



# Housing and Health: What are the Future Directions?

**Megan Sandel MD MPH**

**October 16, 2023**



# Roadmap

- Understanding Social Drivers of Health
- 4 Dimensions of Housing and Health
- Healthcare 101
- Examples of Partnerships
- Future Directions

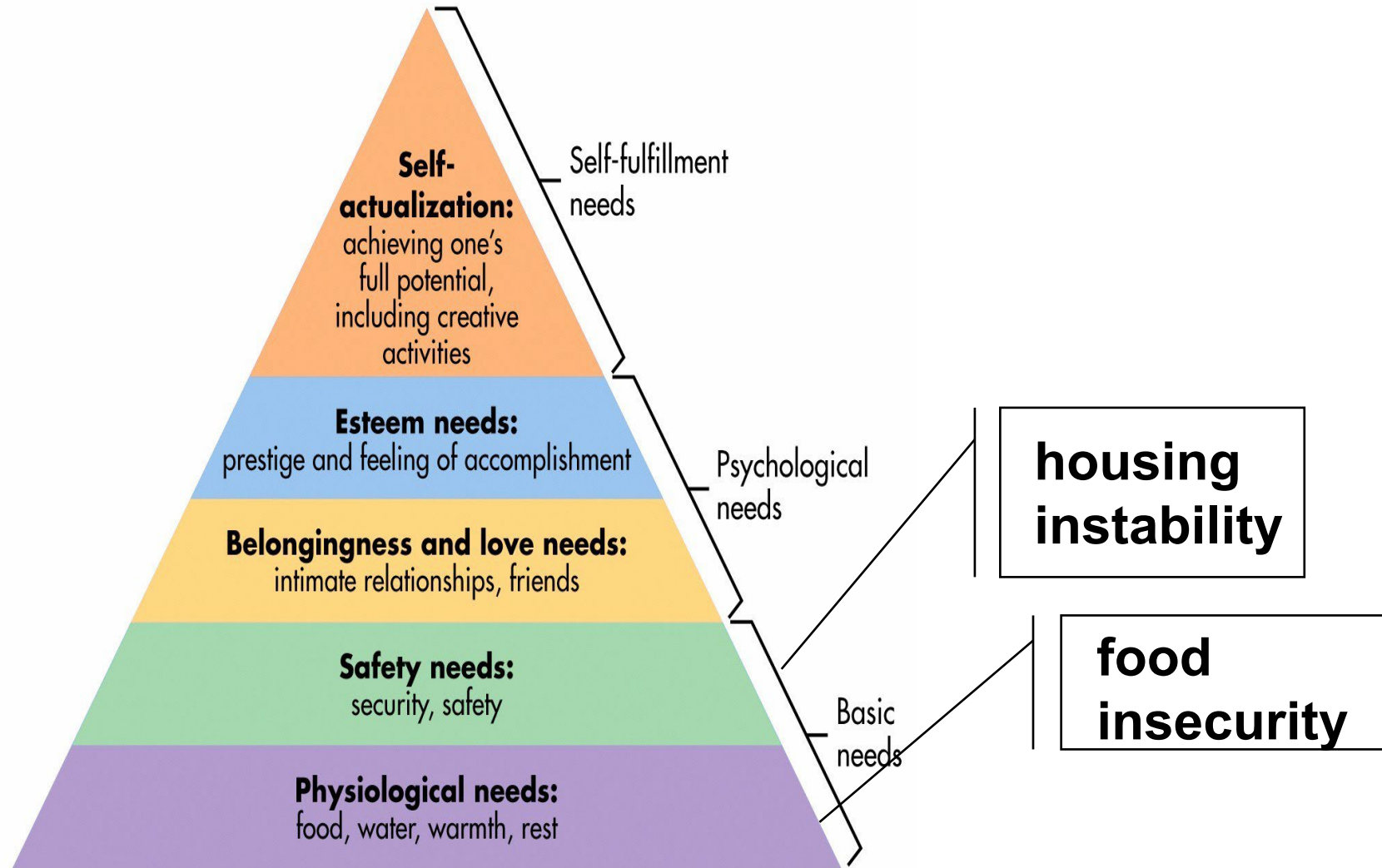


# Social Factors Drive Health Positively and Adversely



**SDOH** are the structural factors and conditions in which people are born, grow, live, work and age.

# Why Housing is the Foundation of Positive Health



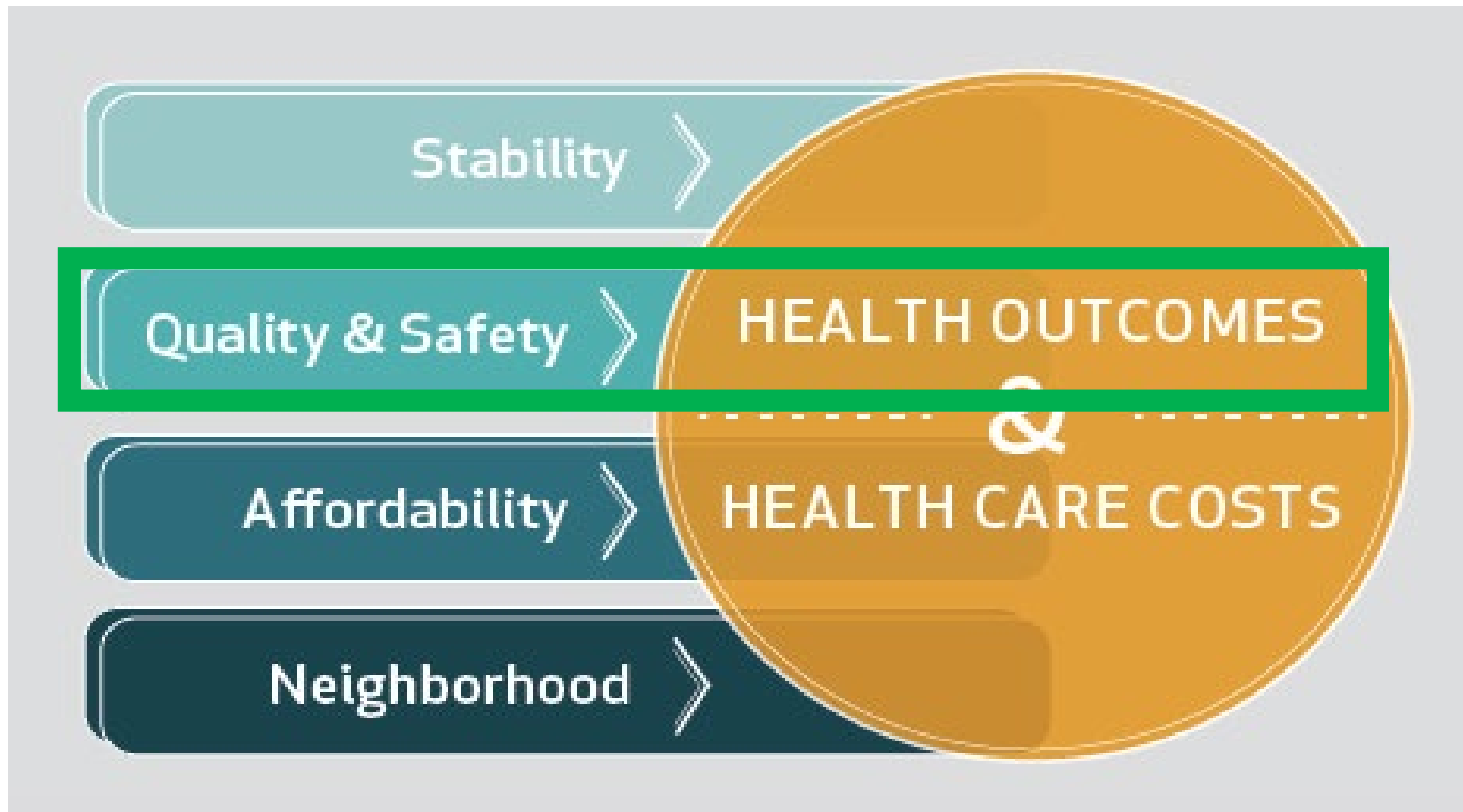
# Dimensions of Housing and Health Impact



Taylor, L. *Health Affairs*, 2018



# Dimensions of Housing and Health Impact



Taylor, L. *Health Affairs*, 2018



# Home Quality and Mental Health

## MacArthur Foundation HOW HOUSING MATTERS

macfound.org/HousingMatters

POLICY RESEARCH BRIEF

### Poor Quality Housing Is Tied to Children's Emotional and Behavioral Problems

*Parents' stress from living in poor quality and unstable homes takes a toll on children's well-being*

by REBEKAH LEVINE COLEY, TAMA LEVENTHAL, ALICIA DOYLE LYNCH, AND MELISSA KULL

SEPTEMBER 2013

A family's home is their haven, but for families living with leaking roofs and roaches, for those who have to choose between paying for rent or for food, or for families who repeatedly move in search of higher quality or more affordable housing, one's place of refuge may not be very homey.

This brief examines how housing characteristics matter to children and families' well-being.<sup>1</sup> Among the various possibilities tested, poor housing quality was the most consistent and strongest predictor of emotional and behavioral problems in low-income children and youth. It also had a sizable association with school performance among older youth. Housing affected children because the stress of living in unhealthy and unsafe conditions affected parenting.

#### Advantages of the Current Study

Past research has identified several aspects of housing that are thought to be associated with children's development.<sup>2</sup> Researchers, for example, have found that substandard housing—exposed wiring, peeling lead paint, rodent infestation, and the like—may contribute to physiological stress in children, inhibiting their emotional stability and learning. Similarly, residential instability may interrupt peer

#### KEY FINDINGS

- Poor housing quality is the most consistent and strongest predictor of emotional and behavioral problems in low-income children and youth, even after controlling for the five housing characteristics studied (stability, affordability, ownership, and housing subsidy).
- Residential instability also is important to children's well-being.
- Even though much of the sample struggled with high housing costs, unaffordability has little association with children's well-being.
- Much of the association between poor quality housing and children's well-being operates through parental stress and parenting behaviors.

and school networks, impeding academic success. If housing costs are unaffordable, families are forced to limit other valuable investments, such as curricular activities, and even other basic necessities such as food and medical care, all of which are important to healthy development. On the other hand, owning one's home or receiving government subsidies may increase family stability and social connections, helping to improve children's school success.

- Poor housing quality strongest predictor of emotional and behavioral problems in low-income children
- Much of association between poor housing quality and children's wellbeing operates through parental stress, parenting behaviors and mental health

# Homelessness matters across the life course

**Homelessness During Pregnancy: A Unique, Time-Dependent Risk Factor of Birth Outcomes**

MATERNAL  
AND  
CHILD  
HEALTH  
JOURNAL

**Homelessness During Infancy:  
Associations With Infant  
and Maternal Health  
and Hardship Outcomes**

Cityscape

Timing and Duration of Pre- and Postnatal Homelessness and the Health of Young Children

PEDIATRICS®

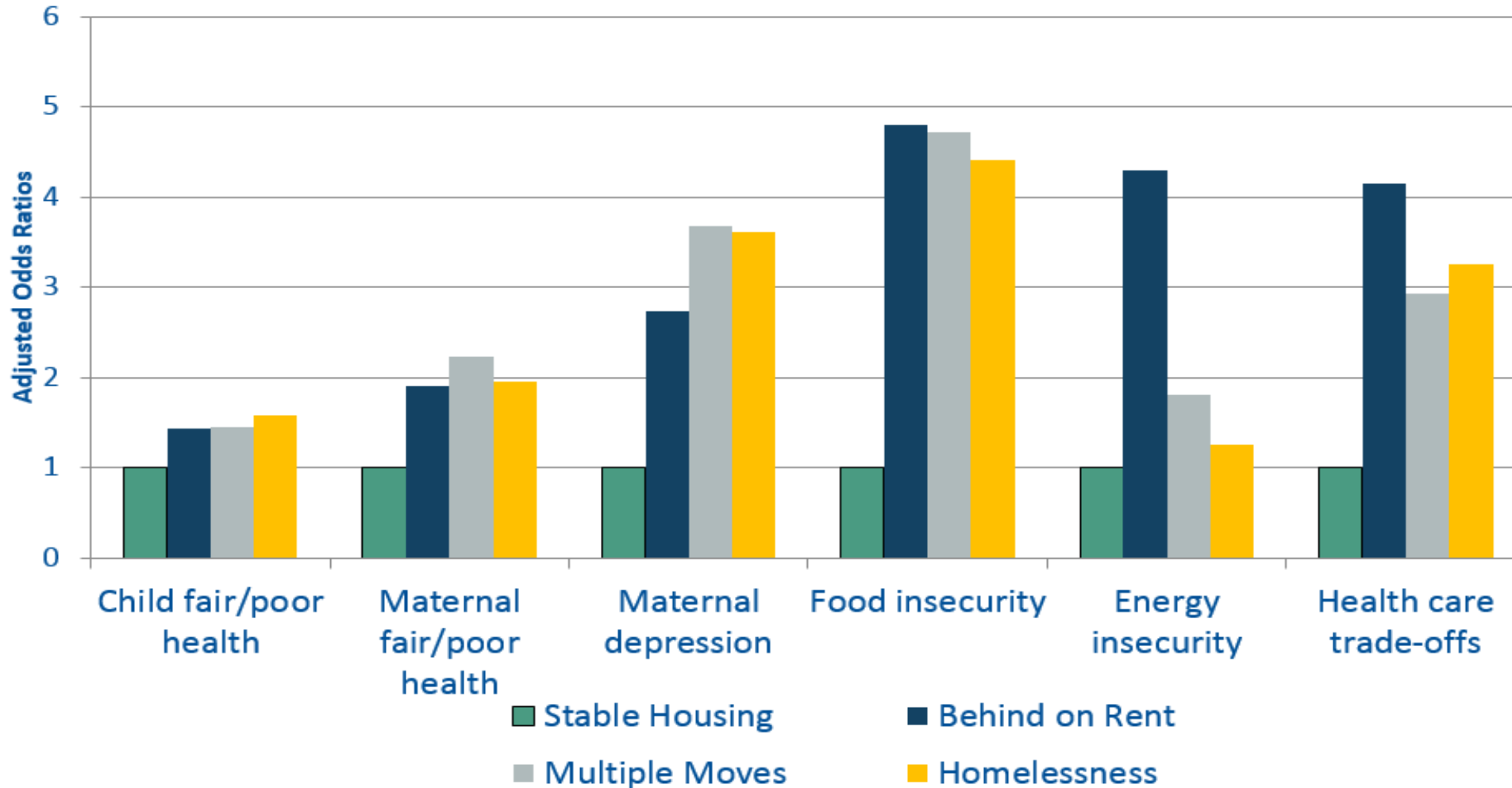
OFFICIAL JOURNAL OF THE AMERICAN ACADEMY OF PEDIATRICS



# Housing Stability Iceberg

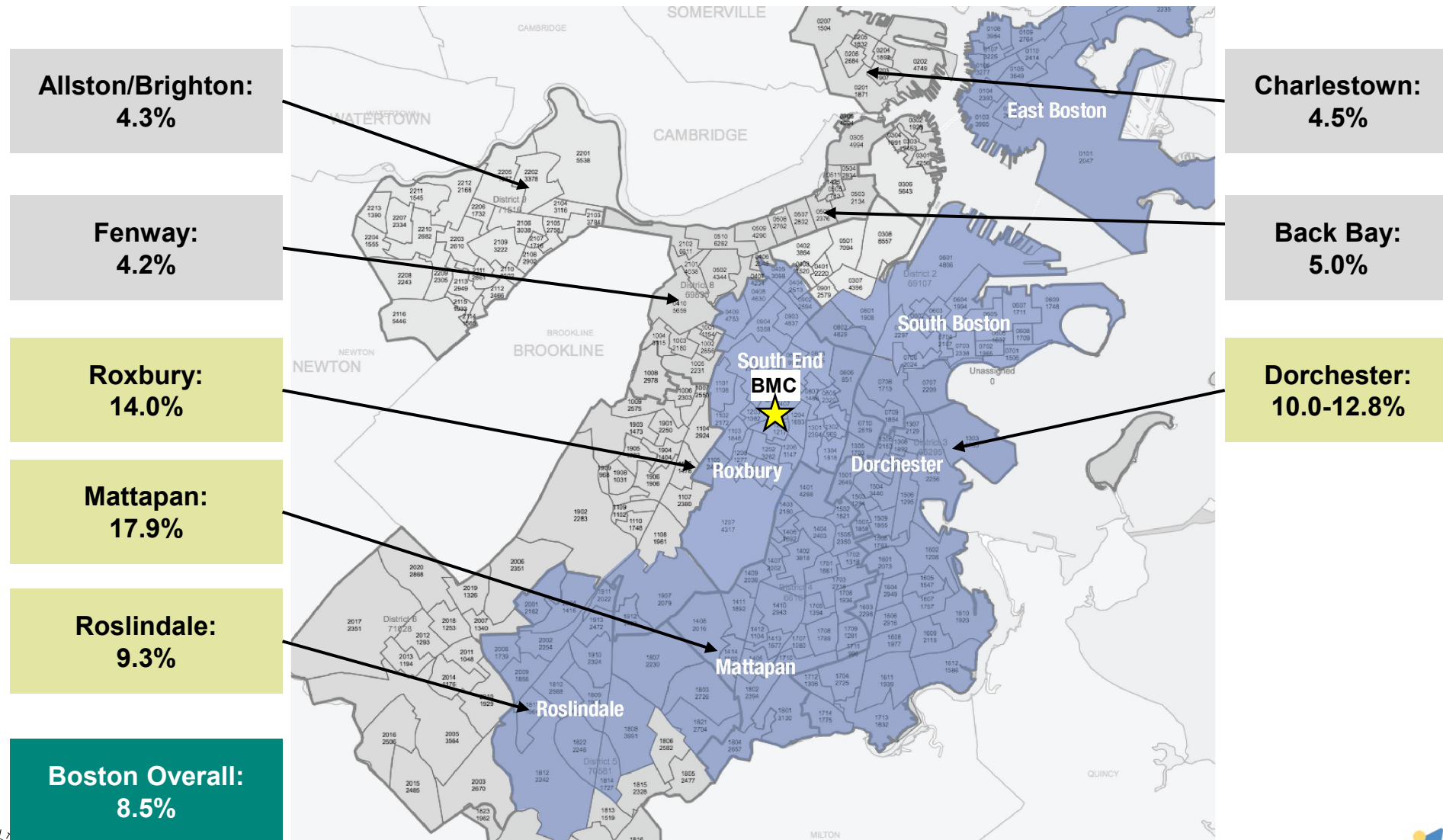


# Affordability and Stability Both Matter to Health

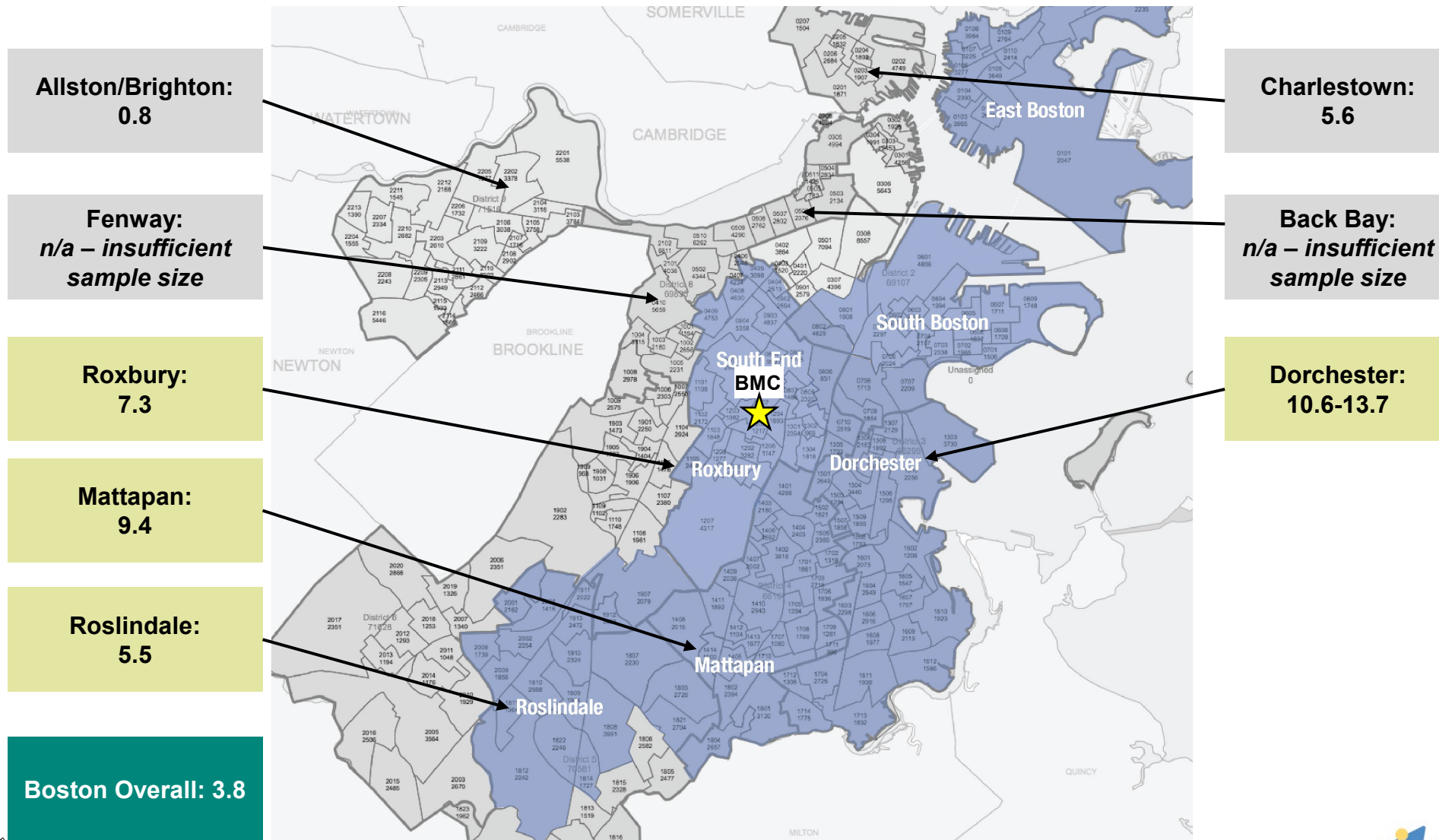


Sandel et al.,  
Unstable Housing  
and Caregiver and  
Child Health  
*Pediatrics* 2018

# Neighborhoods in BMC's catchment area still display stark disparities in many measures like prevalence of diabetes<sup>1</sup>

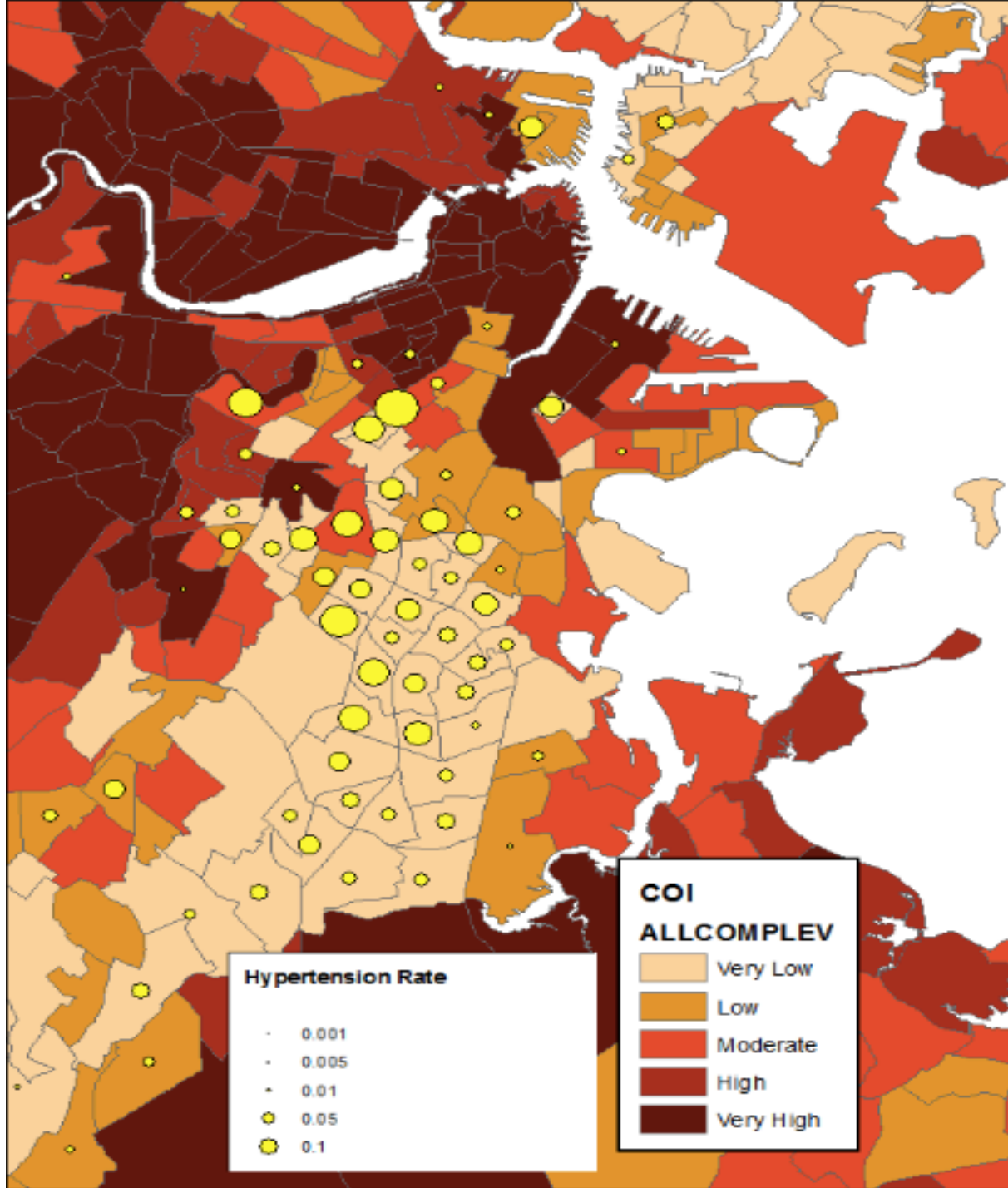
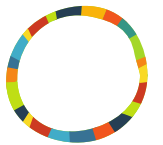


# Neighborhoods in our catchment area have higher rates of homicide by firearm<sup>1</sup> than other neighborhoods



# Place, Opportunity, and Health

- Mapping Boston Neighborhoods by Child Opportunity Index from Kirwan Institute and [diversitydatakids.org](http://diversitydatakids.org)
- Vital Village Network at Boston Medical Center maps relationship between opportunity and stress (elevated BP at age 3)



Sandel et al.,

*Academic Pediatrics* 2014

# Healthcare 101



- A Hospital is different from a Health Plan
  - An Integrated Health System is different too
- How Hospitals get paid has changed
  - Changed from Fee for Service to Value-based care
  - Medicare is different from Medicaid and from Commercial
- Not all patients/members are created equal
  - Small number of patients drive costs
  - Homelessness/housing insecurity drives costs
  - But there are structural reasons its hard to target specific patients and housing

# BMC—an integrated health system serving the most marginalized populations



**Largest safety net hospital in New England >500 beds**

**Largest emergency/trauma service provider in New England**

**Primary campus in Boston; new Brockton inpatient behavioral health facility**

**26K discharges, 1M OP visits and 20K OR cases per year**



**~665K member health plan serving Medicaid beneficiaries in MA and NH**

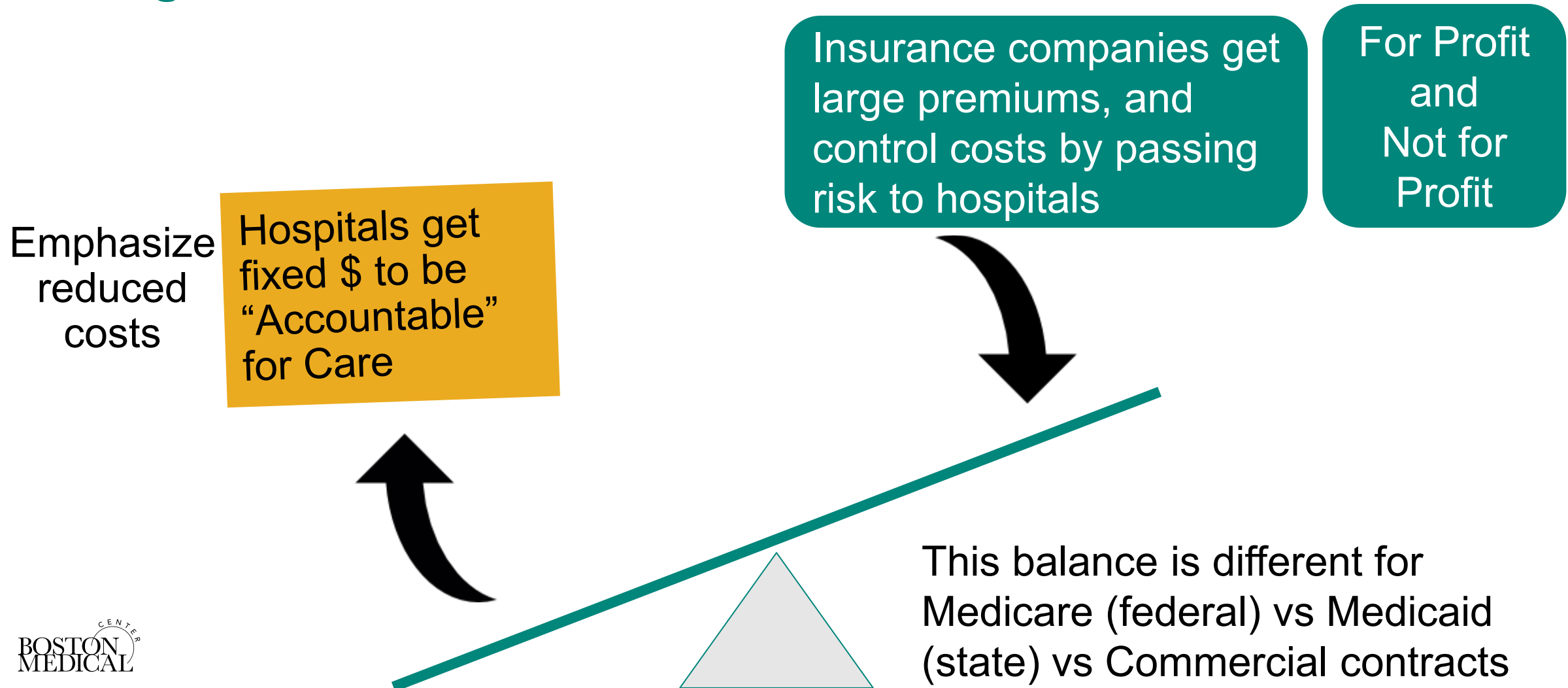
**Our largest ACO, Boston ACO, includes 19 groups, BMC's on-campus practices and many community health centers in MA**

**Participates in government and commercial risk contracts**

We now serve over 40% of the Medicaid market in Massachusetts.

# How Healthcare is paid for changes the balance of power

## Change from Free for Service to Value Based Care

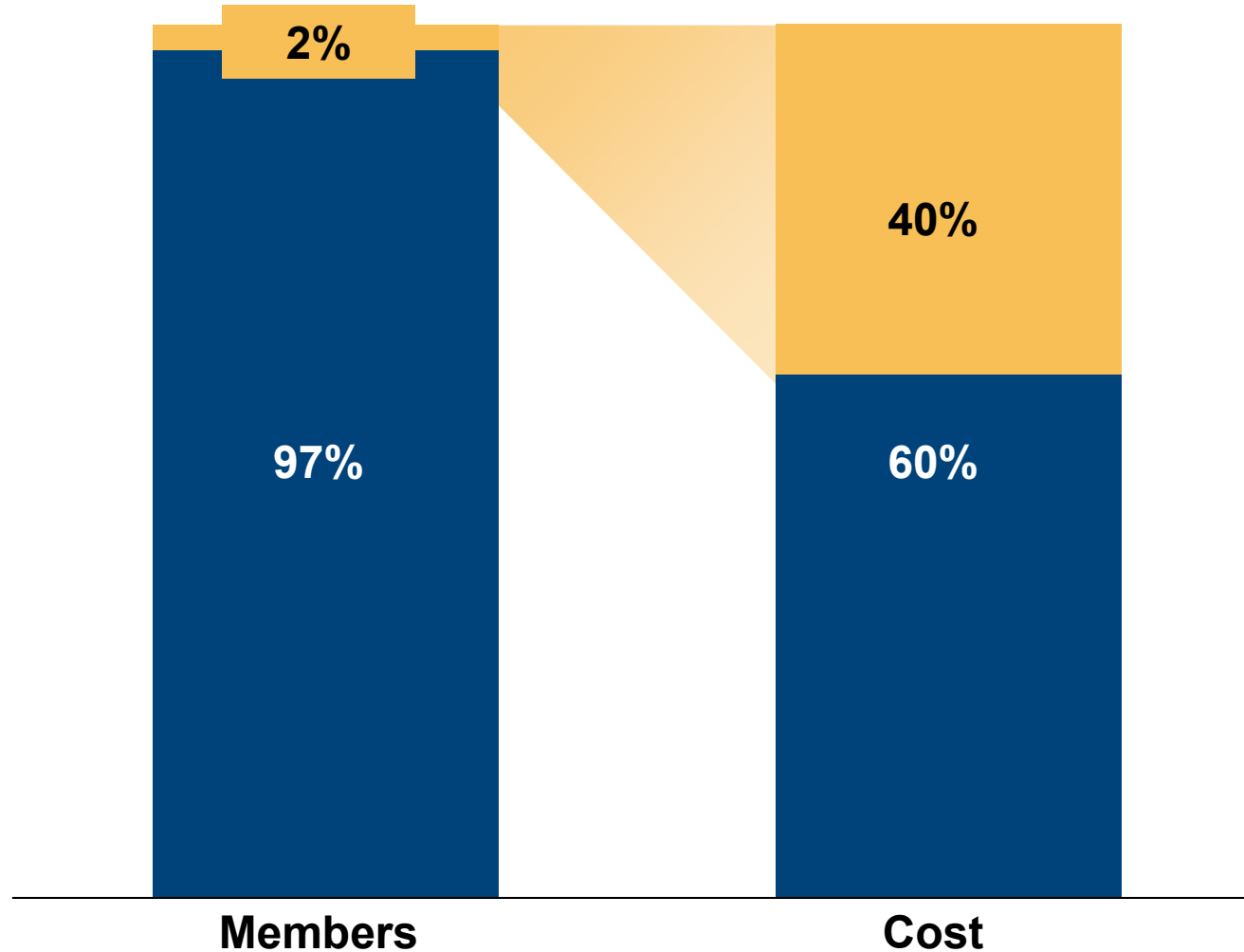




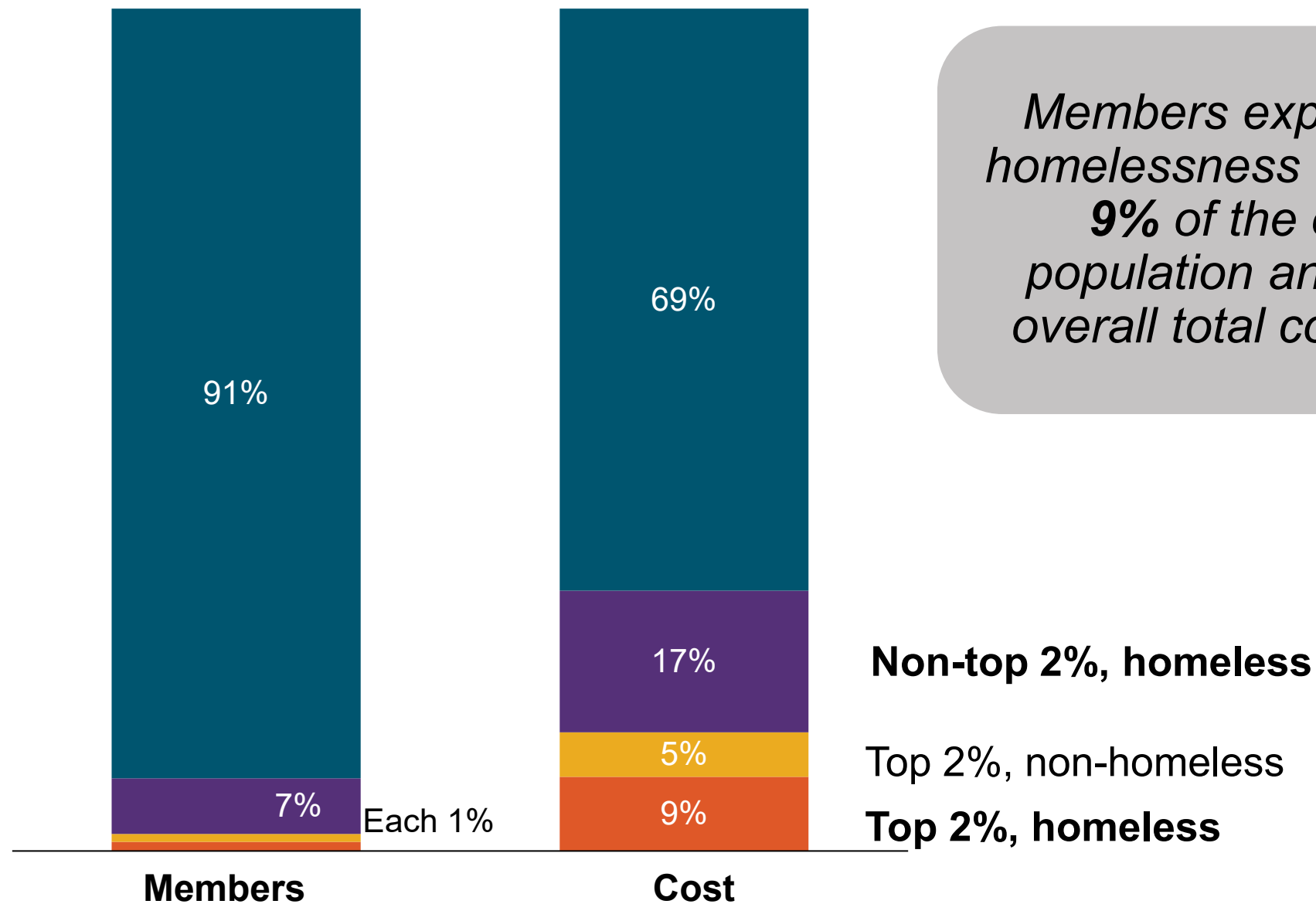
# A small number of patients drives healthcare costs

*2 percent of our patients account for 40% of our costs*

*Our highest risk patients have both clinical and social needs*



# Homelessness disproportionately drives healthcare costs



*Members experiencing homelessness account for 9% of the overall population and 26% of overall total cost of care*

# The Ingredients for Housing and Health Partnerships



Capital for  
housing  
production

+



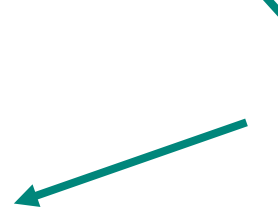
Rental  
assistance and  
income boosting  
policies

+



Tailored  
services for  
family and  
individual  
needs

# Connecting Systems for Medically Complex families



Boston Housing Authority



# Housing Prescriptions RCT show improved child health and parent mental health



INTEGRATING SOCIAL SERVICES & HEALTH

By Allison Bovell-Ammon, Cristina Mansilla, Ana Poblacion, Lindsey Rateau, Timothy Heeren, John T. Cook, Tina Zhang, Stephanie Ettinger de Cuba, and Megan T. Sandel

## Housing Intervention For Medically Complex Families Associated With Improved Family Health: Pilot Randomized Trial

Difference-in-differences in changes from baseline to 6 months between intervention and control groups, among participants in Housing Prescriptions as Health Care in Boston, Massachusetts

	Difference	95% CI
Behind on rent in past year	19 <sup>a</sup>	(-2, 40)
Two or more moves in past year	-9 <sup>a</sup>	(-11, 28)
Homeless in past 6 months	15 <sup>a</sup>	(-11, 40)
Child in fair or poor health	-32 <sup>***</sup>	(-59, -06)
In past 6 months, mean no. of child:		
Urgent care visits	-0.51	(-1.54, 0.51)
ED visits	-0.41	(-1.66, 0.83)
Hospitalizations	0.05	(-0.38, 0.49)
Mean GAD-2 score	-1.38 <sup>**</sup>	(-2.46, -0.31)
Mean PHQ-2 score	-1.04 <sup>**</sup>	(-1.95, -0.13)

Analysis demonstrated **significantly greater improvements in child health status and parent anxiety and depression scores** among those in the intervention group, compared to the control group.

Bovell-Ammon A, et al . *Health Affa*

# Investing in Partnerships



Press Releases

## **Boston Medical Center to Invest \$6.5 Million in Affordable Housing to Improve Community Health and Patient Outcomes, Reduce Medical Costs**

December 07, 2017

A photograph of two Black women sitting at a table, looking at a binder of documents. The woman on the left is wearing a grey zip-up sweater and a blue lanyard with an ID badge that says 'RN'. The woman on the right is wearing a red and black patterned top and glasses. They are in an office setting with a window in the background. A teal circle is on the left side of the image.

# What are the Future Directions?

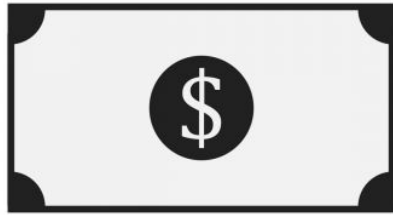
# What are the Future Directions?



- Understand the sources of dollars in healthcare and what motivates them
- Cracking the code of resident services and how to match with housing production may require policy changes
- Hospitals and Health Plans may have political capital for larger investment in housing
- State Housing Finance Agencies can create more acceleration in housing production to benefit everyone



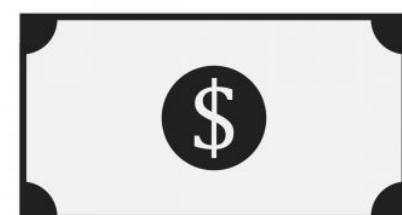
# Understand the different sources of money in Healthcare



+



+



Investment  
portfolios

Healthcare  
delivery

Community  
benefit

# Different sources are driven by different motivations



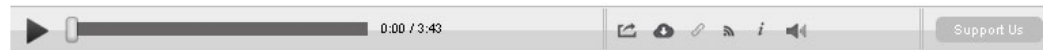
Investment portfolios differ by Hospital and Health Plan

Healthcare delivery needs to be tied to specific patients

Community benefit is best but smallest \$

# Resident services require scale and targeting to have a return on investment

## Why a health insurance company entered the housing market



Jess1781/Shutterstock/Missouri Public Radio

The Seasons Townhomes development Monday, Feb. 3, 2014 in Ramsey, Minn.



## Perspective

### Housing as Health Care — New York's Boundary-Crossing Experiment

Kelly M. Doran, M.D., M.H.S., Elizabeth J. Misa, M.P.A., and Nirav R. Shah, M.D., M.P.H.  
N Engl J Med 2013; 369:2374-2377 | December 19, 2013 | DOI: 10.1056/NEJMp1310121

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Article | **References** | Citing Articles (1)

Among the countries in the Organization for Economic Cooperation and Development (OECD), the United States ranks first in health care spending but 25th in spending on social services.<sup>1</sup> These are not two unrelated statistics: high spending on the former may result from low spending on the latter. Studies have shown the powerful effects that "social determinants" such as safe housing, healthful food, and opportunities for education and employment have on health. In fact, experts estimate that medical care accounts for only 10% of overall health, with social, environmental, and behavioral factors accounting for the rest.<sup>2</sup> Lack of upstream investment in social determinants of health probably contributes to exorbitant downstream spending on medical care in the United States. This neglect has ramifications for health outcomes, and the United States lags stubbornly behind other countries on basic indicators of population health.

The role of social determinants of health, and the business case for addressing them, is immediately clear when it comes to homelessness and housing. The 1.5 million Americans who experience homelessness in any given year face numerous health risks and are disproportionately represented among highest users of costly hospital-based acute care. Placing people who are homeless in housing — affordable housing paired with supportive services such as on-site case management

Audio Interview



Interview with Dr. Nirav Shah on New York State's decision to address housing needs as a social determinant of health. (10:56)

Listen  
 Download

# Health Systems can bring Political Capital and Leverage Funding



762 Carpenter Street 



# Housing production and wealth building are the biggest things needed for health

- Lack of housing affects both healthcare workers and patients
- State Housing Finance Agencies have power to accelerate through guarantees, and simpler financing mechanisms
- Innovations are needed to develop more home ownership opportunities, whether in rent to own, or other ways to address the wealth gaps





**Thank You!**