



ZONING FOR
A HEALTHY

BALTIMORE

A HEALTH IMPACT ASSESSMENT OF THE TRANSFORM
BALTIMORE COMPREHENSIVE ZONING CODE REWRITE

Center for Child and Community Health Research | Johns Hopkins University | Baltimore City 2009-2010

In collaboration with the Baltimore City Health Department

TransForm Baltimore



- 2007 – Baltimore began effort to rewrite entire zoning code
 - First rewrite since 1971
 - Goals: modernize and simplify the code
- Major opportunity for public health

Why an HIA made sense (screening)

Value and need for HIA

- Health not a concern at the outset
- Health considerations might lead to different decisions

Opportunity for HIA to have an impact

- Process open to public comment
- Long time frame: there is time to inform and influence the process
- Already established partnership with Planning Dept

Feasibility of HIA

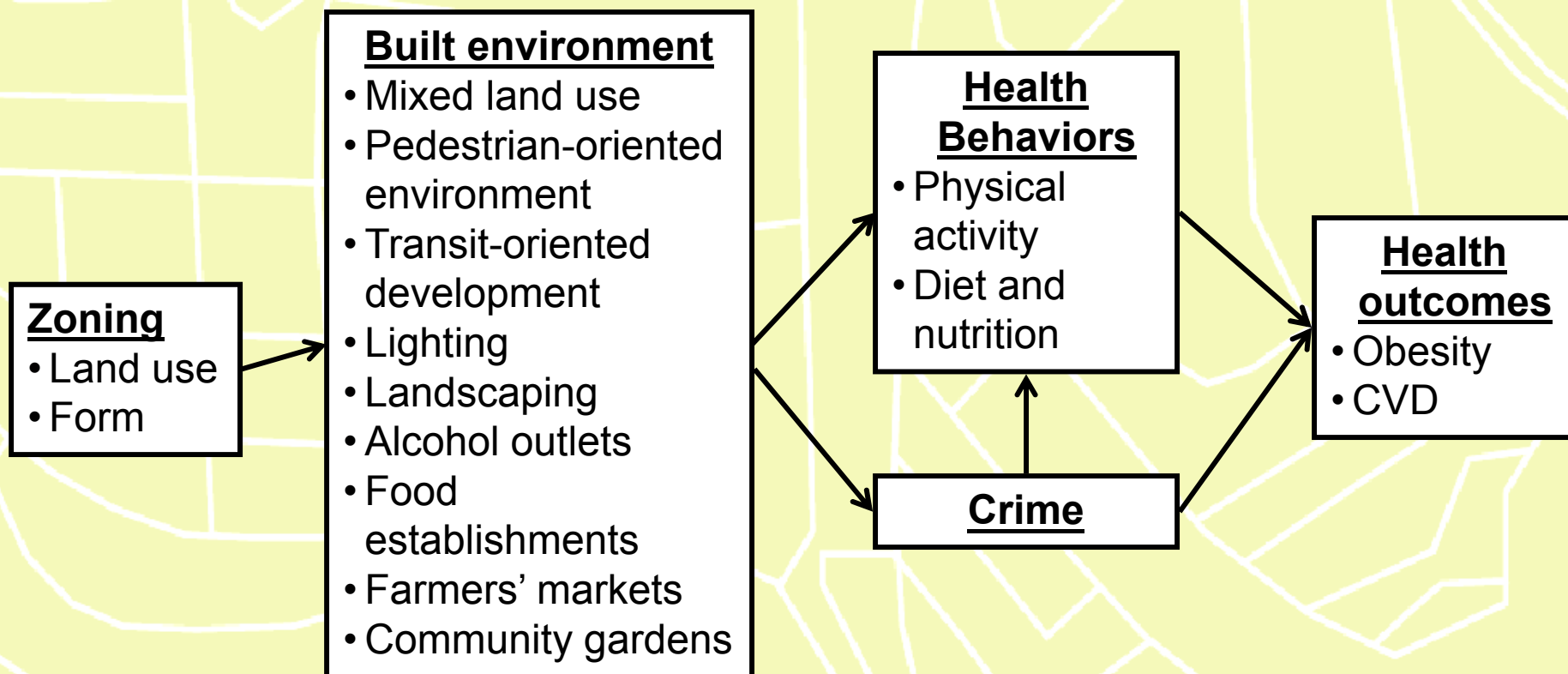
- Grant opportunity (RWJF Active Living Research Rapid Response)
- Academic partners

Baltimore Zoning HIA Goals

Maximize health promotion potential of new code by:

- Identifying ways the rewrite might impact health in Baltimore, with focus on obesity and equity
- Providing recommendations about how to maximize the positive health impacts and minimize any negative health impacts
- Focused only on the base code, not maps

HIA conceptual model



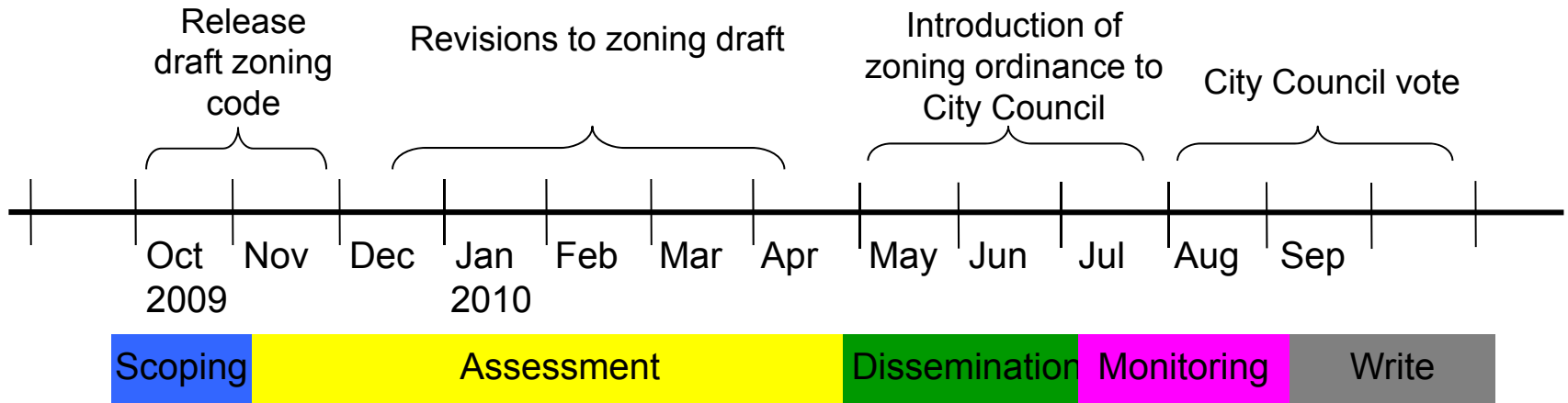
Equity: are lower and higher income populations similarly affected?

HIA Methods

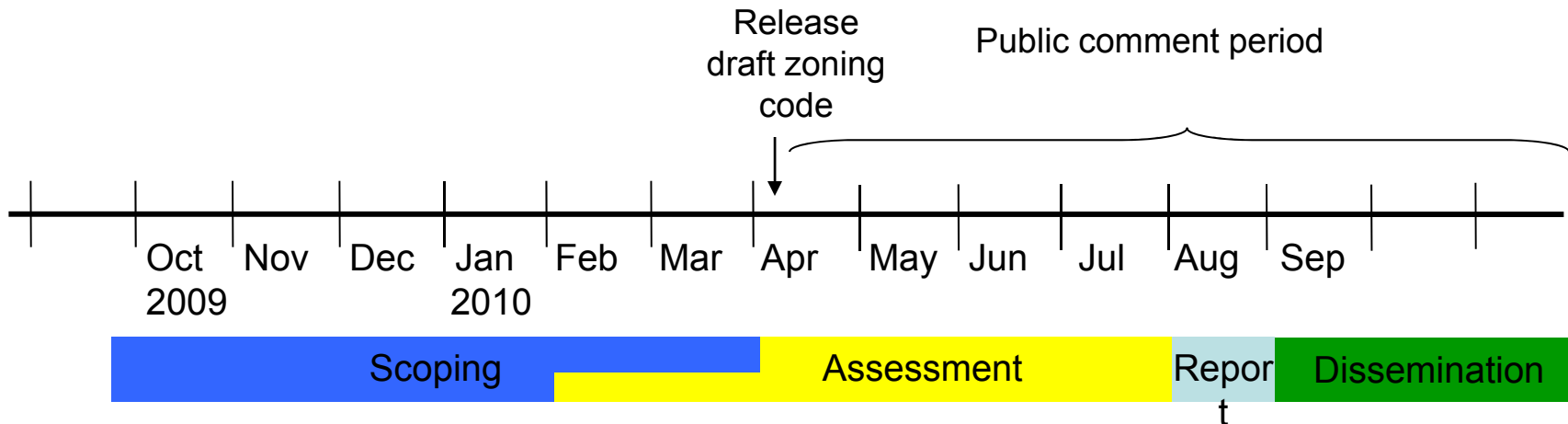
- Interviewed key informants (elected officials, planning dept staff, developers)
- Reviewed the literature on zoning, built environment and obesity, CVD, physical activity, healthy eating, and violent crime.
- Assessed baseline health conditions
- Analyzed the current and draft codes
- Estimated built environment impacts
- Developed recommendations based on HIA results and consultations with zoning and public health experts

Initial vs. Actual Timeline

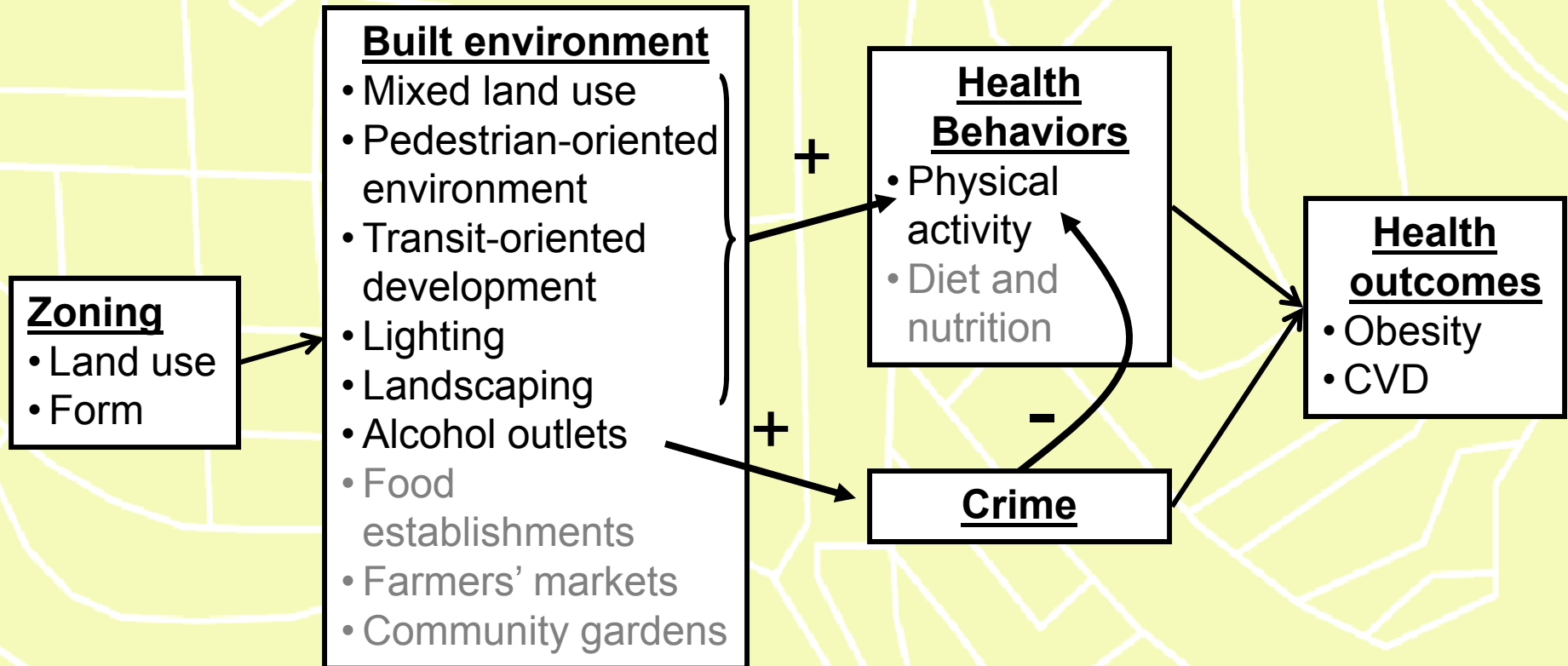
Initial Timeline



Actual Timeline

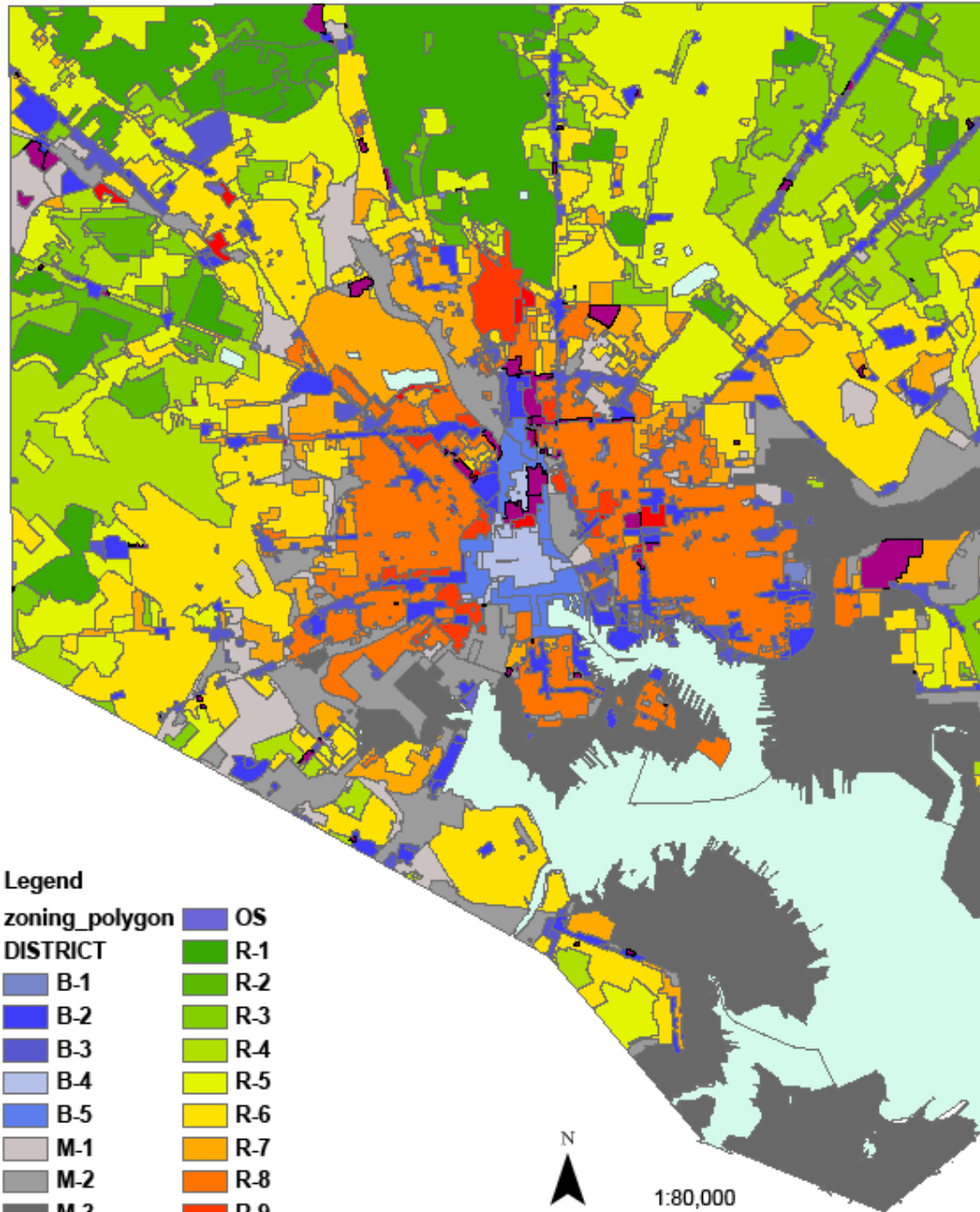


Literature review results



Equity: are lower and higher income populations similarly affected?

Zoning Districts

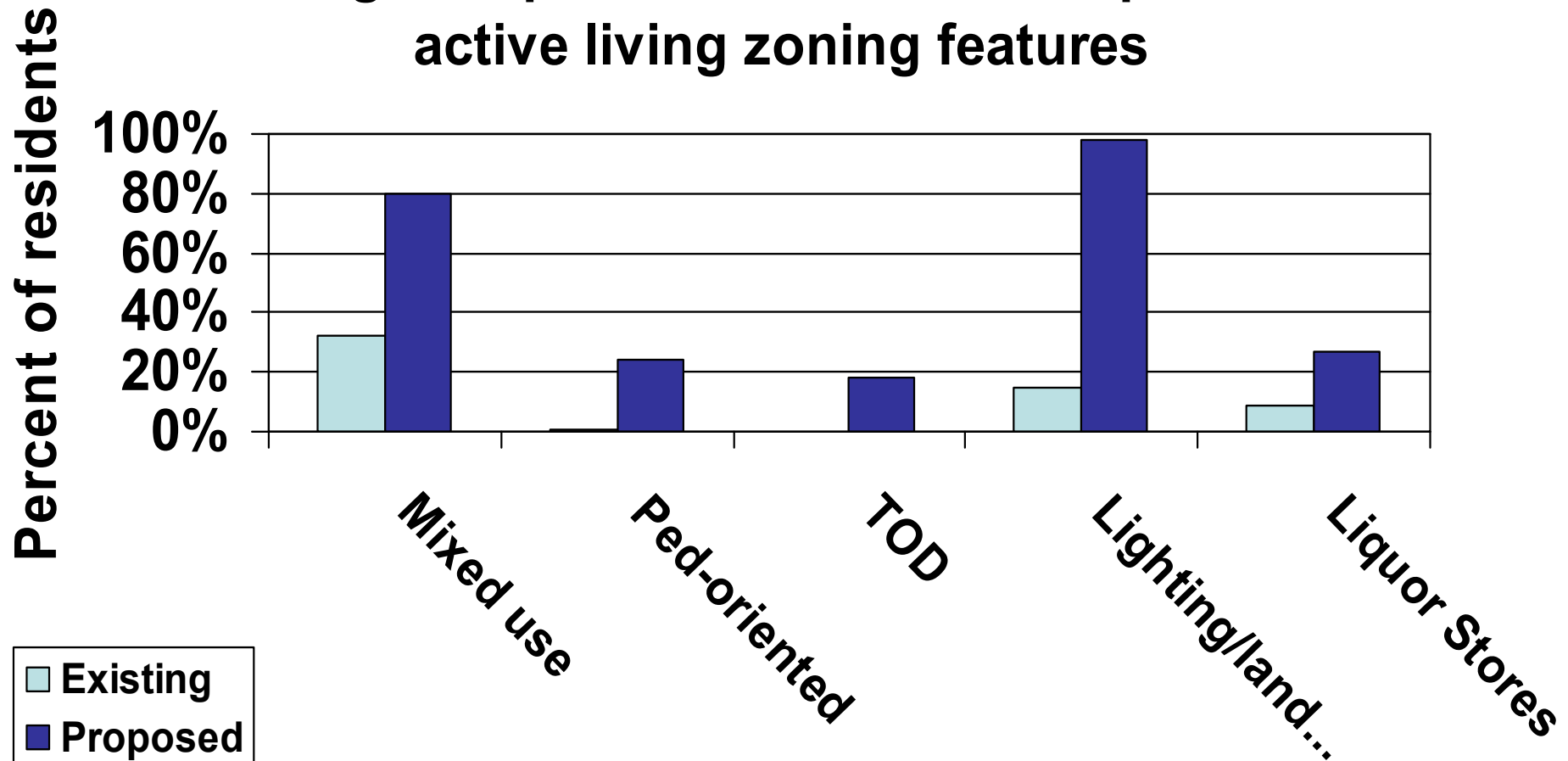


Code analysis

Zoning Feature	Districts that allow this use by right or conditionally*	
	Existing code	Draft new code
Mixed use - Total	R8-R10, B1-B5	R5-R10, B1-B5, BI, I1 BSC, TOD1, TOD2, I-MU
Transit-oriented development	None	TOD1, TOD2
Pedestrian environment (non residential)	B1	B1-B3, B5, TOD1, TOD2
Lighting/ Landscaping	one or both in B1-B5, OR, M1 & M2	R1-R10, OR, B1-B5, BI, OIP, I-MU, I1, BSC, TOD1, and TOD 2 (one or both mentioned)
Off-premises alcohol sales (liquor stores)	B2-B5	B2-B5, BI, OIP, I-MU, I1, BSC, TOD 1 and TOD2

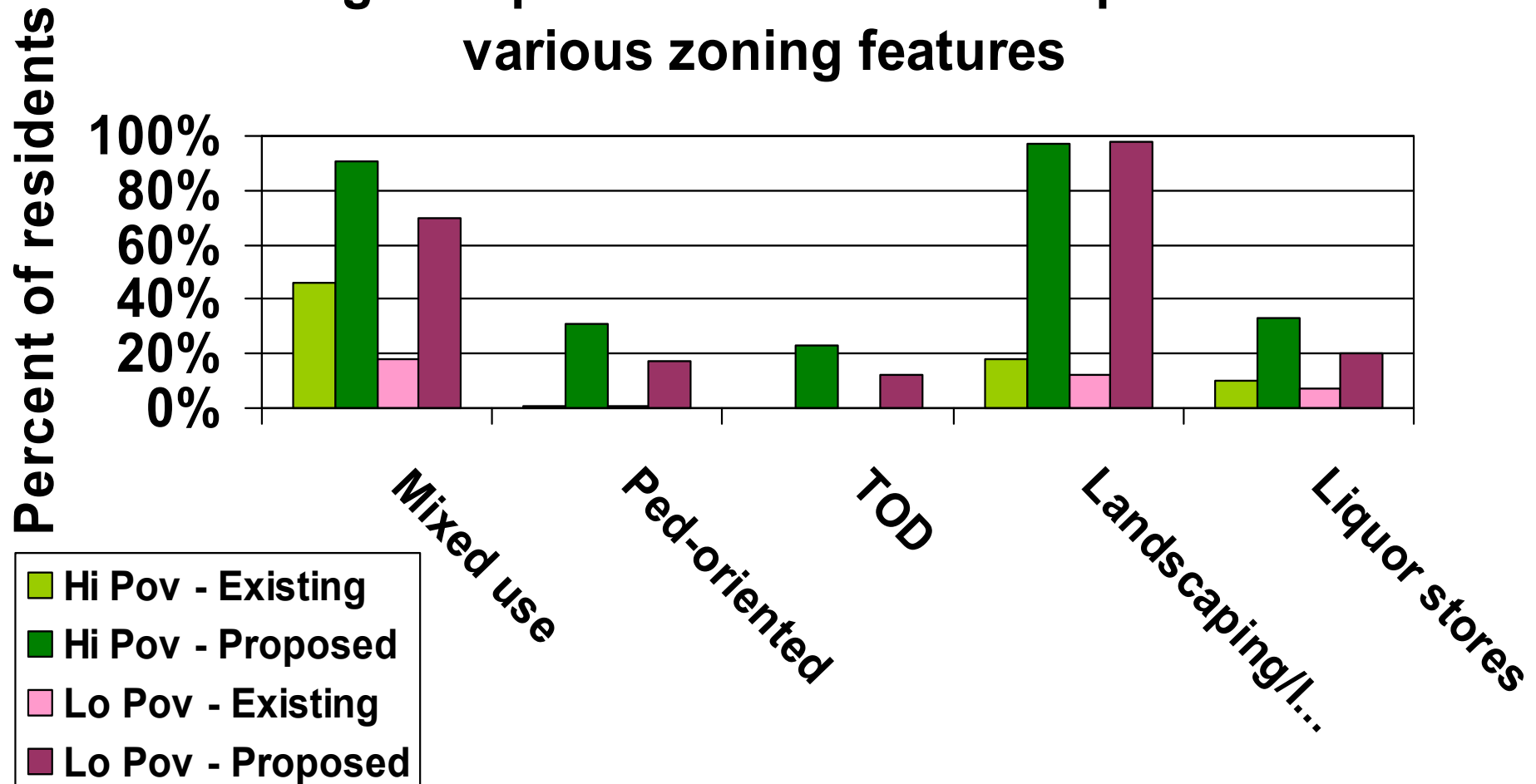
Potential built environment exposure impact

Changes in percent of residents exposed to active living zoning features



Distribution of potential built environment exposure impacts

Changes in percent of residents exposed to various zoning features



Health promoting elements of the draft code

- Increases potential for walkable communities by:
 - Expanding mixed use areas
 - Creating pedestrian corridors and transit oriented development zones
 - Including pedestrian-oriented design standards (first floor transparency, reduced parking requirements)

Potential negative health impacts and missed opportunities

- Increased exposure to alcohol outlets, especially in high poverty neighborhoods
- Room to do more for crime prevention through landscaping, lighting, and form

Major Recommendations

- Conditional and/or dispersal standards for new alcohol outlets establishments
- Include Crime Prevention Through Environmental Design (CPTED) principles in all design elements.

Where we are now

- Disseminated report
- Working with Planning Dept and city solicitor on alcohol outlet issues
- Planning for monitoring phase

Preliminary impact

- Two of three major recommendations included in list of top 10 issues the Planning Dept is considering
- Alcohol issue is seriously being reviewed by Planning Dept and Zoning Advisory Committee
- Other minor recommendations being incorporated

Challenges/Lessons learned

- Very broad topic, long causal chains
- Evidence not consistent, not easily applicable to Baltimore
- Need for more research
 - Small area analyses
 - Zoning → built environment and zoning → health
 - Stratified analyses (by income, by race)
- Timing, didn't get to analyze maps
- Importance of relationships
- Importance of post-report dissemination and follow-up

Baltimore zoning HIA Team



Rachel Johnson
Thornton (Proj. Dir.)
Amelia Greiner (RA)
Beth Feingold (RA)
Jacky Jennings (Co-I)
Madeleine Shea (Co-I)
Joe Schilling (Cons)
R. Breck Taylor (Cons)
David Bishai (Cons)
Jonathan Ellen (PI)

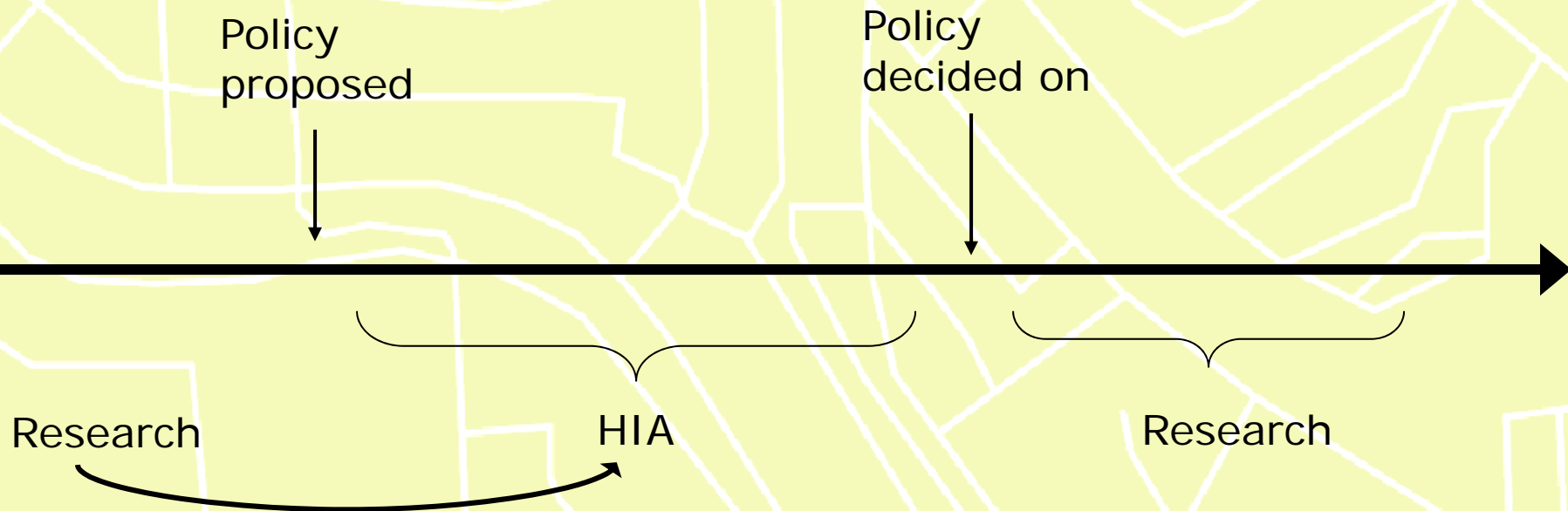
This work was funded by a grant from the Robert Wood Johnson Foundation Active Living Research

Questions?

- Caroline Fichtenberg: cfichten@jhsph.edu
- Report available at: www.hopkinsbayview.org/pediatrics/zoning

HIA ≠ Research

- Uses existing research to predict the likely health impacts of proposed policies/projects/programs prior to decisions being made



Baltimore context

- 20% poverty, 8th poorest out of 54 largest US cities in 2000
- 6 year life expectancy gap with the US
- High rates of HIV/AIDS, homicide, substance use, heart disease, cancer
- 20 year life expectancy gap between city neighborhoods (63 yrs – 83 yrs)



16,000 vacant buildings

		DISTRICTS															
ISSUE	CURRENT CODE: USE	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	OR	B1	B2	B3	B4	B5
FOOD	Carry out food shop													P	P	P	P
	Drug Store								A	A	A	A	P	P	P	P	P
	Retail food shops								A	A	A	A					
	Newsstand								A	A	A	A	P	P	P	P	P
	Candy Stores												P	P	P	P	P
	Food stores/grocery/delicatessen												P	P	P	P	P
	Bakeries														P		
	Meat market														P		
	Vending machines														P		
	Restaurant												C	P	P	P	P
	Restaurant, drive in													C?	C		C
	Gas station													C	C		C
	ALCOHOL	Restaurant											C	P	P	P	P
Tavern													P	P	P	P	
Cocktail lounge									A	A	A	A					
Liquor Stores													P	P	P	P	
OTHER MIXED USE	Health institution: care of children or elderly	C	C	C	C	C	C	C	C	C	C	C					
	Hospital	C	C	C	C	C	C	C	P	P	P	C		C	C	C	C
	Clinics										A			P	P	P	P
	Physicians offices								C	C	C	C					

Literature review findings

- ↑ mixed land use and ↑ transit-oriented development → ↑ walking and ↓ obesity
- ↑ availability of healthy food options → ↑ healthy eating and ↓ obesity
- Mixed evidence for impact of fast food/carry out
- ↑ pedestrian-oriented environments → with ↑ walking, ↓ obesity and ↓ crime
- ↑ alcohol outlets → ↑ violent crime

Potential built environment impact

- Compared percent of city population living in districts with zoning features found to be associated with obesity and crime, under existing and proposed codes
 - Mixed use (residential and commercial)
 - Pedestrian-oriented features
 - Transit-oriented development
 - Lighting/landscaping guidelines
 - Off-premise alcohol sales establishments
- Assumed uniform distribution of population within a CBG
- Zoning code only (not nec. = to actual use)

Dissemination

- Pre-release presentation to Planning Director and recode staff
- Report released early September
- Presentation to Zoning Advisory Committee
- Meetings with various stakeholders
- Met with city solicitor on alcohol outlet issue; developed specific language suggestions

Still to do: monitor impact

Goal: Assess impact of the HIA on decision-making process

Process: Interviews with decision-makers and other stakeholders:

- Are they aware of the HIA?
- Have they read it?
- Do they know any of the results presented?
- Did they use it?
- What impact do they think it had on the discussions and the outcomes?
- How could it have been improved?

Timing: Once revised draft is released