



Division of Public Health
College of Human Medicine
MICHIGAN STATE UNIVERSITY

Building Community Capacity to Promote Health Equity and the Social Determinants of Health

June 4, 2019

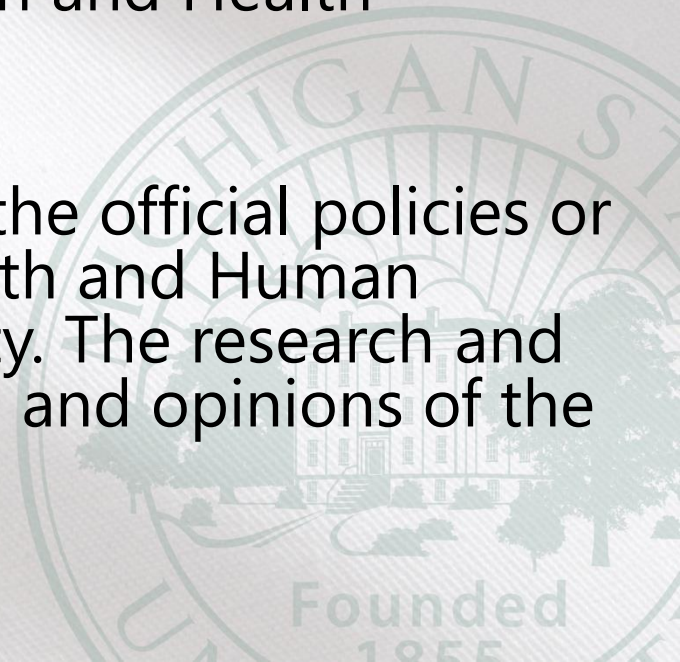
Clatsop County Place Matters Conference

Presented by Debra Furr-Holden



> Funding, Acknowledgements, and Conflicts of Interest

- No conflicts of interest to disclose/declare.
- Funding for this research was made possible by grants U01 CE001954 (PI, Philip Leaf), 1R01CE002682-01 (PI, Debra Furr-Holden) from the National Center for Injury Prevention and Control at the Centers for Disease Control and Prevention and U54MD011227 from The National Institute on Minority Health and Health Disparities..
- The views expressed do not reflect the official policies or opinions of the Department of Health and Human Services or Michigan State University. The research and comments reflect only the thoughts and opinions of the author.



C. Debra Furr-Holden, PhD

C.S. Mott Endowed Professor of Public Health

Director, Division of Public Health

Professor, Department of Epidemiology and Biostatistics

**Director, Flint Center for Health Equity Solutions
(U54MD011227)**

Michigan State University College of Human Medicine



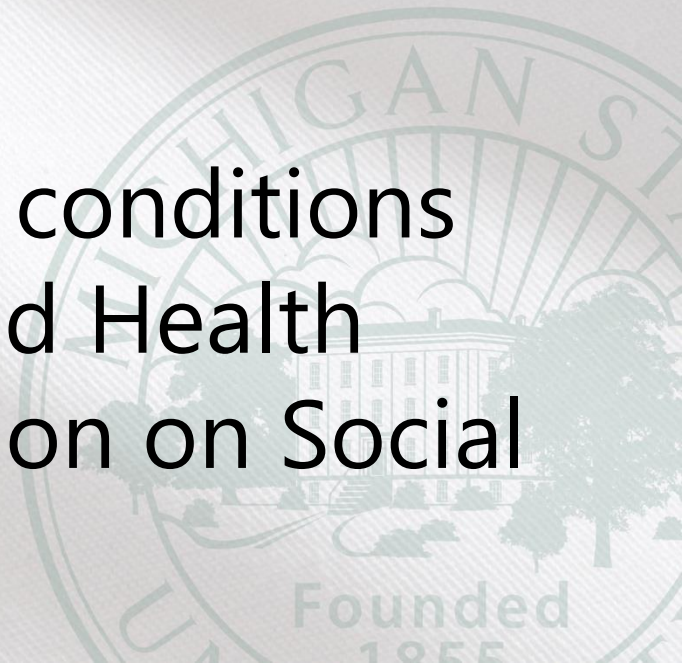
Division of Public Health
College of Human Medicine
MICHIGAN STATE UNIVERSITY



➤ What Are the Social Determinants of Health?

Historically?

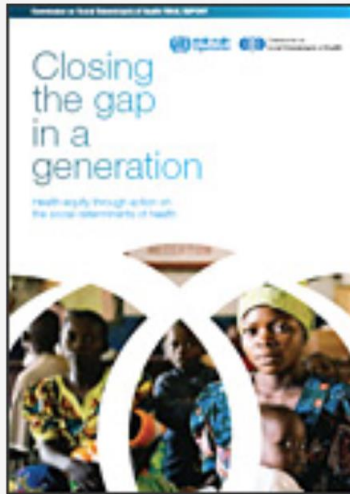
- Individual determinants of health
- Linkages between place and health, e.g., John Snow and the Broad Street Pump
- Linkages between social conditions and health, e.g. the World Health Organization's Commission on Social Determinants of Health



➤ What Are the Social Determinants of Health?

Current state of research

- 'The causes of the causes'
 - Sir Michael Marmot



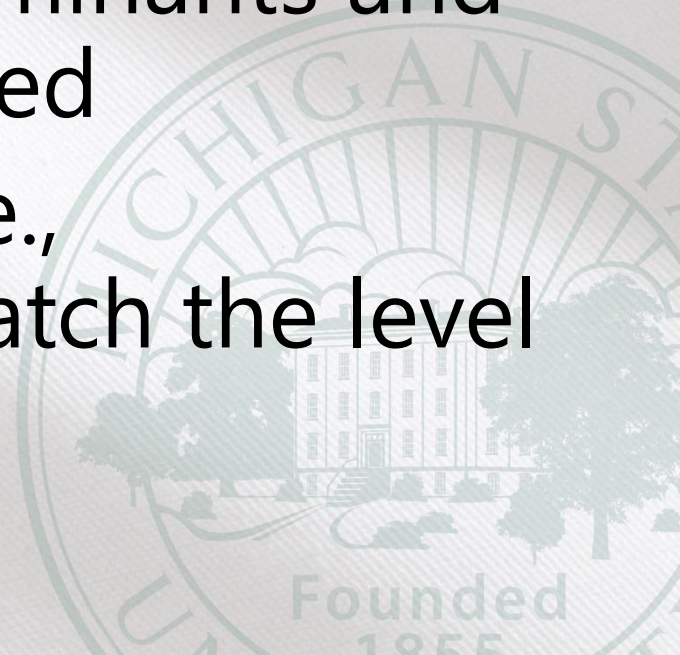
Closing the gap in a generation: Health equity through action on the social determinants of health

Social justice is a matter of life and death. It affects the way people live, their consequent chance of illness, and their risk of premature death. We watch in wonder as life expectancy and good health continue to increase in parts of the world and in alarm as they fail to improve in others.



➤ Why A Social Determinants Framework?

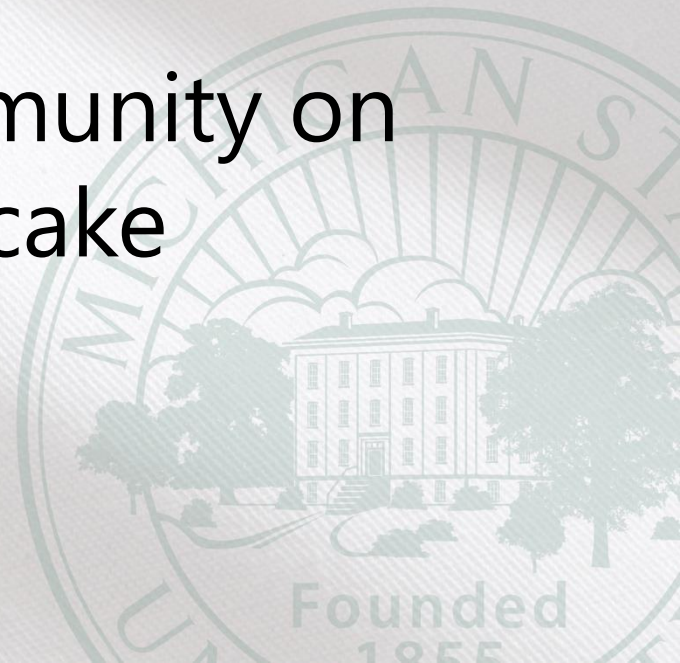
- Structural factors are leading drivers of individual, public health and population-based outcomes
- Downstream approaches that address individual determinants and 'disparities' → mismatched
- Level of the solutions (i.e., interventions) should match the level of the problems



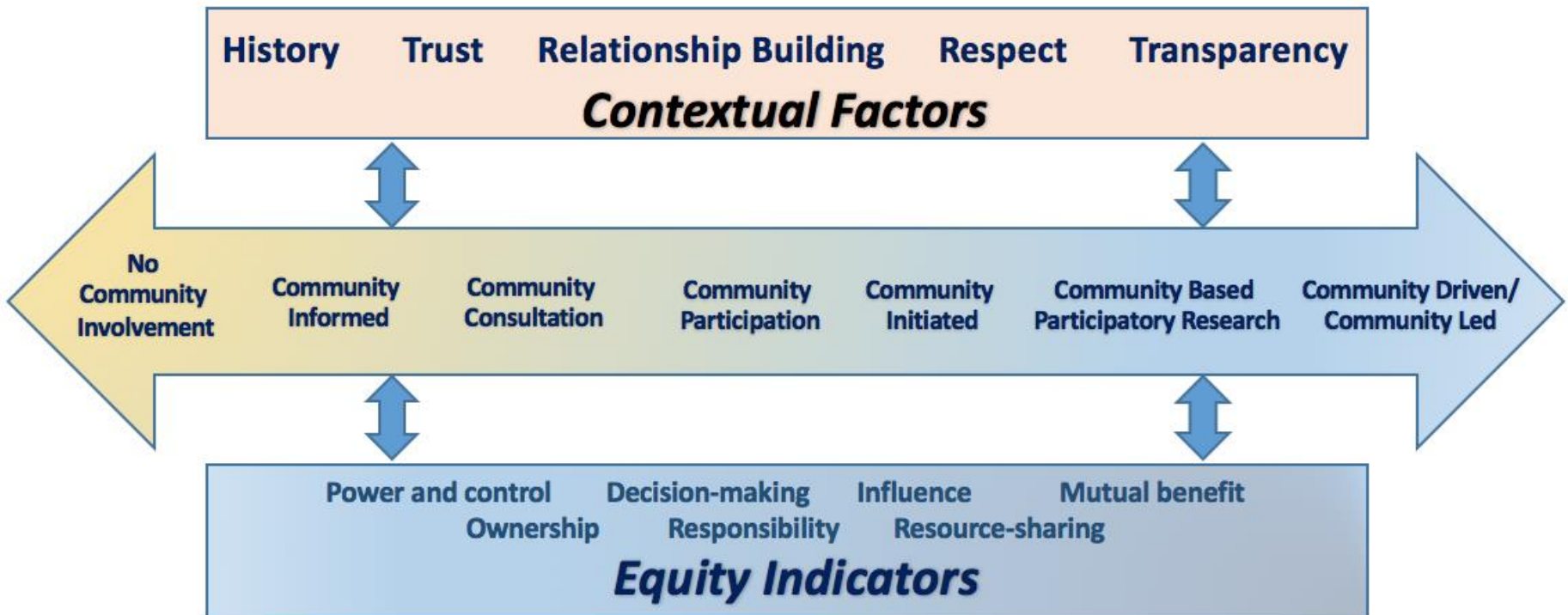
➤ What Solutions are Not!

- Change or improvement
- Progress
- Fixes

→ You can't sprinkle community on after the fact and call it a cake



Continuum of Community Engagement in Research



Equality vs Equity vs Social Determinants of Health



Equality



Equity



**Social
Determinants**



➤ Gaps in Science

- Science establishes clear associations but often does not inform implementation and policy
- Larger contextual factors often not included (e.g., economic development, community development, community will)





Division of Public Health
College of Human Medicine
MICHIGAN STATE UNIVERSITY

Using a Social Determinants Framework to Make a Case for Policy

➤ Background: Neighborhood Disorder

Describes communities with visibly high levels of:

1. Illegal, deviant/unconventional, or otherwise undesirable behavior (e.g., sex work, drug selling, violence, social incivilities, public use of alcohol and drugs, unmonitored youth) – **Social Disorder**
2. Physical disarray or blight (e.g., vandalism, graffiti, rodents, abandoned buildings) – **Physical Disorder**



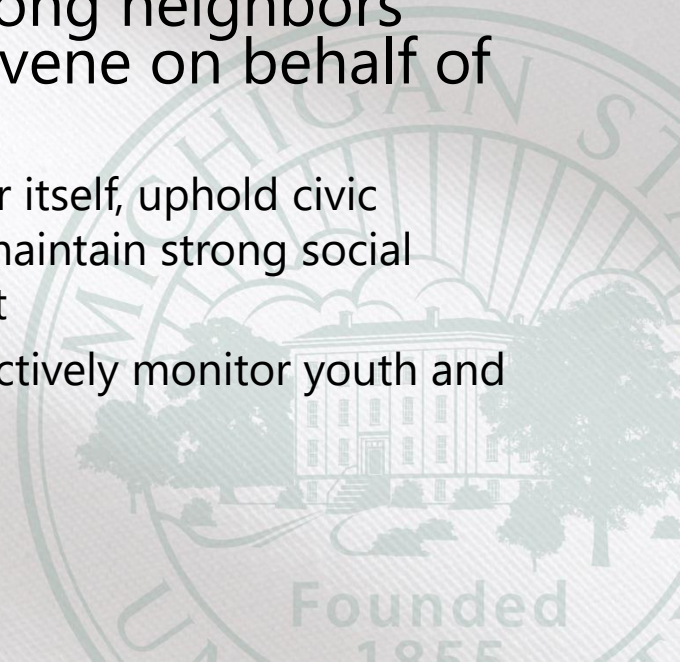
➤ Related Constructs

Social Disorganization: ability of a community to realize common values and address community problems

- Impacted by negative structural forces (e.g., limited availability of jobs due to deindustrialization)
- Results in a degraded the sense of community and the collective ability to manage problems
- Leads to violence and other types of social disorder

Collective Efficacy: social cohesion among neighbors combined with their willingness to intervene on behalf of the common good

- Social cohesion:* community's ability to advocate for itself, uphold civic institutions (e.g., schools, houses of worship), and maintain strong social networks and high levels of trust and social support
- Informal social control:* community's ability to collectively monitor youth and appropriately sanction problem behavior.

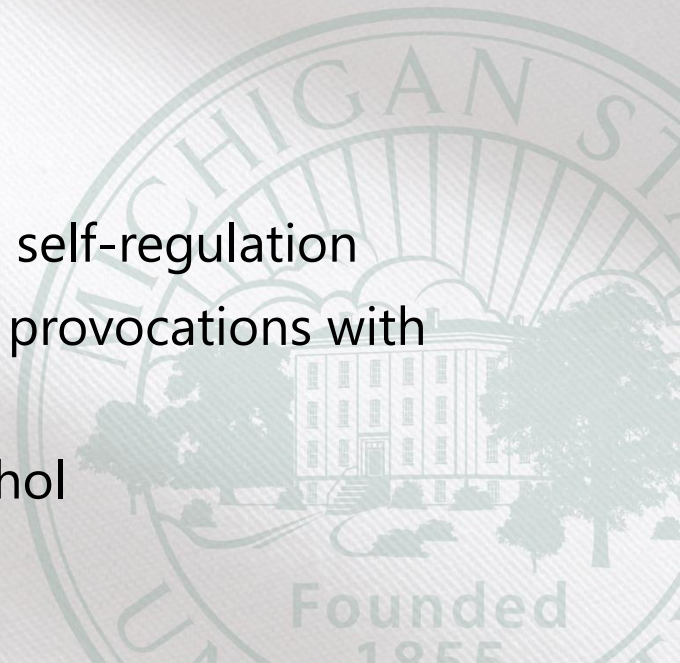


➤ Neighborhood Disorder and Health

Associated with behavioral health problems and risk behavior

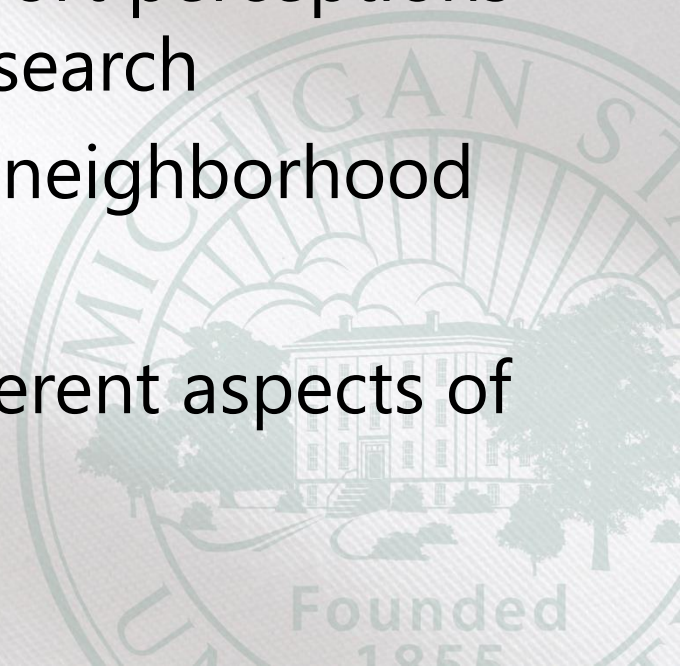
Mechanisms:

1. Chronic stress and fear
2. Anomie (community provides little moral guidance)
3. Low social cohesion
4. Emigration
5. Low social control
6. Disrupts the development of empathy and self-regulation
7. Teaches residents to respond to perceived provocations with violence
8. Increased availability to weapons and alcohol



➤ Measurement of Neighborhood Disorder

1. Historically underdeveloped
2. Literature dominated by use of structural factors from Census data as a proxy – does not fully reflect social processes or physical disorder
3. Reliance on residents' self-report perceptions of disorder through survey research
 - Non-standard definition of neighborhood
 - Same-source bias
 - Instruments emphasize different aspects of disorder



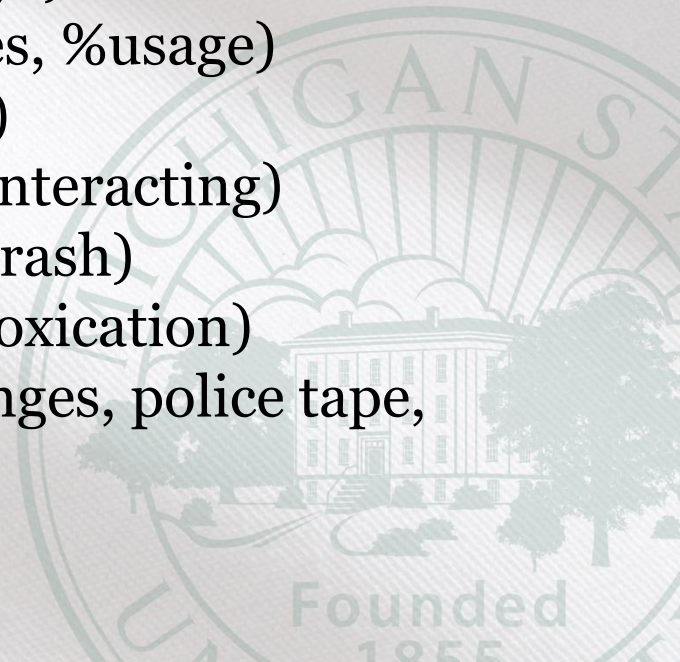
Systematic Social Observation (SSO)

- Standardized approach for direct observation and evaluation the physical and social characteristics of a neighborhood
- Overcomes shortcomings of previous methodologies
- Limitations
 - Focus on neighborhood context broadly
 - Emphasis on physical disorder and that built environment – focus of factors related to chronic disease (food availability, walkability)
- ***Need for an SSO tool that assesses neighborhood context through a lens of neighborhood disorder***
- NIFETY: designed to gather descriptors of a community so as to understand residents' experiences, particularly with regard to exposure to violence, alcohol, and other drugs



Neighborhood Inventory for Environmental Typology (NifETy)

- Merging GIS technology with observational epidemiology
- Fully automated neighborhood assessment method
- 7 core domains
 1. Physical layout (length, width, alleys)
 2. Type of structures (residential types, %usage)
 3. Youth Activity (playing/recreation)
 4. Adult Activity (monitoring youth, interacting)
 5. Physical (Dis)order (landscaping, trash)
 6. Social (Dis)order (noise, fights, intoxication)
 7. Violence and AOD indicators (syringes, police tape, memorials)



Total Broken Windows



Count every broken window that has no signs of makeshift repair¹.

–If there is no evidence of makeshift repair, count both cracked and broken windows.

1. Signs of make-shift repair include duct-tape, sheets of plastic, visible sealant, etc.

Un-Boarded Abandoned Buildings



Abandoned structures
–Commercial or residential

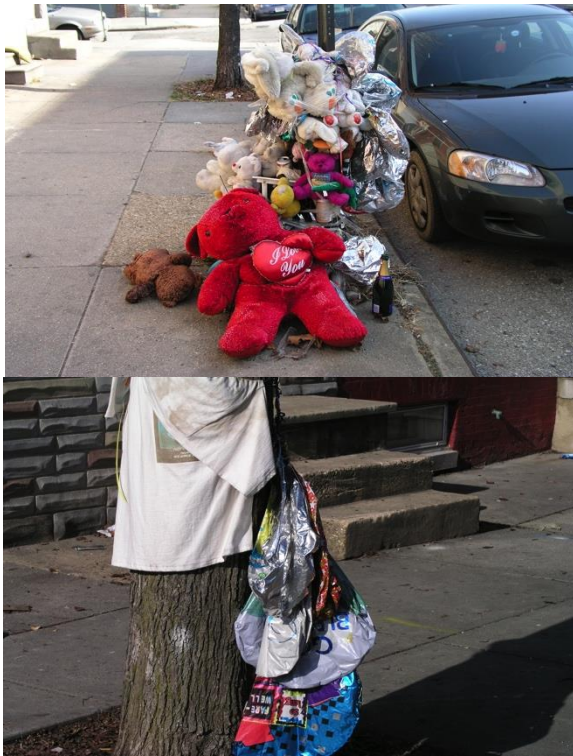
With at least one point of access on the 1st floor or accessible by ground w/o a ladder and that is not boarded up with wood, cinder blocks, bricks, etc.

Drug Paraphernalia



- Evidence of materials used in the production, transport, or sale of illicit/illegal substances
- Include syringes, baggies, vials, blunt guts, marijuana roaches, and/or crack pipes

Memorials on Block



- Evidence of memorials
 - Collections of stuffed animal, pictures, flowers and/or candles, R.I.P. (in paper or graffiti), etc.

Corner Kids

Youth
congregated at
corners or
alley entrances



➤ Primer NifETy Publications

The NifETy Method for Environmental Assessment of Neighborhood-level Indicators of Violence, Alcohol, and Other Drug Exposure

C. D. M. Furr-Holden • M. J. Smart • J. L. Pokorni •
N. S. Ialongo • P. J. Leaf • H. D. Holder • J. C. Anthony

© Society for Prevention Research 2008

Metric Properties of the Neighborhood Inventory for Environmental Typology (NifETy): An Environmental Assessment Tool for Measuring Indicators of Violence, Alcohol, Tobacco, and Other Drug Exposures

C.D.M. Furr-Holden, K.D.M. Campbell, A.J. Milam, M.J. Smart, N.A. Ialongo
and P.J. Leaf

Eval Rev 2010; 34; 159

DOI: 10.1177/0193841X10368493



▶ Neighborhood Disorder and Substance Use

The Growth of Neighborhood Disorder and Marijuana Use Among Urban Adolescents: A Case for Policy and Environmental Interventions*

C. DEBRA M. FURR-HOLDEN, PH.D.,[†] MYONG HWA LEE, M.A.,[†] ADAM J. MILAM, M.H.S.,
RENEE M. JOHNSON, PH.D., M.P.H.,[†] KWANG-SIG LEE, PH.D.,[†] AND NICHOLAS S. IALONGO, PH.D.

Department of Mental Health, The Johns Hopkins University Bloomberg School of Public Health, 624 North Broadway, 8th Floor, Baltimore, Maryland 21205

ABSTRACT. Objective: This study examines the growth of neighborhood disorder and subsequent marijuana use among urban adolescents transitioning into young adulthood. **Method:** Data are derived from a longitudinal sample of 434 predominately African American 12th graders followed-up at 2 years after high school. The data are rich in repeated measures documenting substance use and misuse and neighborhood characteristics. Growth mixture modeling was used to examine how neighborhood disorder trajectories, measured through the presence of abandoned buildings on the blocks where participants reside, influence subsequent drug use beginning in late adolescence and into young adulthood. **Results:** A four-class solution characterizing neighborhood growth was selected as the final model and included rapidly improving, slightly

improving, always-good, and deteriorating neighborhoods. Young adults living in neighborhoods that had been deteriorating over time were 30% more likely to use marijuana 2 years after high school than adolescents living in always-good neighborhoods (odds ratio = 1.30, $p = .034$). There was no relationship between living in a neighborhood that was improving and marijuana use. **Conclusions:** This study identified a salient and malleable neighborhood characteristic, abandoned housing, which predicted elevated risk for young-adult marijuana use. This research supports environmental strategies that target abandoned buildings as a means to improve health and health behaviors for community residents, particularly young-adult substance use. (*J. Stud. Alcohol Drugs*, 72, 371–379, 2011)





Division of Public Health
College of Human Medicine
MICHIGAN STATE UNIVERSITY

Filling the Gap: Empirical Support for Laws and Using Zoning, a Public Health Tool, to Promote Behavioral Health and Reduce Violence

➤ Alcohol Outlet Density, Proximity and

Citation	Study quality	Alcohol Outlet Proximity/ Density	Off-Premise Alcohol Outlet Proximity/ Density	Associated Impact of Alcohol Outlets on Violent Crime	
				All Alcohol Outlets	Off-Premise Alcohol Outlets
Branas et al (2009)	Good	√	√	↑	↑
Franklin et al (2010)	Good	√	√	↑	↑
Gorman, et al (2005)	Fair	√		↑	
Grubesik et al (2011)	Fair	√	√	↑	↑
Gyimah-Brempong (2006)	Good	√		↑	
Reid et al (2003)	Fair	√		↑	
Scribner et al (1999)	Good	√	√	↑	↑
Yu et al (2009)	Good	√		↑	
Zhu et al (2004)	Fair	√		↑	
Furr-Holden, et al (2015)	*	√	√	↑	↑
Milam, et al (2014)	*	√	√	↑	↑
Jennings et al (2014)	*	√	√	↑	↑



The Inequitable Distribution in Alcohol Outlets in Baltimore

- Non-conforming alcohol outlets are inequitably distributed in predominantly African American communities
 - Communities with non-conforming outlets have a statistically significantly higher percentage of African Americans compared to communities without non-conforming outlets [78.3% vs 60.3% ($p < 0.5$); note: Baltimore City is 62.9% African American)
 - 63.8% of non-conforming outlets are located in census tracts with greater than 90% African American population, as compared to 36.1% of the conforming outlets being located in census tracts with greater than 90% African American population ($p < 0.01$)



> The Inequitable Distribution in Alcohol Outlets in Baltimore

- Non-conforming outlets are inequitably distributed in lower income communities
 - Among the non-conforming outlets, 41.3% of them are in census tracts with an annual median household income below \$30K, compared to conforming outlets where only 28.4% of them are in census tracts with an annual median household income less than \$30K ($p < 0.01$; note: median household income in Baltimore City is \$42,241).

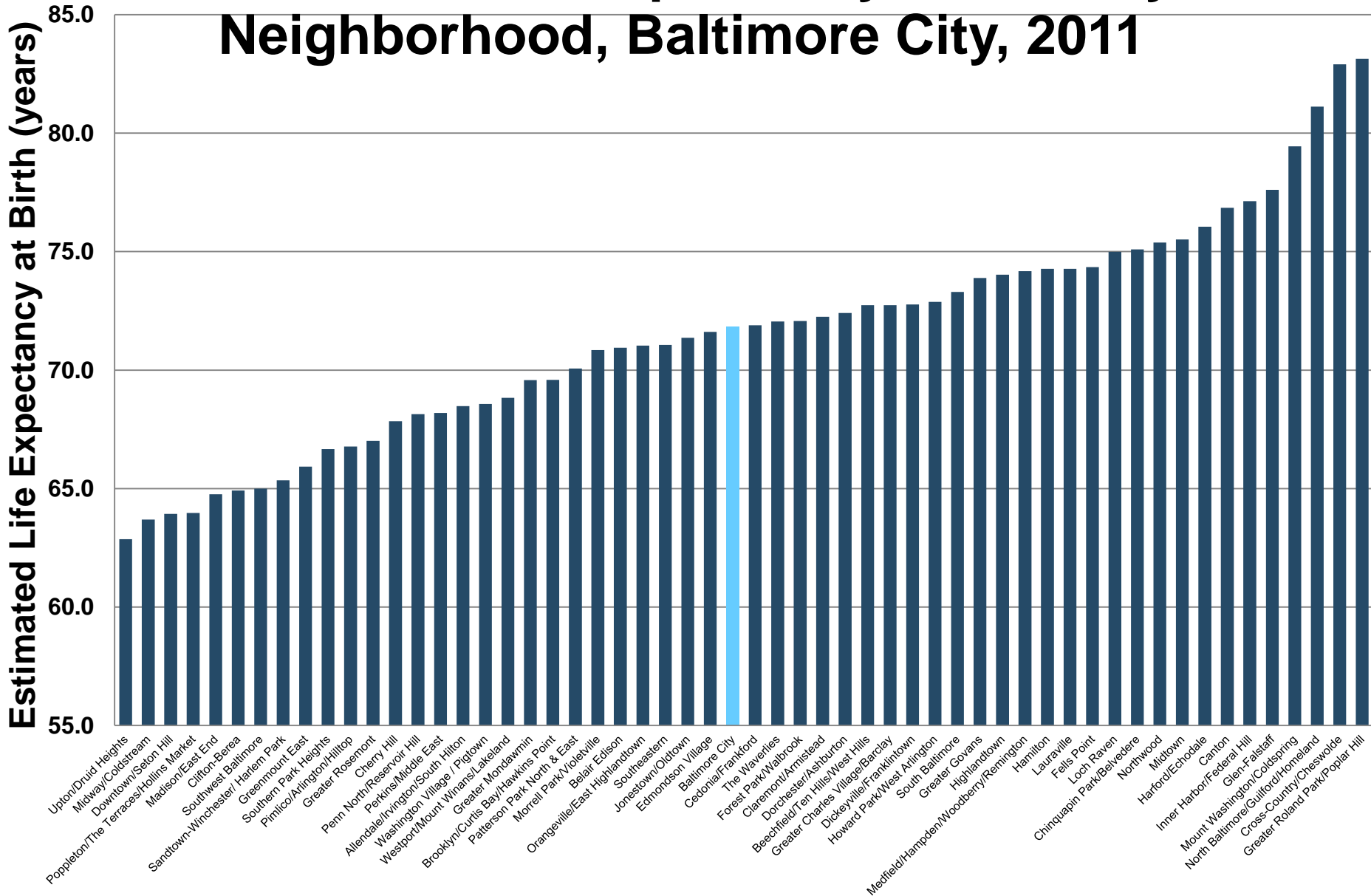


> Why is this Needed? Where are the Inequities?

- 13% of Baltimore City School children live within walking (i.e., a quarter mile) distance of a grocery store
- 54% live within walking distance of a liquor store

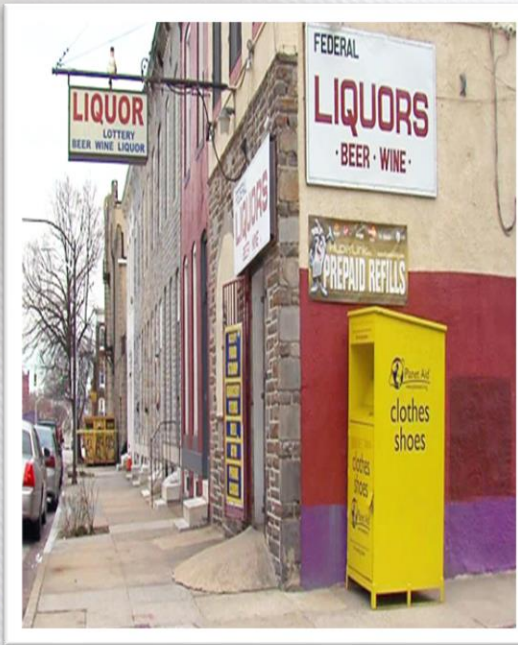


Estimated Life Expectancy at Birth by Neighborhood, Baltimore City, 2011



Baltimore: A Tale of Two Cities

Upton/Druid Heights



Avg. Life Expectancy

63 vs. 83

Median Income

\$13,400 vs. \$90,500

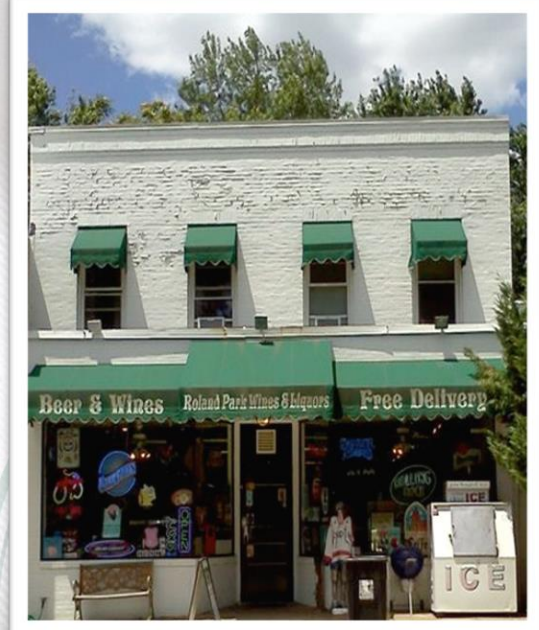
Unemployment Rate

17.5% vs. 3.4%

Living in Poverty

50% vs. 0%

Roland Park

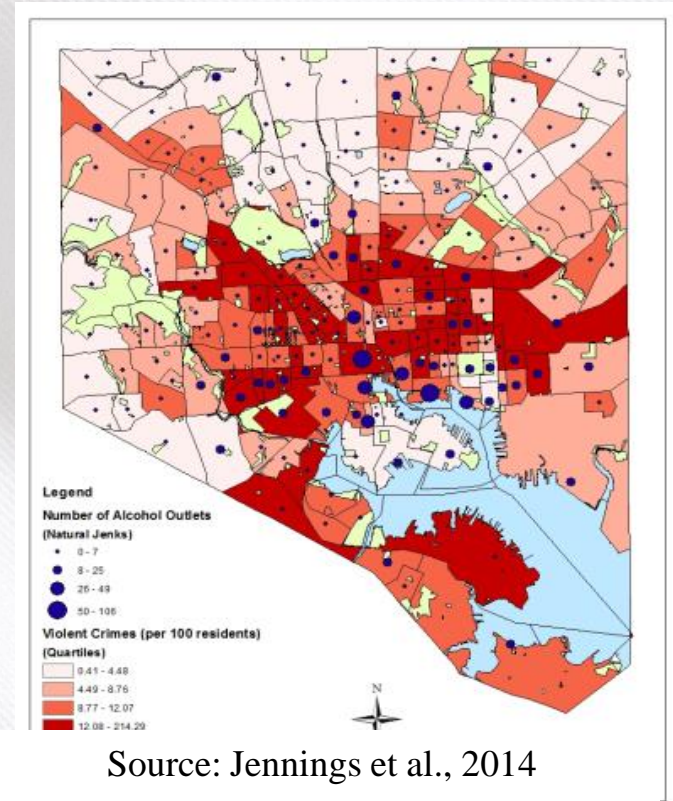


Source: Baltimore City Health Department, 2011



▶ The Facts: Alcohol Outlets & Baltimore City

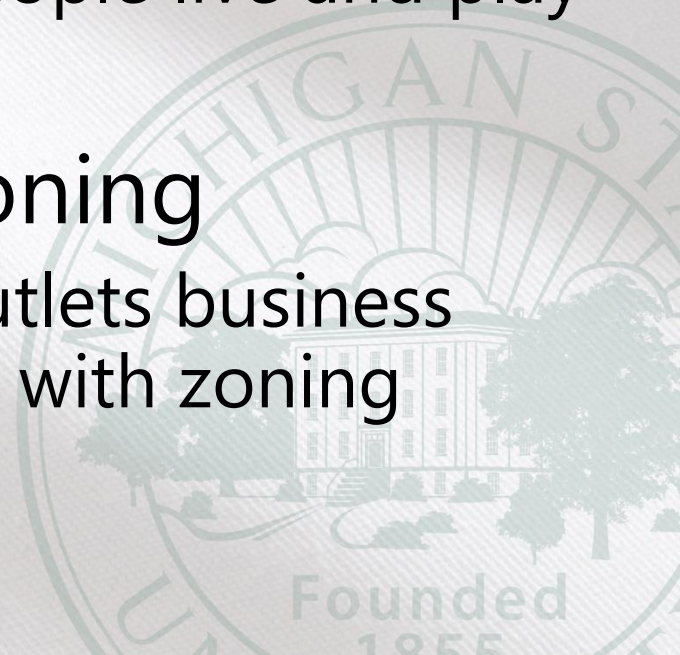
- Baltimore has double the number of alcohol outlets beyond the CDC recommendation (1 per 1,000 population)
- Outlets are over-concentrated in low-income, minority communities
- Each additional alcohol outlet in a Baltimore neighborhood is associated with a 2.2% increase in violent crime; 4.8% increase for off-premise outlets.



➤ Zoning as a Public Health Alcohol Regulatory

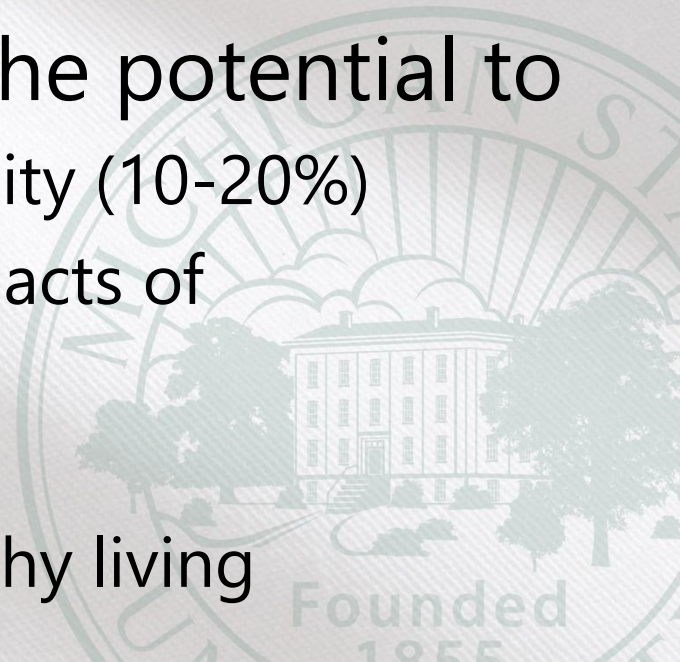
Tool

- Regulate density
 - Saturation/oversaturation
 - Concentration/clustering
- Regulate spacing and placement
 - Proximity to places where people live and play
 - Proximity to schools
- Regulate licensing via zoning
 - Ensure licenses match the outlets business model to ensure compliance with zoning



➤ Reducing Alcohol-Related Harms: An Example from Baltimore

- Zoning rewrite Health Impact Assessment
key finding: reducing alcohol outlet density is the single most impactful step to take for improving health through the rewrite
- The new zoning code has the potential to
 - Significantly reduce outlet density (10-20%)
 - Decrease violent crime (~1,000 acts of violence/year)
 - Increase neighborhood safety
 - Increase opportunities for healthy living



Reducing Alcohol-Related Harms: An Example from Baltimore

RESEARCH ARTICLES

January 2019
Volume 2

Achieving a Healthy Zoning Policy in Baltimore: Results of a Health Impact Assessment of the TransForm Baltimore Zoning Code Rewrite

In Brief

RACHEL L. JOHNSON THORNTON, MD, PhD^a
AMELIA GREINER, MS, PhD^{a,b,c}
CAROLINE M. FICHTENBERG, MS, PhD^d
BETH J. FEINGOLD, MPH, MESC, PhD^{e,f}
JONATHAN M. ELLEN, MD^a
JACKY M. JENNINGS, PhD, MPH^a

ABSTRACT

Objectives. The social determinants of health (SDH) include factors apart from genes and biology that affect population health. Zoning is an urban planning tool that influences neighborhood built environments. We describe the methods and results of a health impact assessment (HIA) of a rezoning effort in Baltimore, Maryland, called TransForm Baltimore. We highlight findings specific to physical activity, violent crime, and obesity.

Methods. We conducted a multistage HIA of TransForm Baltimore using HIA practice guidelines. Key informant interviews identified focus areas for the quantitative assessment. A literature review and a zoning code analysis evaluated potential impacts on neighborhood factors including physical activity, violent crime, and obesity. We estimated potential impacts in high- and low-poverty neighborhoods. The findings resulted in recommendations to improve the health-promoting potential of TransForm Baltimore.

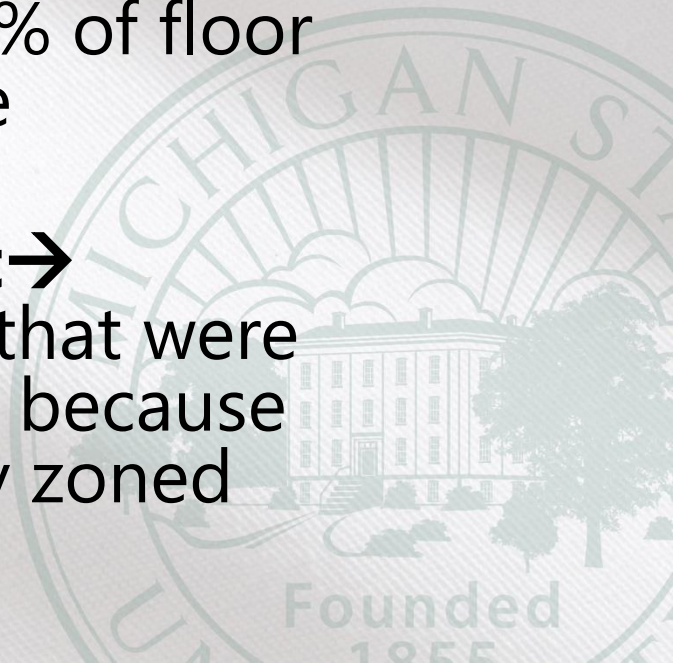
Results. Mixed-use and transit-oriented development were key goals of TransForm Baltimore. Health impact assessment identified health-related benefits of these goals.

ort
nk about
ndation
ts
oods?

> The 3 Components of Transform

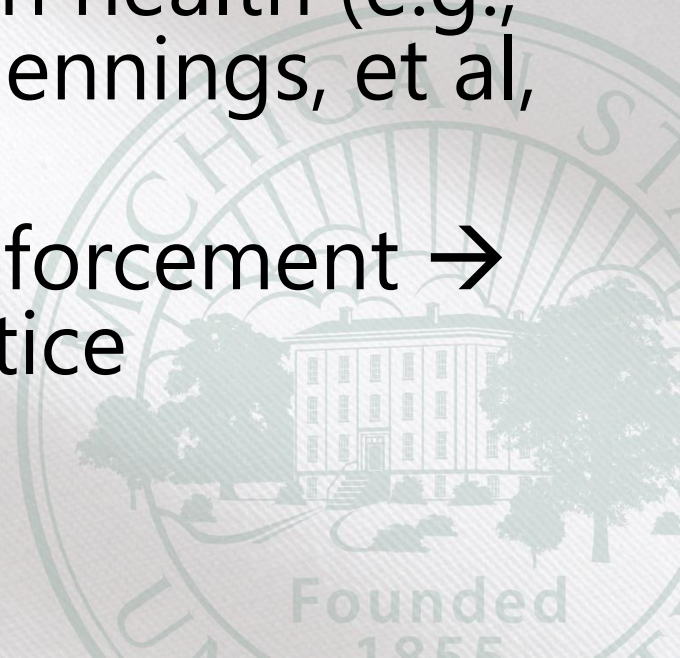
Baltimore

1. **Right spacing** → Space out stores, i.e., no new store can locate within 300 feet of an existing store
2. **Right licensing** → Definitions that govern bar/taverns with take away privileges actually be honored. Specifically, 50% of sales are from on premise consumption (e.g., food and alcohol) and 50% of floor space is devoted to on premise consumption (35-84 of ~420)
3. **Right sizing, right placement** → Amortization of ~100 licenses that were made non-conforming in 1971 because they are located in residentially zoned communities



➤ Why Apply a Social Determinants Lens?

- Social causation versus social drift → what came first the chicken or the egg???
- Alcohol outlets are often inequitably distributed, AND.....
- ...the inequitable distribution of outlets are associated with disparities in health (e.g., Laveist and Wallace, 2000; Jennings, et al, 2014; Franklin, 2010)
- Strengthens the case for enforcement → public health and social justice





BALTIMORE GOOD NEIGHBORS COALITION

We're a network of community members and neighborhood associations who have come together to address public health and safety concerns that occur throughout Baltimore City.


[JOIN THE CONVERSATION](#)

[GET INVOLVED](#)

Community Partnerships: The Baltimore Good Neighbors Coalition

Alcohol Outlet Density: An Evidence-Based Strategy



- 

Reduced rates of excessive alcohol consumption (including binge and underage drinking)
- 

Fewer public nuisance activities and reduced police costs
- 

Lower rates of violence

Considerations for Local Regulation of Alcohol Outlet Density as a Public Health Strategy

- 

Gives authority to those who know local conditions best
- 

Encourages local residents to engage in decision-making processes
- 

Supports community norms that discourage excessive drinking
- 

Empowers local law enforcement agencies to address problems associated with excessive alcohol use



Community Partnerships: The Baltimore Good Neighbors Coalition

Alcohol Outlet Density: An Evidence-Based Strategy

States permit local governments to regulate alcohol outlet density

Local governments use licensing and/or zoning authority to regulate alcohol outlet density

Regulating alcohol outlet density improves health & saves lives



Reduced rates of excessive alcohol consumption (including binge and underage drinking)



Fewer public nuisance activities and reduced police costs



Lower rates of violence

Considerations for Local Regulation of Alcohol Outlet Density as a Public Health Strategy



Gives authority to those who know local conditions best



Encourages local residents to engage in decision-making processes



Supports community norms that discourage excessive drinking



Empowers local law enforcement agencies to address problems associated with excessive alcohol use



Our Current Focus

Curbing the negative effects of alcohol outlet density on our city's most vulnerable citizens

The impetus for coming together has been the over-concentration of alcohol outlets in Baltimore City, and shared experience of the negative effects these outlets can have on neighborhoods, families and young people in our city.

Best practice from elsewhere in the country suggests that pursuing reform both through licensing and local, zoning provisions creates more enforceable oversight of alcohol outlets to effectively reduce crime, violence and underage drinking in Baltimore City.

Nearly half (47%) of all homicides are caused by excessive drinking, according to the Centers for Disease Control and Prevention. This translates to 161 of the 343 homicides in 2017 were associated with excessive alcohol consumption.

LEARN MORE

Opportunities

There are several ways to address nuisance liquor outlets in Baltimore, but the devil is in the details. To achieve your desired outcome, you must know who to call, what information to gather and when and where to make your case.

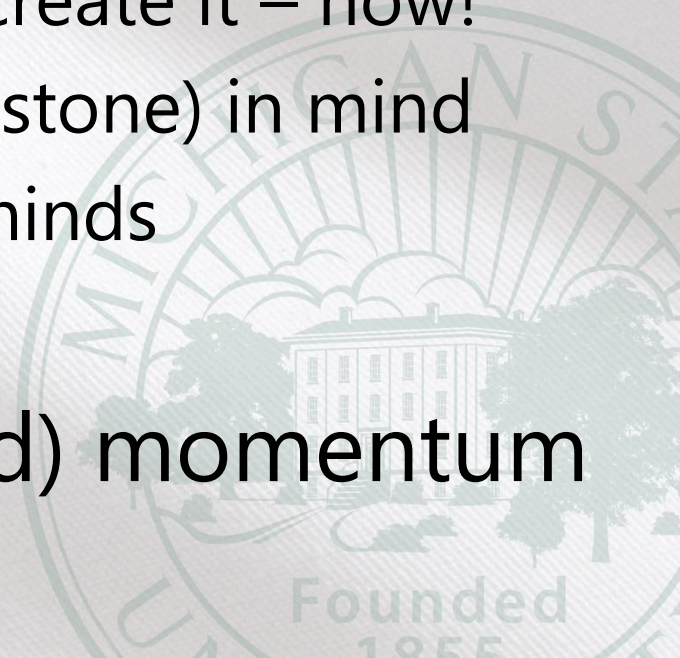
BGNC has conducted informative interviews/meetings with city and state leaders, law enforcement and legal experts to help you navigate the process. To this end, we have compiled a list of resources and guidance on both the city and state opportunities available to residents to address problem liquor outlets in their neighborhoods.

Whether looking to file a complaint against a liquor outlet for violating provisions under the newly revised zoning code (TransForm Baltimore) or launching a citizen protest before the Board of Liquor License Commissioners, we hope you find our list of resources helpful. See our latest fact sheet on [Alcohol & Violence in Baltimore City](#).

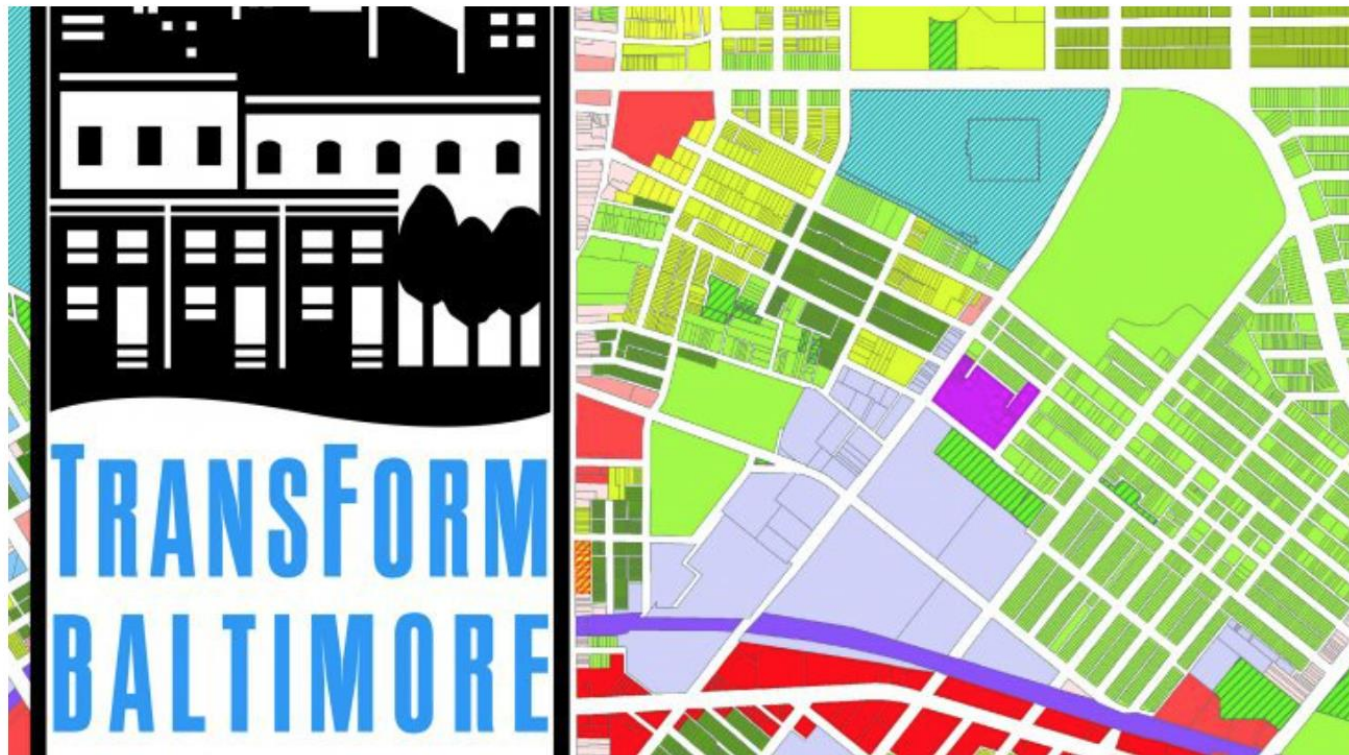
 **TAKE ACTION**

3 Keys to Success in Community-Academic Partnerships

1. Community voice is critical
 - Do a reality check (e.g., CEnR continuum)
2. Shared goals and vision
 - If it doesn't already exist, create it – now!
 - Start with the end (or milestone) in mind
 - Ongoing meeting of the minds
3. Keep (ideally forward) momentum



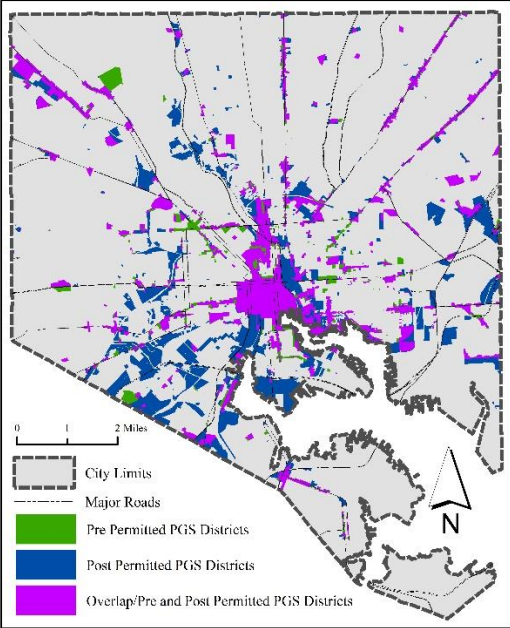
Transform Baltimore



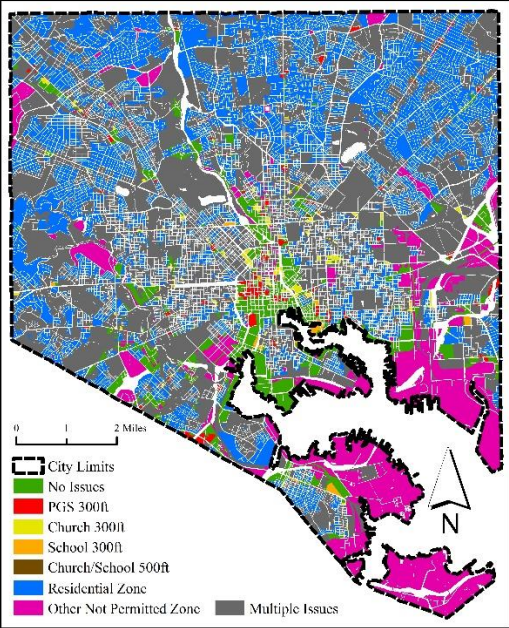
Baltimore's New Zoning Code

The Department of Planning would like to thank the Mayor and City Council for completing their review of City Council Bill #12-0152. On December 5, 2016, the City Council passed and the Mayor signed into law a new zoning code for the City of Baltimore. This code will replace the 1971 Zoning Code. It is intended to simplify and streamline development review, provide an easy to understand set of rules, while creating a more modern code that fosters growth and development while maintaining neighborhood character.

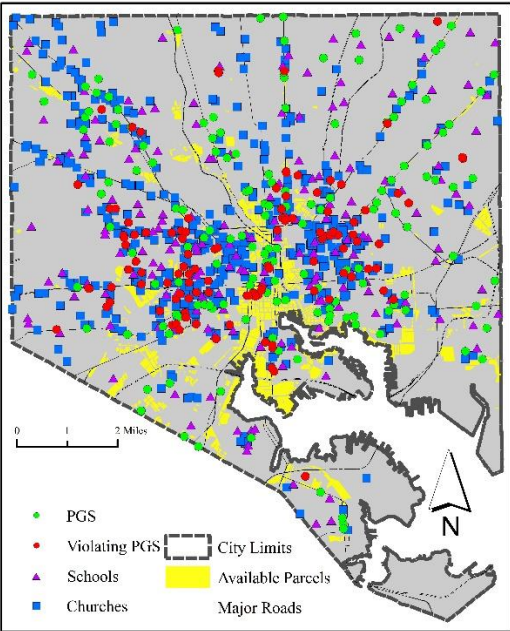
Where will these stores go?



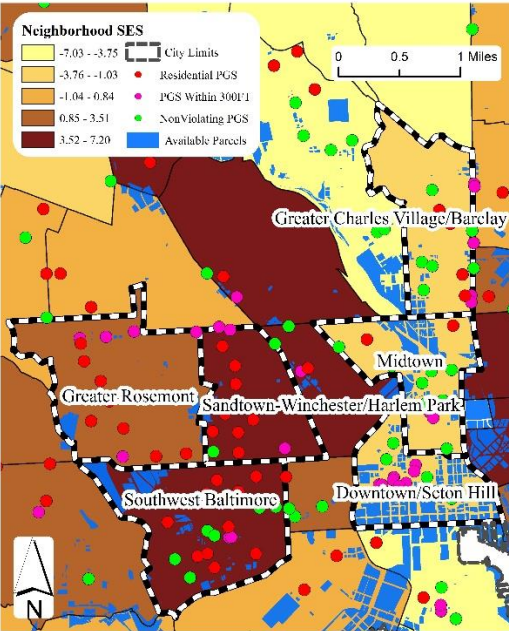
A



B



C



D



➤ Future Directions

- Implementation *and enforcement!!!!*
- Complimentary legislation to address problem retailers
- Public health surveillance of relocation
- National studies of the implementation and impact of structural interventions, policies and enforcement



➤ Future Directions Using a Social Determinants Framework

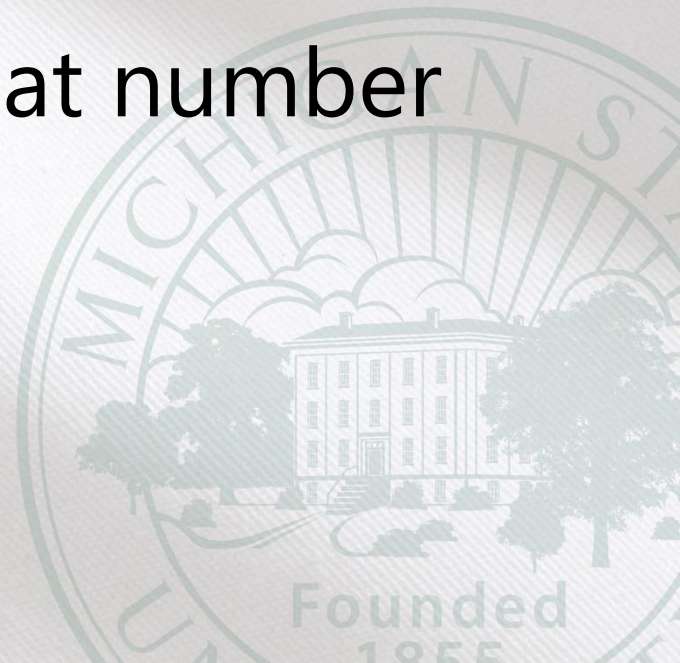
- Assessment methods for structural factors (e.g., laws, policies, built and social environment)
- Empirical support for structural interventions across a range of behavioral health problems
- Enforcement of laws → Gums without teeth
- Evaluation of the public health impact of structural interventions
- Empirical models on the benefit/impact of community-academic partnerships



➤ Future Directions for Research

Increase in Dissemination and Implementation Research

- More than 12,000 active NIH projects with 'trial'
- Less than a quarter of that number with 'implementation'



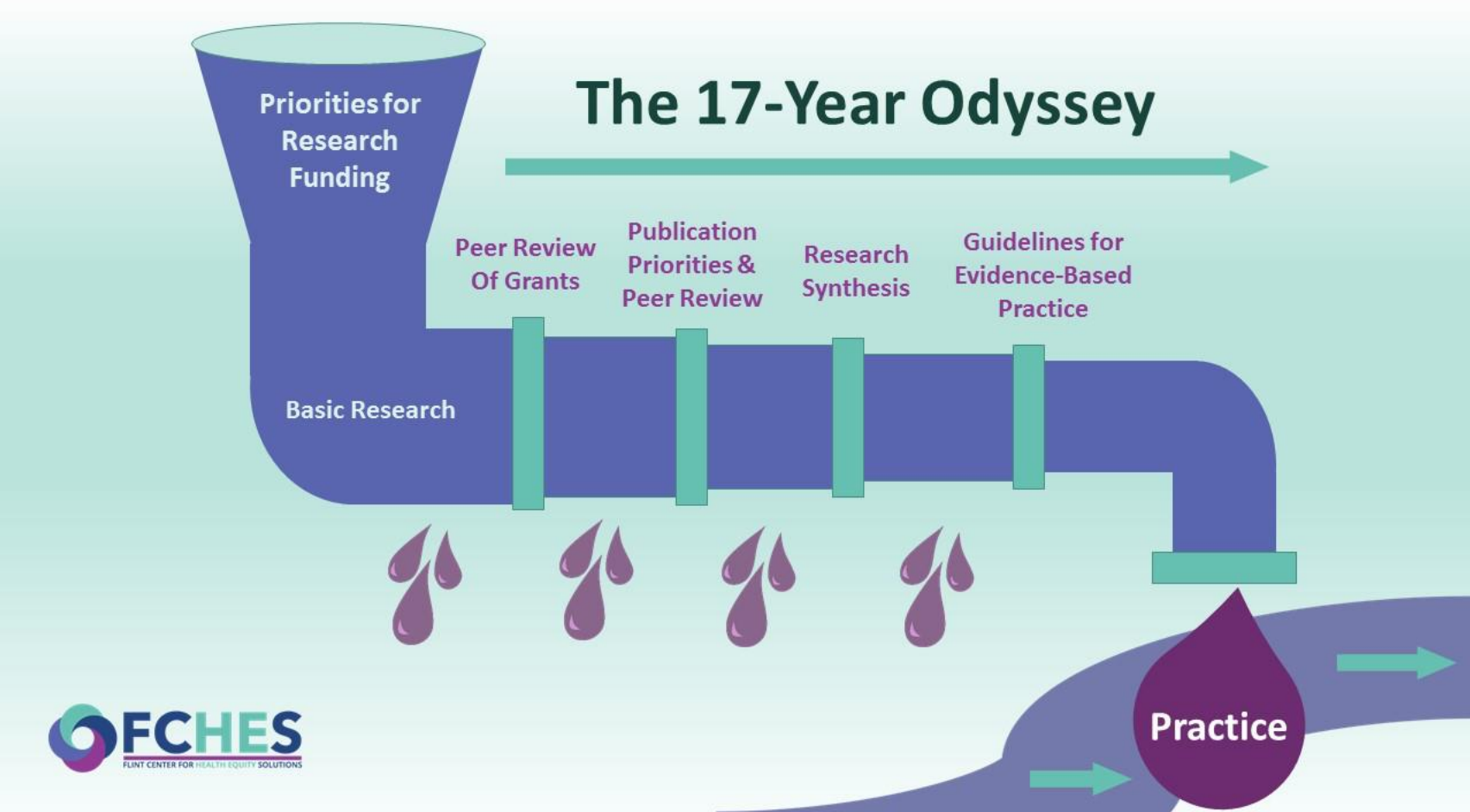
Definitions

- *Dissemination research* is the scientific study of targeted distribution of information and intervention materials to a specific public health or clinical practice audience. The intent is to understand how best to spread and sustain knowledge and the associated evidence-based interventions.
 - How, when, by whom, and under what circumstances evidence spreads throughout the agencies, organizations, front line workers and consumers of public health and clinical services

Definitions

- *Implementation research* is the scientific study of methods to promote the systematic uptake of evidence-based practices into routine clinical care settings with the overarching aim of improving the quality and effectiveness of health services.
 - Seeks to understand the behavior of healthcare professionals and support staff, organizations, consumers and family members, and policymakers in context as key influences on the adoption, implementation and sustainability of evidence-based practices and guidelines

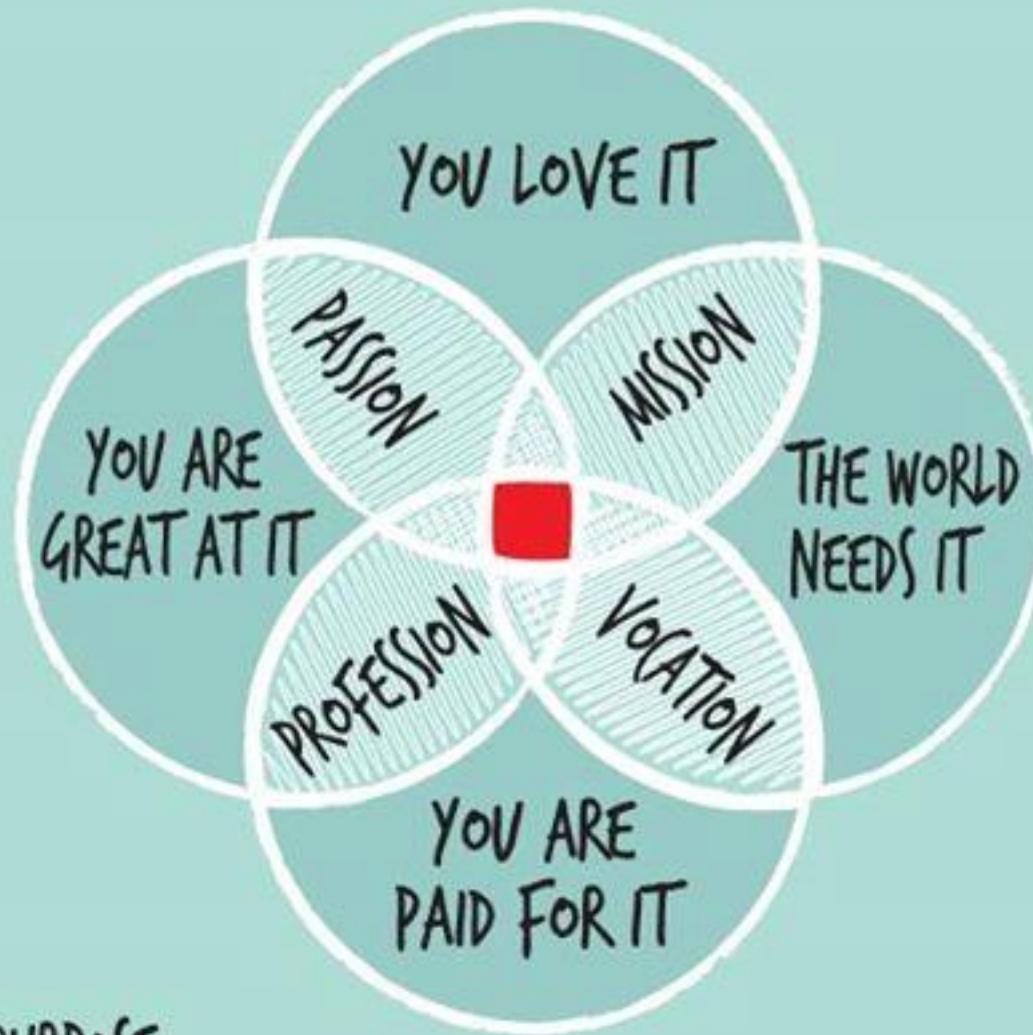
Research-to-Practice Gap: The Leaky Pipeline



➤ Final Words of Wisdom

- SDoH Framework is *not* a one size fits all model
 - E.g., Liquor stores in Baltimore, MD versus Flint, MI
- Intuition is not always right, that's why evaluation and research is needed (and researchers)
- Community engagement in the process can optimize outcomes





 -PURPOSE

> Questions/Contact

Debra Furr-Holden

Debra.Furr-Holden@hc.msu.edu



Division of Public Health
College of Human Medicine
MICHIGAN STATE UNIVERSITY

