menthol Cigarillos	<b>1.32</b> (p-value 0.041; CI 1.01, 1.71)*
Any Large Cigar	<b>1.60</b> (p-value 0.003; CI 1.18, 2.17)*
Single Cigarillos	<b>1.30</b> (p-value 0.032; CI 1.02, 1.65)*

Marketing	
	<b>1.38</b>
Menthol Ecig Near Candy	(p-value 0.032; CI 1.03, 1.86)*
	<b>1.25</b>
Any Cigarillo Ad3ft	(p-value 0.041; CI 1.01, 1.54)^
	<b>1.63</b>
Any E-cig Ad3ft	(p-value 0.008; CI 1.13, 2.34)*
	<b>1.33</b>
Any Ad3ft	(p-value 0.017; CI 1.05, 1.68)*
	<b>1.60</b>
Any Cigarillo Promo	(p-value 0.041; CI 1.01, 2.51)*
	<b>1.24</b>
Any E-cig Promo	(p-value <0.001; CI 1.36, 2.81)*
	<b>1.30</b>
Any Promo	(p-value 0.034; CI 1.02, 1.67)*
	<b>1.83</b>
Menthol Ecig Price Promo	(p-value 0.001; CI 1.28, 2.64)*

\*Controlled for median income, rurality, store type, and county



# Race/Ethnicity: Hispanic Neighborhoods (Cont.)

- Hypothesis: Hispanic neighborhoods will not be more or less likely to have menthol flavored product availability or advertising.

Self-Service (SS)	
SS Yes/No	1.49 (p-value 0.035; CI 1.03, 2.15)*
Menthol Cigarettes SS	1.53 (p-value 0.018; CI 1.08, 2.19)*
Menthol Cigarillos SS	1.51 (p-value 0.019; CI 1.10, 2.14)*
Any Cigarillo SS	1.66 (p-value 0.001; CI 1.22, 2.25)*
Any Cigar SS	1.76 (p-value 0.001; CI 1.26, 2.45)*
Any E-cig SS	1.69 (p-value 0.006; CI 1.17, 2.45)*
Any SS	1.44 (p-value 0.032; CI 1.03, 2.00)*

\*Controlled for median income, rurality, store type, and county

# Wealth: Median Income and % Below Poverty

- Hypothesis: Areas with lower income or higher poverty will have greater menthol product availability and advertising, especially for cigarettes, cigars, and smokeless tobacco.

	Median Income	Below Poverty
Cheap Non-Flavored Cig Price	<b>-0.09#</b> (p-value 0.007; CI ~-0.16, -0.03)^	<b>0.26#</b> (p-value 0.003; CI 0.9, 0.43)^
Cheap Menthol Cig Price	Not significant	<b>0.20#</b> (p-value 0.019; CI 0.03, 0.36)^
Product Availability		
Mint Cigarillos	<b>1.32</b> (p-value 0.016; CI 1.05, 1.66)^	Not significant
Mint Large Cigars	<b>1.36</b> (p-value 0.011; CI 1.07, 1.73)^	<b>0.47</b> (p-value 0.050; CI 0.22, 1.00)^
Any Large Cigar	Not significant	<b>0.47</b> (p-value 0.045; CI 0.22, 0.98)^
Mint Chew	<b>1.97</b> (p-value 0.014; CI 1.15, 3.38)^	<b>0.27</b> (p-value 0.041; CI 0.08, 0.95)^
Any Chew	<b>1.35</b> (p-value 0.019; CI 1.05, 1.74)^	Not significant

	Median Income	Below Poverty
Marketing		
Menthol Chew Ad3ft	<b>1.43</b> (p-value 0.045; CI 1.01, 2.03)^	
Menthol Chew Promo	<b>1.33</b> (p-value 0.031; CI 1.03, 1.71)^	<b>0.28</b> (p-value 0.018; CI 0.10, 0.80)^
Mint Chew Price Promo	<b>1.50</b> (p-value 0.002; CI 1.16, 1.95)^	<b>0.26</b> (p-value 0.009; CI 0.09, 0.71)^
Menthol Cigarillo Promo	<b>1.40</b> (p-value 0.031; CI 1.03, 1.89)^	
Any Cigarillo Promo	<b>1.34</b> (p-value 0.011; CI 1.07, 1.69)^	
Any Chew Promo	<b>1.23</b> (p-value 0.027; CI 1.02, 1.47)^	

^Controlled for rurality, store type, and county

# Wealth: Median Income and % Below Poverty

- Hypothesis: E-cigarette availability and advertisement will not differ by economic factors.

	Median Income	Below Poverty
Product Availability		
Mint E-cigs	<b>0.80</b> (p-value 0.010; CI 0.68, 0.95)^	<b>1.74</b> (p-value 0.028; CI 1.06, 2.86)^
Any E-cig	<b>0.78</b> (p-value 0.005; CI 0.65, 0.93)^	Not significant
^Controlled for rurality, store type, and county		

# Why are the Results so Different?

## Impact of COVID-19

- Changes in use, supply, and advertising (marketing and discounts)
- In-store barriers, restructuring
- Less enforcement and education

## Retail chain policies

## Rapidly changing market and retail environment

## Change in tobacco industry strategy

Tobacco control efforts are working to reduce disparities in certain communities, particularly non-Hispanic Black communities

Michigan could be unique and particularly affected

# Implications



Enforcement is lacking

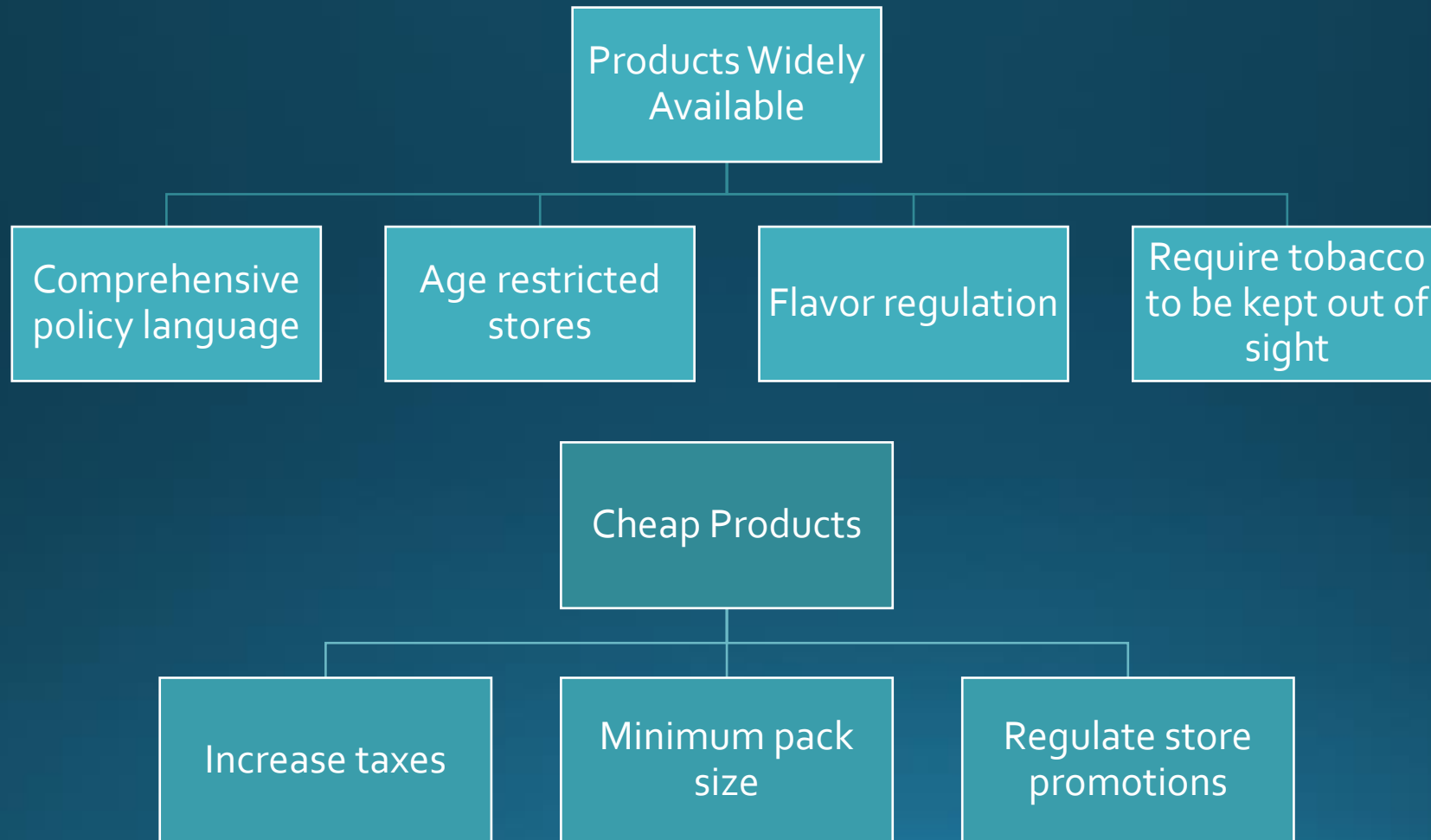


Possible language barrier/education deficit for Hispanic communities



Product placement and marketing can be targets for policy change or education

# Policy Options

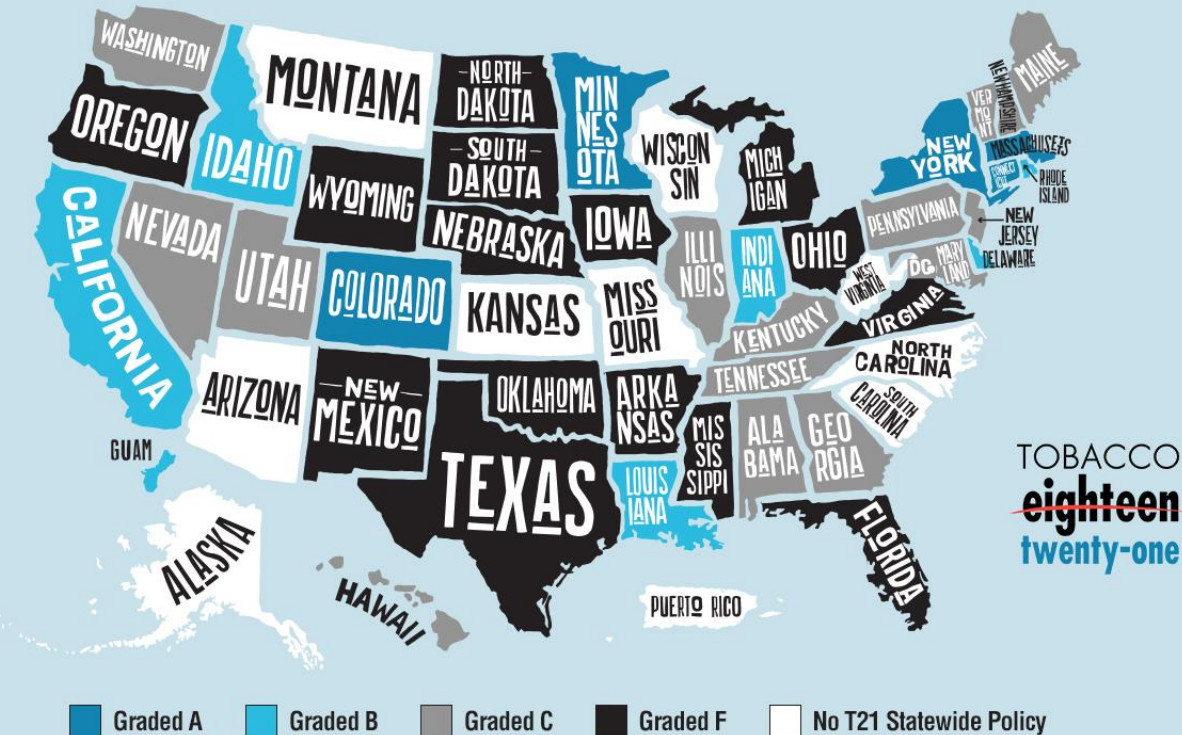


*Diminished Democracy Revisited: Examining a  
“Grassroots” Movement in Public Health Advocacy*

# State and Local Politics

# Politics of Local and State Tobacco 21 Policies

## Tobacco 21: The Law of the Land



- Question
  - How were citizens and organizations involved in the passage of Tobacco 21?
- Method
  - Interviews with 30 key advocates and legislators
- Why it's important
  - Tobacco 21 is considered a classic grassroots movement in public health



# Colorado

- Adopted in 2020
- Best-practice law
- Not preempted
- Leader in tobacco control

Ideologically moderate

Similar adult and youth use rates

# Virginia

- Adopted in 2019
- Industry law
- Dillon's Rule
- Tobacco industry state



# Key Themes

- Tobacco 21 was driven by organizations and professionals more than general citizens
  - Preventing Tobacco Addiction Foundation and Campaign for Tobacco-Free Kids were leaders
- National advocacy organizations have immense resources compared to state or local groups
  - Funding
  - Research capabilities
  - Manpower
  - Advocacy strategy

# National Efforts can Disrupt or Displace State Agendas

- “They [PTAF] pick Aspen, say ‘hey, we think Aspen... could be a leading early adopter community in Colorado and let's start working in Aspen’ and then we find out that they're doing this. And I get ... I remember I chewed him out, I never chew anybody out over the phone, especially a stranger. But anyway, it's like, ‘what are you doing coming to Colorado? Why aren't you talking to us first? Do you know? Why are you working at odds against our priorities? You could really unravel years of work that we have put into place by simply just imposing this on the community’.” (P14, CO, State public health)
- Virginia
  - Campaign for Tobacco-Free Kids had a resource which discouraged VA from pursuing T21
  - AHA, ALA, and ACS all on the legislative committee of VA's statewide coalition-nationally focused on pursuing tobacco taxation; taxes ended up higher on agenda than licensing

# Citizen Involvement Through Professionals

- Most efforts were driven by professionals
- There were rarely opportunities described for general citizen involvement with public health organizations
- Few examples of town halls
- Public health groups instead chose to engage with and recruit specific citizen groups:
  - Youth
  - Parents
  - Educators
  - Medical professionals



# Industry Action

- Veterans and active military
  - Legitimate and citizen-organized
- Astroturfing
  - Front groups created or led by tobacco industry
- Industry signage
  - Direct opportunity for citizen involvement
- Industry efforts were more united than public health



# Why Are Some Organizations Leading?



Funding Source



Organizational Capacity



Perceived Representation of  
Constituents

# Funding Arrangements

- Sources
  - Grants from foundations (RWJF, Truth Initiative) and governmental sources
  - Government allocations (public health departments)
  - Donations (PTAF and Bloomberg Philanthropies)
- Funding determines stance and priorities
  - PTAF provided grant funding to CTFK for T21
  - Bloomberg Philanthropies “Protect Kids: Fight Flavored E-Cigarettes”
- Federal internal revenue tax code: 501 (c)(3) vs. 501 (c)(4)
- Competition between groups for funding and attention

# Capacity for Advocacy

- National advocacy organizations have a federated structure
  - CTFK, ALA, AHA, ACS
  - Increases ability to act
- Organizations must be well-staffed and sufficiently funded
- Legislators rely on organizations for:
  - Informational materials
  - Policy language
  - Lists of supporters
- Can be proponents or opponents of tobacco control



# Representation of 'Constituents'

- The field of public health positions itself as protecting, serving, and representing the public
  - But these positions are unelected
- Public health officials felt they were the professionals most aware of local or state tobacco control needs
- Polling and surveys used to understand constituent desires
  - Not representative
  - Limited to certain questions
  - Replacement for town halls or direct conversation
- Personal stories were more convincing than evidence

T21 was seen as a success by public health due to the popularity of the policy and evidence of its effectiveness across states. From the perspective of democracy, however, the process of passing T21 was quite flawed.

# Policy Implications



Only certain groups or individuals can influence the policy agenda



Policies are determined by national advocacy organizations



The policies favored by these organizations may have questionable efficacy and potential harm

*Fixing Tobacco Enforcement: Retail Compliance Failures  
During COVID-19 and Proposed Solutions*

# Impact on Enforcement

# Enforcement of Minimum Legal Sales Age



- Question
  - Why is the current enforcement regime failing?
- Method
  - Content analysis of government documents
  - Review of retailer observations and interviews
- Why it's important
  - Laws only work if implemented and enforced; potential for policy failure

# Enforcement Mechanisms

- Federal
  - Synar program under Substance Abuse and Mental Health Services Administration (SAMHSA)
  - US Food & Drug Administration (FDA) inspections
- State
  - Vary based on state law
- Local
  - Only in some states

# Federal Enforcement Regimes

## Synar Program

- Relies on states to enforce with their own funds
- Must sample a percentage of state
- Optional to penalize retailers
- Penalty for states which do not comply
  - Potential revenue loss of 10% of substance use block grant if retailer violation rate (RVR) is over 20%

## FDA Inspections

- Contracts with states or third-party entities to perform inspections
- Penalties for retailers out of compliance
- Not required to be random
- No penalty for states

## Systematic Failures

- Variation at state/local level (TRL, T21, taxes, flavor restrictions)
  - Preemption
- Two incongruent federal regimes
- Incentive is for states to stay under 20% RVR

## National Tobacco 21

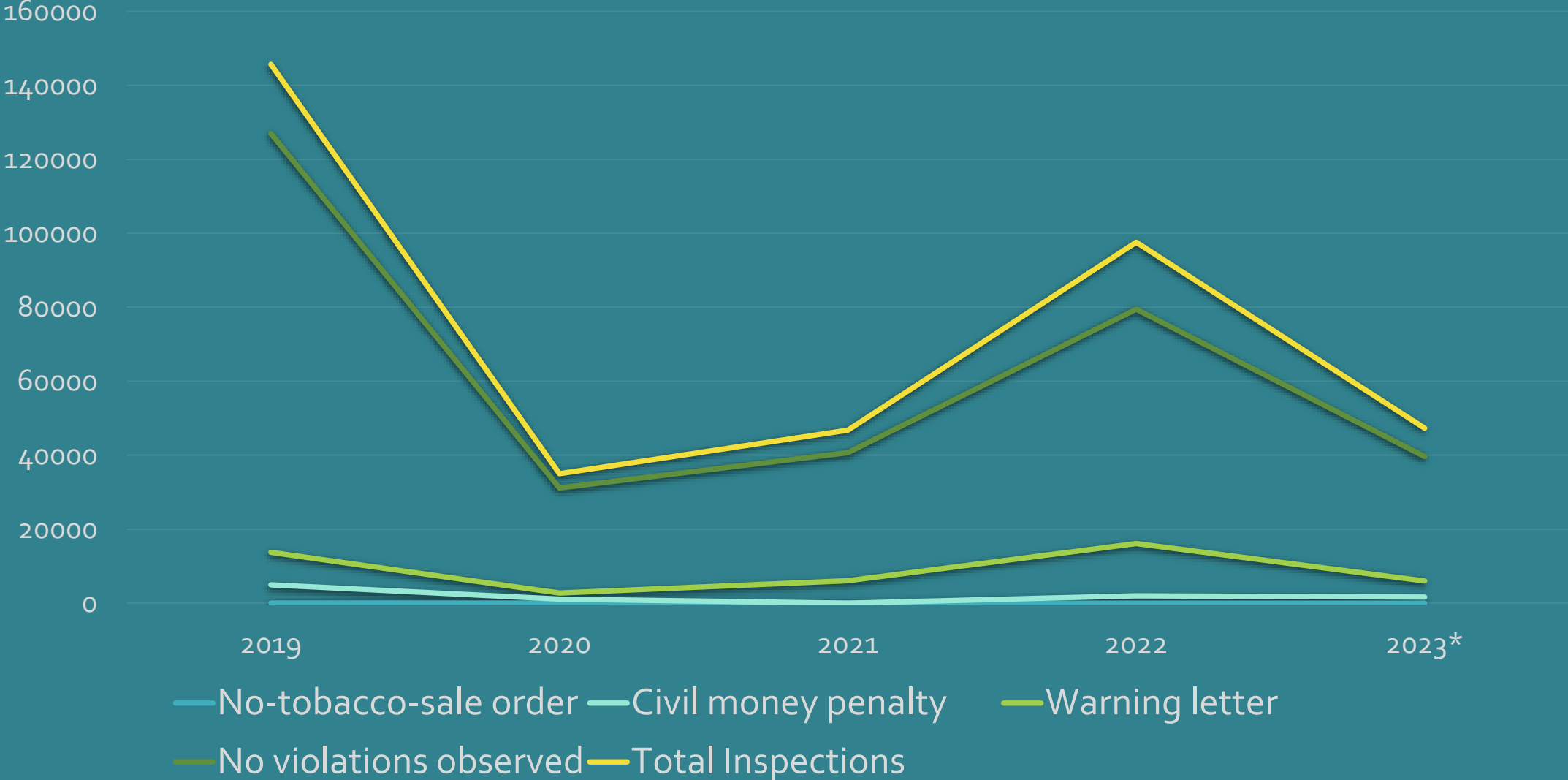
- Synar
  - Three-year grace period
  - Reduced potential Synar penalty for states
  - Transitional grant funding (\$18.6 million annually through 2024 [\$74 million total])
- FDA allowed a one-year adjustment period for retailers

## COVID-19 Pandemic

- Severely limited ability to perform compliance checks- Virginia had none from 2020-2022



# FDA Inspections Summary, January 2019 - June 2023



# RVRs for 2023 Will Likely be Over 20%

- States “may elect to submit a corrective action plan”
  - Despite having the 10% block grant penalty option to force state action, SAMHSA is instead giving states more time
  - This does not address underlying issues (Virginia as an example)
  - Unclear how long this would be in place
- This is not a new problem: DiFranza and Dussault 2005
  - States were not complying even when there was more funding
  - Overreliance on FDA
  - Previously spared non-compliant states:
    - “In 2000, four states with no funded enforcement (Maryland, Missouri, Montana, and Rhode Island) were rescued from being out of compliance by SAMHSA’s decision to renegotiate targets for 1999, saving them from having to fund enforcement.” (DiFranza and Dussault 2005)

# Michigan Data Signals Poor Enforcement

- FDA specifies that cigarettes, loose tobacco (for roll-your-own cigarettes), and smokeless tobacco products must not be sold using self-service displays unless in an age-restricted store
- Of 122 retailers
  - 8% of retailers sold self-service cigarettes
  - 7% sold self-service loose tobacco
  - 5% sold self-service smokeless tobacco
- Large cigars, cigarillos, and e-cigarettes were all sold using self-service displays across a number of stores
  - Nearly a quarter (24.58%) of retailers had at least one product sold using a self-service display

## Federal Policy Change

- Move Synar program to FDA
- Restructure the funding of the program to better align incentives for state governments
- Set guidelines to determine if a state is making a “good faith effort”
- Remove state preemption of local enforcement

## Synar Program Updates

- Computerized system
- Greater data transparency
- Program audit
- Require states to penalize retailers and use 18-20 year old decoys

# Stronger Implementation is Needed to Achieve Health Equity

- The infrastructure for implementation and enforcement across states and localities in the United States is unequal, resulting in inconsistent outcomes
- Recent tobacco control policies, like Tobacco 21 and flavor restrictions, have been layered atop an arrangement of weak enforcement regimes
  - More work needs to be dedicated to closing the gap between states with best-practice policies and weak or nonexistent enforcement
- Great progress has been made to reduce youth vaping; the weaknesses in the US enforcement system must be resolved to protect those targeted by the tobacco industry



Q&A

# Extension Opportunities



Larger analysis of tobacco product advertising and placement



Toolkit for community-based work



Mapping preemption and identifying barriers



Tobacco 21 implementation

POLICY INSIGHT | PUBLIC HEALTH

[HEALTH AFFAIRS](#) > [VOL. 41, NO. 9](#): NURSES, CARE DELIVERY, PHARMACEUTICALS & MORE

POLICY INSIGHT

## A Proposed Policy Agenda For Electronic Cigarettes In The US: Product, Price, Place, And Promotion

[Kenneth E. Warner](#), [Karalyn A. Kiessling](#), [Clifford E. Douglas](#), and [Alex C. Liber](#)

[AFFILIATIONS](#) ▾

PUBLISHED: SEPTEMBER 2022  [Free Access](#) <https://doi-org.proxy.lib.umich.edu/10.1377/hlthaff.2022.00187>

# Future Work



Create healthier  
environments  
through policy



Assess impact of  
policies and  
interventions



# Other Experiences

 Available access | Review article | First published online July 12, 2021

## Application of Mixed Methods in Health Services Management Research: A Systematic Review

[Shoou-Yih D. Lee](#)  , [Bradley Iott](#), [...], and [N'dea Moore-Petinak](#)  [View all authors and affiliations](#)

[Volume 79, Issue 3](#) | <https://doi-org.proxy.lib.umich.edu/10.1177/10775587211030393>

### RESEARCH REPORTS

## Funding Community Health Activities: An Experiment Comparing Health Foundation's Priorities to Those of Public Health Agencies, Hospitals, and Nonprofit Organizations

Rozier, Michael D. PhD; Banaszak-Holl, Jane PhD; Kiessling, Karalyn A. MHA; Singh, Simone R. PhD

[Author Information](#)

*Journal of Public Health Management and Practice* 28(3):p E662-E669, May/June 2022. | DOI: 10.1097/PHH.0000000000001468

BUY

 Metrics

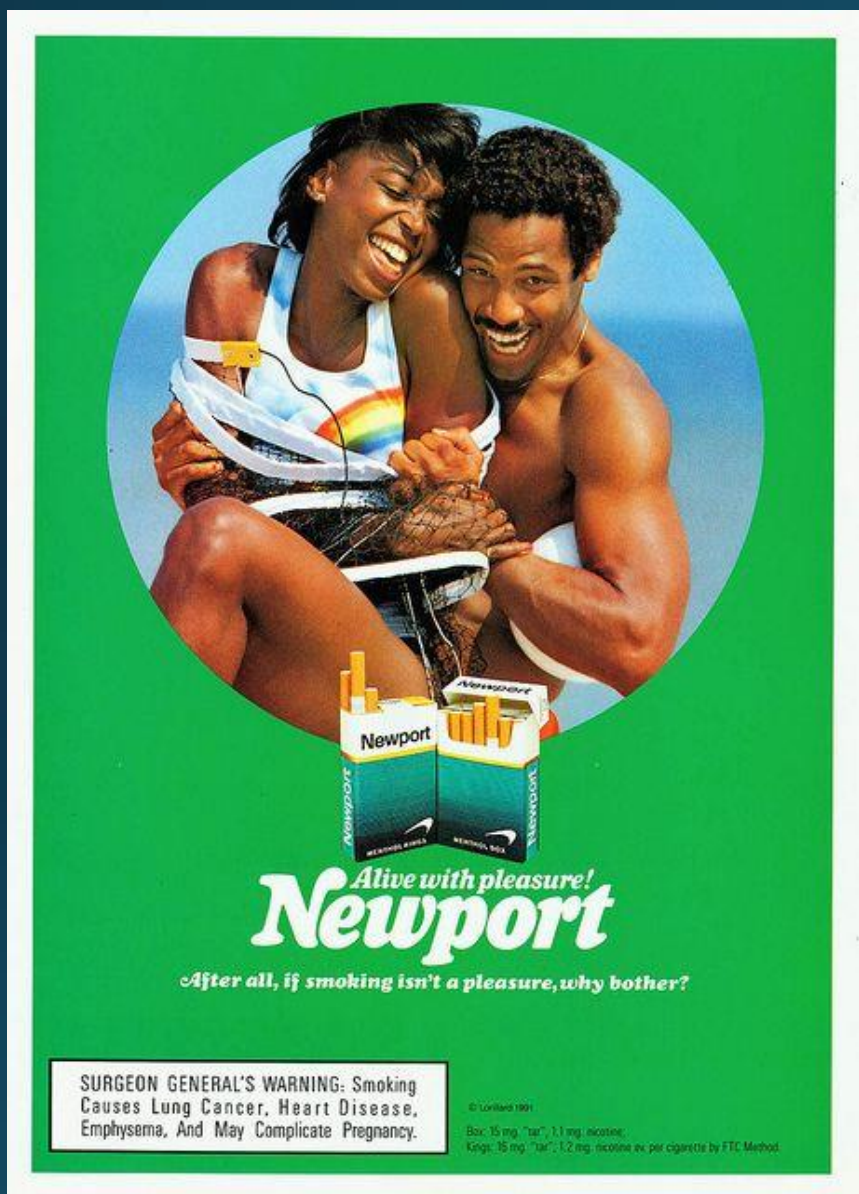
### JOURNAL ARTICLE

## Health informatics interventions to minimize out-of-pocket medication costs for patients: what providers want

Karalyn A Kiessling, Bradley E Iott, Jessica A Pater, Tammy R Toscos, Shauna R Wagner, Laura M Gottlieb, Tiffany C Veinot 

*JAMIA Open*, Volume 5, Issue 1, April 2022, ooac007, <https://doi-org.proxy.lib.umich.edu/10.1093/jamiaopen/ooac007>

**Published:** 24 February 2022 **Article history** ▼



The advertisement features a circular inset image of a young Black couple smiling and embracing. The woman is wearing a white tank top with a rainbow stripe and a white bandage wrapped around her chest. The man is shirtless and wearing white shorts. Below the couple are two packs of Newport cigarettes: one labeled 'Newport Menthol Lights' and the other 'Newport Menthol Soft'. The background is a solid green color.

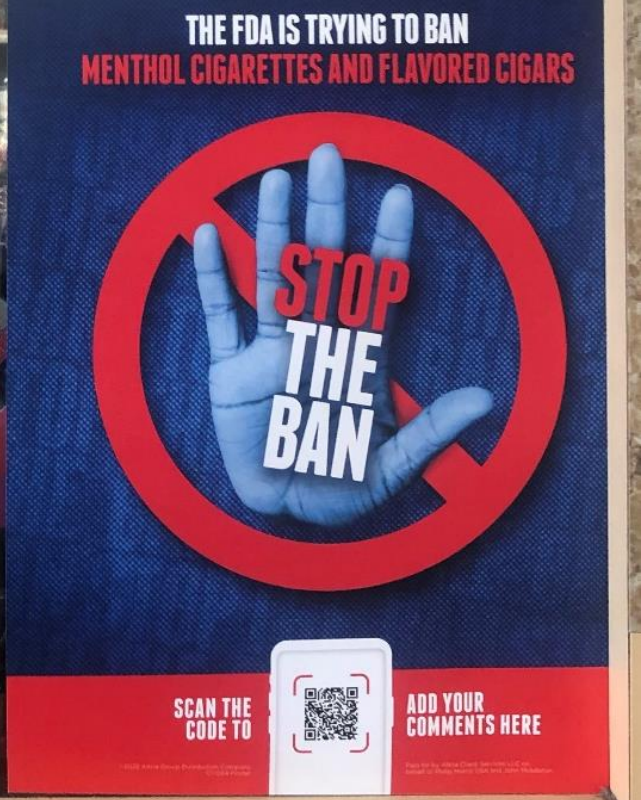
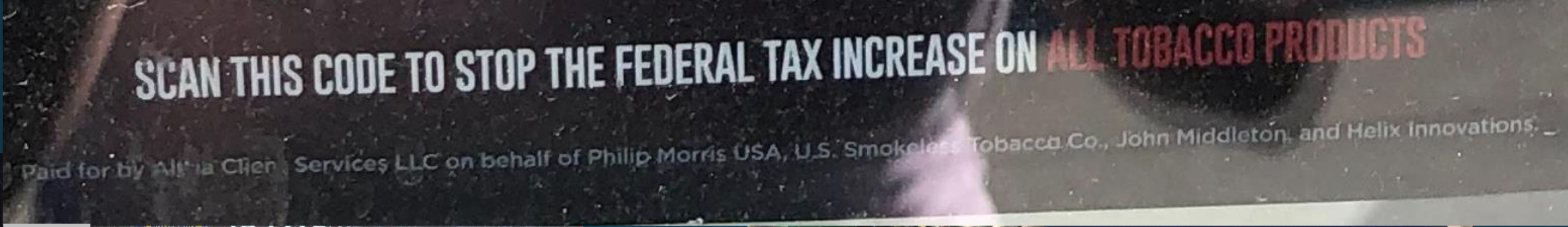
*Alive with pleasure!*  
**Newport**  
*After all, if smoking isn't a pleasure, why bother?*

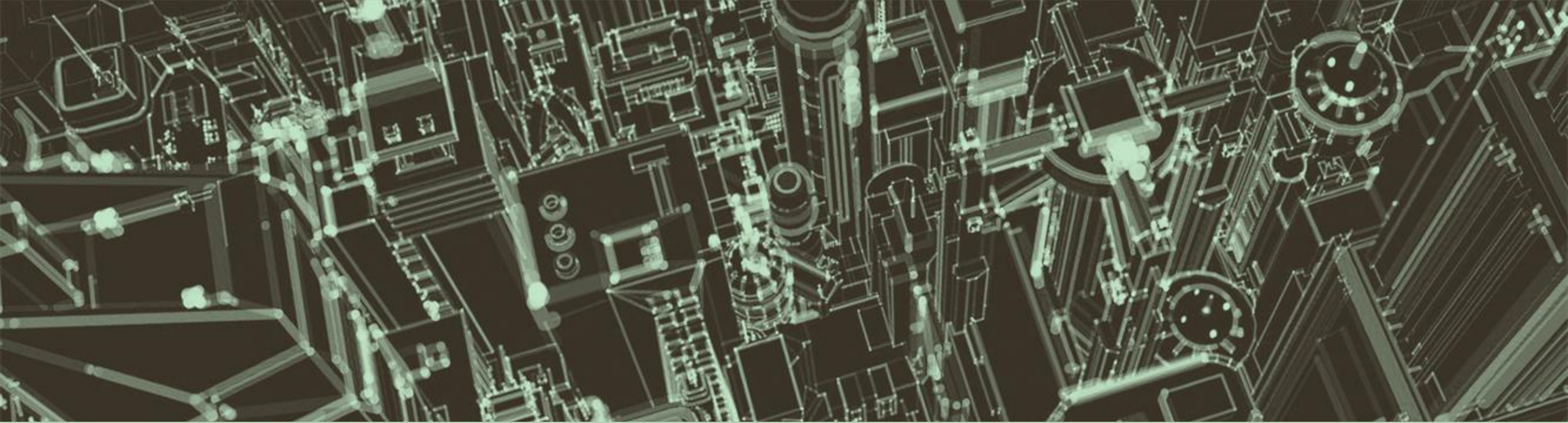
**SURGEON GENERAL'S WARNING: Smoking Causes Lung Cancer, Heart Disease, Emphysema, And May Complicate Pregnancy.**

© Lorillard 1991  
Box: 15 mg. "tar", 1.1 mg. nicotine;  
Kings: 15 mg. "tar", 1.2 mg. nicotine av. per cigarette by FTC Method.

- Smoking is still the **leading preventable cause of morbidity and mortality** in the United States
- Tobacco companies have **targeted** youth and Black communities for decades
- There are many efforts to increase cessation and reduce youth access and use
- Product bans, like **menthol bans and flavor bans**, have been proposed to prevent youth from starting nicotine products and reduce racial disparities

# “Surprise” Finding





# Methods



# Retailer Identification and Mapping



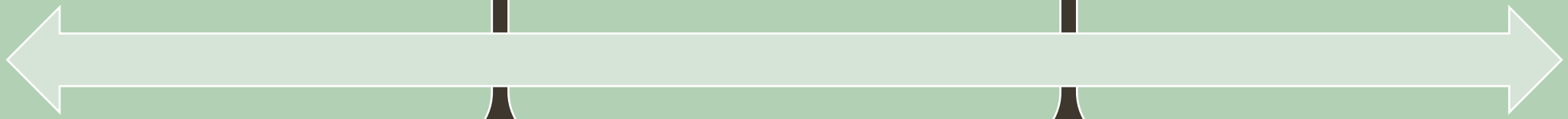
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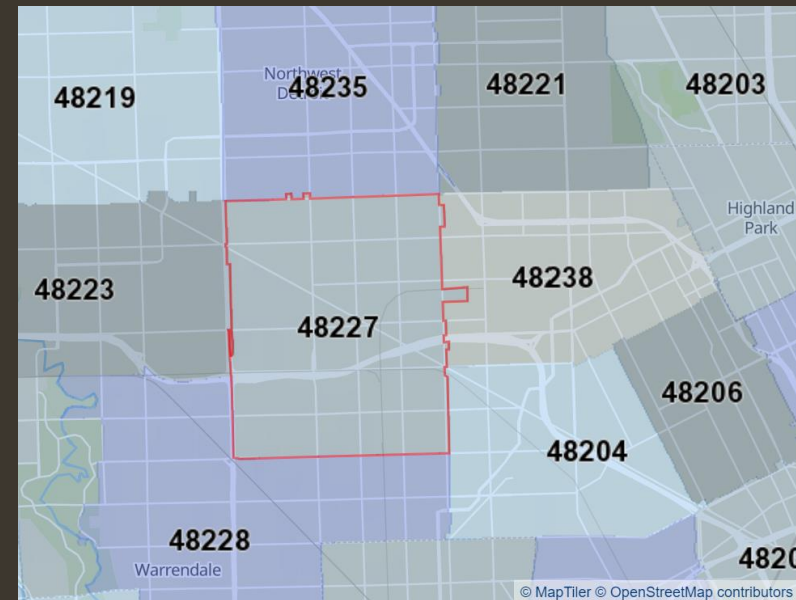


## Zip Code Selection

- Demographic data from the *American Community Survey* was used to purposefully select *five zip codes* in Kent County *six zip codes* to survey in Wayne County (six were chosen due to greater heterogeneity)
  - Zip codes selected to ensure there is a *variety of income levels, racial makeup, and rurality*

# Wayne County

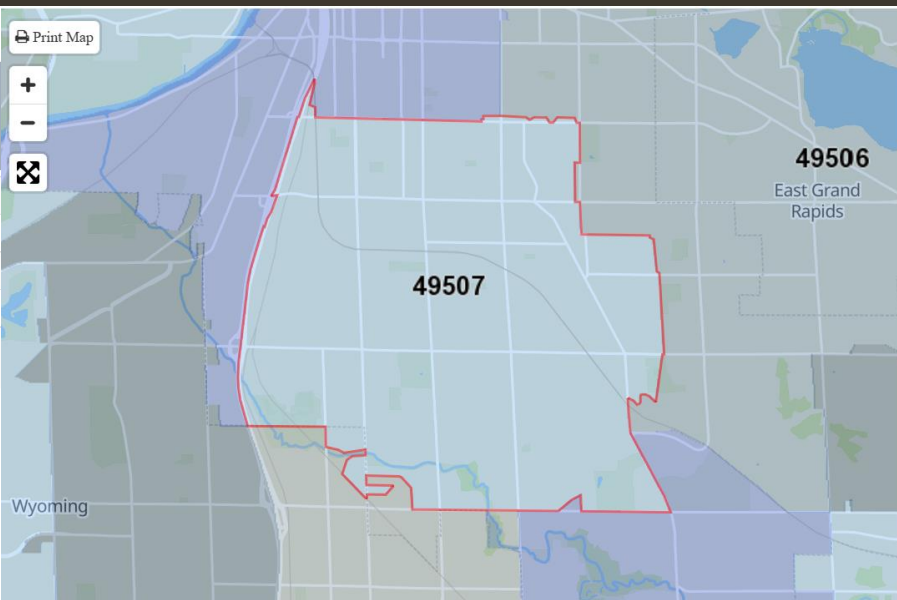
# Kent County



### ZIP Code 48227

Population Real Estate  
Employment Schools

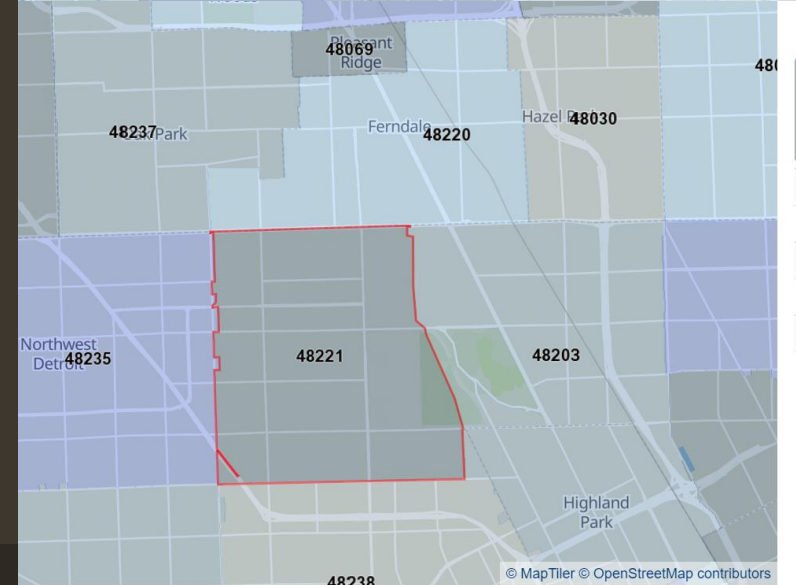
Post Office City: Detroit, MI ([View All Cities](#))  
County: Wayne County  
Timezone: Eastern (9:21am)  
Area code: 313 ([Area Code Map](#))  
Coordinates: 42.39, -83.19  
ZIP (~2 mile radius)



### ZIP Code 49507

Population Real Estate  
Employment Schools

Post Office City: Grand Rapids, MI ([View All Cities](#))  
Neighborhood: Oakdale  
County: Kent County  
Timezone: Eastern (11:26am)  
Area code: 616 ([Area Code Map](#))  
Coordinates: 42.93, -85.65  
ZIP (~2 mile radius)



### ZIP Code 48221

Population Real Estate  
Employment Schools

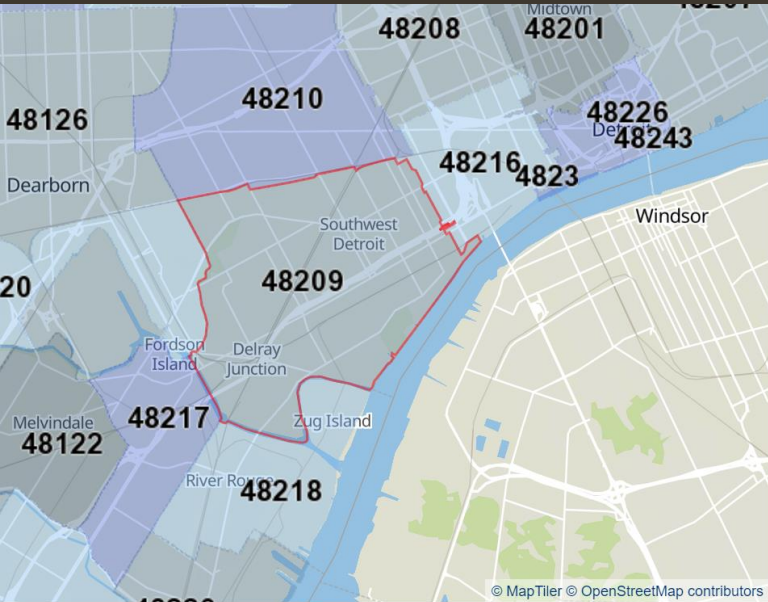
Post Office City: Detroit, MI ([View All Cities](#))  
Neighborhood: Bagley  
County: Wayne County  
Timezone: Eastern (9:19am)  
Area code: 313 ([Area Code Map](#))  
Coordinates: 42.43, -83.14  
ZIP (~2 mile radius)

- Largely Black/ African American area
- Low Median Household Income
- High poverty rates

- Largely Black/ African American area
- Mixed Median Household Income
- Average poverty rates

# Wayne County

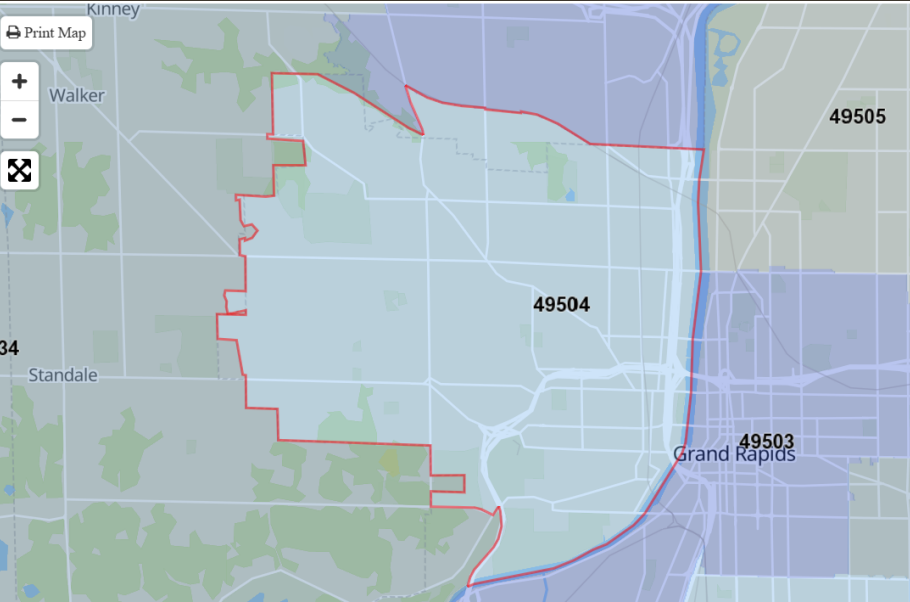
# Kent County



### ZIP Code 48209

[Population](#)
[Real Estate](#)
[Employment](#)
[Schools](#)

**Post Office City:** Detroit, MI ([View All Cities](#))  
**Neighborhood:** Delray  
**County:** Wayne County  
**Timezone:** Eastern (9:14am)  
**Area code:** 313 ([Area Code Map](#))  
**Coordinates:** 42.30, -83.11  
 ZIP (~2 mile radius)



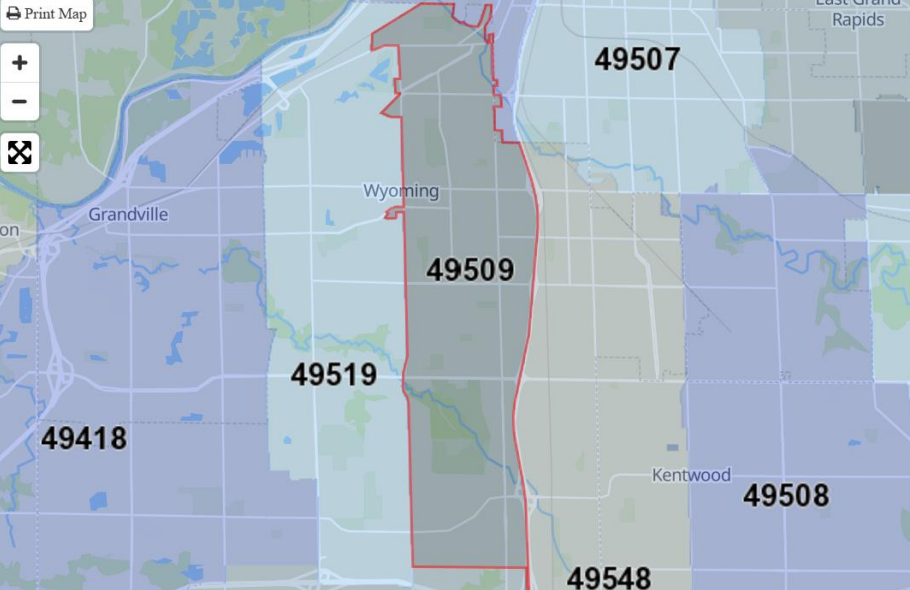
### ZIP Code 49504

[Population](#)
[Real Estate](#)
[Employment](#)
[Schools](#)

**Post Office City:** Grand Rapids, MI ([View All Cities](#))  
**County:** Kent County  
**Timezone:** Eastern (11:26am)  
**Area code:** 616 ([Area Code Map](#))  
**Coordinates:** 42.98, -85.71  
 ZIP (~3 mile radius)

- Largely **Hispanic** area
- Low Median Household Income
- **High poverty rates**

- Largely **Hispanic** area
- Mixed Household Income
- **Mixed poverty rates**



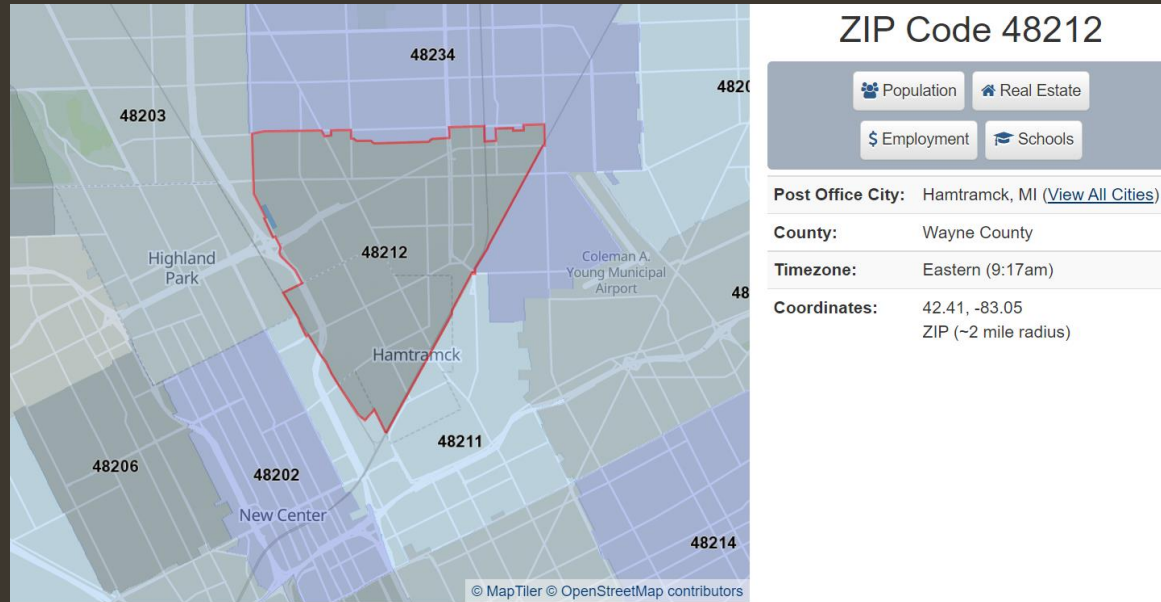
### ZIP Code 49509

[Population](#)
[Real Estate](#)
[Employment](#)
[Schools](#)

**Post Office City:** Wyoming, MI ([View All Cities](#))  
**County:** Kent County  
**Timezone:** Eastern (11:27am)  
**Area code:** 616 ([Area Code Map](#))  
**Coordinates:** 42.90, -85.69  
 ZIP (~4 mile radius)



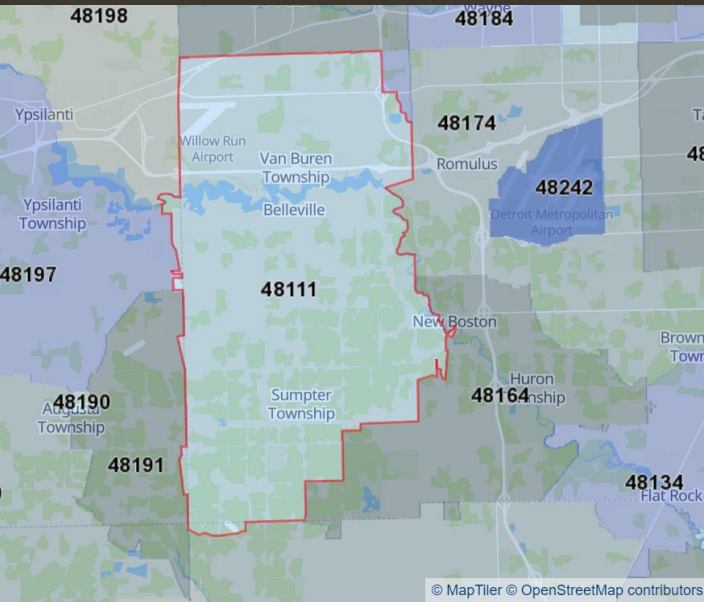
# Wayne County Only



- Relatively large Asian [Middle Eastern] population
- Low Median Household Income
- High poverty rates

# Wayne County

# Kent County



### ZIP Code 48111

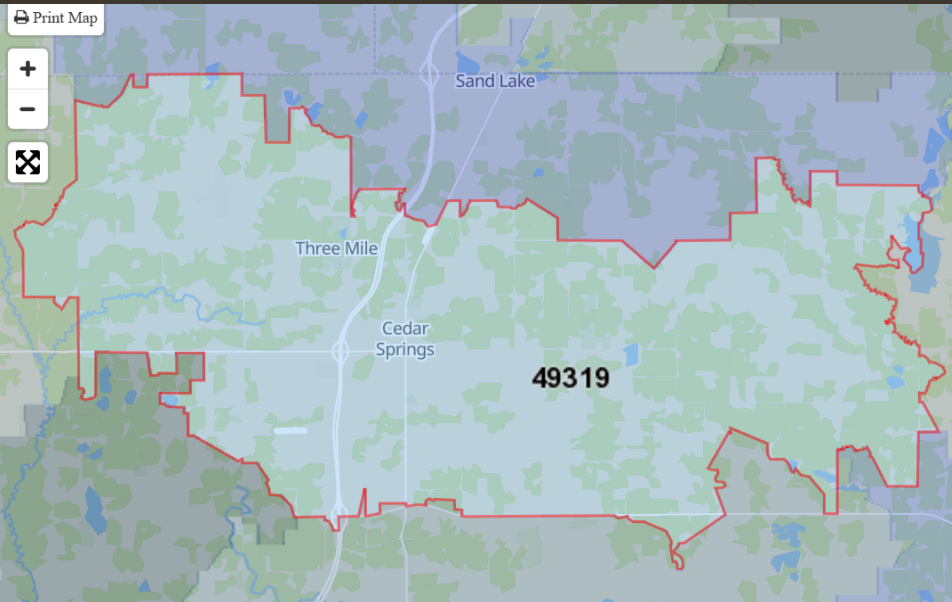
[Population](#) [Real Estate](#)  
[Employment](#) [Schools](#)

**Post Office City:** Belleville, MI ([View All Cities](#))

**County:** Wayne County

**Timezone:** Eastern (9:11am)

**Coordinates:** 42.2, -83.5  
ZIP (~8 mile radius)



### ZIP Code 49319

[Population](#) [Real Estate](#)  
[Employment](#) [Schools](#)

**Post Office City:** Cedar Springs, MI ([View All Cities](#))

**County:** Kent County

**Timezone:** Eastern (11:25am)

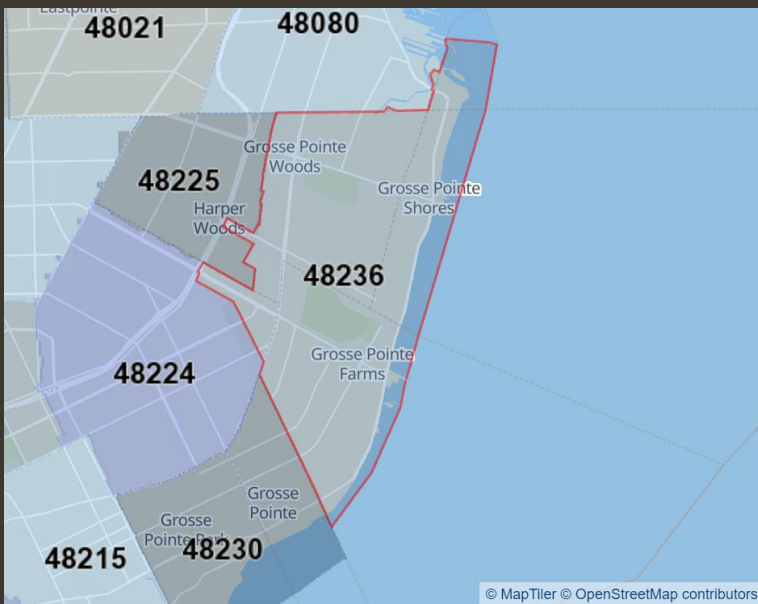
**Area code:** 616 ([Area Code Map](#))

**Coordinates:** 43.2, -85.5  
ZIP (~11 mile radius)

- Non-Hispanic white **rural** area
- Average Median Household Income
- Average poverty rates

# Wayne County

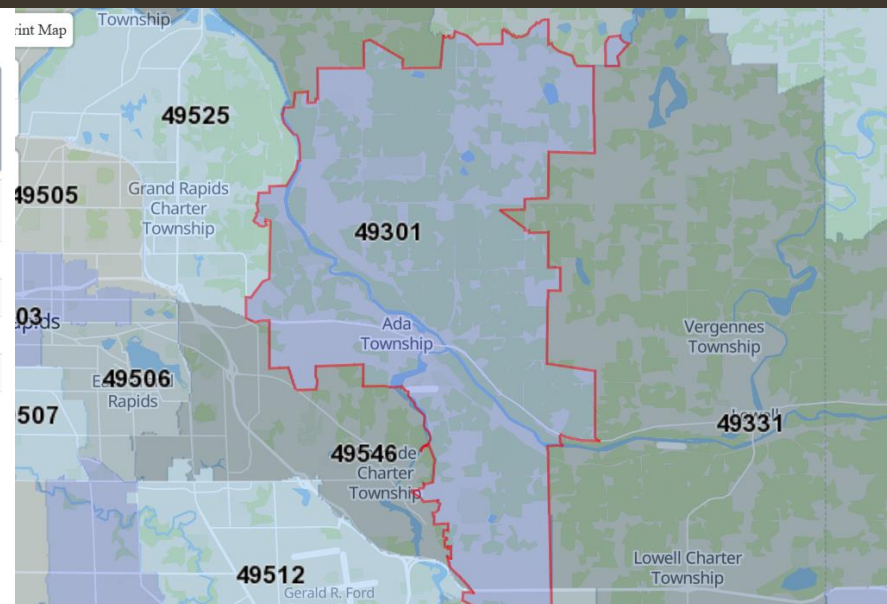
# Kent County



## ZIP Code 48236

- Population
- Real Estate
- Employment
- Schools

<b>Post Office City:</b>	Grosse Pointe, MI ( <a href="#">View All Cities</a> )
<b>Neighborhood:</b>	Grosse Pointe
<b>County:</b>	Wayne County
<b>Timezone:</b>	Eastern (9:23am)
<b>Area code:</b>	313 ( <a href="#">Area Code Map</a> )
<b>Coordinates:</b>	42.42, -82.90 ZIP (~4 mile radius)



## ZIP Code 49301

- Population
- Real Estate
- Employment
- Schools

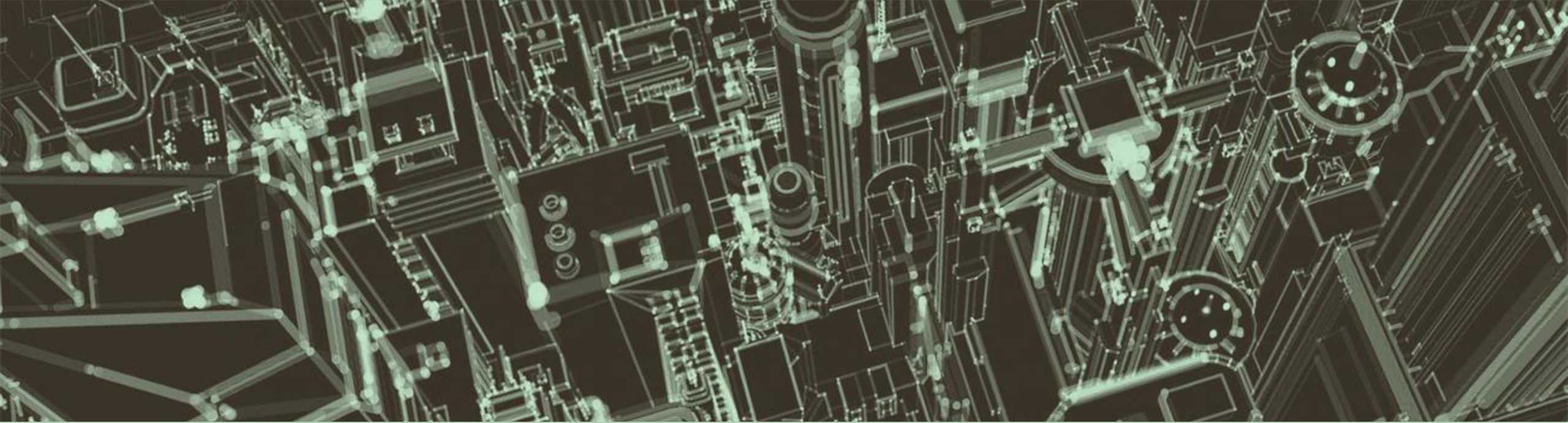
<b>Post Office City:</b>	Ada, MI ( <a href="#">View All Cities</a> )
<b>County:</b>	Kent County
<b>Timezone:</b>	Eastern (11:24am)
<b>Area code:</b>	616 ( <a href="#">Area Code Map</a> )
<b>Coordinates:</b>	43.0, -85.5 ZIP (~9 mile radius)

- Non-Hispanic white areas
- High Median Household Income
- Low poverty rates

# Structured Observation of the Retail Environment



- 12 to 15 retailers were randomly selected from the zip codes chosen above
- Observations assessed products sold, pricing, advertising, and placement of products
- Created a modified version of the Standardized Tobacco Assessment for Retail Settings (STARS) tool and amendments to examine the interior and exterior of the retailer



# Results: Descriptive Statistics



# Sample Summary

- 177 randomly selected
  - 112\* stores completed inside and out (56 in Kent County and 56 in Wayne County)
  - Excluded: no tobacco products (n=30); observers were asked to leave (n=12); store does not exist (n=9); store closed (n=7); unsafe environment (n=1); other (n=6)

Store Characteristics			
	Grand Rapids	Detroit	Total
Convenience store with gas (e.g., Exxon, Shell)	18	18	36
Convenience store without gas (e.g., 7-Eleven)	9	3	12
Drug store or pharmacy (e.g., Walgreens, Rite Aid)	2	4	6
Beer, wine, liquor store	14	19	33
Grocery store (e.g., deli, small grocer, Kroger)	7	7	14
Mass merchandiser (e.g., Walmart, Meijer, Costco)	0	1	1
Discount store (e.g., Dollar General, Family Dollar)	6	4	10
Tobacco shop (e.g., Wild Bill's, cigar shops, hookah bars)	2	6	8
Vape shop/head shop with vaping products	1	1	2
Total	59	63	122

# Products Sold (Grand Rapids, Detroit)



Any cigarette:  
100% 92%

Any cigarillo:  
96% 85%

Any  
chew/smokeless:  
82% 40%

Any e-cigarettes:  
67% 69%

Any large cigar:  
25% 28%

Any loose  
tobacco:  
44% 20%



Any  
hookah/shisha:  
14% 18%



# Flavors (Grand Rapids, Detroit)



- Cigarillos were the most prevalent product
  - 95% 80% non-flavored
  - 95% 73% flavored
- E-cigarettes were next most prevalent in Detroit
  - 64% 67% other flavors
  - 60% 64% mint
  - 46% 56% non-flavored
  - 38% 38% menthol
- Chew/snus/smokeless products were next most prevalent in Grand Rapids
  - 79% 24% mint
  - 77% 36% non-flavored
  - 58% 25% other flavors
  - 46% 25% menthol

**E-cigarettes and cigarillos were also the products most likely to be placed by candy**



# Specific Products (Grand Rapids, Detroit)



**88%** **56%** of stores surveyed sold menthol capsule cigarettes



**81%** **58%** of stores surveyed sold single cigarillos

Major brands: Black & Mild (**72%** **70%**), Swisher Sweets (**11%**), Backwoods (**5%** **11%**), White Owl (**4%**)

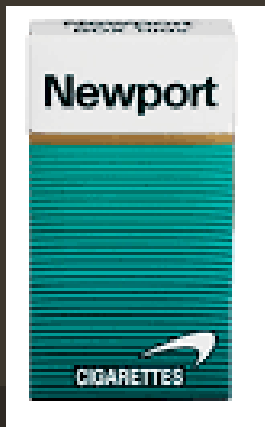


**84%** **67%** of stores surveyed sold cigarillos for less than \$1

# Product Pricing (Grand Rapids, Detroit)

Table 6

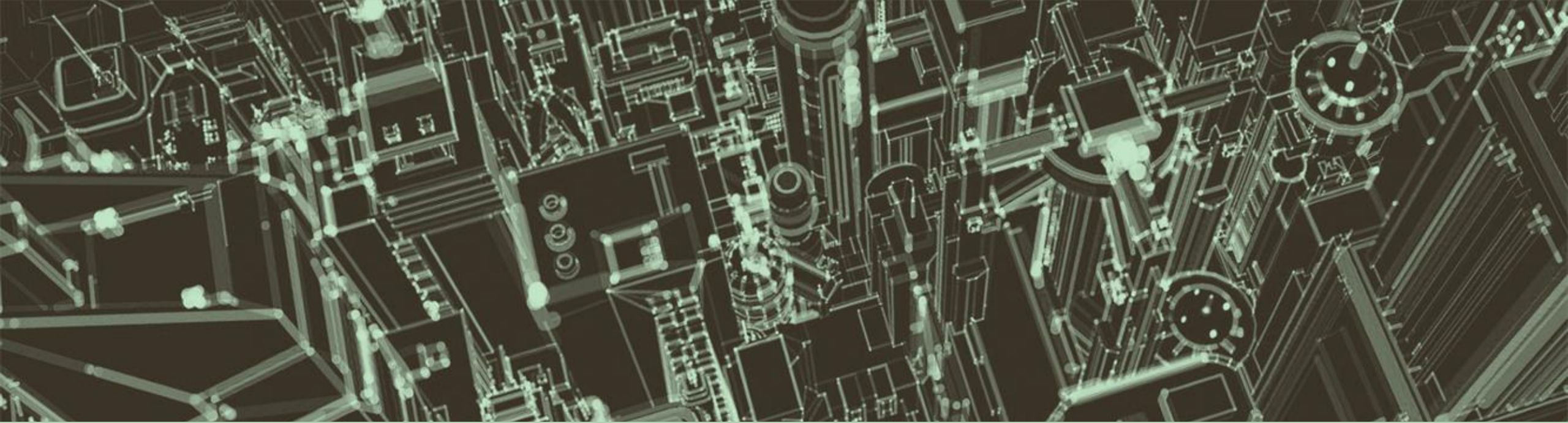
	Observations	Min	Max	Mean	Std. Dev.
Cheap Non-menthol	108	4.24	9.43	7.11	0.97
Cheap Menthol	107	4.24	9.43	7.16	0.91
Newport Menthol	107	7.79	10.69	9.30	0.52
Cheap disposable e-cigarette	20	6.99	18.82	11.58	3.77
Blu disposable e-cigarette	7	7.49	12	8.56	1.54



**98%** **90%** of stores sold Newport's

The most common menthol e-cigarette brand was **Breeze**





# Results: Regression Analyses

Comparing neighborhoods



# Race/Ethnicity: Non-Hispanic Black Neighborhoods

- Hypothesis: Non-Hispanic Black neighborhoods will have **greater menthol flavored product availability and advertising for cigarettes and cigarillos.**

	Non-Hispanic Black
Newport Price	<b>0.05#</b> (p-value 0.009; CI 0.01, 0.09)*
Product Availability	
Mint Cigarillos	<b>0.69</b> (p-value 0.043; CI 0.49, 0.99)*
Menthol Pipe Tobacco	<b>0.59</b> (p-value 0.017; CI 0.38, 0.91)*
Any Pipe	<b>0.73</b> (p-value 0.023; CI 0.55, 0.96)*
Mint Chew	<b>0.54</b> (p-value 0.044; CI 0.29, 0.98)*
Any Chew	<b>0.71</b> (p-value 0.005; CI 0.55, 0.90)*
Menthol E-cigs	<b>0.81</b> (p-value 0.032; CI 0.68, 0.98)*

Self-Service (SS)	
SS Yes/No	<b>0.50</b> (p-value 0.028; CI 0.27, 0.93)*
Any Cigarillo SS	<b>0.21</b> (p-value 0.018; CI 0.57, 1.56)*
Any Cigar SS	<b>0.29</b> (p-value 0.048; CI 0.09, 0.99)*
Any SS	<b>0.38</b> (p-value 0.019; CI 0.17, 0.85)*
Marketing	
Any Ad3ft	<b>0.80</b> (p-value 0.033; CI 0.65, 0.98)*
Any E-cig Promo	<b>0.02</b> (p-value 0.034; CI 0.01, 0.74)*
Any Promo	<b>0.81</b> (p-value 0.014; CI 0.69, 0.96)*

\*Controlled for median income, rurality, store type, and county

# Race/Ethnicity: Non-Hispanic White Neighborhoods

- Hypothesis: Non-Hispanic White areas will have **greater availability and advertisement of all flavors of smokeless tobacco as well as menthol e-cigarettes.**

	Non-Hispanic White
Menthol Pipe Tobacco	<b>1.53</b> (p-value 0.009; CI 1.11, 2.11)*
Mint Chew	<b>2.43</b> (p-value 0.005; CI 1.31, 4.51)*
Any Chew	<b>1.62</b> (p-value 0.004; CI 1.17, 2.25)*
Menthol Capsules	<b>1.67</b> (p-value 0.014; CI 1.11, 2.52)*

\*Controlled for median income, rurality, store type, and county

# Race/Ethnicity: Non-Hispanic Asian Neighborhoods

- Hypothesis: Asian neighborhoods **will not be more or less likely to have menthol flavored product availability or advertising.**

	Newport Sold
Non-Hispanic Asian	<b>0.22</b> (p-value 0.020; CI 0.06, 0.79)*
*Controlled for median income, rurality, store type, and county	

# Race/Ethnicity: Hispanic Neighborhoods

- Hypothesis: **Hispanic neighborhoods will not be more or less likely to have menthol flavored product availability or advertising.**

Newport Price	<b>-0.05#</b> (p-value 0.048; CI -0.10, 0.01)*
Product Availability	
Menthol Cigarillos	<b>1.32</b> (p-value 0.041; CI 1.01, 1.71)*
Any Large Cigar	<b>1.60</b> (p-value 0.003; CI 1.18, 2.17)*
Single Cigarillos	<b>1.30</b> (p-value 0.032; CI 1.02, 1.65)*

Marketing	
	<b>1.38</b>
Menthol Ecig Near Candy	(p-value 0.032; CI 1.03, 1.86)*
	<b>1.25</b>
Any Cigarillo Ad3ft	(p-value 0.041; CI 1.01, 1.54)^
	<b>1.63</b>
Any E-cig Ad3ft	(p-value 0.008; CI 1.13, 2.34)*
	<b>1.33</b>
Any Ad3ft	(p-value 0.017; CI 1.05, 1.68)*
	<b>1.60</b>
Any Cigarillo Promo	(p-value 0.041; CI 1.01, 2.51)*
	<b>1.24</b>
Any E-cig Promo	(p-value <0.001; CI 1.36, 2.81)*
	<b>1.30</b>
Any Promo	(p-value 0.034; CI 1.02, 1.67)*
	<b>1.83</b>
Menthol Ecig Price Promo	(p-value 0.001; CI 1.28, 2.64)*

\*Controlled for median income, rurality, store type, and county

# Race/Ethnicity: Hispanic Neighborhoods (Cont.)

- Hypothesis: **Hispanic neighborhoods will not be more or less likely to have menthol flavored product availability or advertising.**

Self-Service (SS)	
SS Yes/No	<b>1.49</b> (p-value 0.035; CI 1.03, 2.15)*
Menthol Cigarettes SS	<b>1.53</b> (p-value 0.018; CI 1.08, 2.19)*
Menthol Cigarillos SS	<b>1.51</b> (p-value 0.019; CI 1.10, 2.14)*
Any Cigarillo SS	<b>1.66</b> (p-value 0.001; CI 1.22, 2.25)*
Any Cigar SS	<b>1.76</b> (p-value 0.001; CI 1.26, 2.45)*
Any E-cig SS	<b>1.69</b> (p-value 0.006; CI 1.17, 2.45)*
Any SS	<b>1.44</b> (p-value 0.032; CI 1.03, 2.00)*

\*Controlled for median income, rurality, store type, and county



# Wealth: Median Income and % Below Poverty

- Hypothesis: Areas with **lower income or higher poverty will have greater menthol product availability and advertising, especially for cigarettes, cigars, and smokeless tobacco.**

	Median Income	Below Poverty
Cheap Non-Flavored Cig Price	<b>-0.09#</b> (p-value 0.007; CI ~0.16, -0.03)^	<b>0.26#</b> (p-value 0.003; CI 0.9, 0.43)^
Cheap Menthol Cig Price	Not significant	<b>0.20#</b> (p-value 0.019; CI 0.03, 0.36)^
Product Availability		
Mint Cigarillos	<b>1.32</b> (p-value 0.016; CI 1.05, 1.66)^	Not significant
Mint Large Cigars	<b>1.36</b> (p-value 0.011; CI 1.07, 1.73)^	<b>0.47</b> (p-value 0.050; CI 0.22, 1.00)^
Any Large Cigar	Not significant	<b>0.47</b> (p-value 0.045; CI 0.22, 0.98)^
Mint Chew	<b>1.97</b> (p-value 0.014; CI 1.15, 3.38)^	<b>0.27</b> (p-value 0.041; CI 0.08, 0.95)^
Any Chew	<b>1.35</b> (p-value 0.019; CI 1.05, 1.74)^	Not significant

	Median Income	Below Poverty
Marketing		
Menthol Chew Ad3ft	<b>1.43</b> (p-value 0.045; CI 1.01, 2.03)^	
Menthol Chew Promo	<b>1.33</b> (p-value 0.031; CI 1.03, 1.71)^	<b>0.28</b> (p-value 0.018; CI 0.10, 0.80)^
Mint Chew Price Promo	<b>1.50</b> (p-value 0.002; CI 1.16, 1.95)^	<b>0.26</b> (p-value 0.009; CI 0.09, 0.71)^
Menthol Cigarillo Promo	<b>1.40</b> (p-value 0.031; CI 1.03, 1.89)^	
Any Cigarillo Promo	<b>1.34</b> (p-value 0.011; CI 1.07, 1.69)^	
Any Chew Promo	<b>1.23</b> (p-value 0.027; CI 1.02, 1.47)^	

^Controlled for rurality, store type, and county

# Wealth: Median Income and % Below Poverty

- Hypothesis: E-cigarette availability and advertisement will not differ by economic factors.

	Median Income	Below Poverty
Product Availability		
Mint E-cigs	<b>0.80</b> (p-value 0.010; CI 0.68, 0.95)^	<b>1.74</b> (p-value 0.028; CI 1.06, 2.86)^
Any E-cig	<b>0.78</b> (p-value 0.005; CI 0.65, 0.93)^	Not significant
^Controlled for rurality, store type, and county		

# Why are the hypotheses so far off?

- Study design
  - Undercounted menthol and mint cigarillo availability
  - Did not count advertisements or share of advertising space
  - Store environment not covered by store type (ex. in-store barriers, retailer policy)
  - Looking across wider range of products
- Bad retailer practices are spreading
- Change in tobacco industry strategy
- Tobacco control efforts are working
- Michigan is unique in some important way

# Implications



Enforcement is lacking



Possible language barrier/education deficit for Hispanic communities



Product placement and marketing can be targets for policy change or education

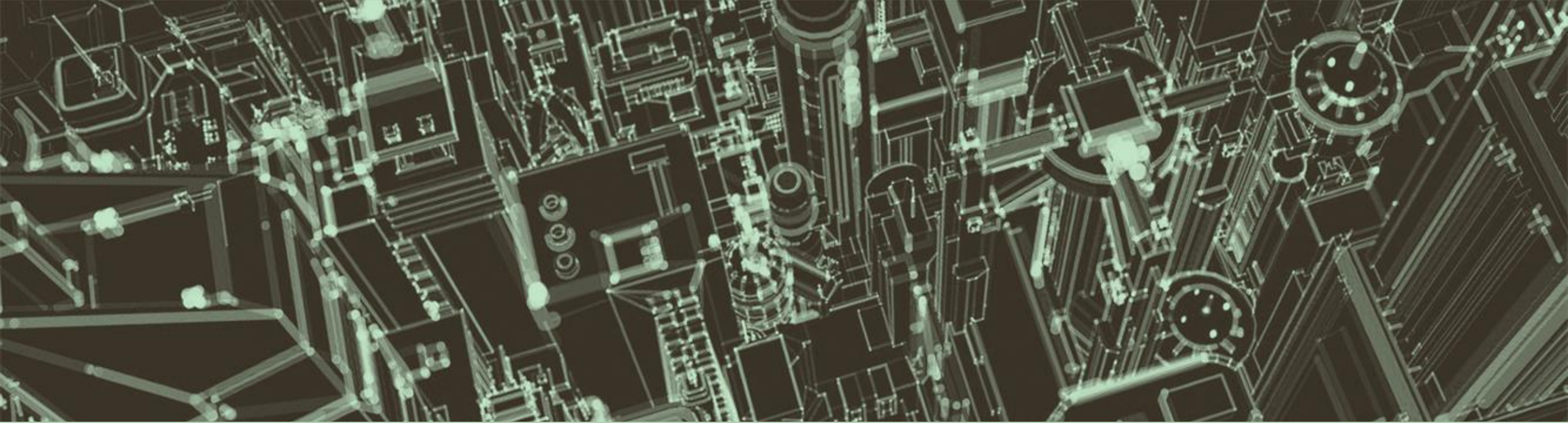


# Acknowledgements

Questions?

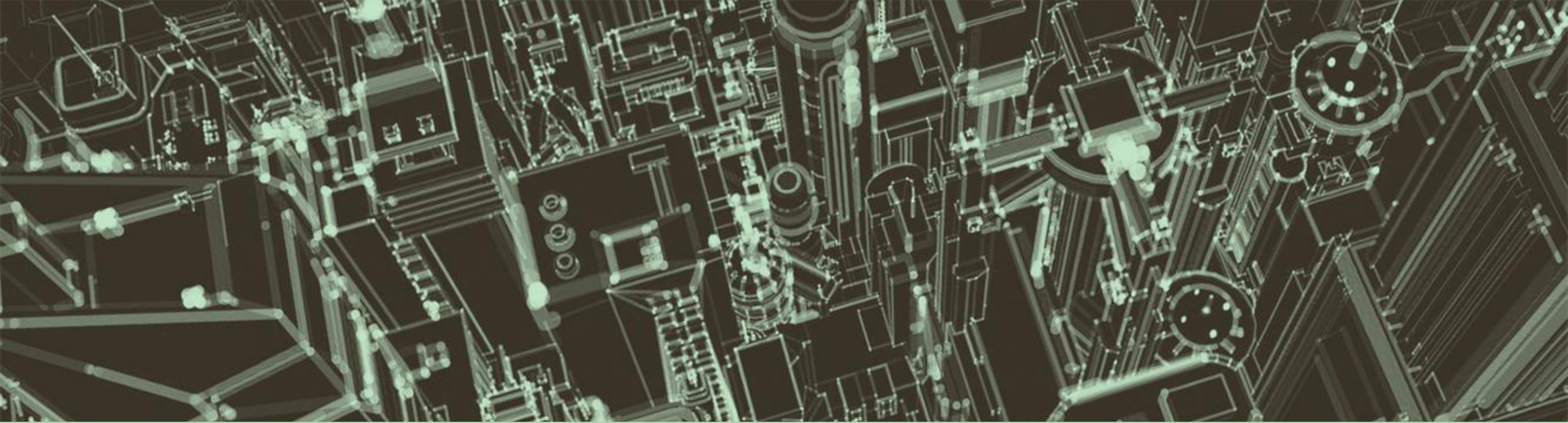
Contact:  
[kiessli@umich.edu](mailto:kiessli@umich.edu)





# Conclusion





Background







**KOOL** Intense Menthol \$7.26 PLUS TAX  
 FEEL THE VIBE

**Winston** BEST MENTHOL. 100% TOBACCO PERIOD. \$7.03 PLUS TAX  
 100% TOBACCO BASED MENTHOL

**MAVERICK** \$6.55 PLUS TAX  
 American Quality

A well-stocked counter area for a tobacco shop. The background wall features a city skyline graphic and the text "SMOKE SHOP". A blue jacket hangs from the ceiling. A price sign above the counter lists products: KOOL Intense Menthol (\$7.26 plus tax), Winston Best Menthol (100% tobacco based, \$7.03 plus tax), and MAVERICK (\$6.55 plus tax). The counter itself has a glass display case containing various items, including a blue and yellow cup and a blue bag. Below the counter, shelves are filled with numerous packs of cigars and cigarettes, organized by brand and type.

GOLD PACK  
Marlboro



WATERFORD  
**SHARK**  
MERCH

HOODIE \$30  
T \$15

Shark  
club