

# Community Determinants of Health: Roadmap for Health Equity

Sandra Viera, MPA  
Associate Program Director  
Prevention Institute

**PREVENTION**  
INSTITUTE



 [PreventionInstitute.org](https://www.PreventionInstitute.org)  [@preventioninst](https://twitter.com/preventioninst)

**PREVENTION**  
INSTITUTE

# Norms

- Attitudes, beliefs, ways of being
- Taken for granted
- Behavior shapers
- Sanction behavior
- Based in culture & tradition



# Tobacco in Pharmacies



# Pharmacy Tobacco Policy



**CVSquitsforgood**

**CVS/pharmacy will stop selling cigarettes and all tobacco products at its more than 7,600 stores nationwide by October 1, 2014.**

Ending the sale of cigarettes and tobacco products at CVS/pharmacy is simply the right thing to do for the good of our customers and our company. The sale of tobacco products is inconsistent with our purpose – helping people on their path to better health.

As the delivery of health care evolves with an emphasis on better health outcomes, reducing chronic disease and controlling costs, CVS Caremark is playing an expanded role through our 26,000 pharmacists and nurse practitioners. By removing tobacco products from our retail shelves, we will better serve our patients, clients and health care providers while positioning CVS Caremark for future growth as a health care company. Cigarettes and tobacco products have no place in a setting where health care is delivered. This is the right thing to do.

Learn more at:  
[www.cvsquits.com](http://www.cvsquits.com)  
[#cvsquits](https://twitter.com/cvsquits)

f t in





The ideas of one generation become the instincts of the next.

- D.H. Lawrence











# Raise Your Hand If...

---

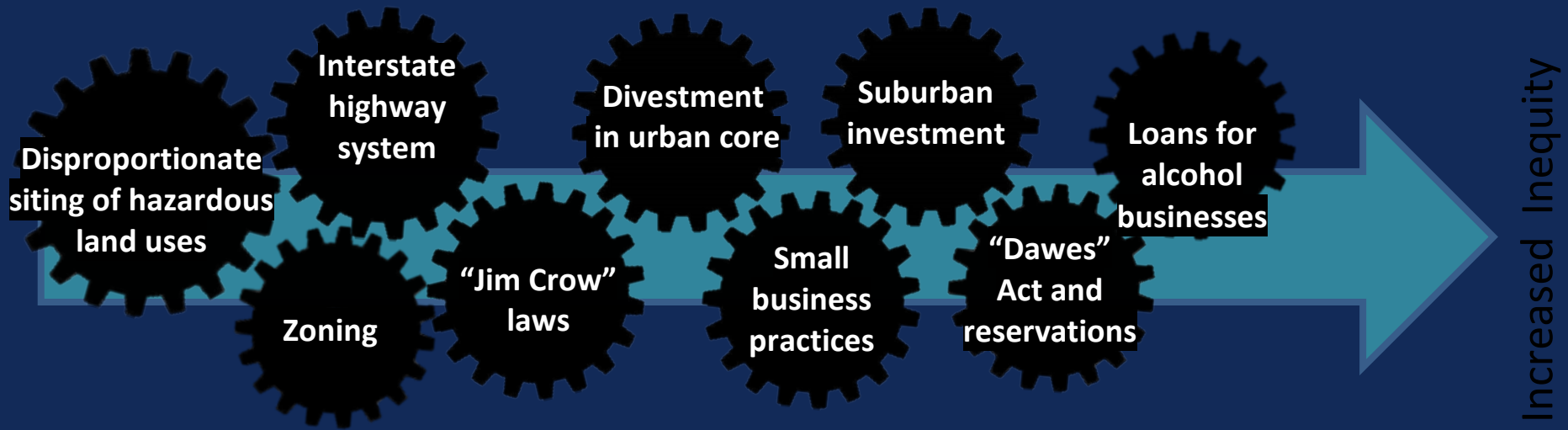
**Your  
neighborhood has  
more alcohol  
outlets than  
grocery stores**

# Raise Your Hand If...

---

**You can name a neighborhood in your county where your grandparents would have been prevented from living because of their race, ethnicity, or religion**

# The Production of Inequity in the Housing System

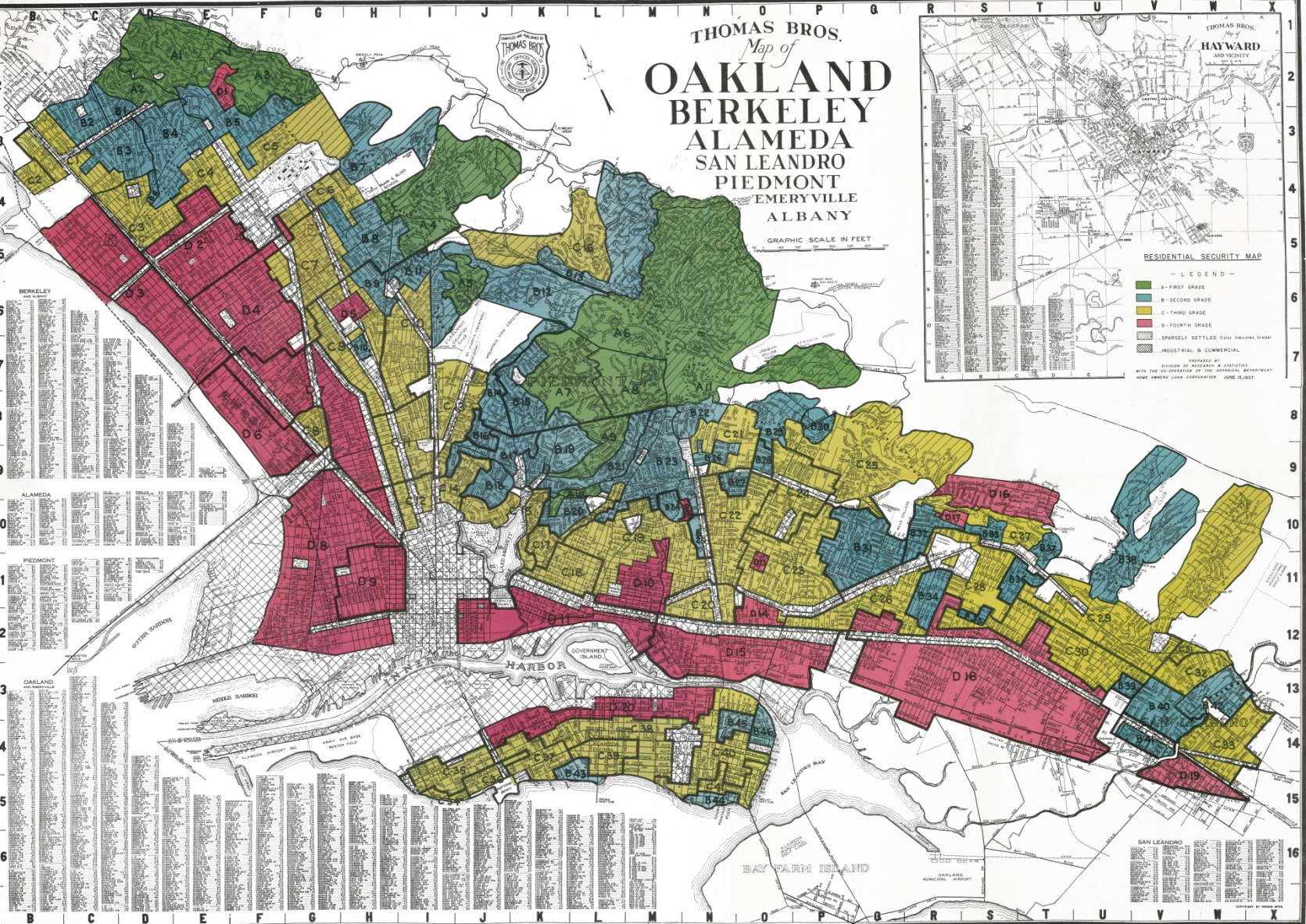
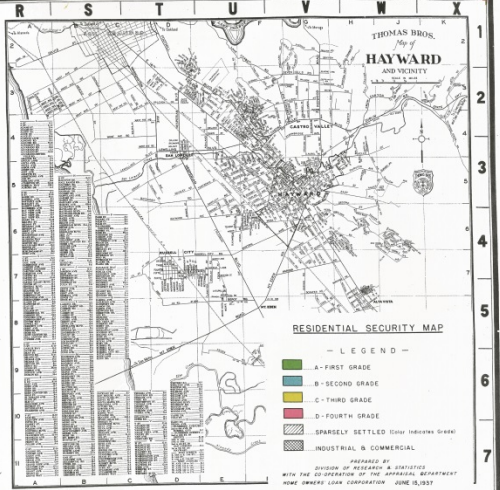






THOMAS BROS.  
Map of  
**OAKLAND  
BERKELEY  
ALAMEDA  
SAN LEANDRO  
PIEDMONT  
EMERYVILLE  
ALBANY**

GRAPHIC SCALE IN FEET



BERKELEY	ALAMEDA	PIEDMONT	OAKLAND
B2	B1	B1	B1
B3	B2	B2	B2
B4	B3	B3	B3
B5	B4	B4	B4
B6	B5	B5	B5
B7	B6	B6	B6
B8	B7	B7	B7
B9	B8	B8	B8
B10	B9	B9	B9
B11	B10	B10	B10
B12	B11	B11	B11
B13	B12	B12	B12
B14	B13	B13	B13
B15	B14	B14	B14
B16	B15	B15	B15
B17	B16	B16	B16
B18	B17	B17	B17
B19	B18	B18	B18
B20	B19	B19	B19
B21	B20	B20	B20
B22	B21	B21	B21
B23	B22	B22	B22
B24	B23	B23	B23
B25	B24	B24	B24
B26	B25	B25	B25
B27	B26	B26	B26
B28	B27	B27	B27
B29	B28	B28	B28
B30	B29	B29	B29
B31	B30	B30	B30
B32	B31	B31	B31
B33	B32	B32	B32
B34	B33	B33	B33
B35	B34	B34	B34
B36	B35	B35	B35
B37	B36	B36	B36
B38	B37	B37	B37
B39	B38	B38	B38
B40	B39	B39	B39
B41	B40	B40	B41
B42	B41	B41	B42
B43	B42	B42	B43
B44	B43	B43	B44
B45	B44	B44	B45
B46	B45	B45	B46
B47	B46	B46	B47
B48	B47	B47	B48
B49	B48	B48	B49
B50	B49	B49	B50
B51	B50	B50	B51
B52	B51	B51	B52
B53	B52	B52	B53
B54	B53	B53	B54
B55	B54	B54	B55
B56	B55	B55	B56
B57	B56	B56	B57
B58	B57	B57	B58
B59	B58	B58	B59
B60	B59	B59	B60
B61	B60	B60	B61
B62	B61	B61	B62
B63	B62	B62	B63
B64	B63	B63	B64
B65	B64	B64	B65
B66	B65	B65	B66
B67	B66	B66	B67
B68	B67	B67	B68
B69	B68	B68	B69
B70	B69	B69	B70
B71	B70	B70	B71
B72	B71	B71	B72
B73	B72	B72	B73
B74	B73	B73	B74
B75	B74	B74	B75
B76	B75	B75	B76
B77	B76	B76	B77
B78	B77	B77	B78
B79	B78	B78	B79
B80	B79	B79	B80
B81	B80	B80	B81
B82	B81	B81	B82
B83	B82	B82	B83
B84	B83	B83	B84
B85	B84	B84	B85
B86	B85	B85	B86
B87	B86	B86	B87
B88	B87	B87	B88
B89	B88	B88	B89
B90	B89	B89	B90
B91	B90	B90	B91
B92	B91	B91	B92
B93	B92	B92	B93
B94	B93	B93	B94
B95	B94	B94	B95
B96	B95	B95	B96
B97	B96	B96	B97
B98	B97	B97	B98
B99	B98	B98	B99
B100	B99	B99	B100

SAN LEANDRO
B1
B2
B3
B4
B5
B6
B7
B8
B9
B10
B11
B12
B13
B14
B15
B16
B17
B18
B19
B20
B21
B22
B23
B24
B25
B26
B27
B28
B29
B30
B31
B32
B33
B34
B35
B36
B37
B38
B39
B40
B41
B42
B43
B44
B45
B46
B47
B48
B49
B50
B51
B52
B53
B54
B55
B56
B57
B58
B59
B60
B61
B62
B63
B64
B65
B66
B67
B68
B69
B70
B71
B72
B73
B74
B75
B76
B77
B78
B79
B80
B81
B82
B83
B84
B85
B86
B87
B88
B89
B90
B91
B92
B93
B94
B95
B96
B97
B98
B99
B100



# Housing Affects Health



## Housing issues

- Housing cost burden
- Overcrowding
- Substandard housing conditions
- Housing instability
- Evictions
- Displacement
- Homelessness

## Social factors

- Financial instability
- Poorer educational outcomes
- Increased commute times
- Neighborhood instability
- Disruption of social networks and cultural supports
- Difficulty attending school and work

## Health outcomes

- ↑ chronic stress
- ↑ heart disease
- ↓ money for necessities (food, transportation, medical care)
- ↑ in missed appointments due to housing issues
- ↑ respiratory infections (e.g., tuberculosis)
- ↑ headaches, fever, skin disease, asthma
- ↑ hospitalization
- ↑ trauma
- ↓ mental health
- ↓ child development

↑ morbidity and mortality

# Structural Drivers

The distribution of power, money, and other resources nationally and globally that, “together fashion the way societies are organized”

- Nature and degree of social stratification in society (*class, income inequality, caste system*)
- Biases, norms, values (*racism, sexism*)
- Global and national economic and social policy (*trade agreements, tax policy, war*)
- Processes of governance at the global, national, and local level (*lobbying, strength of democracy*)



# Community Determinants

---


- The daily living conditions where people live, work, learn, play, and age
  - Education
  - Employment
  - Housing
  - Food
  - Transportation

# The Community Determinants of Health

---



- The daily living conditions where people live, work, learn, play, and pray
- Focusing on community determinants enables communities to alter daily living conditions, thus providing the opportunity to improve health and safety and advance health equity.

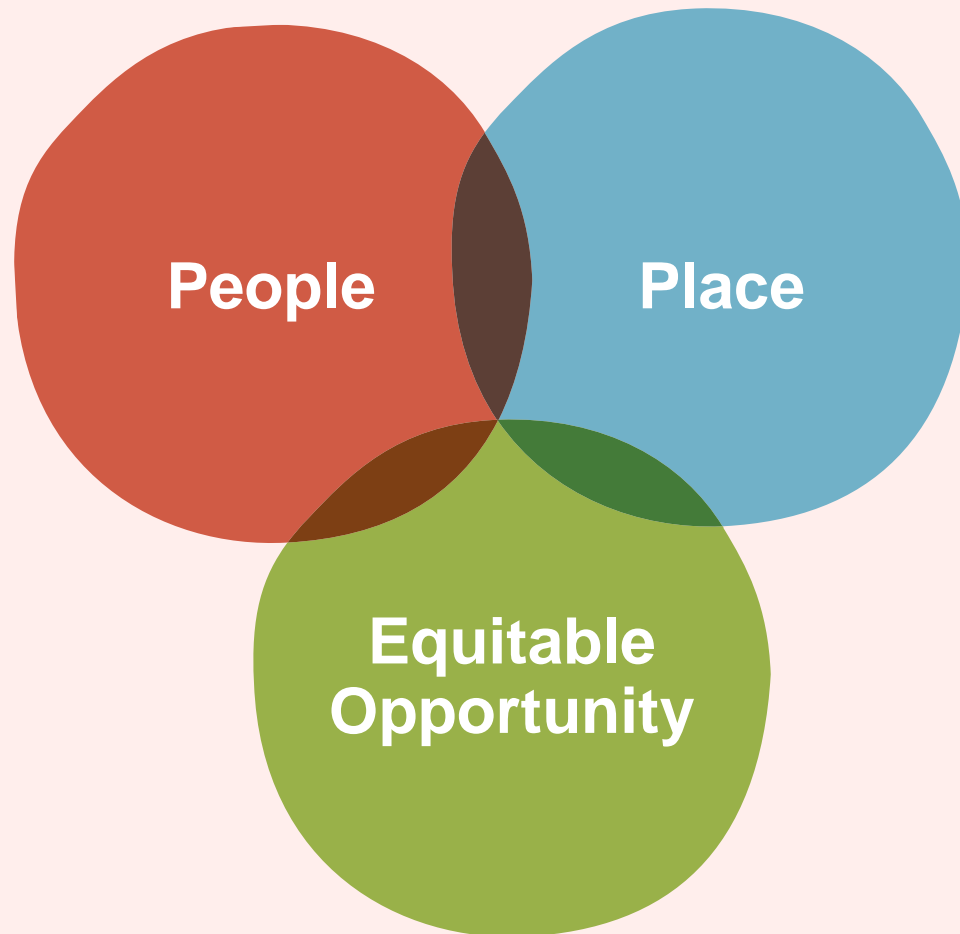


**Health equity** means that every person, regardless of who they are—the color of their skin, their level of education, their gender or sexual identity, whether or not they have a disability, the job that they have, or the neighborhood that they live in—has an equal opportunity to achieve optimal health.

– Braveman PA, et al. Health disparities and health equity: The issue is justice. 2011.



# THRIVE



# THRIVE clusters

## Understanding structural drivers

### People



Social networks  
& trust



Participation &  
willingness to act for  
the common good



Norms &  
culture



Education



Living wages &  
local wealth

### Place



What's sold & how  
it's promoted



Look, feel,  
& safety



Housing



Parks &  
open space



Air, water  
& soil



Getting  
around



Arts & cultural  
expression

# People

The relationships between people, the level of engagement, and norms, all of which influence health outcomes.



## Healthy norms & culture

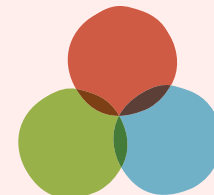
- Norms that support healthy and equitable relationships
- Norms that support non-violence
- Norms that support engagement in family matters



## Strong social networks & trust



## Strong collective efficacy and community sanctions against violence and inequity

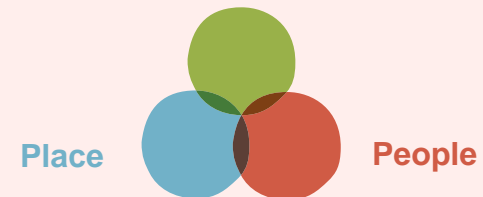


# Equitable Opportunity

The level and equitable distribution of opportunity and resources.



**Family and community economic security**





# Place

The physical environment in which people live, work, play, and go to school.



**Media and marketing practices that support healthy norms of culture**



**Accessible, safe places to play and be physically active**

**Safe, stable and affordable housing**

# Health Systems and Housing



Medical Evidence Form

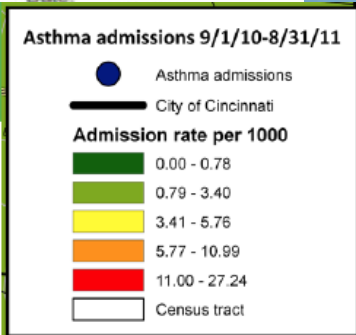
Patient information: Name: \_\_\_\_\_ DOB: \_\_\_\_\_  
 Chart #: \_\_\_\_\_ Blood Lead Levels: \_\_\_\_\_  
 Diagnosis:  Asthma  Hypertension  Skin Disease

Parent/Child Information: Does anyone in the home smoke?  Yes  No  
 Is the child exposed to second hand smoke?  Yes  No

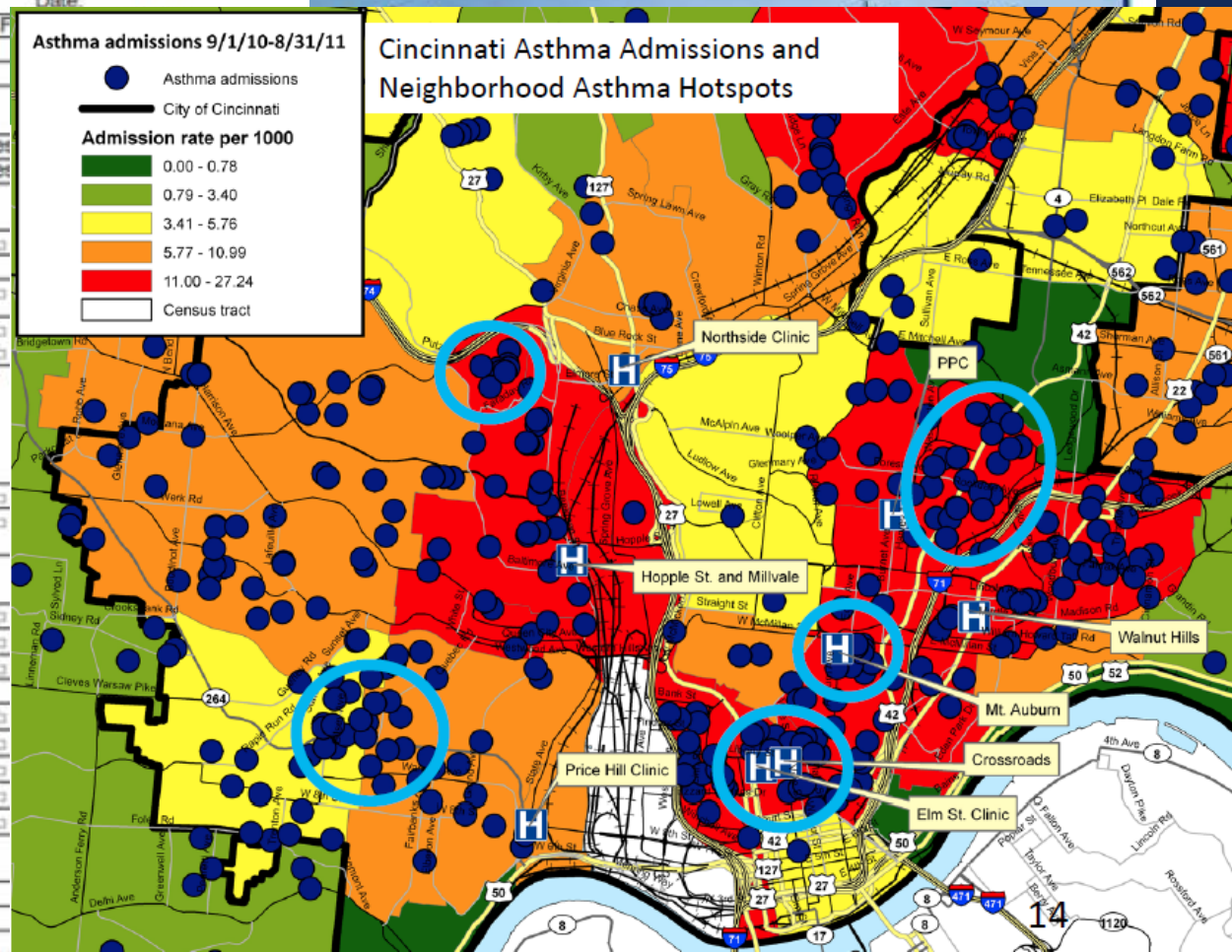
Environmental History: Do you live next to or near a freeway?  Yes  No  
 • Which freeway? \_\_\_\_\_  
 Do you live near a construction site?  Yes  No  
 Is your home being repaired or new construction?  Yes  No  
 Which of the following do you have in your home?  
 Air Conditioner  Fireplace  
 Air Purifier  Gas Stove  
 Kitchen  
 Is there a strong (bad) smell in your home?  Yes  No  
 Are pesticides or herbicides used in your home, garden or on pets?  Yes  No  
 Have you ever been bitten by or have in your home:  
 • Roaches  Yes  No  
 • Rats or mice  Yes  No  
 Do you have pets?  Yes  No  
 Type: Do you have mold in your home?  Yes  No  
 Do you have leaking pipes?  Yes  No  
 Does your home have a lot of dust?  Yes  No  
 Do you have any rusting pipes?  Yes  No  
 Do you have chipping or peeling paint?  Yes  No

Health: # of missed schools days due to asthma #  
 # of doctor visits due to asthma attacks #  
 # of emergency room visits due to asthma #

Provider comments/remarks (including referrals made or action taken):



Cincinnati Asthma Admissions and Neighborhood Asthma Hotspots



# What Works to Get Kids Active

Schools and communities can help kids get the 60 minutes of physical activity they need each day

provide in-class activity breaks  
**+19<sup>min</sup>**

renovate parks  
**+12<sup>min</sup>**

add after-school programs  
**+10<sup>min</sup>**

support walking/cycling to school  
**+16<sup>min</sup>**

require daily P.E.  
**+23<sup>min</sup>**



Bassett, D.R. et al. (2013). Estimated Energy Expenditures for School-Based Policies and Active Living. American Journal of Preventive Medicine. 42(2), 108-113. Link to paper <http://www.sciencedirect.com/science/article/pii/S0749379712008057>

Active Living Research is a national program of the Robert Wood Johnson Foundation  
[www.activelivingresearch.org](http://www.activelivingresearch.org)



# Mandela Marketplace







# Four Distinct Understandings of Mental Health

---

- Psychoses, chronic, and serious mental illnesses.
- A broader set of emotional/mental concerns or disorders: clinical diagnosis or not.
- Everyday ups and downs experienced by the general public
- “Mental health and wellness” as a goal for the population as a whole. Not only to responsiveness to emotional setbacks or disorders, but positive attributes, resilience, joy, and self-confidence.



# Adverse Community Experiences and Resilience

A FRAMEWORK FOR ADDRESSING AND PREVENTING COMMUNITY TRAUMA



This paper was supported by a grant from Kaiser Permanente Northern California Community Benefit Program



# What Causes Trauma?

---

- Experiences or situations that are emotionally painful
- Chronic adversity (discrimination, racism, sexism, poverty, oppression)
- Not feeling loved, wanted or safe

Occurs at population level but focus remains at the individual level

# Toward a Resilience Framework

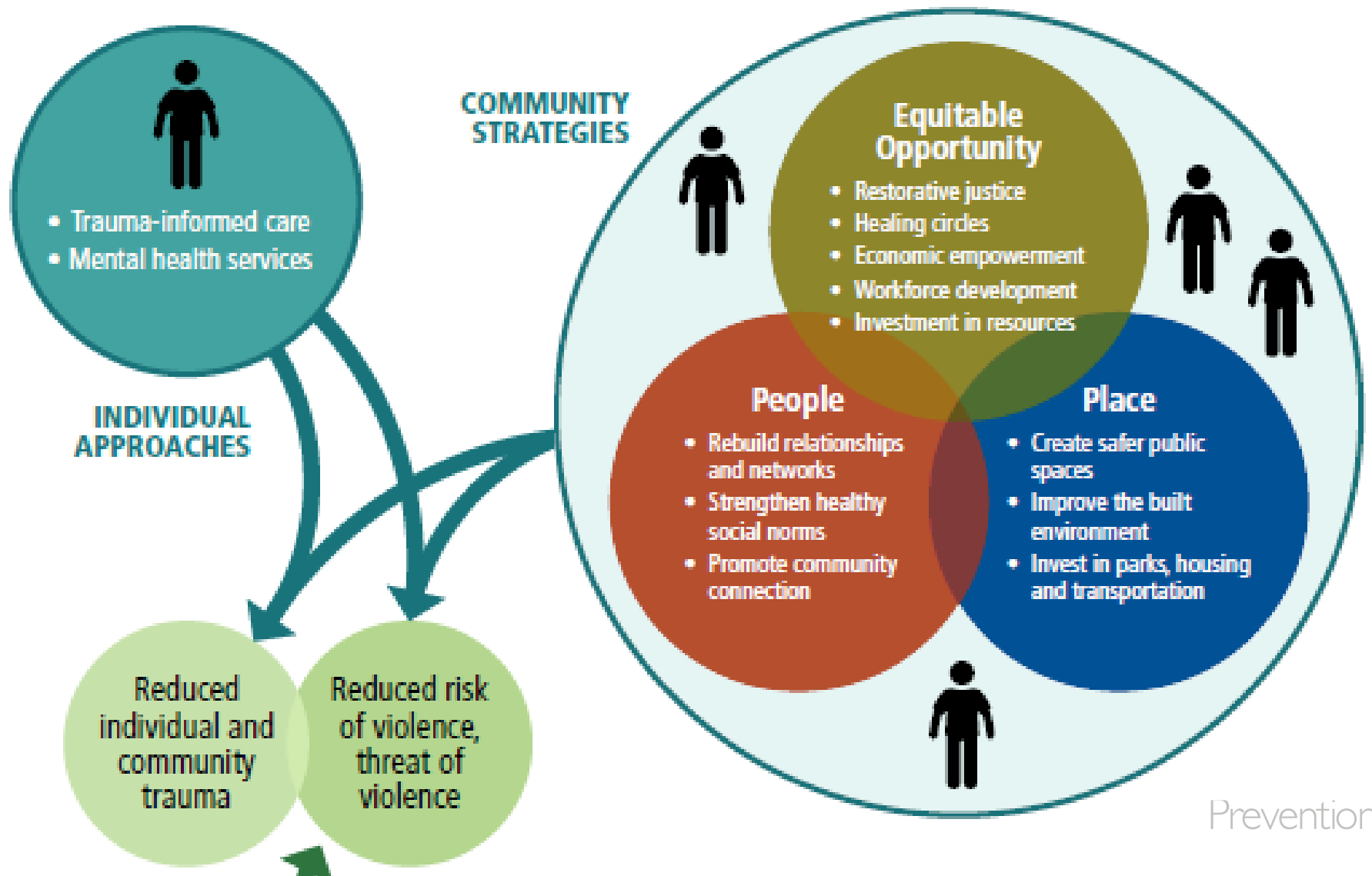
---


**Community resilience** is the ability of a community to recover from and/or thrive despite the prevalence of adverse conditions.



# Simultaneous Community Solutions

Figure 5 Promoting Community Resilience: From Trauma to Well-being





**When you start with needs, you get programs.**

**When you start with strengths, you get possibilities.**

**Lupe Serrano  
casa de esperanza**



# Thank You

## *Gracias*

Sandra Viera, MPA

Associate Program Director

[sandra@preventioninstitute.org](mailto:sandra@preventioninstitute.org)

**PREVENTION**  
INSTITUTE



# Approaches to obesity treatment and prevention for Latino children

Amy Beck MD MPH  
University of California San Francisco  
Co-Director Healthy Lifestyles Clinic  
Zuckerberg San Francisco General Hospital

# Objectives

- Review evidence-based interventions to **treat** obesity among Latino children
- Describe our experience translating evidence into practice at the **Healthy Lifestyles Clinic** at Zuckerberg San Francisco General Hospital
- Discuss potential benefits of initiating obesity **prevention** for Latino children in the infant and toddler period



# Childhood obesity treatment: What does the evidence say?

- Intensive behavioral interventions involving the family that aim to modify child diet, physical activity, screen time usage and parenting approaches can reduce child BMI

1. Kalarchian, M. A., Levine, M. D., Arslanian, S. A., Ewing, L. J., Houck, P. R., Cheng, Y., Ringham RM, Sheets CA. Marcus, M. D. (2009). Family-based treatment of severe pediatric obesity: randomized, controlled trial. *Pediatrics*, 124(4), 1060-1068.
2. Wilfley, D. E., Saelens, B. E., Stein, R. I., Best, J. R., Kolko, R. P., Schechtman, K. B., Wallendorf M., Welch R.R., Perri M., Epstein, L. H. (2017). Dose, Content, and Mediators of Family-Based Treatment for Childhood Obesity: A Multisite Randomized Clinical Trial. *JAMA Pediatrics*, 171(12), 1151-1159.
3. Boutelle, K. N., Rhee, K. E., Liang, J., Braden, A., Douglas, J., Strong, D., Rock, C.L., Wilfley D.E., Epstein L.H. Crow, S. J. (2017). Effect of Attendance of the Child on Body Weight, Energy Intake, and Physical Activity in Childhood Obesity Treatment: A Randomized Clinical Trial. *JAMA Pediatrics*, 171(7), 622-628.

# Features of evidence-based childhood obesity treatment programs

## Variations in Design

- Group vs. individual
- Parent only vs. child and parent together
- Range of “interventionists”

## Critical Features

- Younger age at entry improves chances of success
- High frequency and duration
  - 20 sessions over 6 months is fairly typical!
- On-going follow-up is critical!

# Culturally Tailored Interventions for Latino Children

- **Salud Con La Familia (Barkin et al. 2012)**
  - Offered in a community center in Nashville TN
  - Enrolled Latino children ages 2-6 and their parents
  - 90-minute weekly sessions for 12 weeks (provided by an “interventionist”)
  
- **Active and Healthy Families (Falbe et al.)**
  - Offered in 2 FQHCs in Contra Costa County
  - Enrolled Latino children ages 5-12
  - 5 1-hour group sessions every other week by a physician, nutritionist and promotora

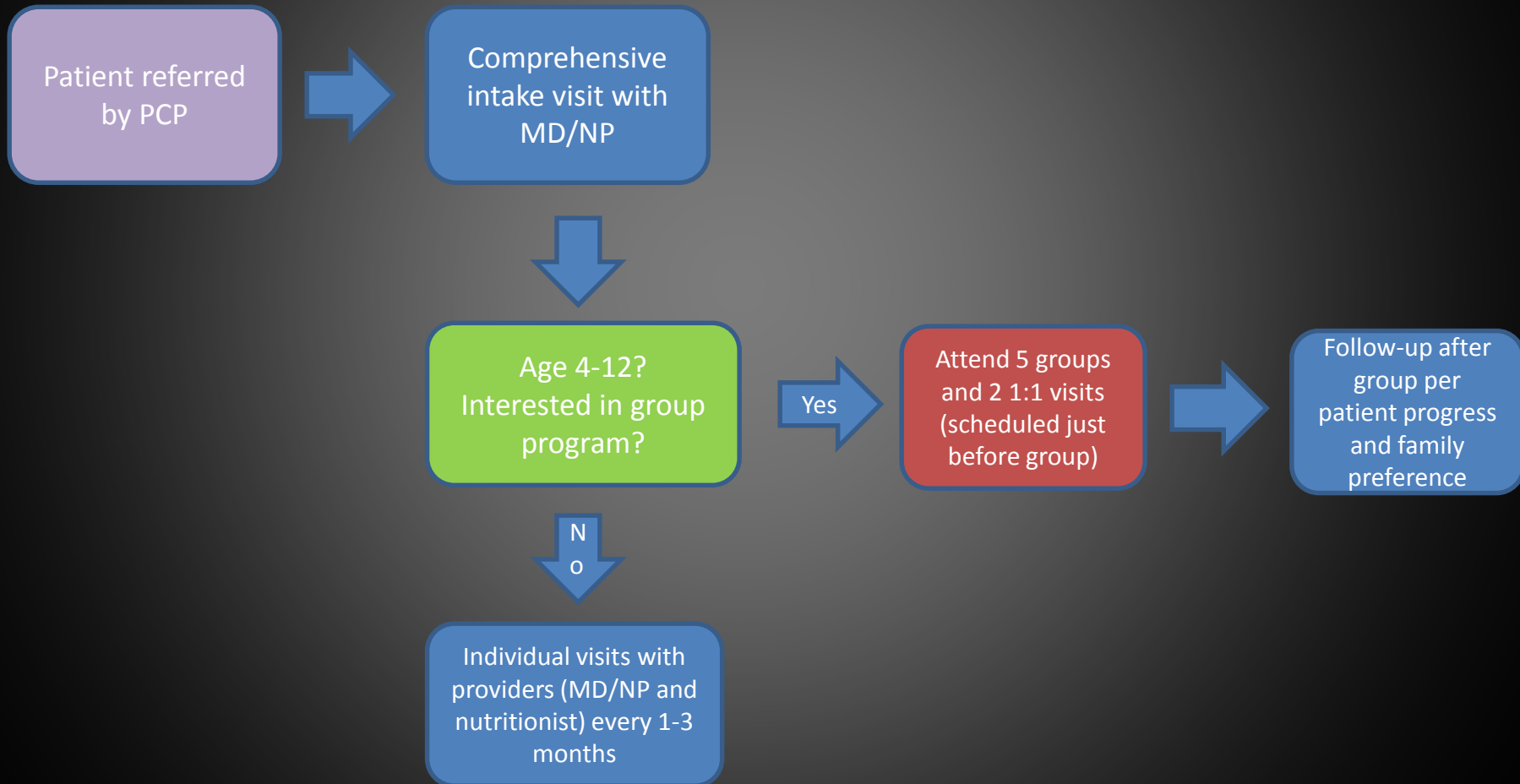
1. Barkin, S. L., Gesell, S. B., Po'e, E. K., Escarfuller, J., & Tempesti, T. (2012). Culturally tailored, family-centered, behavioral obesity Intervention for Latino-American preschool-aged children. *Pediatrics*, 130(3), 445-456.

2. Falbe, J., Cadiz, A., Tantoco, N. K., Thompson, H. R., & Madsen, K. A. (2015). Active and Healthy Families: A Randomized Controlled Trial of a Culturally Tailored Obesity Intervention for Latino Children. *Academic Pediatrics*, 15(4), 386-395.

# Healthy Lifestyles Clinic

- Pediatric obesity treatment clinic at Zuckerberg San Francisco General Hospital
- Part of sub-specialty pediatric care within a county health system
- Referrals from primary care providers at ZSFG and other SFDPH clinics
- All patients are publicly insured and 80% are Latino
- Clinic staffed by two MDs, one NP, one nutritionist
- One session per week on Monday evenings

# Clinic Resources and Patient Flow

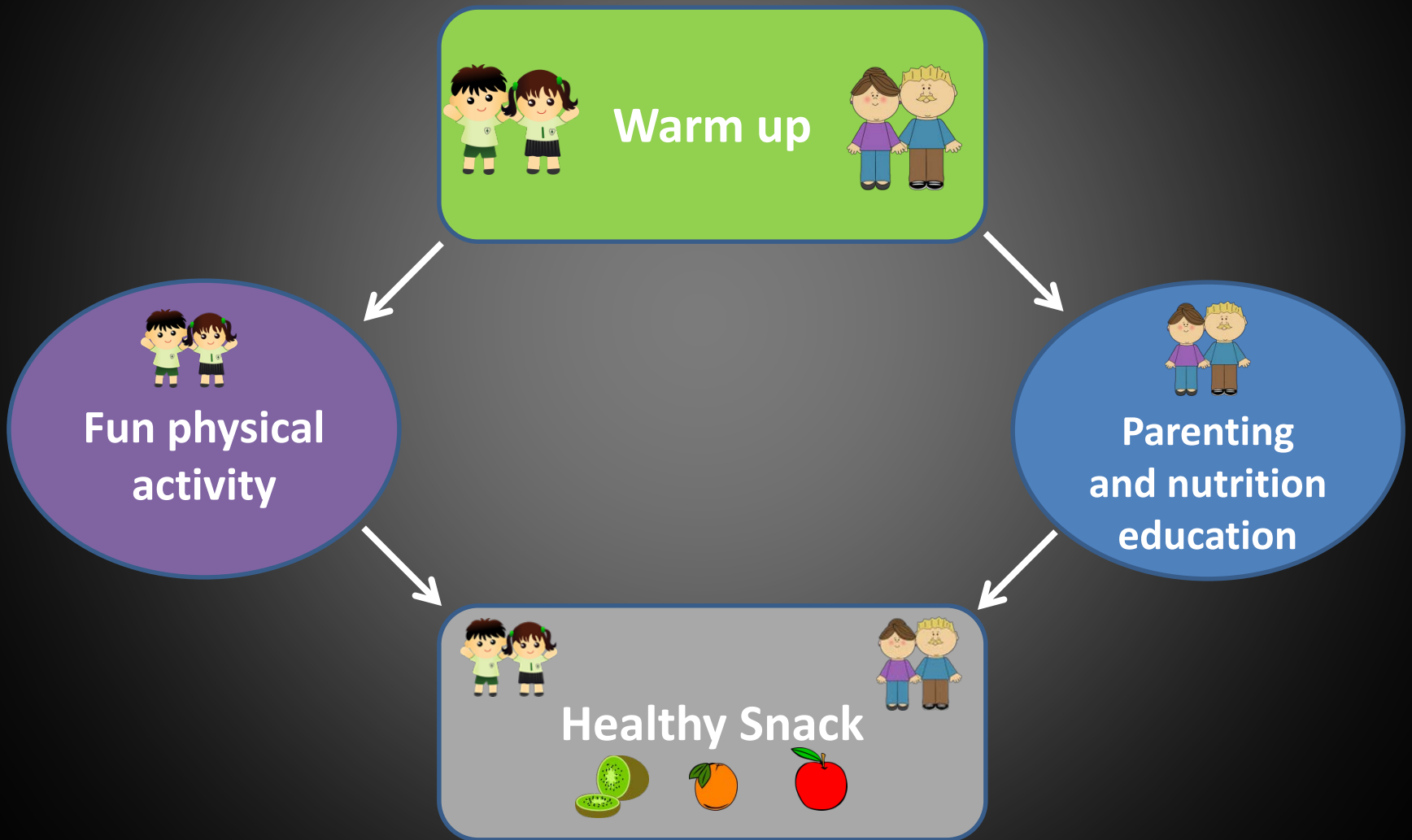




# Healthy Lifestyles Group Education for Obesity Treatment

- 5-session curriculum
- Facilitated by clinic providers (MD, NP, or nutritionist) and a physical activity teacher
- Offered every other Monday from 5:45-7:00 pm
- Entrance is rolling

# Group Education Session Flow



# Group Education Session Topics

Group	Nutrition/Lifestyle Topics	Parenting Topics
1	Sugar containing beverages	Division of responsibility for feeding (parent roles/child roles)
2	MyPlate for meal planning	Talking to children about weight
3	Healthy breakfasts and snacks Healthy fats	Positive reinforcement
4	Whole grains and hidden sugars	Positive limit setting
5	Physical activity and screen time	Parental role modeling

# Group Education Components

- Introductions
- Didactic
- Discussion and idea sharing
- Troubleshooting individual challenges
- Skills building exercises
- Goal setting
- Take home educational materials

# Group 1

- Show parents a 20 ounce bottle of Coca-Cola and demonstrate how to find the calories and grams of sugar on the food label

**Coca-Cola**

20 fl oz bottle



**nutrition** ingredients varieties

### Nutrition Facts

Serving Size 1 bottle  
Servings Per Container 1

**Amount Per Serving**  
Calories 240

	% Daily Value*
Total Fat 0g	0%
Sodium 75mg	3%
<b>Total Carbohydrate 65g</b>	<b>22%</b>
Sugars 65g	
Protein 0g	

Not a significant source of fat calories, saturated fat, trans fat, cholesterol, fiber, vitamin A, vitamin C, calcium and iron.

\*Percent Daily Values (DV) are based on a 2,000 calorie diet.

**similar products**



# Group 1

- Uses a calculator to divide grams of sugar by 4 to determine teaspoons of sugar in the bottle ( $65/4= 16.25$ )
- Demonstrates sugar content by placing 16 sugar cubes on a plate












# Intervention Details

Beverage	Calories	Sugar	Fiber	Vitamin C

# SSBs vs. 100% fruit juice vs. whole fruit

	Calories	Sugar grams	Fiber grams	Vitamin C
	240	65	0	0
	180	41	0	0
	210	49	0	180%
	210	45	0	180%
	<b>62</b>	<b>12</b>	<b>3</b>	<b>116%</b>
	<b>60</b>	<b>14</b>	<b>2</b>	<b>108%</b>
	<b>50</b>	<b>7</b>	<b>3</b>	<b>149%</b>

# Examples of Cultural Tailoring

- Sessions provided in Spanish (or bilingually)
- Culturally appropriate menu planning ideas
- Limit setting reframed as a means to communicate love
- Address common nutritional misconceptions
  - Homemade beverages healthy (despite added sugar!)
  - “All natural” and organic products healthy
  - Yogurt drinks healthy (despite added sugar!)

# A healthy choice?



# A healthy choice?



## Nutrition Facts

Serving Size 7 fl. oz. (207ml)

### Amount per serving

Calories 240      Calories from Fat 70

### % Daily Value\*

Total Fat 8g      12%

Sat. Fat 5g      26%

Trans Fat 0g

Cholesterol 30mg      10%

Sodium 100mg      4%

Total Carbohydrate 36g      12%

Dietary Fiber 0g      0%

Sugars 35g

Protein 7g

Vitamina A 5%      •      Vitamina C 0%

Calcium 22%      •      Iron 0%

\*Percent Daily Values (DV) are based on a 2,000 calorie diet.

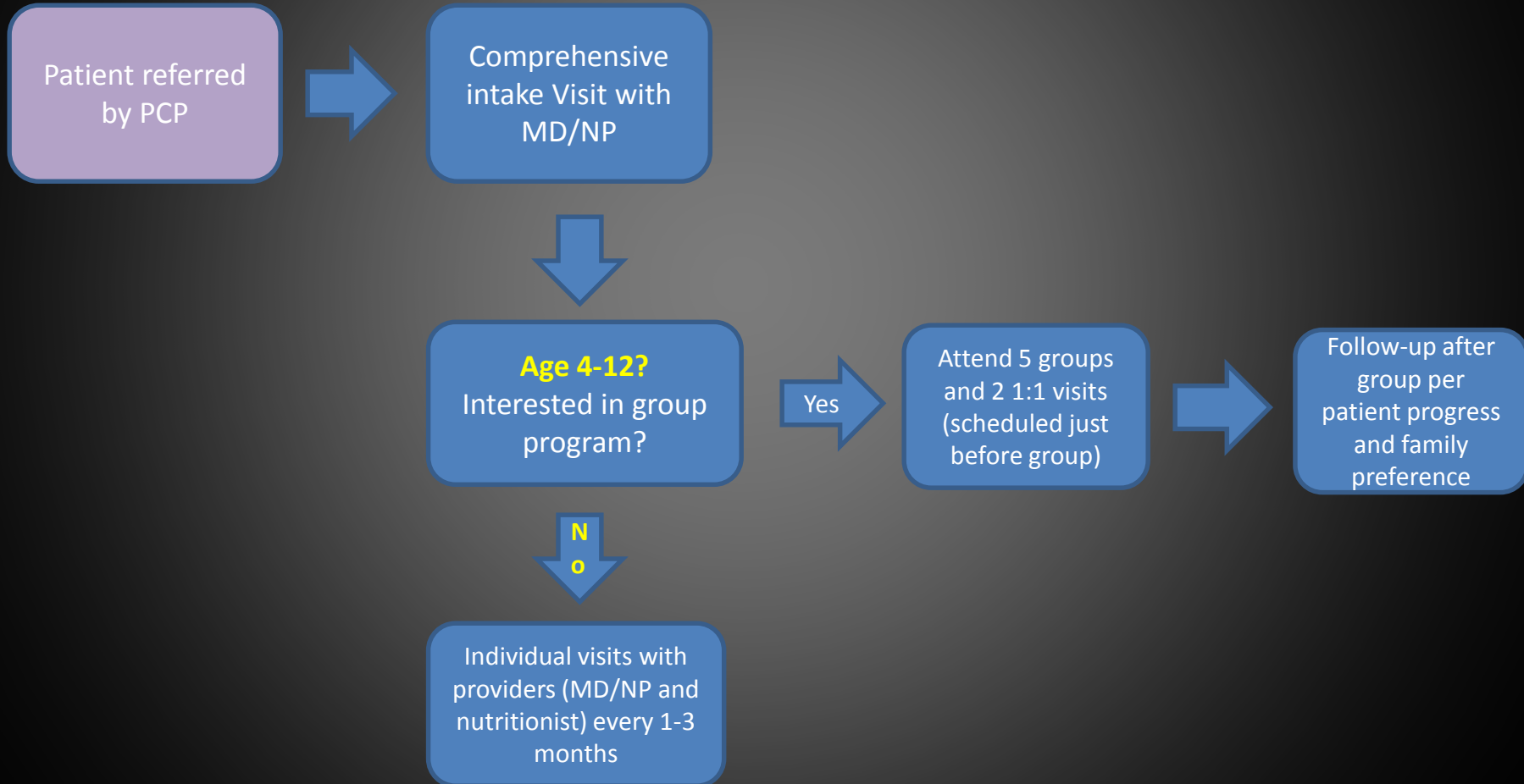
**INGREDIENTS:** CULTURED PASTEURIZED GRADE A MILK AND CREAM, SUGAR, NON FAT DRY MILK, TAPIOCA STARCH, CARRAGEENAN, LOCUST BEAN GUM, HIGH FRUCTOSE CORN SYRUP, STRAWBERRY PUREE, WATER, MODIFIED CORN STARCH, CITRIC ACID, ARTIFICIAL FLAVORS, SODIUM BENZOATE, POTASSIUM SORBATE, FOOD COLORS ANNATTO, RED#40 AND BLUE#1.

# Attention to disparities

- Groups in evening to accommodate working parents
- Cost-conscious examples and tips for shopping on a budget
- Physical activity referrals coordinator to assist with finding programs and applying for scholarships
- Actively cultivate relationships with community organizations that serve youth (Parks and Rec, YMCA etc.)



# Clinic Resources and Patient Flow



# Adolescent needs assessment

- Interviewed 33 overweight and obese teens in our clinic
- Asked about barriers and facilitators to healthy eating and physical activity
- Asked about adolescents' preferences for programs to promote healthy eating and physical activity

# Key Results

- Significant barriers to physical activity
  - Cost
  - Lack of age appropriate/desired programming
  - Age restrictions
- Perceived themselves as knowledgeable about nutrition and understood basic concepts, but had a lot of misconceptions
- Desire for cooking classes, Fitbits, physical activity opportunities, and receiving info via texts!

# Healthy and Fit Teen Program

- Pilot program in collaboration with the San Francisco YMCA and 18 Reasons (Cooking Matters)
- Recruited overweight and obese adolescents from our clinic
- Twice weekly physical activity: Dance or Strength training
- Given a Fitbit
- Weekly cooking class (incorporates nutrition)
- Three motivational/educational text messages per week

A photograph showing a person's hands holding a white rectangular sign. The sign has the text "PREVENTION IS BETTER THAN CURE" written in bold, red, uppercase letters. The background is plain white.

**PREVENTION  
IS BETTER  
THAN  
CURE**





# Why begin obesity prevention in infancy?

- Rapid weight gain in infancy is associated with childhood obesity
- Obesogenic behaviors start in infancy
- High prevalence of obesity in preschoolers
- Parents of infants are typically open to education about their infants' health and have lots of contact with the health care system and with WIC
- Two studies of obesity prevention interventions starting in infancy have led to lower child weight at age 1 and 2

Wen, L. M., Baur, L. A., Simpson, J. M., Rissel, C., Wardle, K., & Flood, V. M. (2012). Effectiveness of home based early intervention on children's BMI at age 2: randomised controlled trial. *BMJ (Clinical research ed.)*, 344, e3732-e3732.

Savage, J. S., Birch, L., Marini, M., Anzman Frasca, S., & Paul, I. M. (2016). Effect of the INSIGHT Responsive Parenting Intervention on Rapid Infant Weight Gain and Overweight Status at Age 1 Year: A Randomized Clinical Trial. *JAMA Pediatrics*, 170(8), 742-749.

# Strong Futures/Futuros Fuertes

- Pilot randomized controlled trial based in pediatric primary care
- Latino infant/parent dyads are recruited just after birth and followed for 2 years
- Parents receive education on obesity prevention topics from a lay health educator just after well child visits at infant age 2-weeks, 2-, 4-, 6-, 9-, and 12-months
- Parents receive 2-text messages per week until 15-months and 1 text message per week until age 2



# Futuros Fuertes Intervention Topics

Visit	Topics
2-weeks	Responsive feeding: Benefits and how to do it Health effects of sweet beverages
2-months	Health benefits of adequate sleep Promoting longer sleep duration Screen time avoidance
4-months	Introduction of solids Responsive feeding with solids
6-months	What to feed and what to avoid Whole grains
9-months	What to feed and what to avoid Hidden sugars
12-months	MyPlate for toddler meal planning Division of responsibility in feeding Family schedules and physical activity

# Summary

- Childhood obesity is treatable but requires intensive sustained intervention (and prevention is always the better option!)
- Latino parents are motivated to learn how to address childhood obesity but face numerous structural barriers
- Leveraging both community and health systems resources is critical to help low-income families
- Meeting families (and teens) where they are is a key element for success



# ADDRESSING OBESITY: POLICY OPTIONS

---

Alicia Fernandez, MD  
Professor of Medicine  
Center for Vulnerable Populations  
University of California, San Francisco



# DISCLOSURES

---

No Disclosures



# OUTLINE

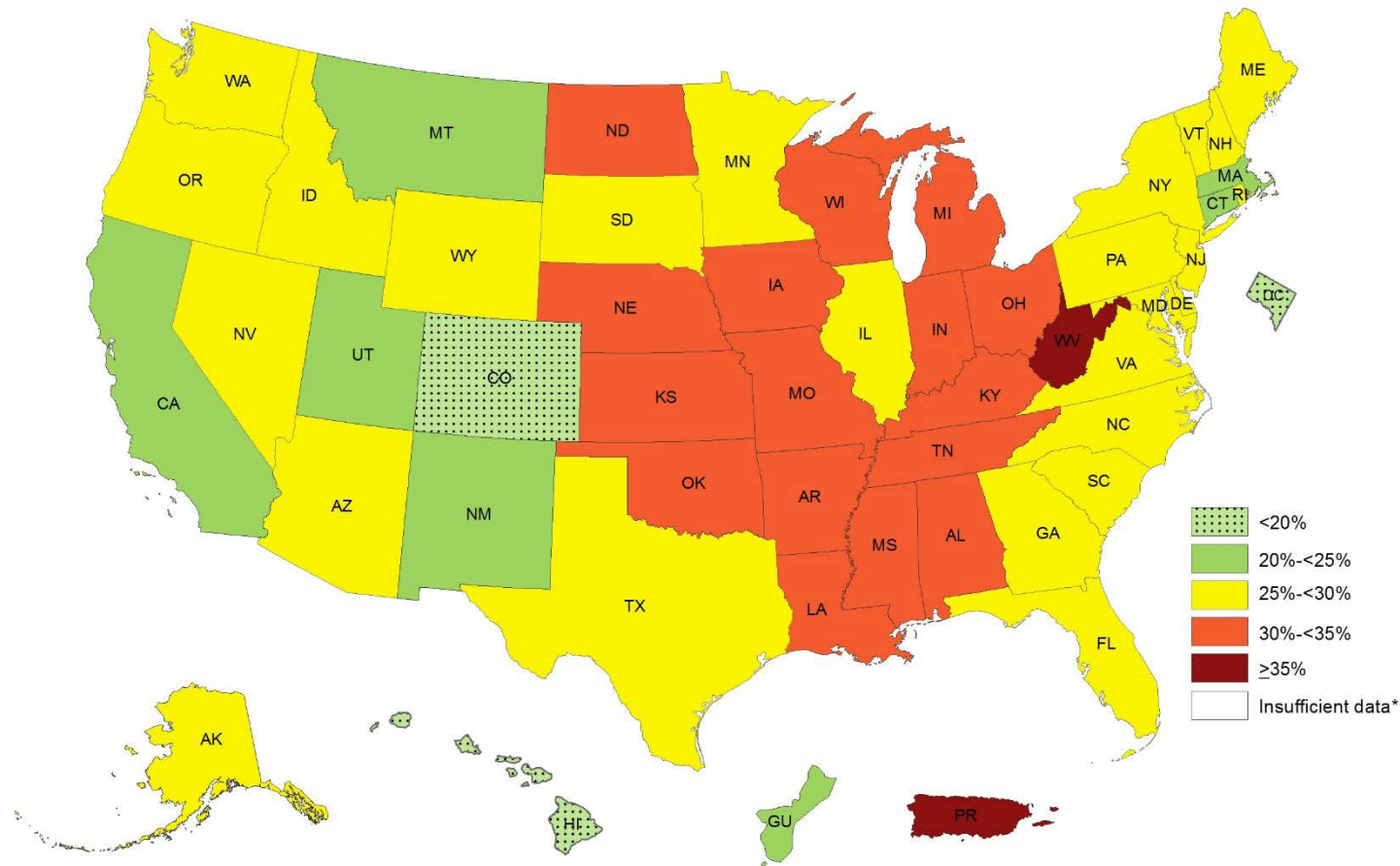
- Review of national obesity data
- San Diego Data
- Policy Options
  - Food security
  - SSB
  - Multicomponent Coalitions

# Goals for Today's Talk:

- Awareness of local data
- Successes of policy options
- Harnessing knowledge/ideas from others

# **Current State of Obesity in the US**

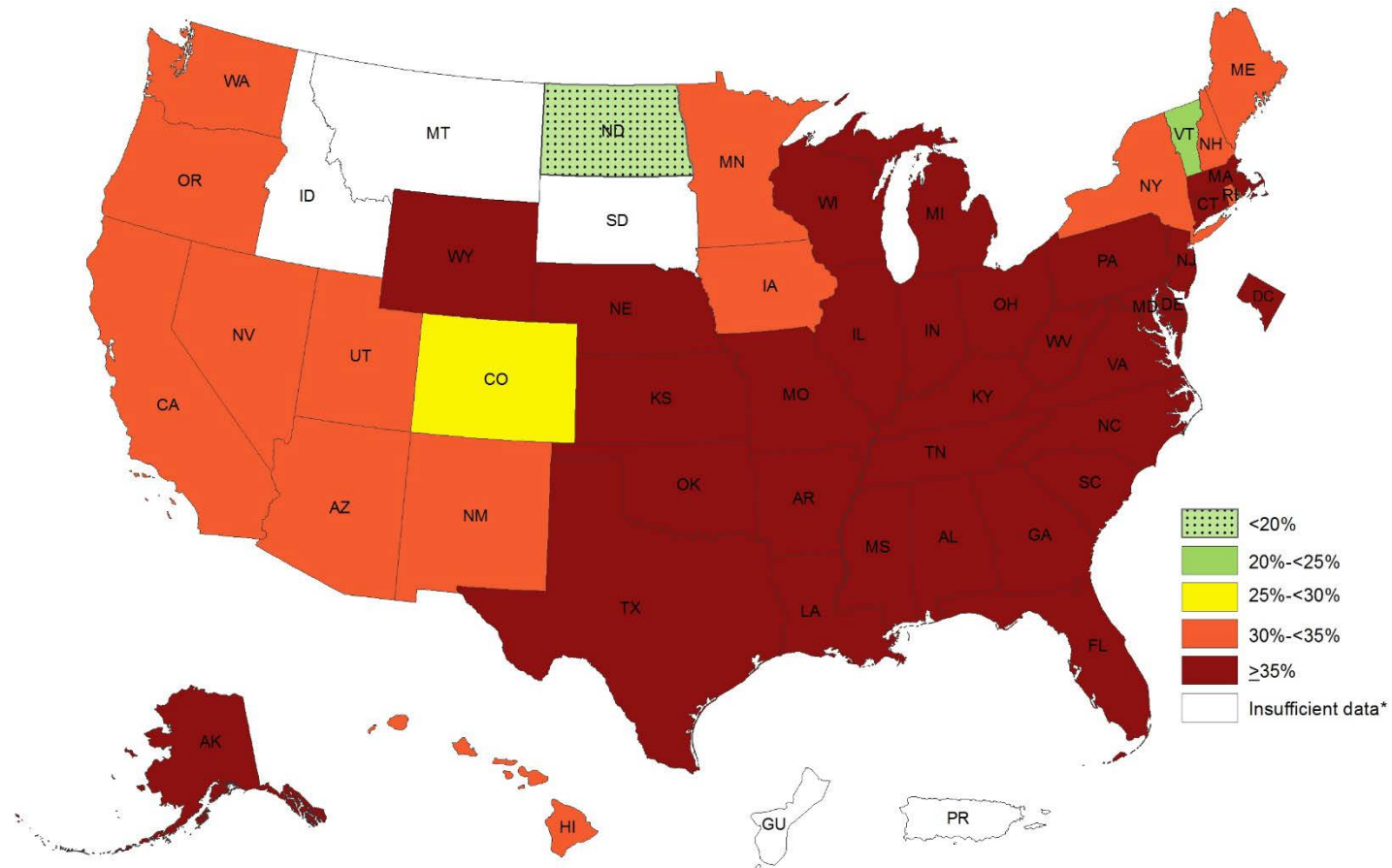
# Prevalence of Self-Reported Obesity Among Non-Hispanic White Adults, by State and Territory, BRFSS, 2014-2016



\*Sample size <50 or the relative standard error (dividing the standard error by the prevalence) ≥ 30%.



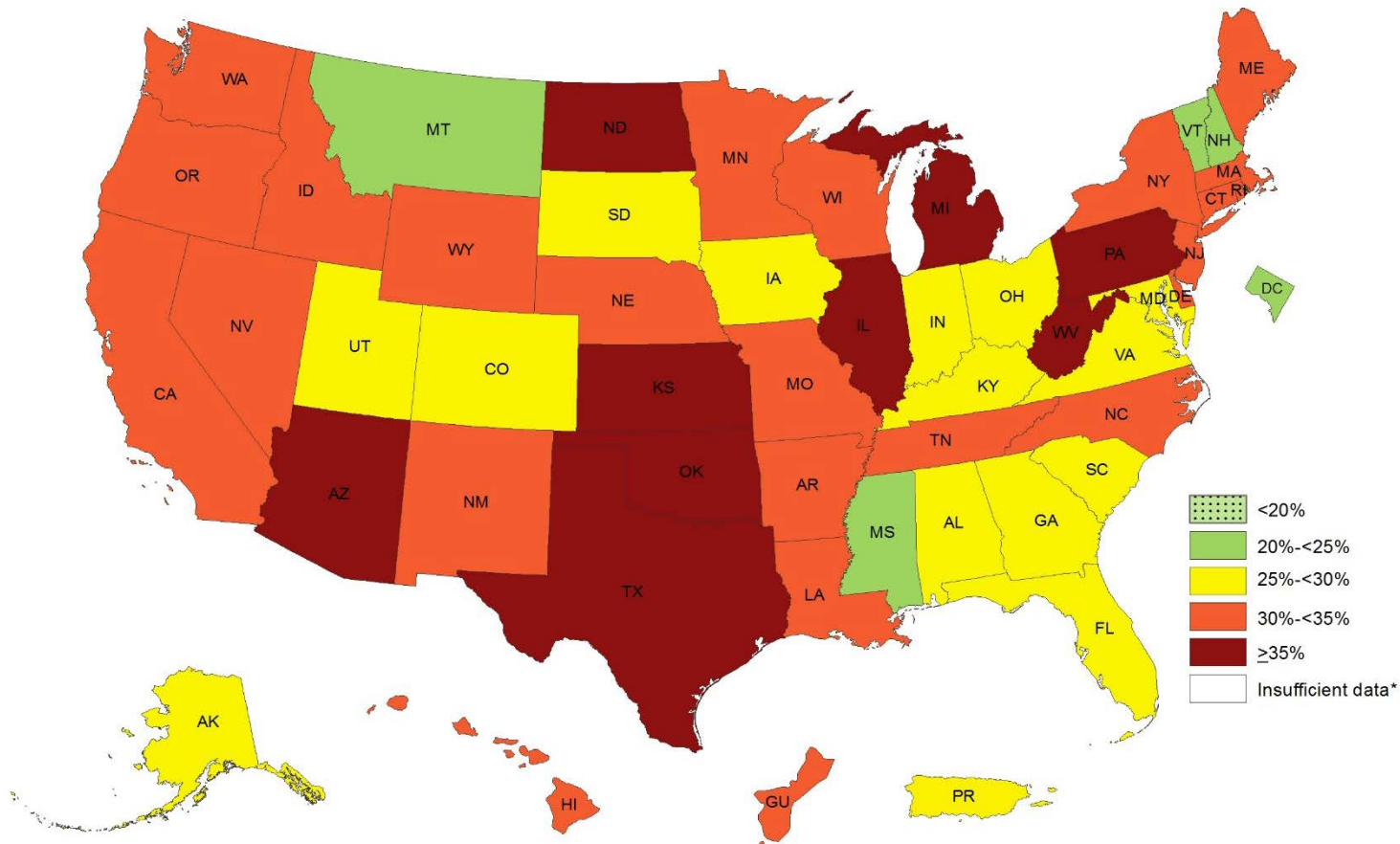
# Prevalence of Self-Reported Obesity Among Non-Hispanic Black Adults, by State and Territory, BRFSS, 2014-2016



\*Sample size <50 or the relative standard error (dividing the standard error by the prevalence) ≥ 30%.



# Prevalence of Self-Reported Obesity Among Hispanic Adults, by State and Territory, BRFSS, 2014-2016

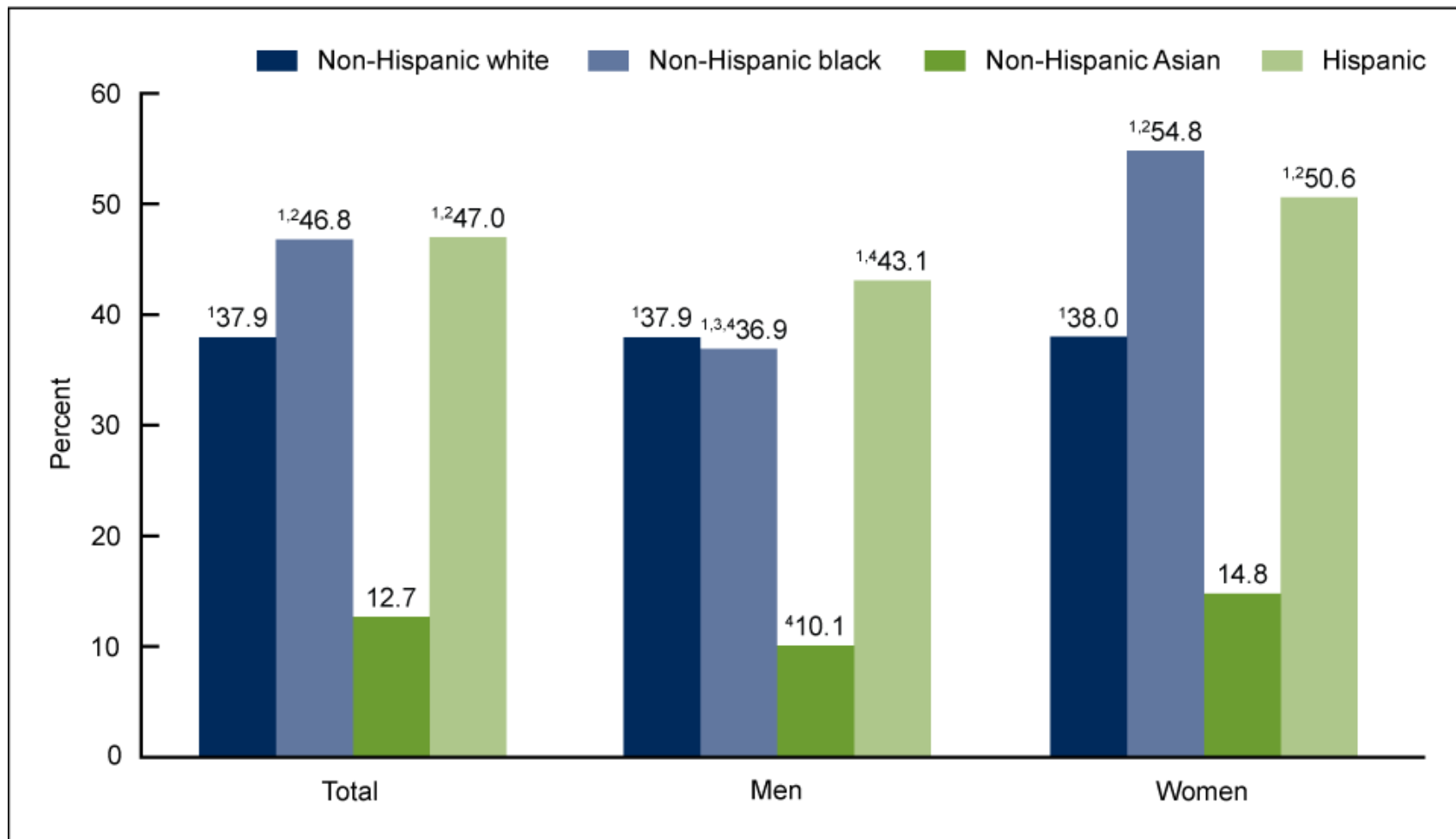


\*Sample size <50 or the relative standard error (dividing the standard error by the prevalence) ≥ 30%.





Figure 2. Age-adjusted prevalence of obesity among adults aged 20 and over, by sex and race and Hispanic origin: United States, 2015–2016



<sup>1</sup>Significantly different from non-Hispanic Asian persons.

<sup>2</sup>Significantly different from non-Hispanic white persons.

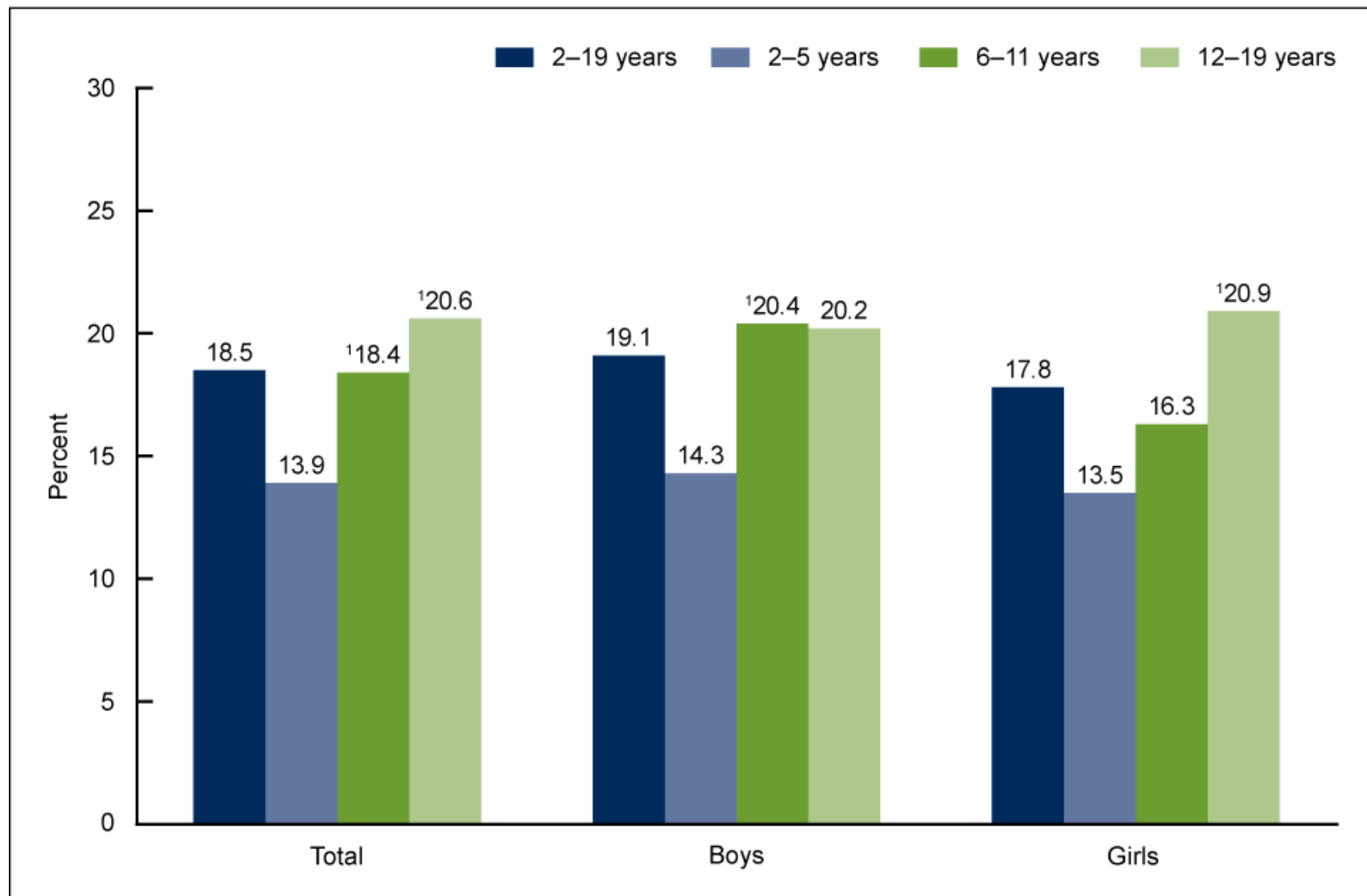
<sup>3</sup>Significantly different from Hispanic persons.

<sup>4</sup>Significantly different from women of same race and Hispanic origin.

NOTES: All estimates are age adjusted by the direct method to the 2000 U.S. census population using the age groups 20–39, 40–59, and 60 and over. Access data table for Figure 2 at: [https://www.cdc.gov/nchs/data/databriefs/db288\\_table.pdf#2](https://www.cdc.gov/nchs/data/databriefs/db288_table.pdf#2).

SOURCE: NCHS, National Health and Nutrition Examination Survey, 2015–2016.

Figure 3. Prevalence of obesity among youth aged 2–19 years, by sex and age: United States, 2015–2016

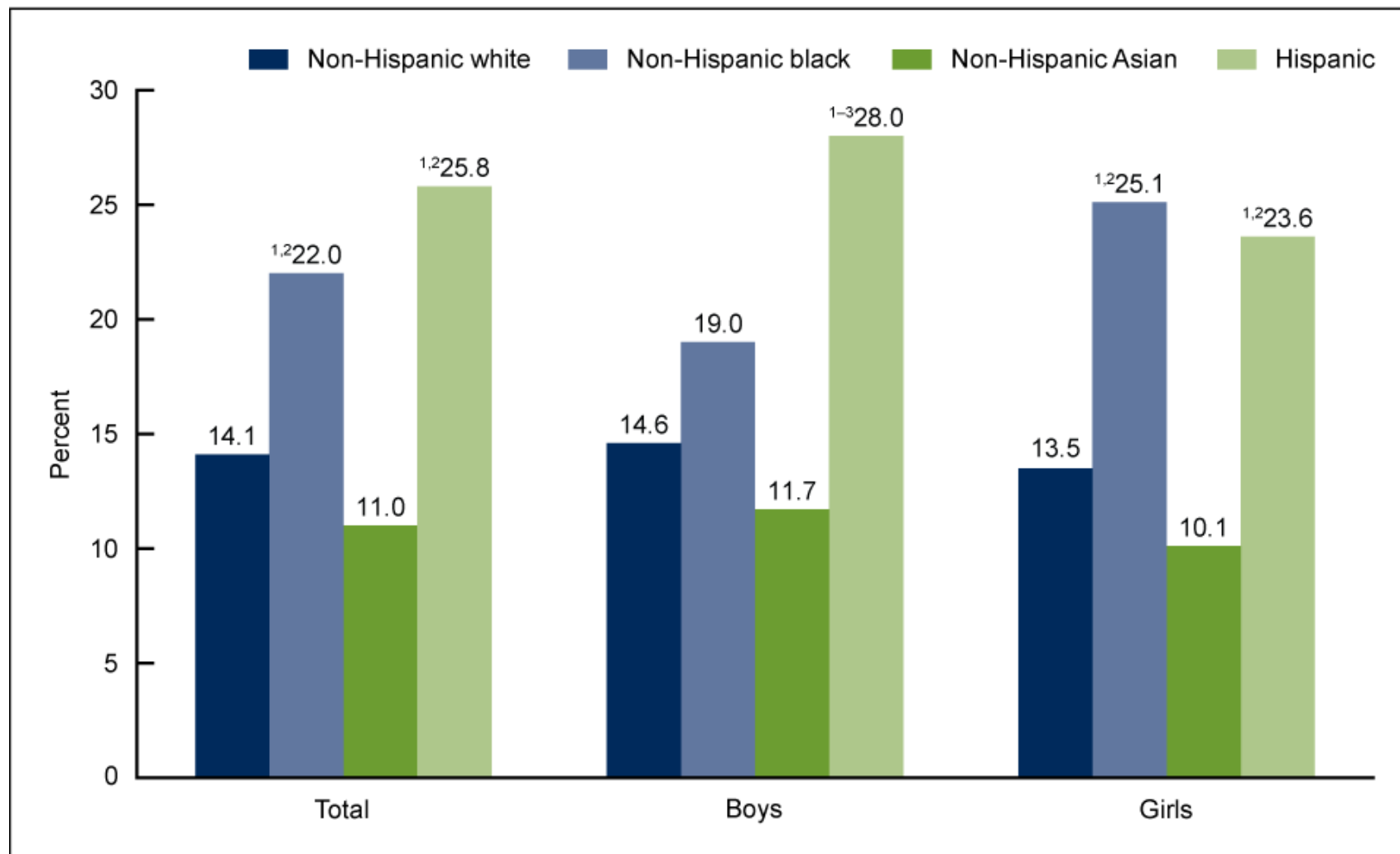


<sup>1</sup>Significantly different from those aged 2–5 years.

NOTE: Access data table for Figure 3 at: [https://www.cdc.gov/nchs/data/databriefs/db288\\_table.pdf#3](https://www.cdc.gov/nchs/data/databriefs/db288_table.pdf#3).

SOURCE: NCHS, National Health and Nutrition Examination Survey, 2015–2016.

Figure 4. Prevalence of obesity among youth aged 2–19 years, by sex and race and Hispanic origin: United States, 2015–2016



<sup>1</sup>Significantly different from non-Hispanic Asian persons.

<sup>2</sup>Significantly different from non-Hispanic white persons.

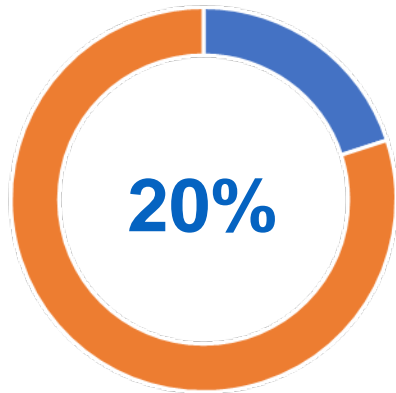
<sup>3</sup>Significantly different from non-Hispanic black persons.

NOTE: Access data table for Figure 4 at: [https://www.cdc.gov/nchs/data/databriefs/db288\\_table.pdf#4](https://www.cdc.gov/nchs/data/databriefs/db288_table.pdf#4).

SOURCE: NCHS, National Health and Nutrition Examination Survey, 2015–2016.

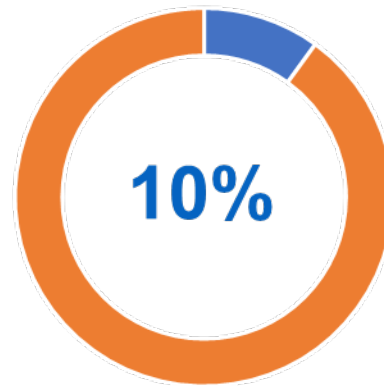
# Food Insecurity

Latino



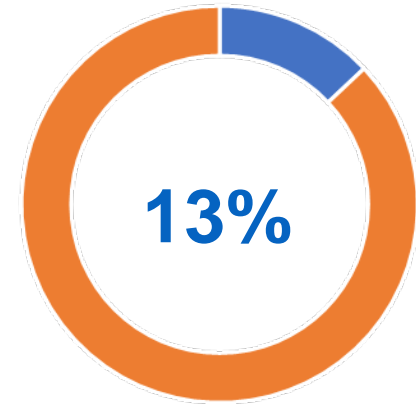
■ Food Insecure ■ Food Secure

White, non-Hispanics



■ Food Insecure ■ Food Secure

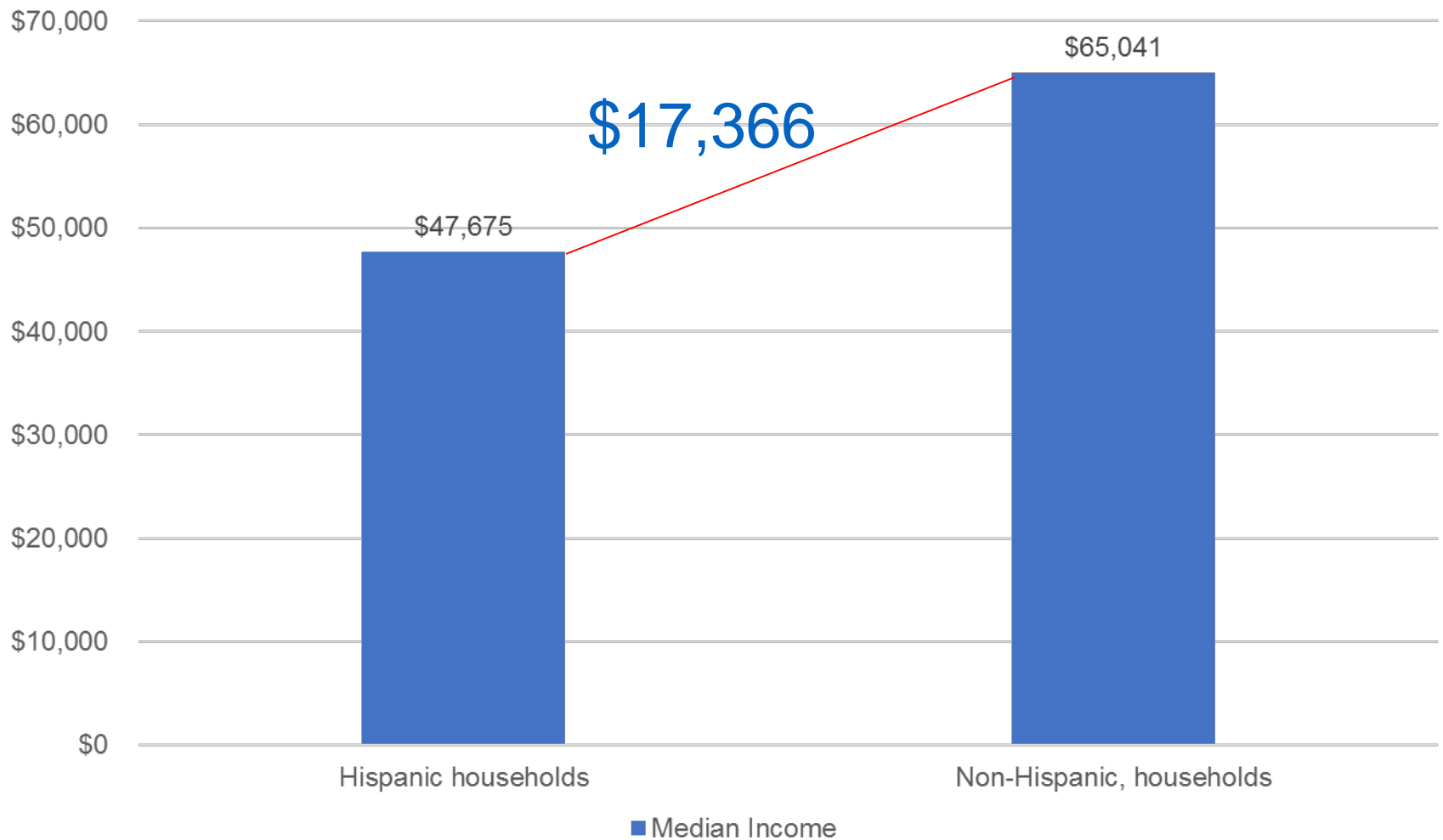
Americans overall



■ Food insecure ■ Food secure

Source: Feeding America Latino Hunger Fact Sheet September 2017

# Income Inequality

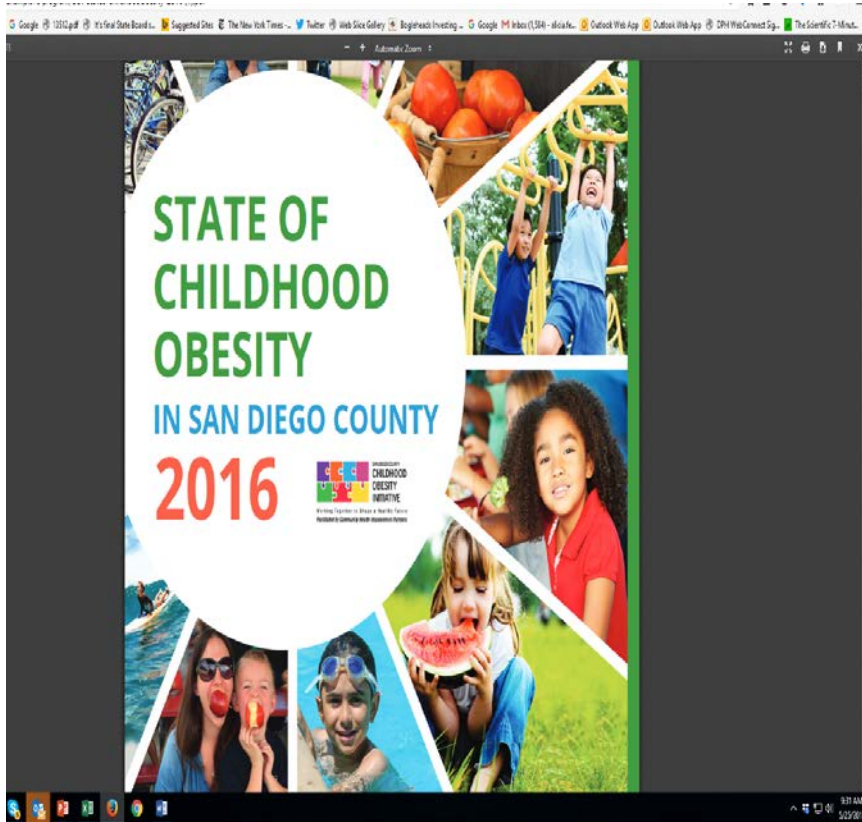


Source: Feeding America Latino Hunger Fact Sheet September 2017

# San Diego County Level Data

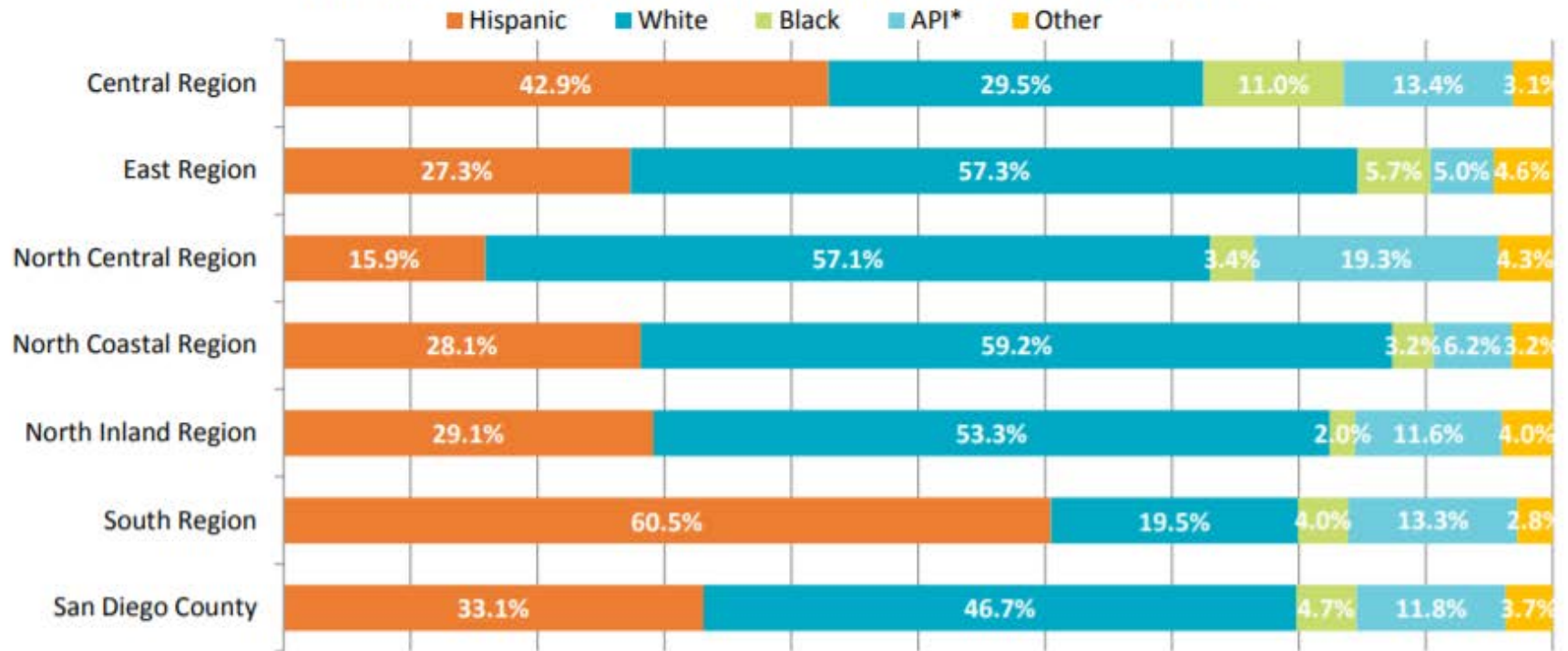


# San Diego Childhood Obesity Initiative



- SD Department Public Health
- Live Well San Diego
- Kaiser Permanente
- First 5
- CHIP

### Percent of Population by Race/Ethnicity and HHS Region, 2016



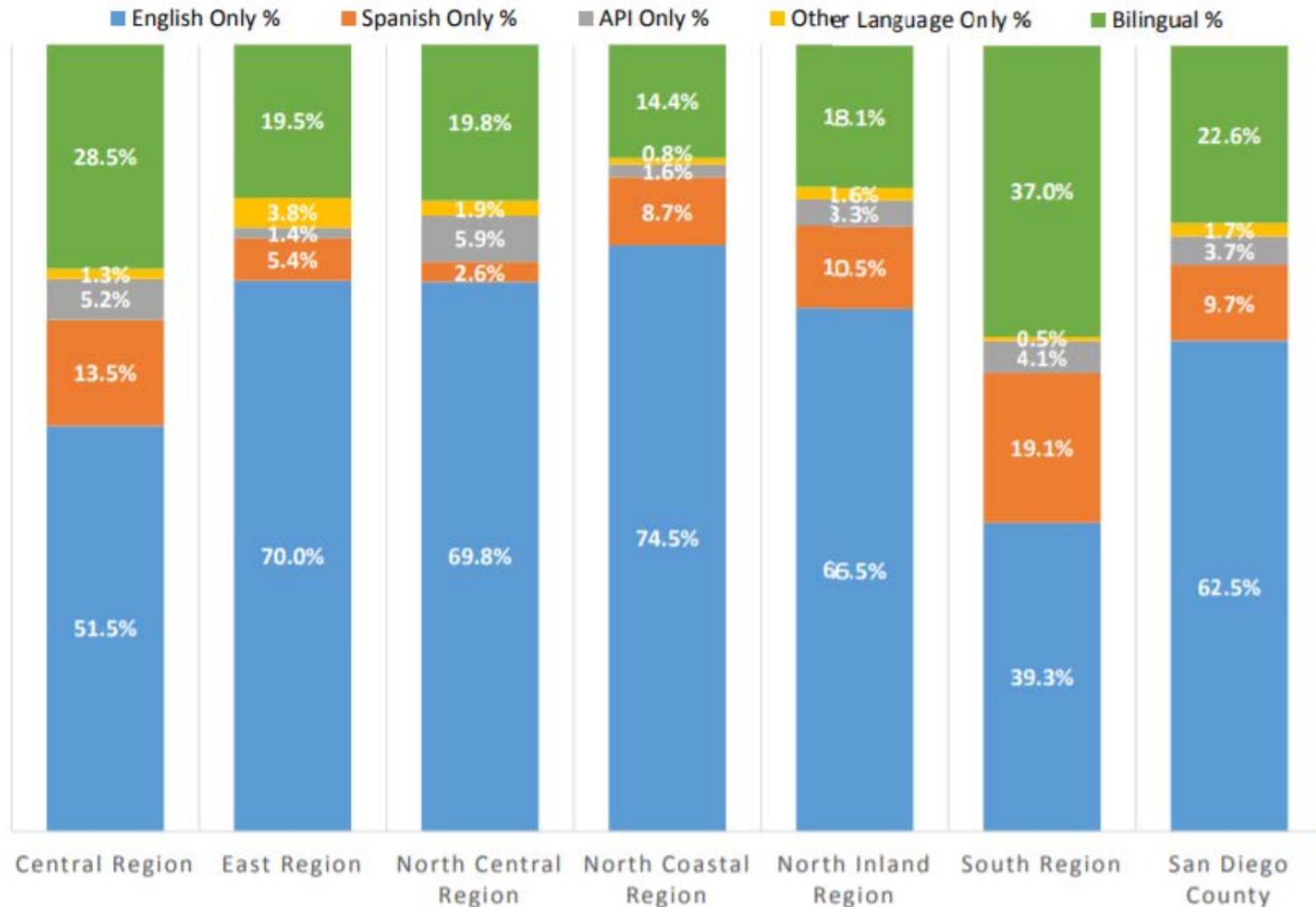
\*API refers to Asian/ Pacific Islanders and include Asian, Pacific Islander, and Native Hawaiian. Other includes American Indian or Alaska Native, 2 or more races, and other.

Source: U.S. Census Bureau; 2012-2016 American Community Survey 5-Year Estimates, Table B03002.

Prepared by: County of San Diego, Health and Human Services Agency, Public Health Services, Community Health Statistics Unit, 2018.

\*API refers to Asian/ Pacific Islanders and include Asian, Pacific Islander, and Native Hawaiian. Other includes American Indian or Alaska Native, 2 or more races, and other.

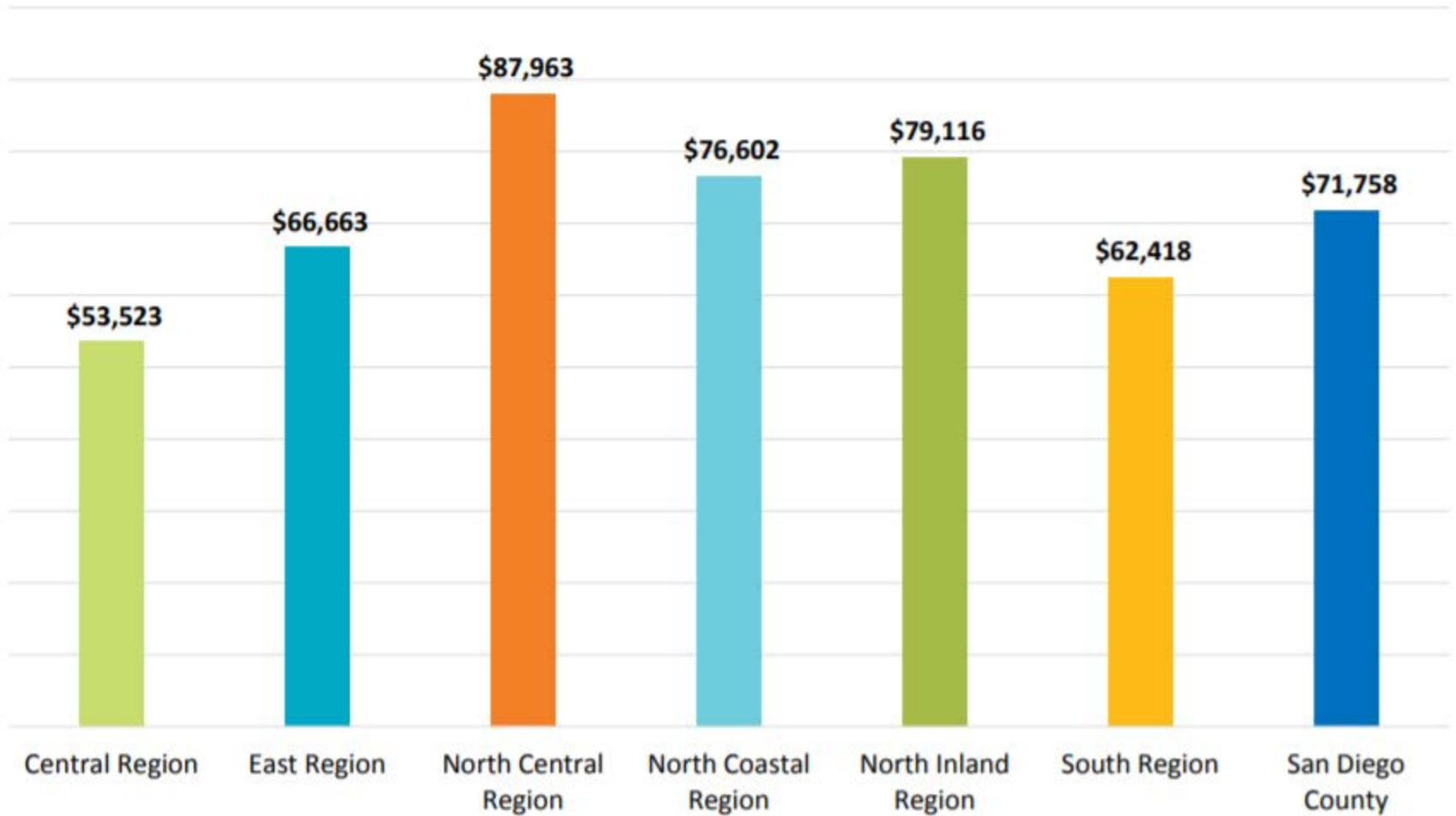
## Language Spoken at Home Among Population 5 Years and Older by HHS Region, 2016



Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates, Table DP02.

Prepared by: County of San Diego, Health and Human Services Agency, Public Health Services, Community Health Statistics Unit, 2018.

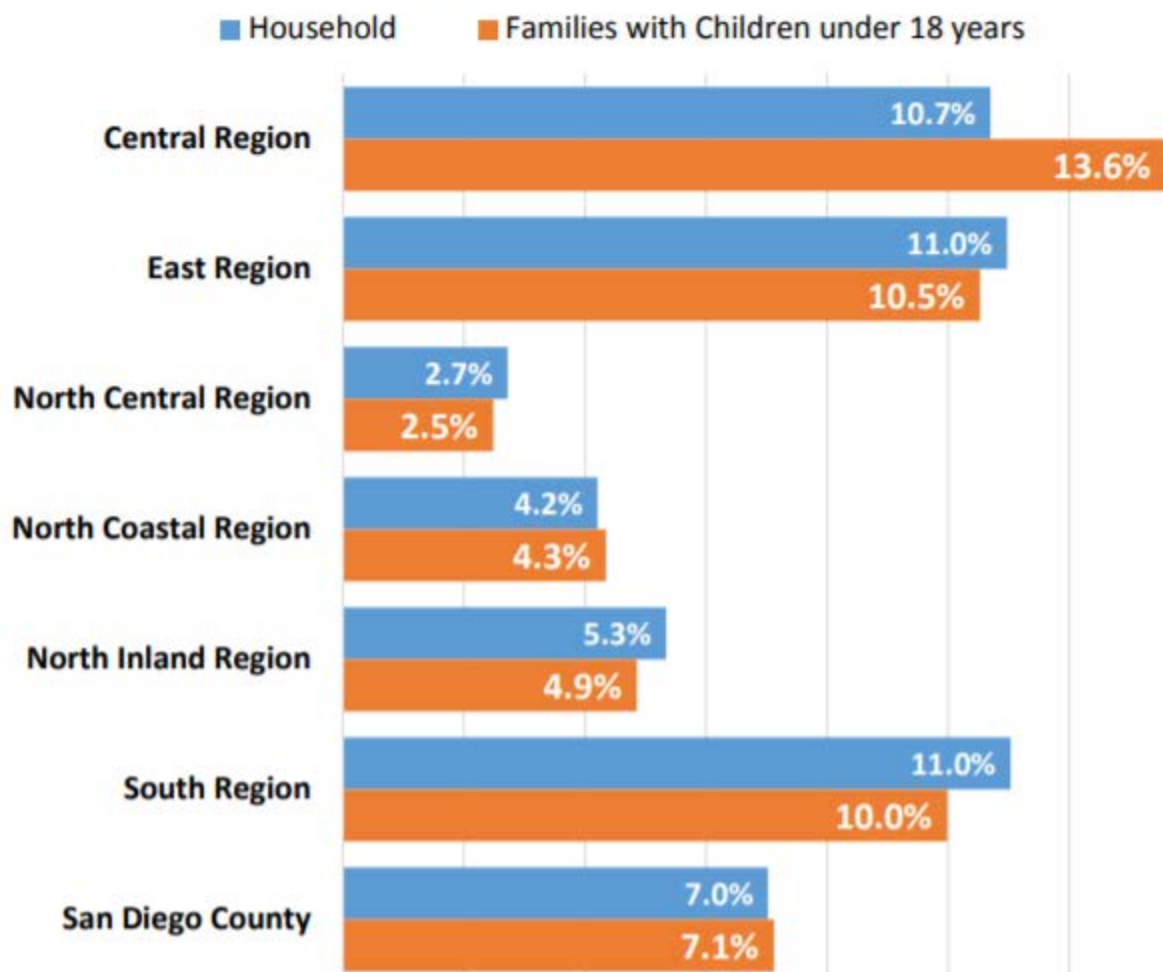
## Median Household Income by HHS Region, 2016



Source: U.S. Census Bureau; 2012-2016 American Community Survey 5-Year Estimates, Table DP03, DP04.

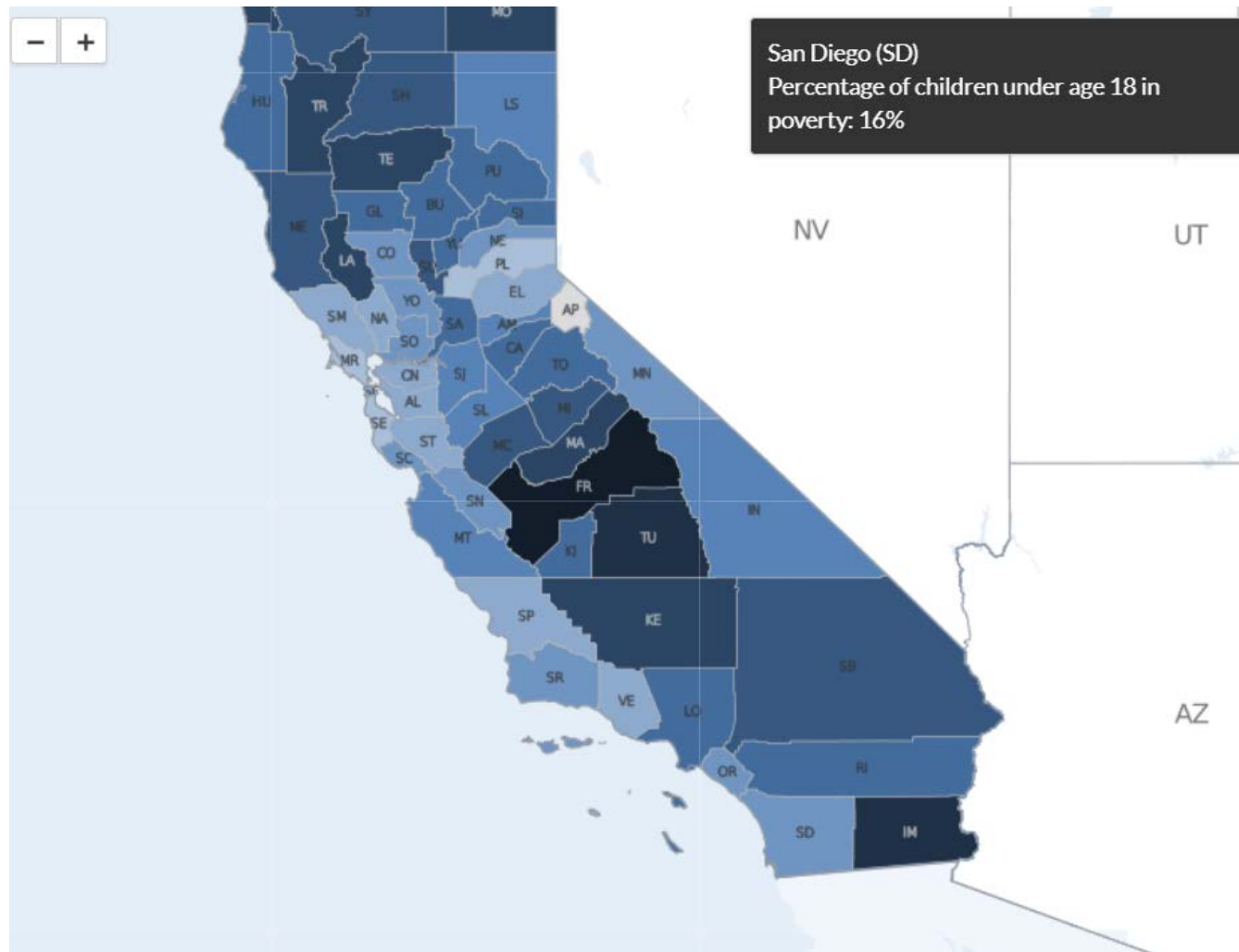
Prepared by: County of San Diego, Health and Human Services Agency, Public Health Services, Community Health Statistics Unit, 2018.

## Food Stamps/SNAP/CalFresh Receipt by HHS Region, 2016



Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates, Table B22002, B22007, B17024.  
Prepared by: County of San Diego, Health and Human Services Agency, Public Health Services,  
Community Health Statistics Unit, 2018.

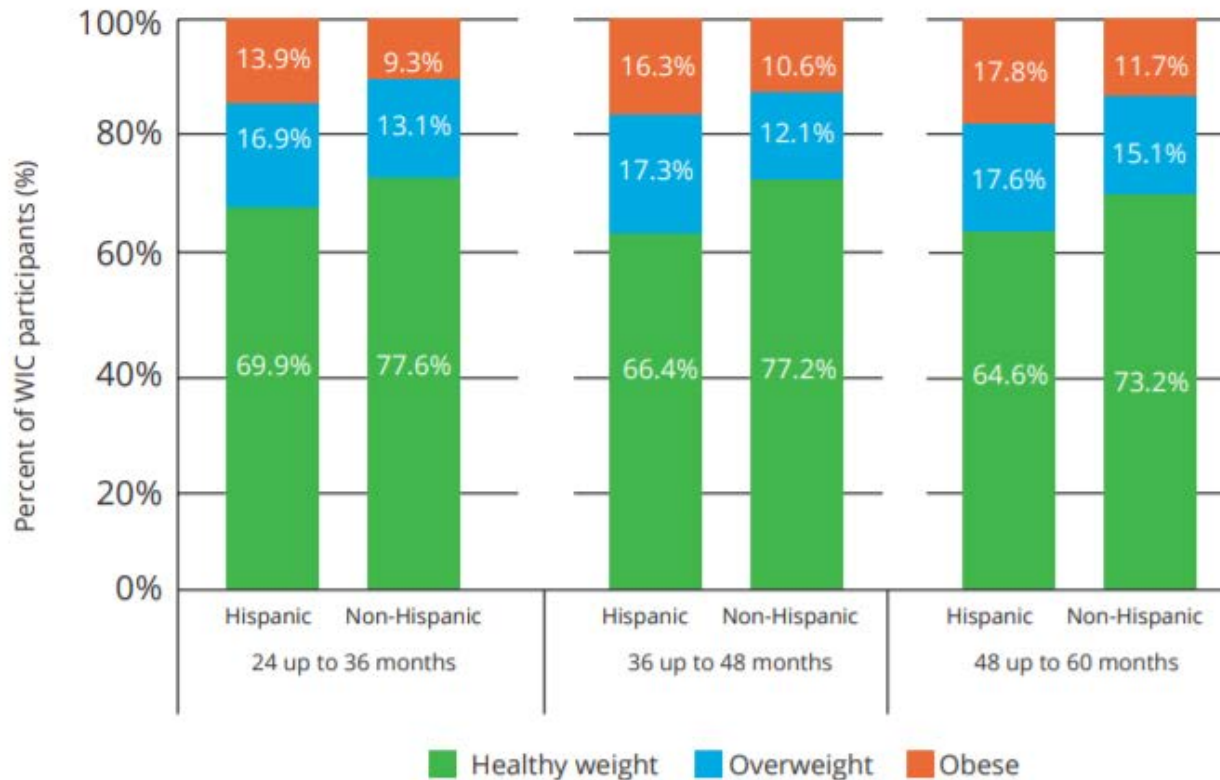
# Children Living in Poverty





# San Diego County

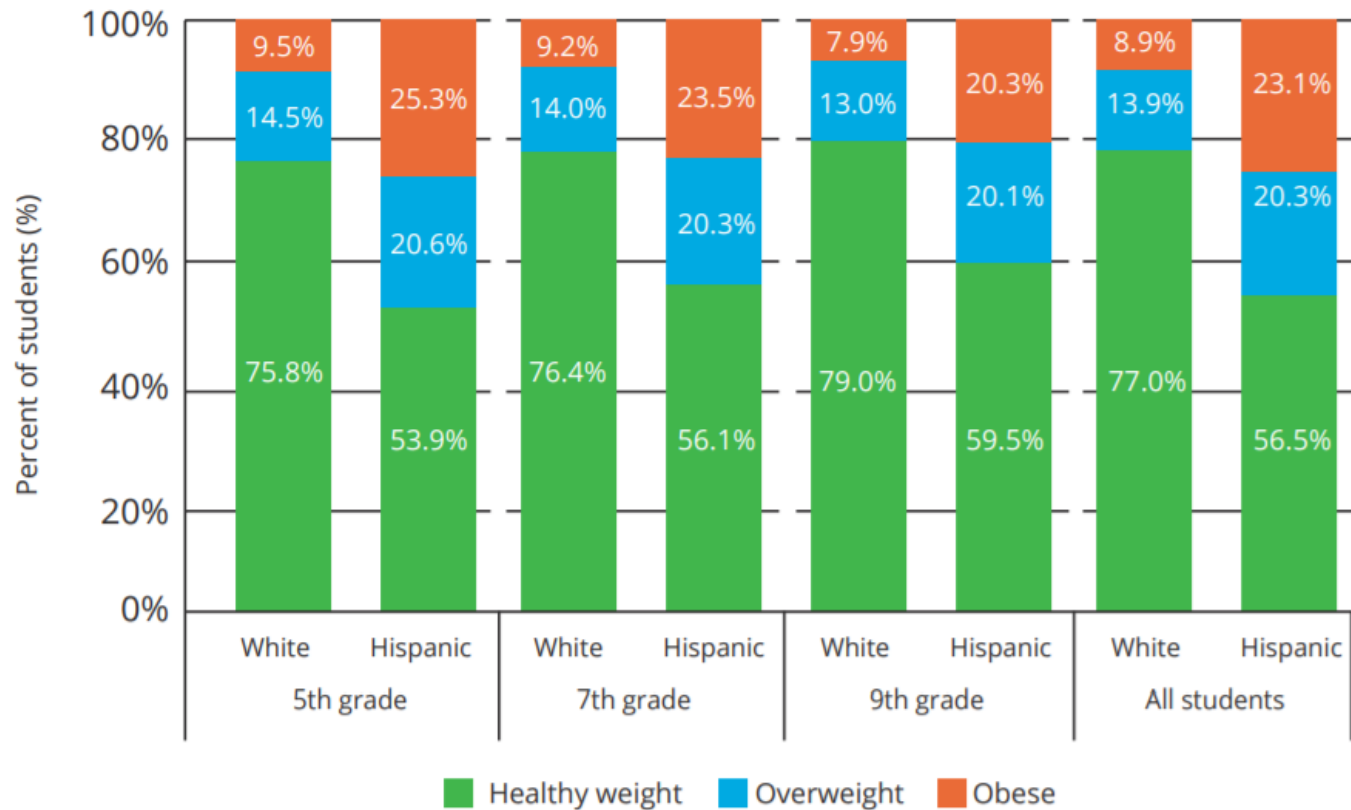
**Figure 7: Childhood overweight and obesity among San Diego County WIC participants ages 24 to 60 months (2015)  
Hispanic vs. Non-Hispanic**



Source: San Diego County WIC agencies

# San Diego County

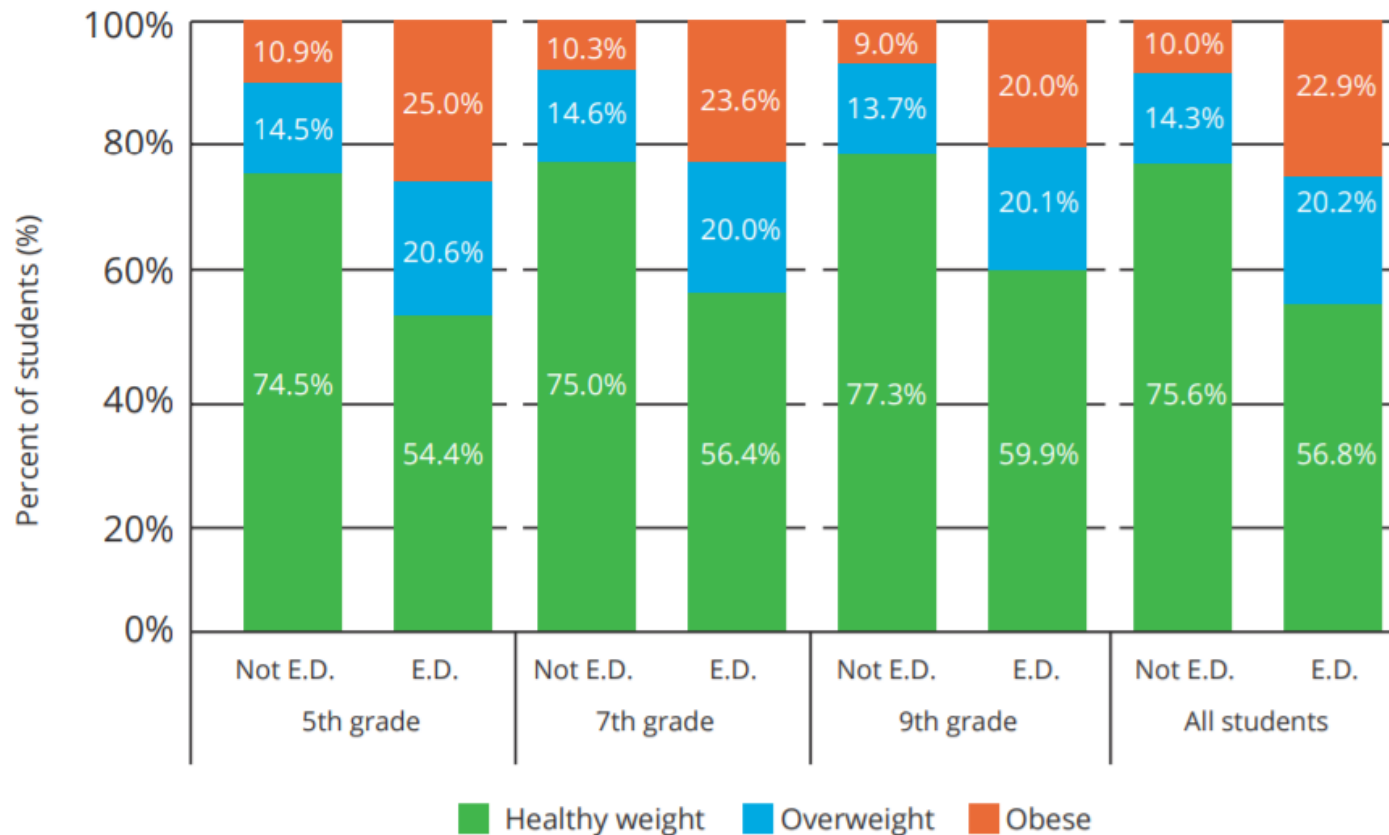
**Figure 3: Childhood overweight and obesity among San Diego County  
5th, 7th, and 9th grade public school students  
White vs. Hispanic students (school year 2014-15)**



Source: California Department of Education, FITNESSGRAM® body composition test

# San Diego County

**Figure 4: Childhood overweight and obesity among San Diego County 5th, 7th, and 9th grade public school students economically disadvantaged (E.D.) vs. non-E.D. students (school year 2014-15)**



Source: California Department of Education, FITNESSGRAM® body composition test

# Obesity in Mexico

- Second most obese country in world
- 74% of women and 67% of men are overweight/obese by WHO criteria
- Driven by urbanization, dietary changes
- Highest consumption of sugar sweetened beverages in world
- May challenge “healthy immigrant” effect



# San Diego County

In 2014 - 2015

- Half of all public school students in San Diego County were Hispanic
- Half of all public school students in San Diego County were low income
- High variation in school wellness initiatives
- Will require intensive and intentional health equity strategy

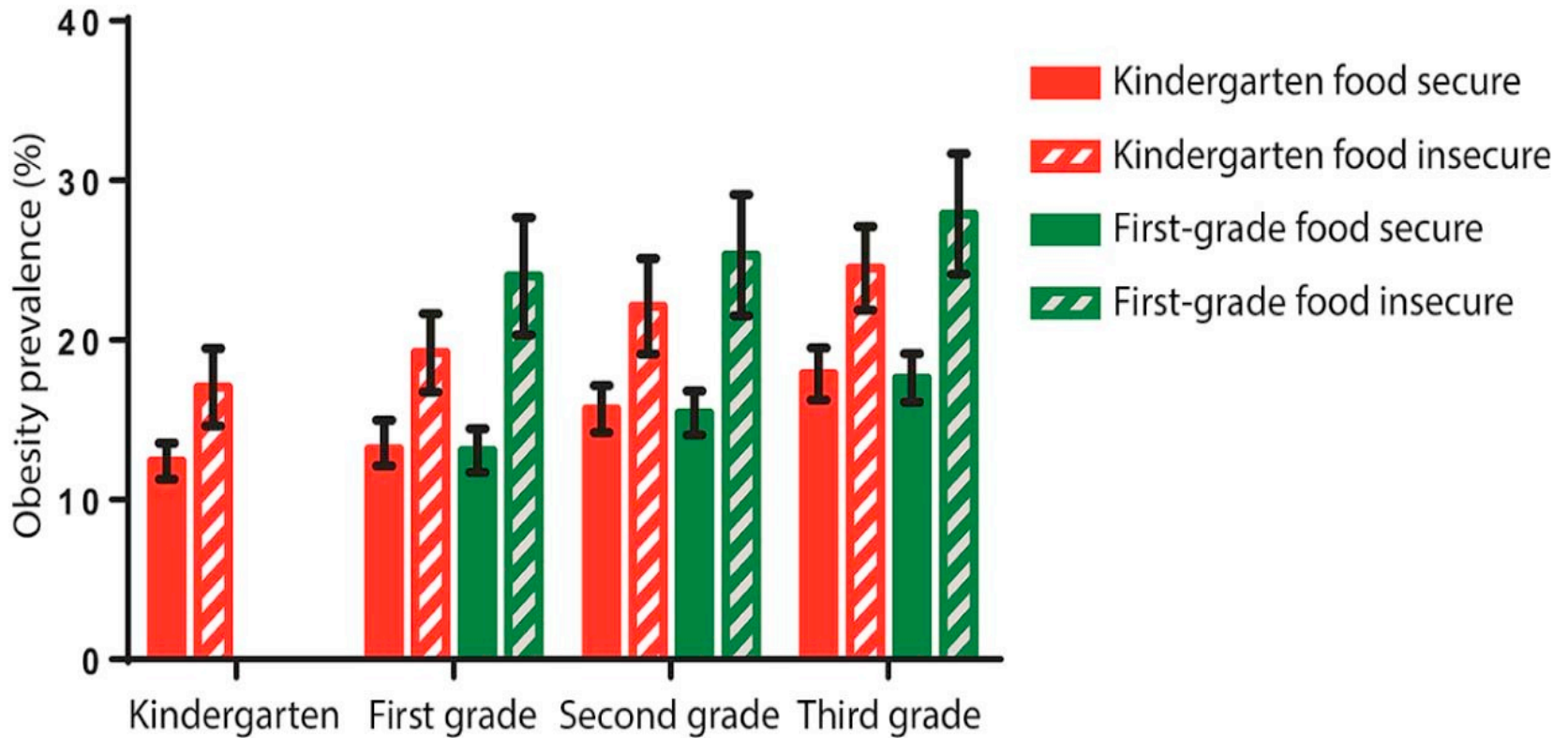
# Contributing Factors

- Aggressive marketing
- *One XXXX-XXXX executive pointed out that "86 percent of [the company's] growth through 2020 for XXXX-XXXX's youth-target market [would] come from multicultural consumers, especially Hispanic," and concluded "focusing on this segment [is] critical to the company's future growth."<sup>13</sup>*



# A Menu of Policy Options

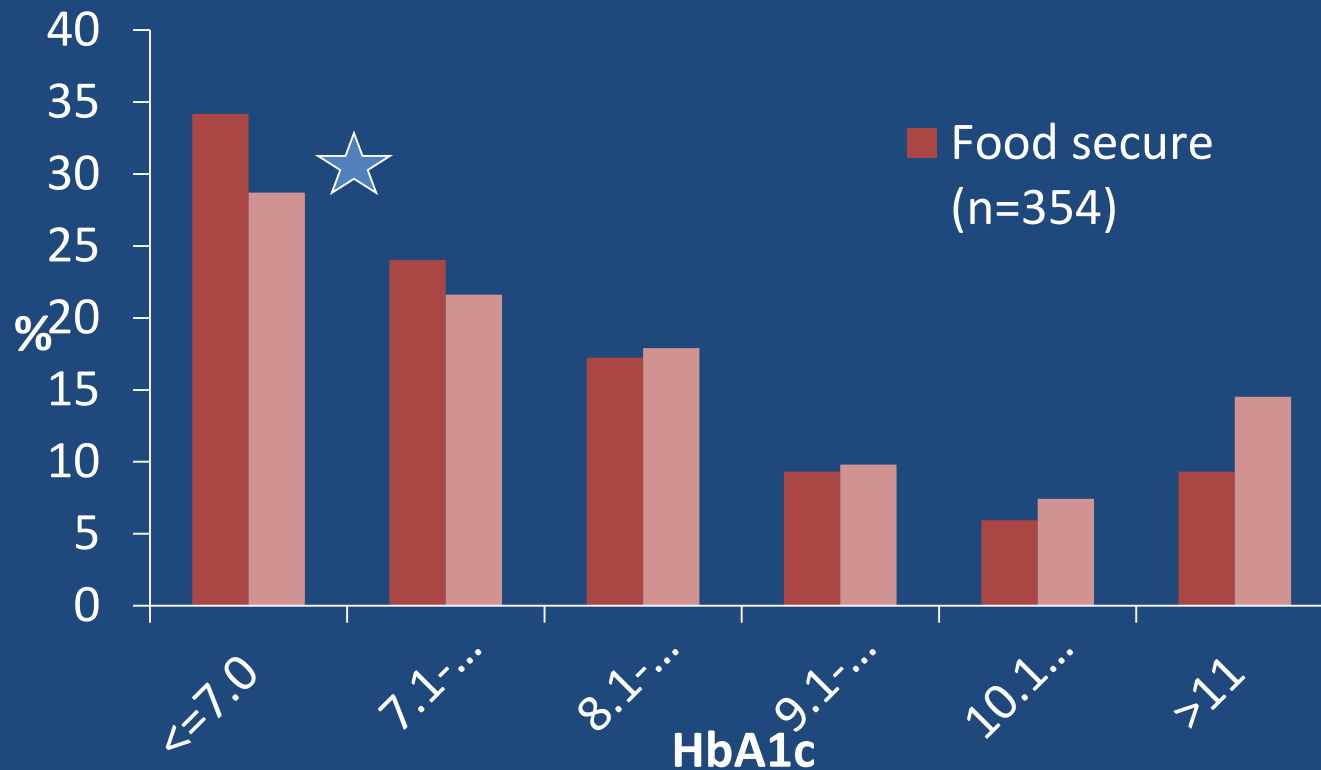
- Taxes
- Removing sugary drinks from school/government/health care buildings
- Reformulation of products
- Warning labels
- Restricted marketing to children
  
- Eliminating food insecurity



Lee; *Nutrition* 2018 51, 1-5 DOI: (10.1016/j.nut.2017.12.008)



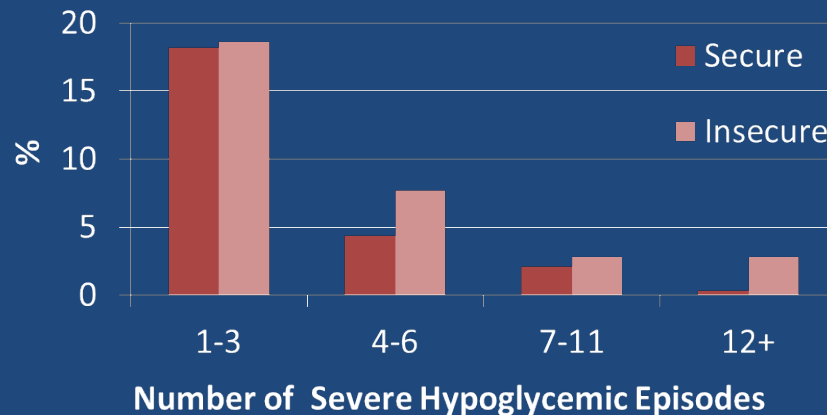
# Food Insecure Adults with Diabetes Have Higher Average Blood Sugars



Seligman, / Fernandez *Diabetes Care*, 2012.

# Food Insecurity and Hypoglycemia

Of the 711 participants, 197 (28%) reported at least one significant hypoglycemic episode in the previous year.



4+ episodes:  
AOR 1.9 (1.1-3.5)

\*Adjusted model includes age, race/ethnicity, tobacco use, English proficiency, income, educational attainment, body weight, insulin, renal disease, adherence to medication and blood glucose testing, comorbid conditions, and alcohol abuse.

# Healthcare and Food

**HEALTHCARE FINANCE**  
REIMBURSEMENT | REVENUE CYCLE MANAGEMENT | STRATEGIC PLANNING

MAY 16, 2017 | MORE ON PATIENT ENGAGEMENT

## Major hospitals, doctors make food insecurity in patient care a priority

Patients with a near-bare cupboard might buy unhealthful food or skimp on prescriptions or avoid going hungry.

**KHI** Kaiser Health News



## Boston Medical Center's Preventive Food Pantry Merges Nutrition and Healthcare

Patients get referred to the pantry by their primary care physician.

by **JAMIE DUCHARME** • 9/25/2014, 10:44 a.m.



Inside the Preventive Food Pantry. Photos provided to bostonmagazine.com

**MPRnews**

Sections ▾ Members ▾ More ▾

## Hospital hands out food to patients in need

Julie Siple · Minneapolis · Feb 4, 2011

Issues



**LISTEN** Doctor launches food shelf at HCMC  
3min 41sec



Shanelle Milo, Diana Cutts MPR Photo/Julie Siple

Every time Dr. Diana Cutts walks into the pediatric clinic at Hennepin County Medical Center in Minneapolis, she knows there's a nearly one in three chance she'll find a family struggling with hunger.

With such research in mind -- and the knowledge that poor nutrition affects a child's physical and cognitive development -- Cutts pays close attention to whether families consistently have nutritious food at home.

When she meets parents like Shanelle Milo, a mother who recently brought in her eight-month-old daughter Saraiya for an exam, the conversation can quickly shift to food. That's what happened when Milo mentioned that she had run out of baby formula.

Milo, who lives in a shelter, told Cutts she has trouble affording enough nutritious food to feed her three children.

Cutts makes sure Milo receives benefits from the federal Women, Infants and

Thx to Alice Chen, MD

# Why not provide food? Eat SF

Healthy fruit and vegetable voucher program for low-income SF residents with diet-sensitive chronic diseases and families with children <5 years old

## Food Security

- EatSF improves access to fruits and vegetables at the market where people regularly shop.

## Community Transformation

- Participating vendors will stock an increased variety and amount of quality fruits and vegetables in response to customer demand. This will increase access to healthy food for everyone, not just those in the EatSF program.

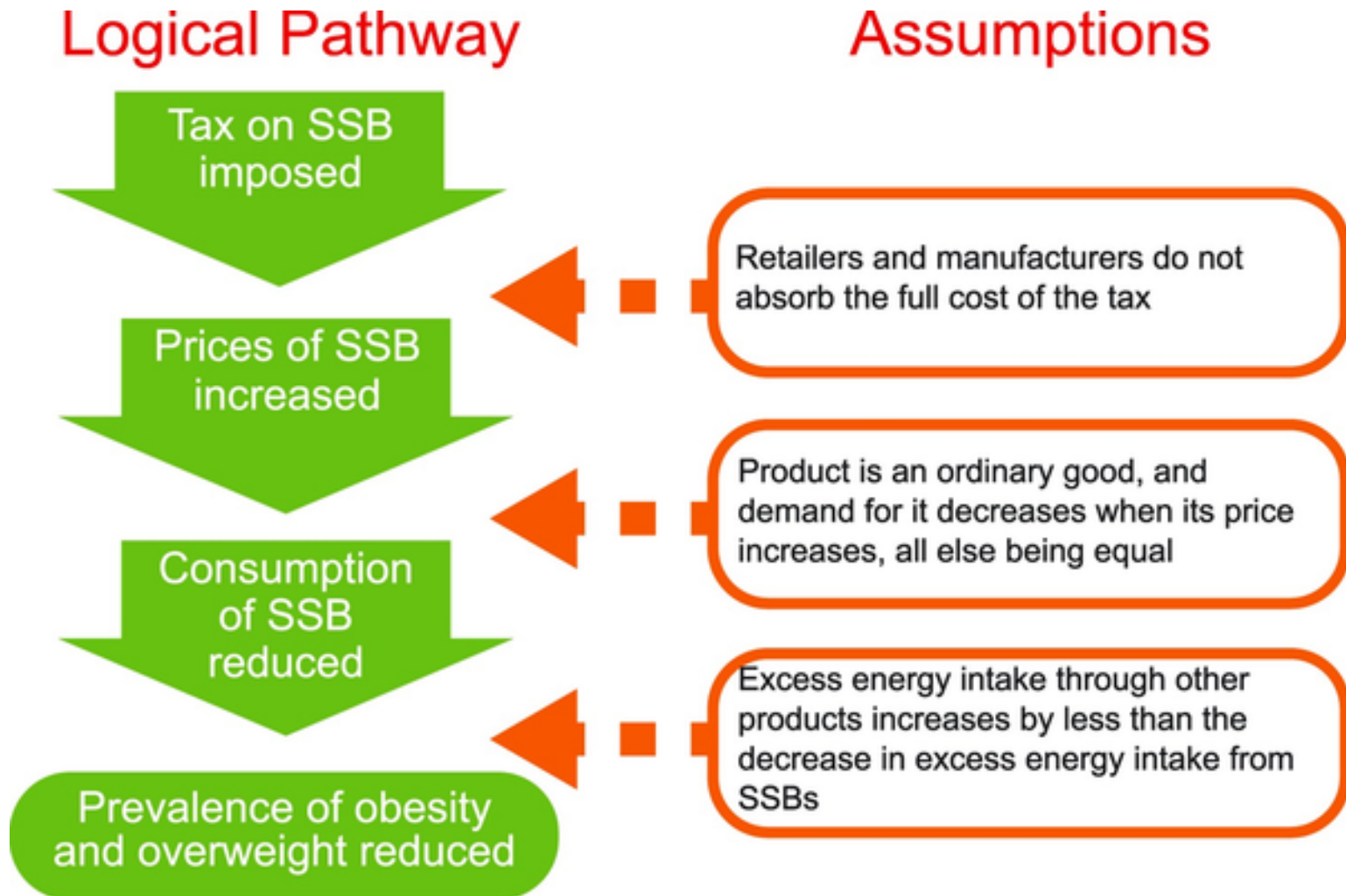
## Economic Development

- By driving business to the participating corner stores and providing them with a small reimbursement fee, EatSF is helping small neighborhood businesses thrive.

Hilary Seligman, PI



**Fig 1. Logical Pathway from Taxing SSBs to Public Health Impact.**



Nakhimovsky SS, Feigl AB, Avila C, O'Sullivan G, Macgregor-Skinner E, et al. (2016) Taxes on Sugar-Sweetened Beverages to Reduce Overweight and Obesity in Middle-Income Countries: A Systematic Review. PLOS ONE 11(9): e0163358.

<https://doi.org/10.1371/journal.pone.0163358>

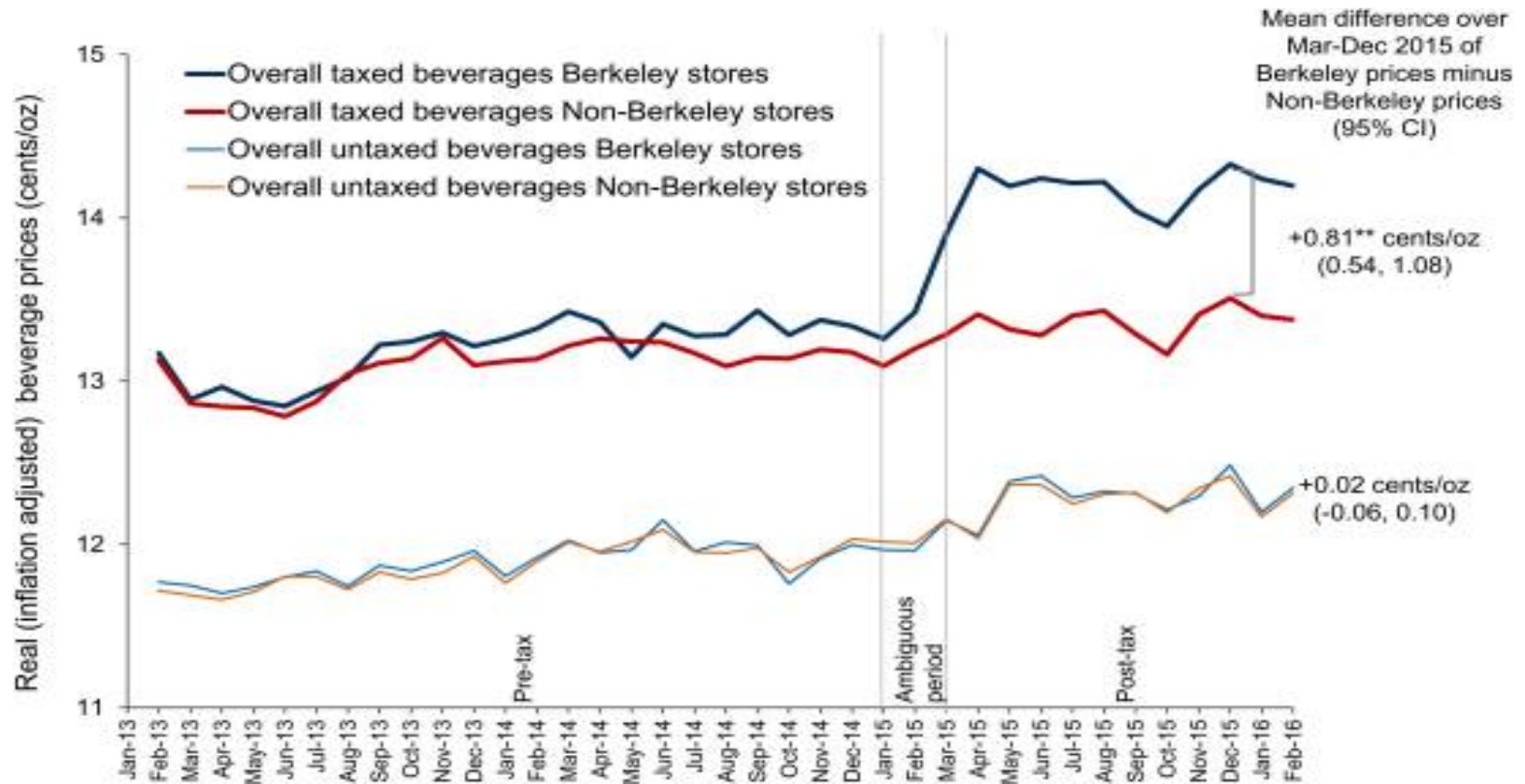
<http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0163358>



# Soda Taxes

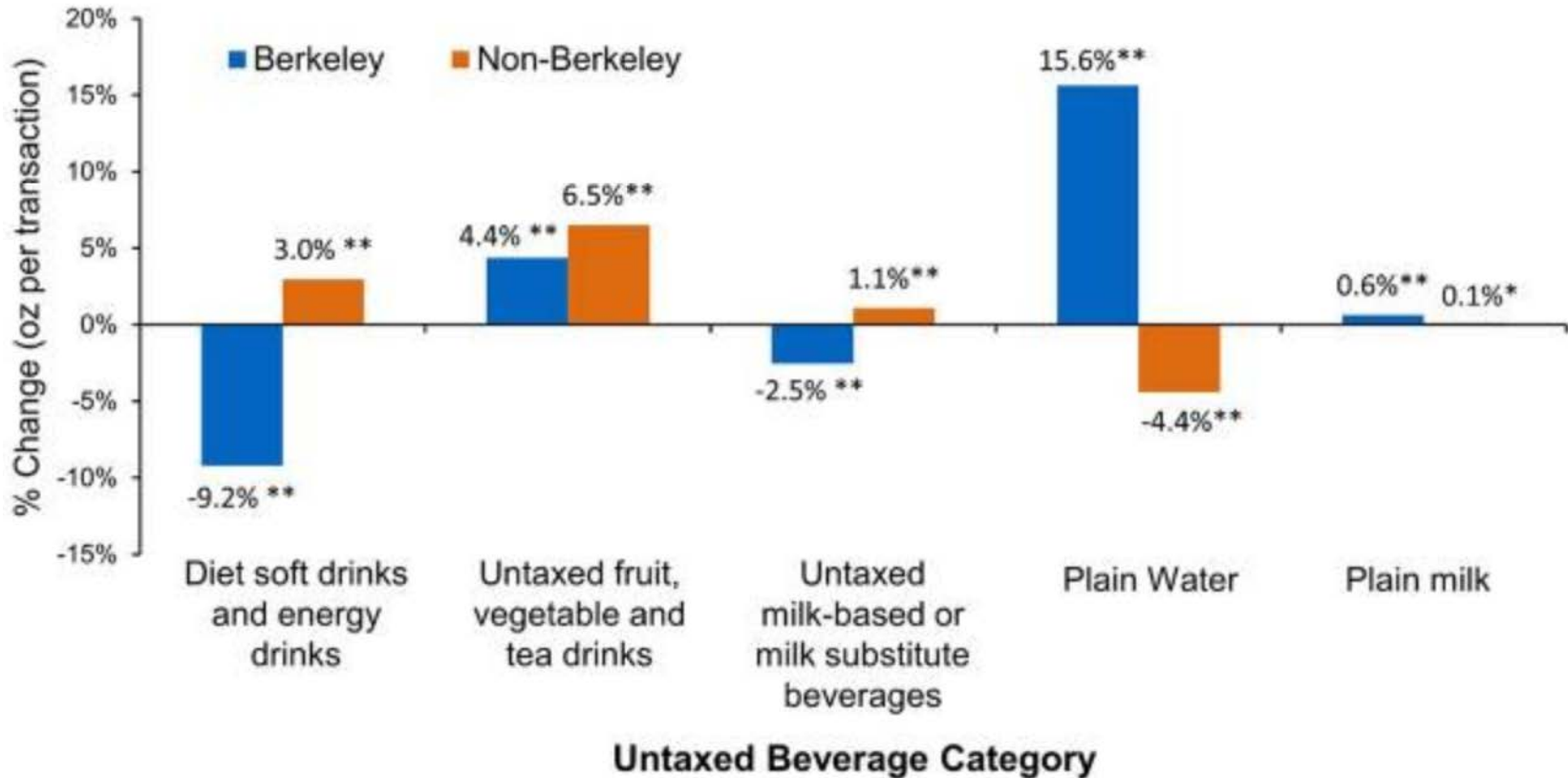
- Mexico and eight U.S. local governments, including Berkeley and San Francisco, CA, Seattle, WA, and Philadelphia, PA, have adopted sugary drink taxes.
- 9 evaluations – all show decrease in consumption of SSB
- Mexico: 1 peso per liter tax on SSB Jan 2014
  - Year 1 impact: 6% decrease in purchases
  - Year 2 impact: 9% decrease in purchases
  - Increase purchase of bottled water

# Prices increased with SSB tax

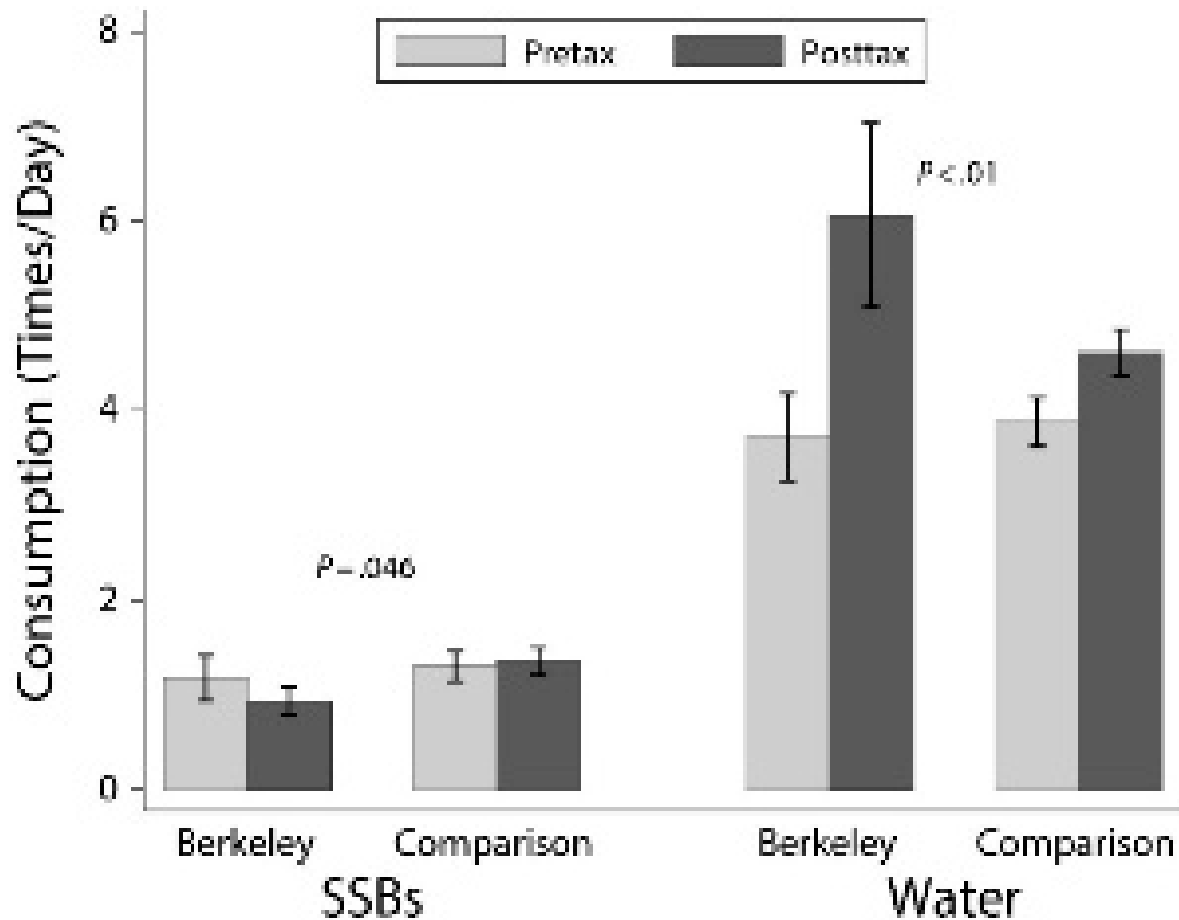


# Changes in Consumption One Year Post Tax

D



## Decreased Consumption of SSB in Berkeley



# Howard County—Multilevel Initiative

Interpersonal Level	Better Beverage Finder (online tool) Street teams (fairs, swim pools, healthy drinks)
Organizational Level	Hopkins Medicine Healthy Beverages Healthy Play – local soccer team AAP– teach local pediatricians best practices Better choices – 50 CBO commit to healthy bevs and improve vending machine choices Dental Coalition – best practices local dentist Head Start curriculum Healthy child care – 70 facilities certified

## Community Level

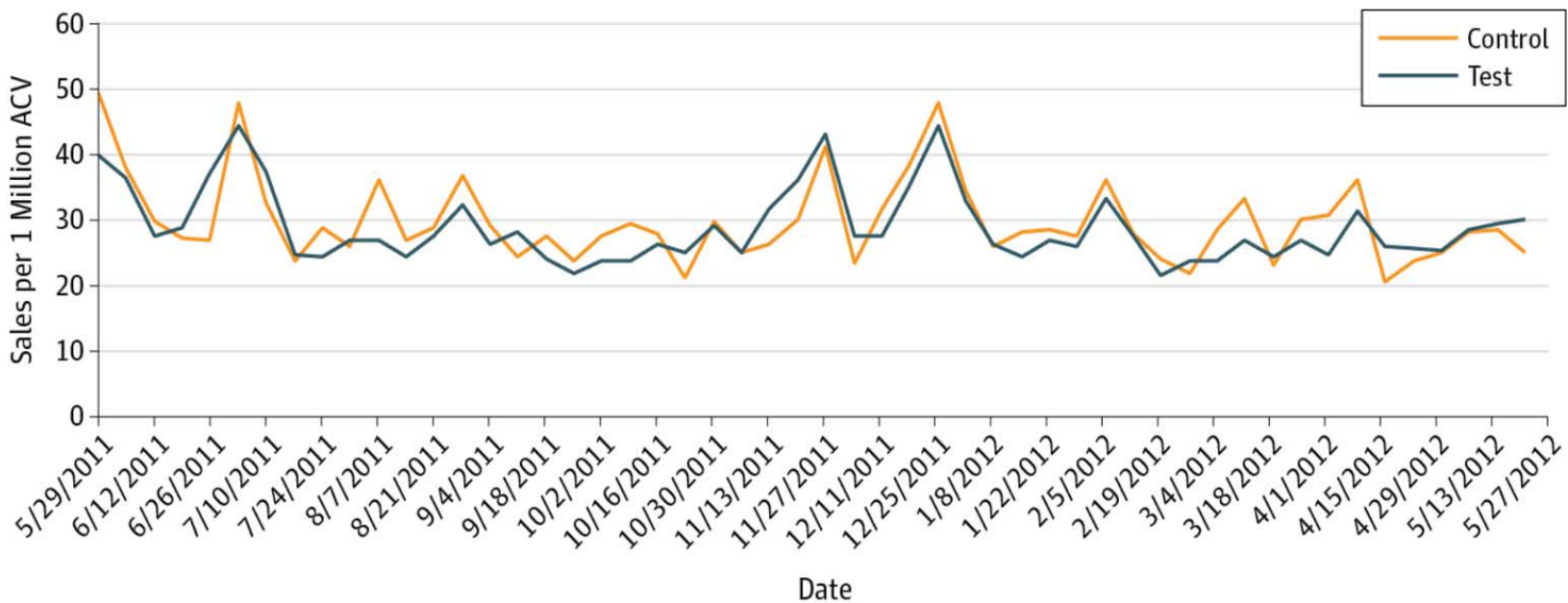
Joint data collection (4 major com. health institutions)  
Youth documentary contest  
Sugar Free Kids – coalition of 240 members, lots of media  
Community partnerships: key groups ie faith org, teacher union, non-profits  
Media campaign  
Joint Chamber of Commerce Study on obesity (with Horizon Foundation)

## Policy Level

School policy– using Well-SAT; changed vending machines to meet standards  
State Law– children facilities can only serve healthy bev (water, lowfat/nonfat milk)  
County property – vending machines and youth programs meet national standards

## Association of a Community Campaign for Better Beverage Choices With Beverage Purchases From Supermarkets

JAMA Intern Med. 2017;177(5):666-674. doi:10.1001/jamainternmed.2016.9650



### Figure Legend:

Comparison of Store Groups in Sales of Regular Soda This graph was produced by IRI MarketAdvantage to demonstrate the close match between Howard County, Maryland (HC) and comparison stores in sales of regular soda. The total sales of regular soda per 1 million all-commodity volume (ACV) of total supermarket sales in the HC stores (test) and comparison stores (control) for the 52 weeks ending on May 20, 2012, are given.





## Association of a Community Campaign for Better Beverage Choices With Beverage Purchases From Supermarkets

JAMA Intern Med. 2017;177(5):666-674. doi:10.1001/jamainternmed.2016.9650

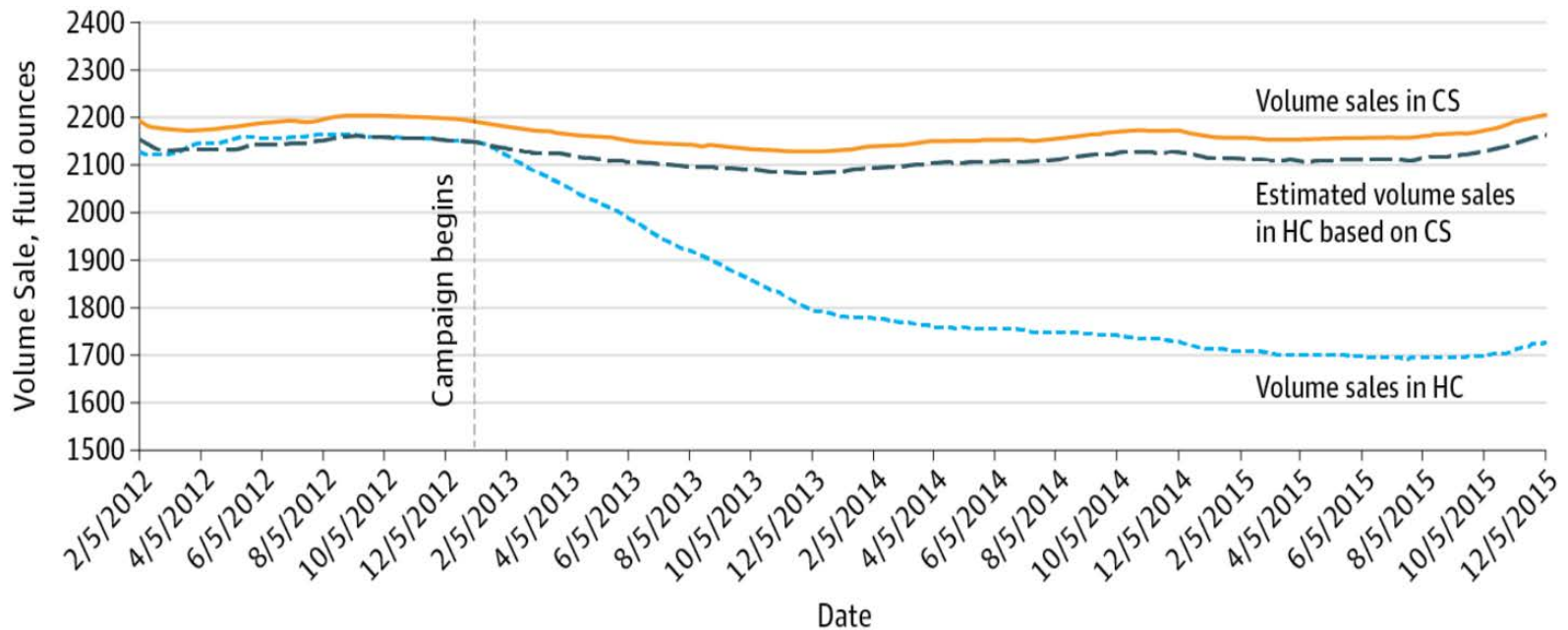


Figure Legend:

Moving Mean of Adjusted Weekly Volume Sales The moving mean sales of regular soda for stores in Howard County, Maryland (HC) and comparison stores (CS) and the estimated volume sales for HC are shown. The estimated sales represent the expected HC sales without exposure to the campaign. The HC estimated sales were calculated by adjusting the intercept of the volume sales in comparison stores. To convert fluid ounces to milliliters, multiply by 30.

## Association of a Community Campaign for Better Beverage Choices With Beverage Purchases From Supermarkets

JAMA Intern Med. 2017;177(5):666-674. doi:10.1001/jamainternmed.2016.9650

**Table 2. Adjusted Means of Volume Sold in Supermarkets From 2012 Through 2015**

Beverage (No. of Brands)	HC Stores					Comparison Stores				
	Volume Sold, fl oz per Product per Store per Week				Change From 2012 to 2015, %	Volume Sold, fl oz per Product per Store per Week				Change From 2012 to 2015, %
	2012 (Baseline)	2013	2014	2015		2012 (Baseline)	2013	2014	2015	
Regular soda (n = 13)	2148	1784	1717	1725	-19.7	2193	2123	2162	2211	0.8
Sports drinks (n = 2)	3924	3406	3063	2938	-25.1	4891	5087	4513	4503	-7.9
Fruit drinks (n = 6)	2004	1928	1655	1696	-15.3	2315	2882	2315	2301	-0.6
Diet soda (n = 7) <sup>a</sup>	2325	2056	1899	1911	-17.8	2463	2338	2216	2184	-11.3
100% fruit juice (n = 4) <sup>a</sup>	2991	2996	2689	2544	-15.0	3204	3389	3241	3135	-2.1

Abbreviation: HC, Howard County.

SI conversion factor: To convert fluid ounces to milliliters, multiply by 30.

<sup>a</sup> Indicates nontargeted product.

# SF Health Improvement Partnership

- **University of California San Francisco (UCSF) Clinical and Translational Science Institute (CTSI)**
- **San Francisco Department of Public Health (SFDPH)**
- **Chicano/Latino/Indigena Health Equity Coalition**
- **African American Community Health Equity Council**
- **Asian and Pacific Islander Health Parity Coalition**
- **Community hospitals**
- **San Francisco Unified School District (SFUSD)**
- **Public Utilities Commission**
- **San Francisco Board of Supervisors,**

## Achievements SF HIP, 2010 – 2016

- Most San Francisco hospitals implemented or have committed to implementing healthy beverage policies prohibiting serving or sale of SSBs (2015–2017).
- 2 new local SSB ordinances banning use of San Francisco government funds to purchase SSBs and requiring health warnings on advertisements for SSBs (2015).
- Sugar tax ballot measures June 2014 and November 2016 elections; June 2014 ballot measure was defeated by voters but voters passed the November 2016 ballot measure.
- 19 new neighborhood tap water filling stations installed in low-income neighborhoods (2016–2017).
- SFUSD wellness policy was adopted prohibiting sale or serving of SSBs (2016)
- 9 community health workers were trained on SSBs for education campaign in low income and minority neighborhoods (2016).

# Collective Impact Model

**Table 1. Principles of Collective Impact and Evidence-to-Policy Population Health Translational Science, San Francisco Health Improvement Partnership, 2010–2016**

Principle	Component
Core elements of collective impact <sup>a</sup>	Common agenda
	Shared measurement strategy
	Mutually reinforcing activities
	Continuous communication
	“Backbone” support from organizations that provide staff and financial resources
Key ingredients of population health translational science <sup>b</sup>	Research responsive to user needs
	Understanding of the decision-making environment
	Effective stakeholder engagement
	Strategic communication
Health equity <sup>c</sup>	Achievement of social justice in health, measured by elimination of health disparities

<sup>a</sup> Source: Hanleybrown, et al (1).

<sup>b</sup> Source: Woolf, et al (3).

<sup>c</sup> Source: Braveman (5).

# Summary

- Policy interventions such as SSB taxes work
- Multi-level, multicomponent interventions led by community coalitions can create sustained change
- Much work is needed!

# Resources

- Rudd Obesity Center <http://www.uconnruddcenter.org/>
- SugarScience UCSF <http://sugarscience.ucsf.edu/>
- Obesity Prevention Source, Harvard  
<https://www.hsph.harvard.edu/obesity-prevention-source/>