

# **bridging the gap**

Research Informing Policies & Practices  
for Healthy Youth

## The Need for Regulations and Public Policy in the Face of Industry Self-Regulation

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*Supported by grants from RWJF, NHLBI, NCI, CDC, and others*

**International Forum on Public Policy to Combat Obesity  
Mexico City, Mexico, May 13, 2013**

# Overview

- Lessons from tobacco control
  - Limits of self-regulation
  - Need for and effectiveness of policy interventions
- Implications for promoting healthy eating and reducing obesity
  - School food environment
  - Food & beverage marketing
  - Food & beverage pricing

# Lessons from Tobacco Control

- 1950s/1960s
  - Evidence emerges, strengthens on the health consequences of tobacco use
  - Industry response:
    - “A Frank Statement to Cigarette Smokers” – January 1954
      - “We accept an interest in people’s health as a basic responsibility, paramount to every other consideration in our business”
      - “We always have and always will cooperate closely with those whose task it is to safeguard the public health”
- Similar statements from food & beverage industry

# Lessons from Tobacco Control

- Industry “Playbook” to counter efforts to regulate
  - Focus on “personal responsibility”
  - Raise fears that government intervention intrudes on individual freedoms
  - Vilify critics - e.g. “nanny state”, “health nazis”
  - Portray research as “junk science”
  - Self regulation
  - Support for ineffective interventions
  - Corporate Social Responsibility Campaigns
  - Lobbying efforts
  - Support for front groups
- Similar “playbook” used by food & beverage industry

# Lessons from Tobacco Control

- Litigation leads to release of millions of pages of internal tobacco company documents
  - US Department of Justice’s “7 pillars of fraud” in “a massive 50-year scheme to defraud the public”
    - Defendants denied the adverse health effects of cigarette smoking and secondhand smoke
    - Defendants propagated the myth that tobacco industry-sponsored research was independent
    - Defendants denied that nicotine is addictive
    - Defendants manipulated nicotine levels in cigarettes to create and sustain addiction
    - Defendants marketed ‘light’ cigarettes as less harmful
    - Defendants marketed their products to young people
    - Defendants suppressed evidence on the dangers of smoking

# Lessons from Tobacco Control

## Judge Kessler's Decision:

“Defendants have know many of these facts for at least 50 years or more. Despite that knowledge, they have consistently, repeatedly, and with enormous skill and sophistication, denied these facts to the public, to the Government, and to the public health community. Moreover, in order to sustain the economic viability of their companies, Defendants have denied that they marketed and advertised their products to children under the age of eighteen and to young people between the ages of eighteen and twenty-one in order to ensure an adequate supply of ‘replacement smokers,’ as older ones fall by the wayside through death, illness, or cessation of smoking. ***In short, Defendants have marketed and sold their lethal product with zeal, with deception, with a single-minded focus on their financial success, and without regard for the human tragedy or social costs that success exacted.***”

# Food/Beverage and Tobacco Industries

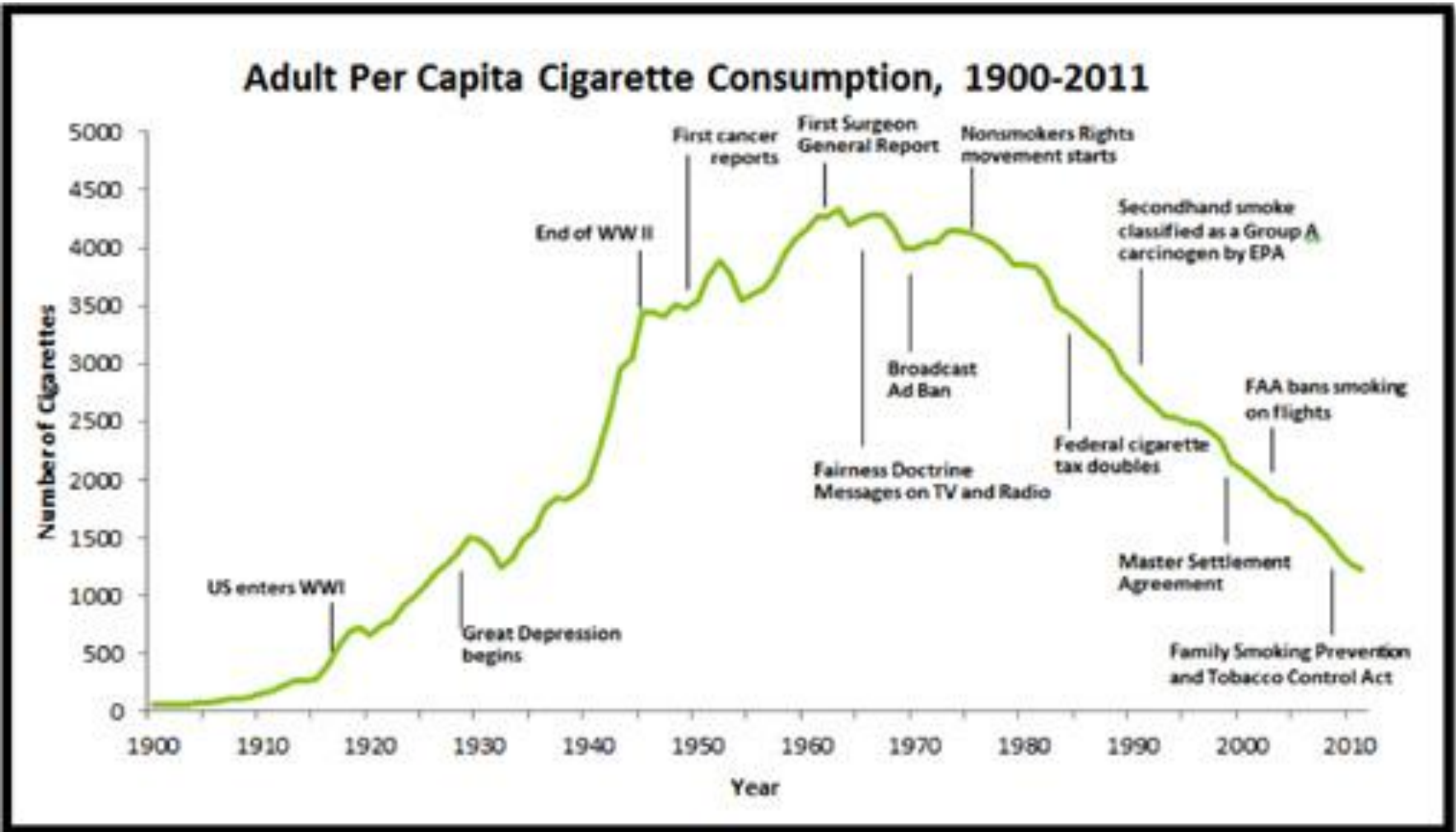
- Market failures motive government intervention
  - Both cause considerable health consequences among users, with consequences poorly understood by many
  - Financial externalities for both from use of publicly funded health care to treat these health consequences
  - Consumption patterns established at early ages when information problems are more pronounced
  - Clear evidence of addiction for tobacco and growing evidence of addictive potential for sugar

# Food/Beverage and Tobacco Industries

- Marketed aggressively by large multinational companies
- Multinationals have considerable political influence
- Both industries emphasize personal responsibility
- Both industries misuse economic arguments in debate over control policies
- Both industries engage in 'self-regulation'
- Both industries introduce 'safer' products



# Lessons from Tobacco Control



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# Lessons from Tobacco Control

## MPOWER Framework

“Monitor” the tobacco epidemic

“Protect” non-smokers

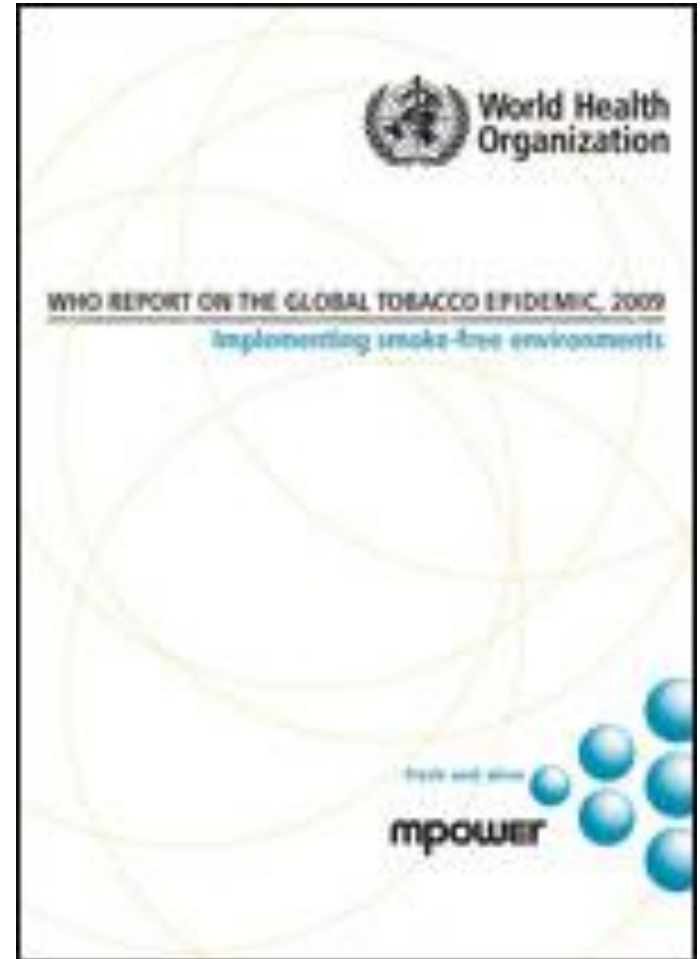
“Offer” help to quit

“Warn” about the harms

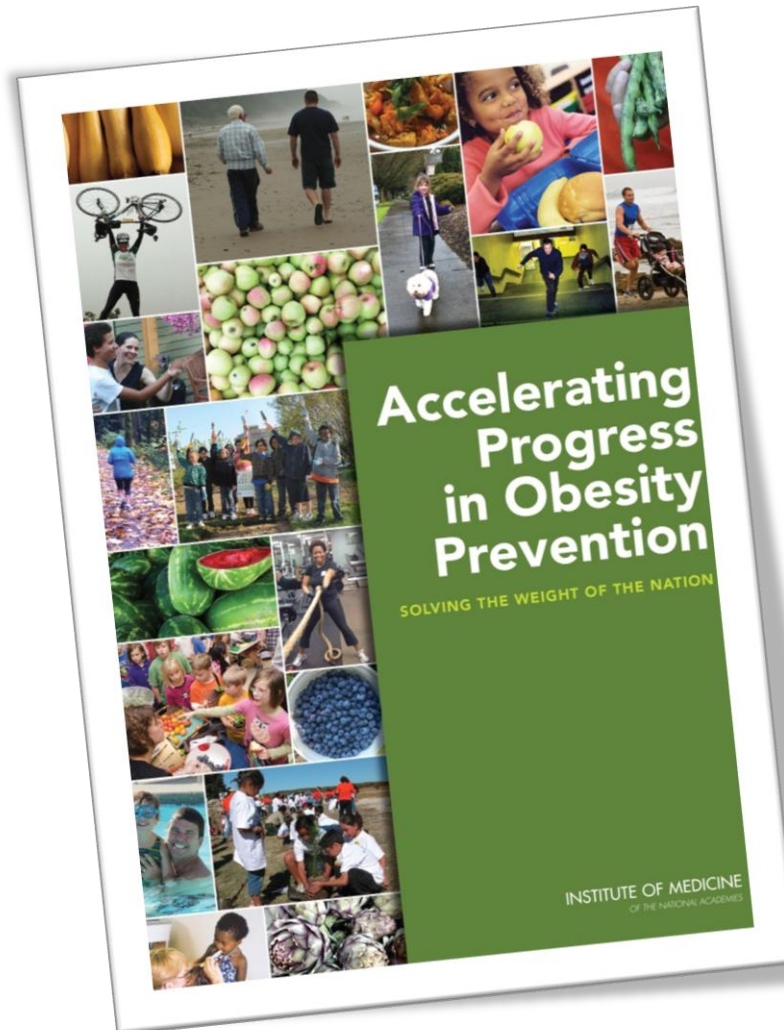
“Enforce” marketing bans

“Raise” taxes

Most cost-effective  
components of WHO FCTC

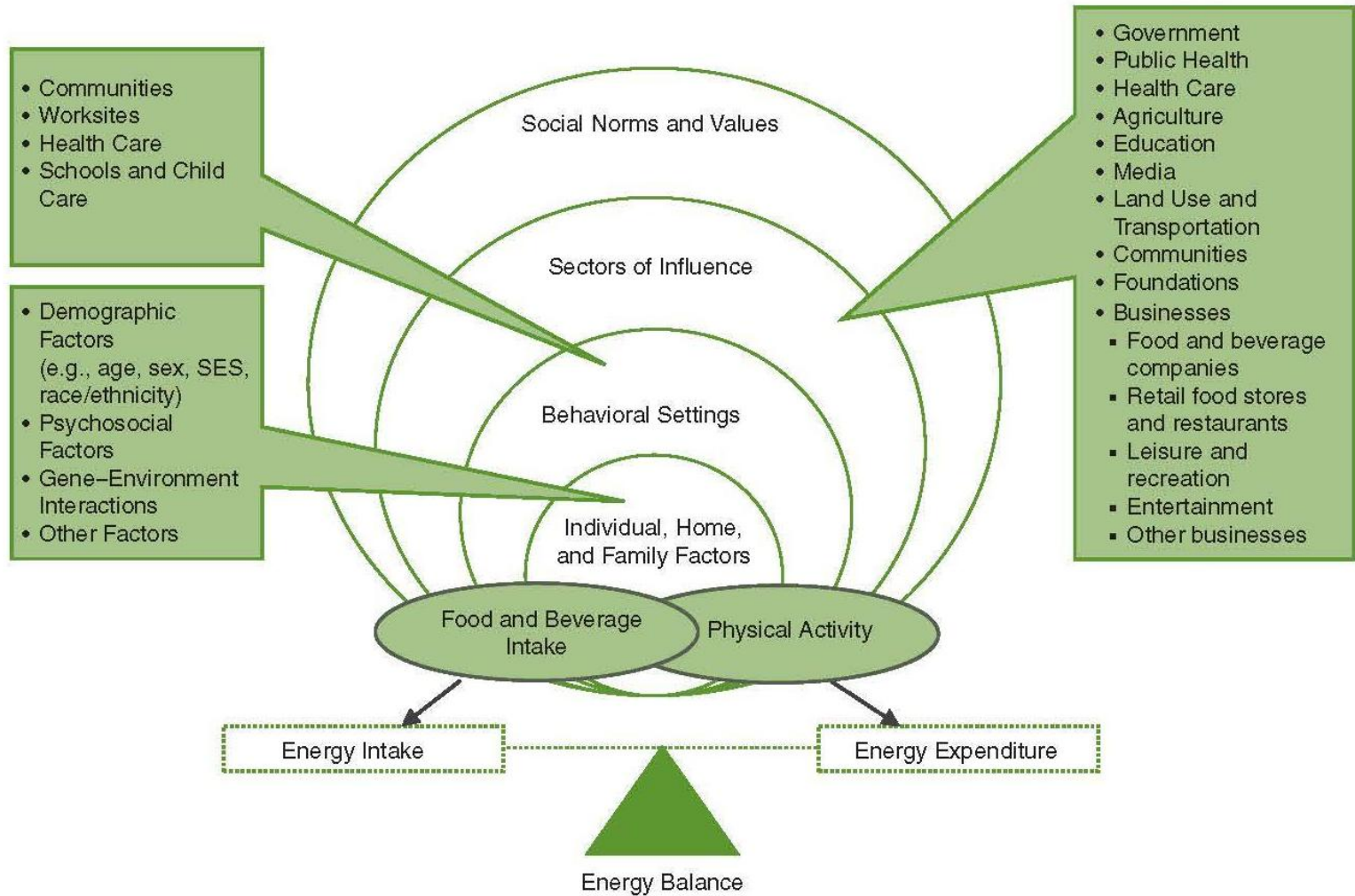


# Institute of Medicine Report: *Accelerating Progress in Obesity Prevention (2012)*



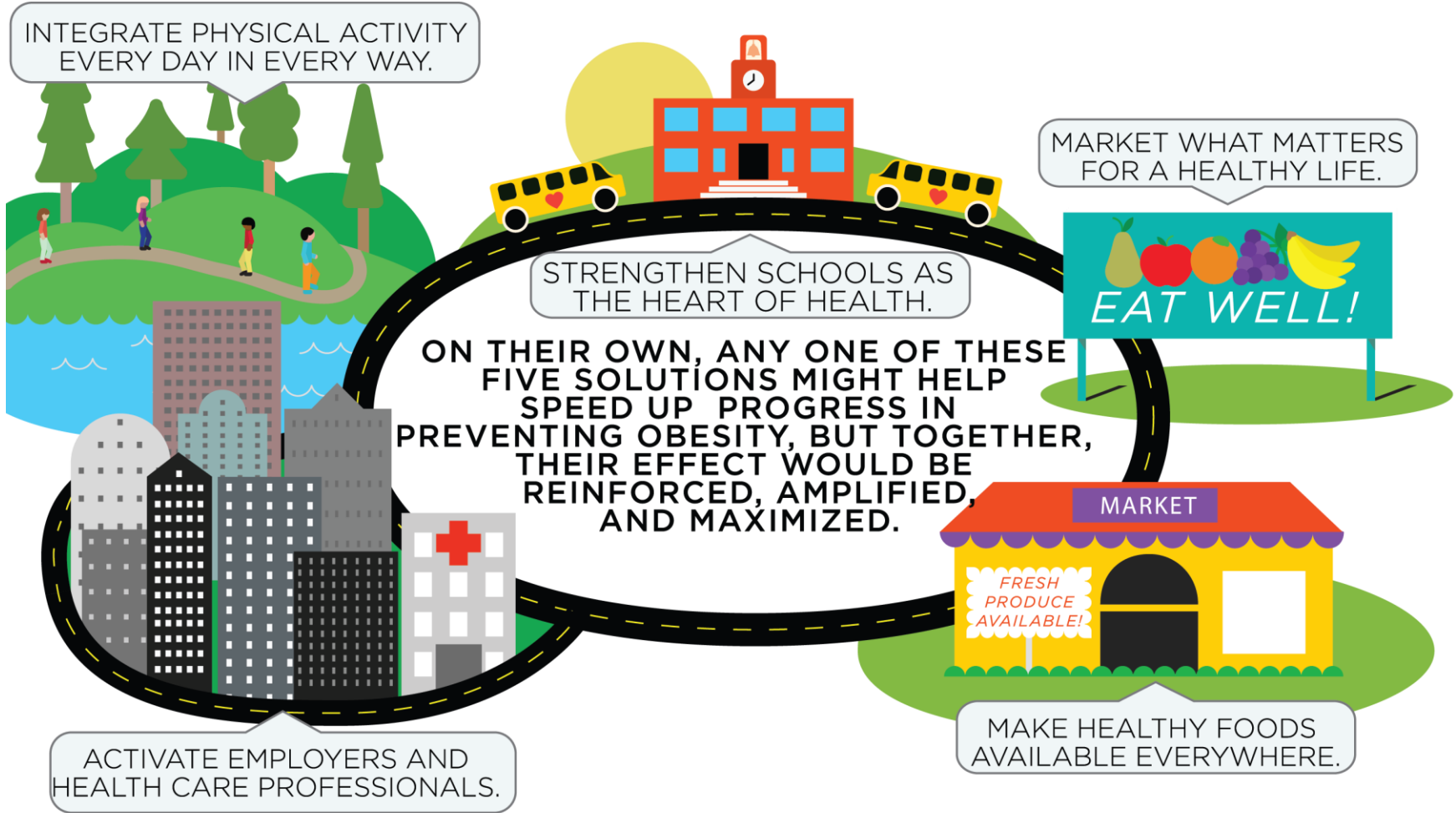
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# Levels and sectors of influence on obesity prevention efforts



Source: Institute of Medicine (IOM), 2012; Adapted from IOM, 2007

**5 SOLUTIONS FOR CHANGING OUR COMMUNITIES**



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## Meeting the Challenge of Achieving Equity



Transform inequitable environments

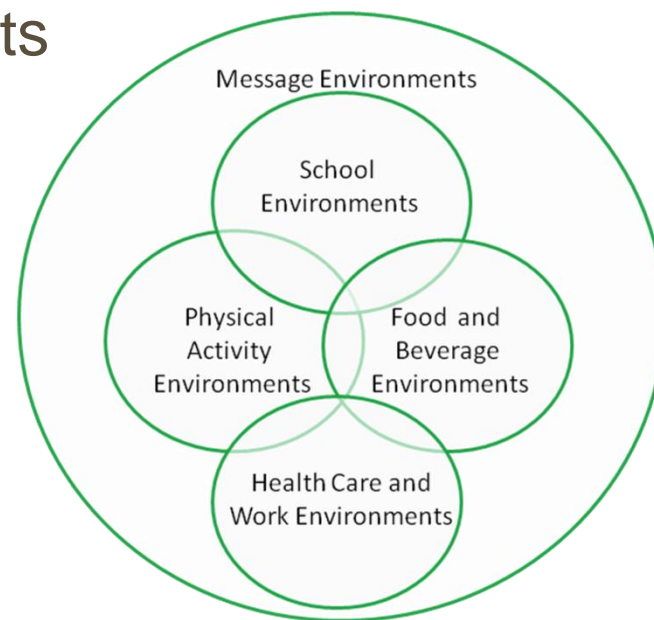
Food and Beverage

Physical Activity

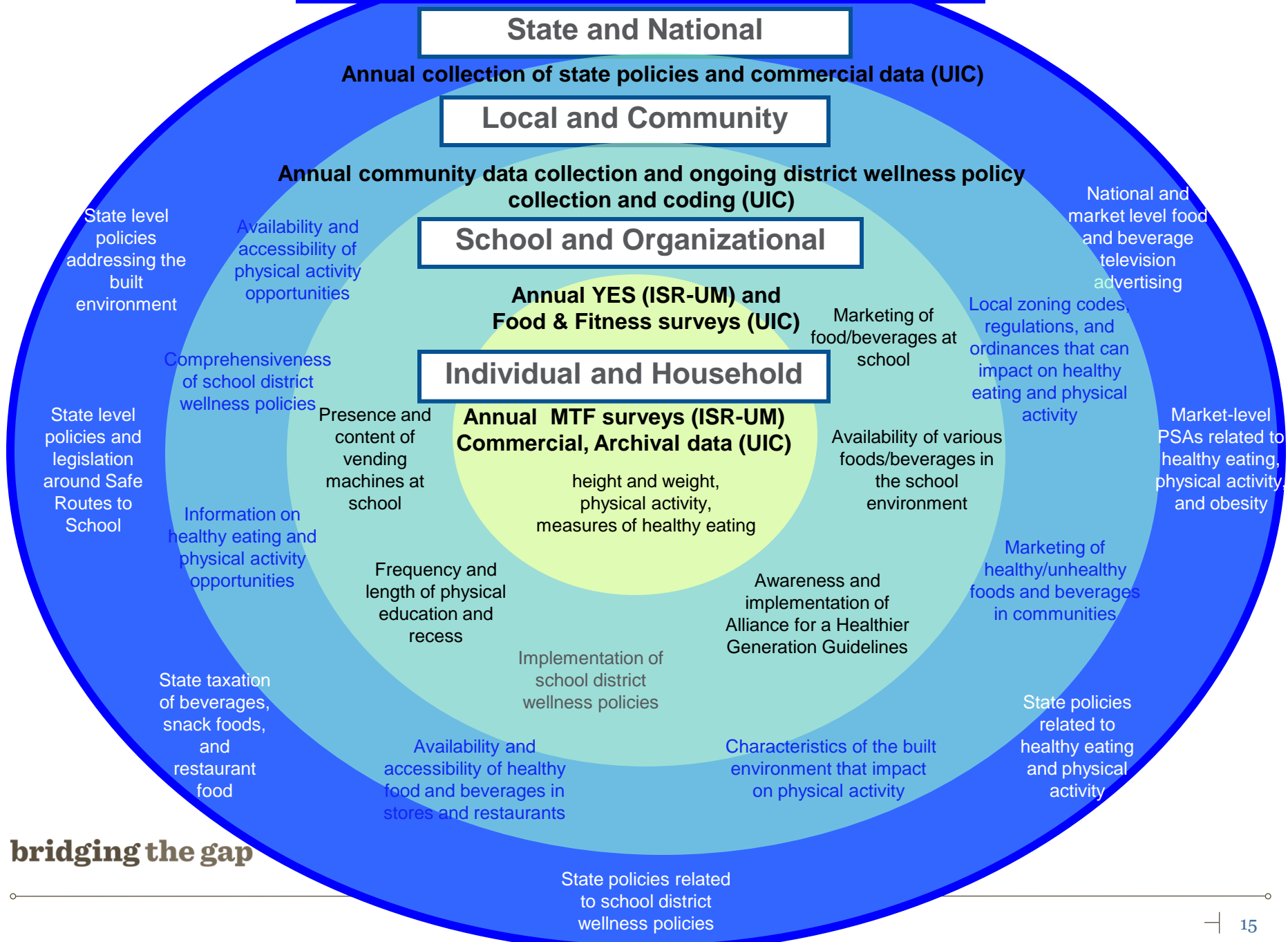
Message

Target Critical Settings

- School
- Worksites



# Bridging the Gap - Obesity



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# School Food/Beverage Environment

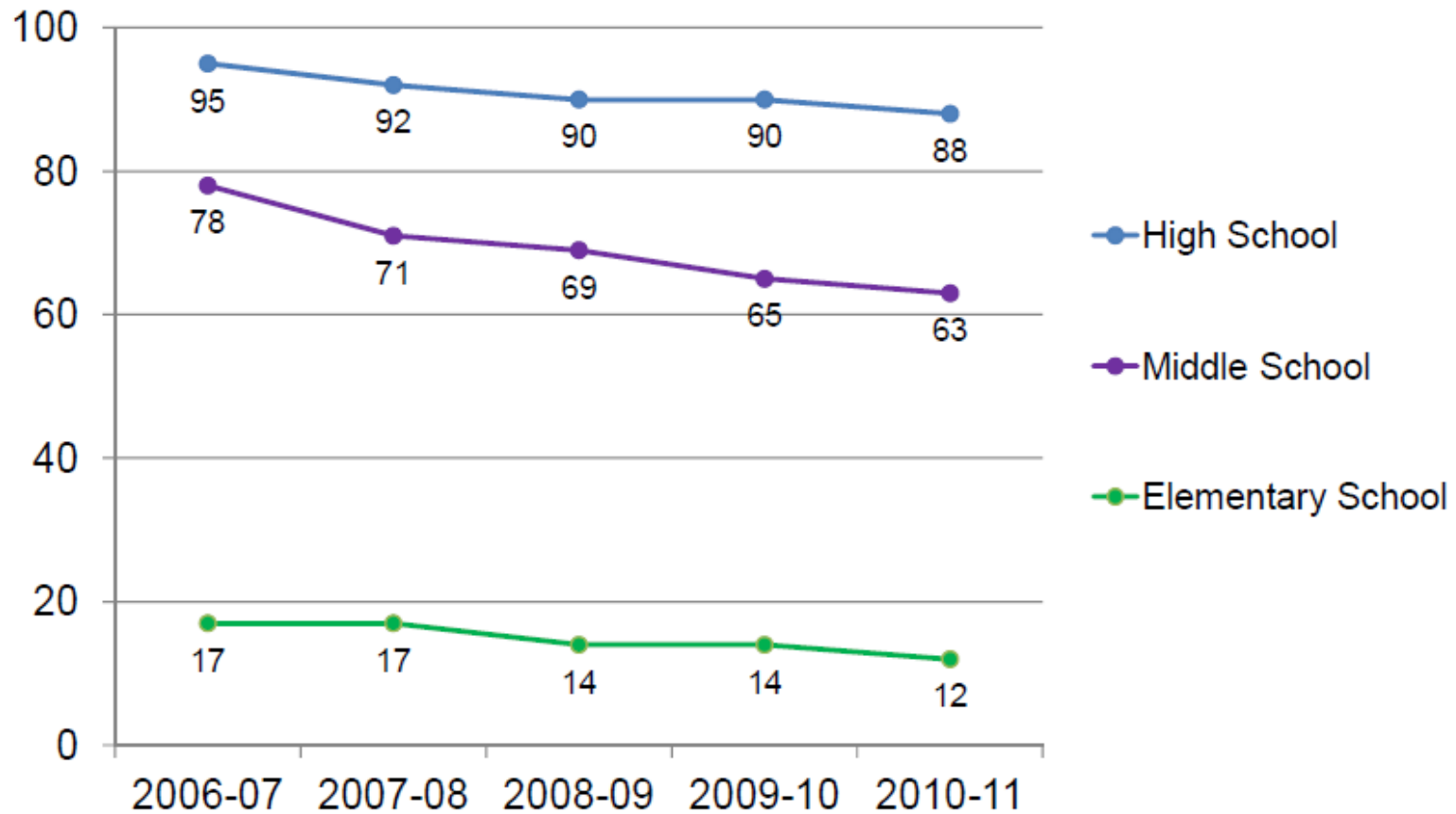
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# School Foods & Beverages

- Industry supported 'guidelines' to reduce availability of less healthy foods and beverages in schools
  - May 2006 agreement between the American Beverage Association and the Alliance for a Healthier Generation on guidelines related to availability and portion sizes for various beverages in schools
  - Similar agreement between various food companies and the Alliance on nutritional standards for competitive foods sold in schools

# Percentage of Students with Sugar-Sweetened Beverages Available for Purchase in School, SY 06-07 thru 10-11



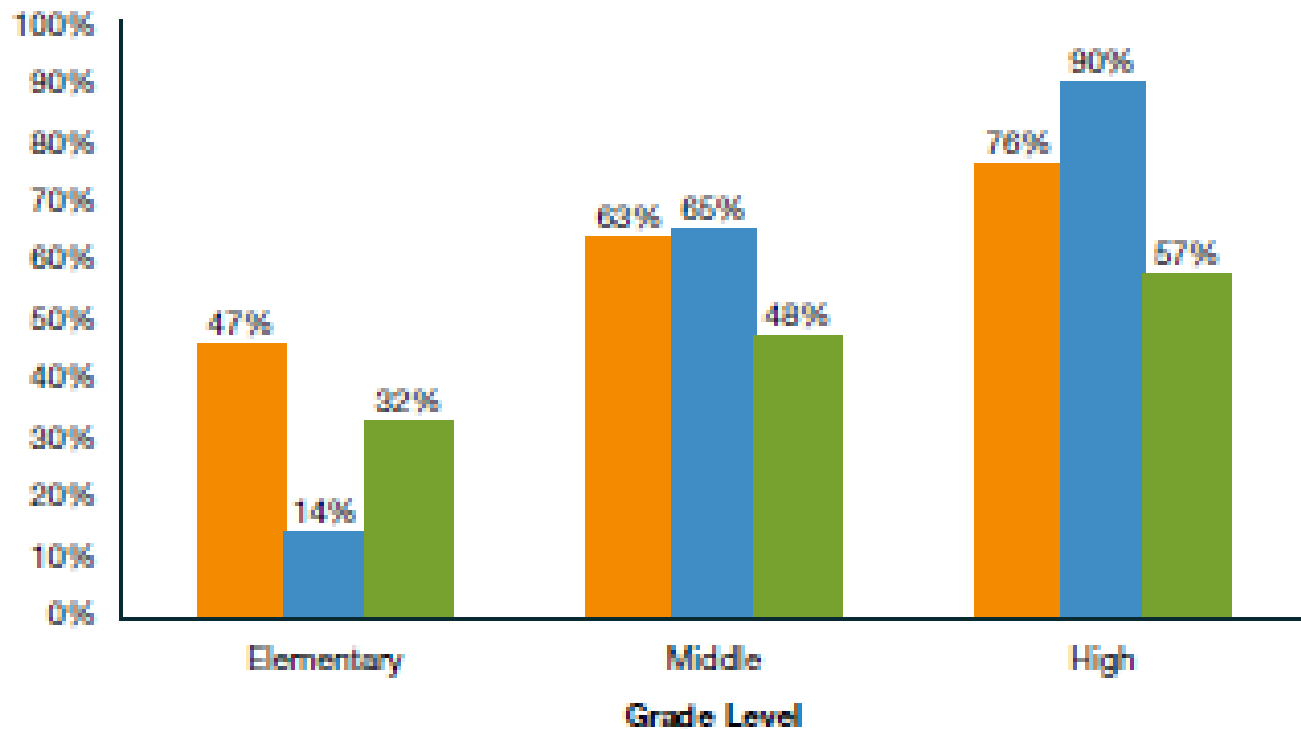
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**Source:** Turner, et al., 2012 BTG Research Brief

**Percentage of U.S. Public School Students Nationwide with Access to Unhealthy Foods and Beverages in Competitive Venues by Grade Level, School Year 2009–10**

- Sweet/Salty/High Fat Snacks
- SSBs
- 2% or Whole Milk

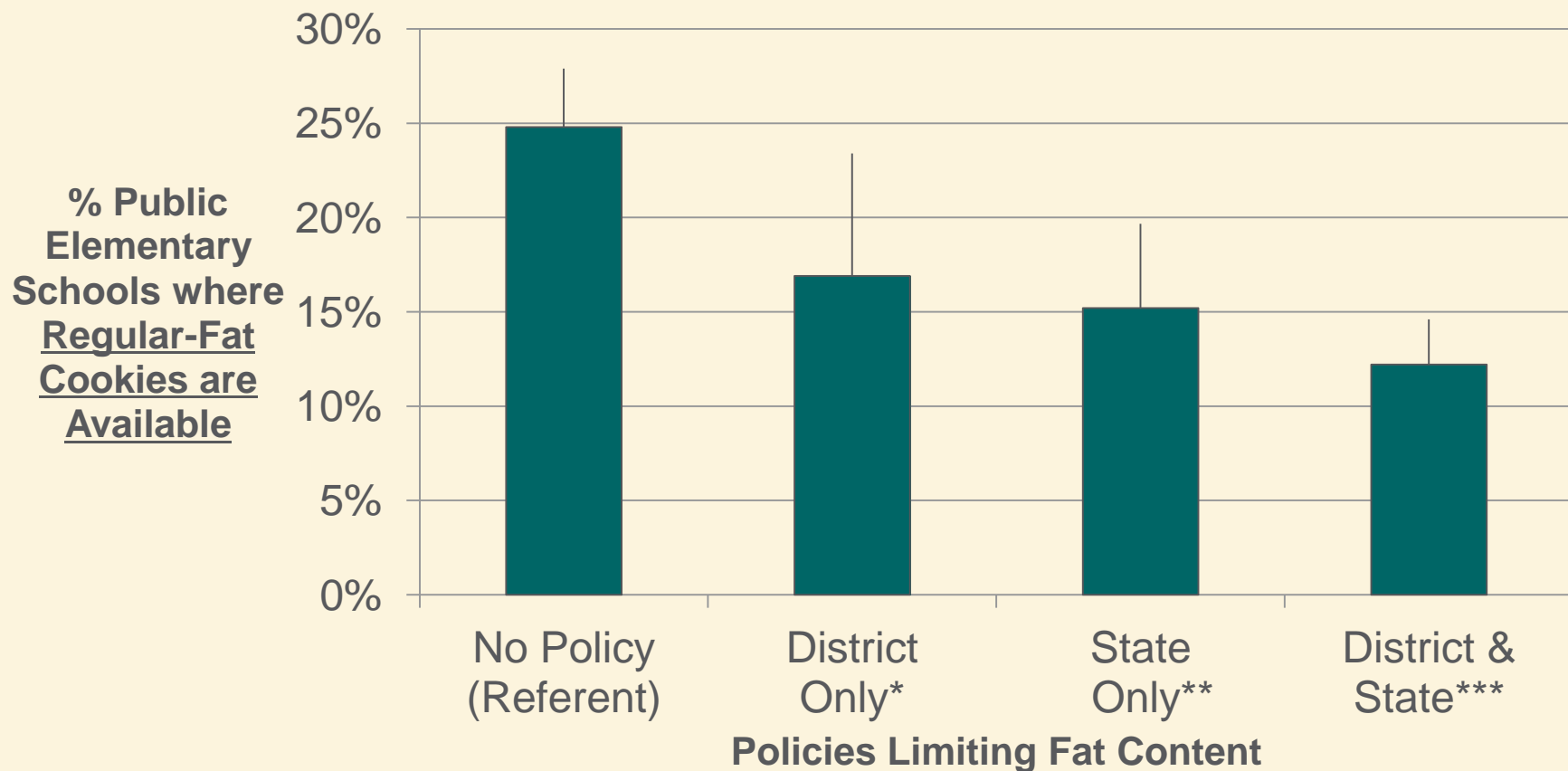
**% of Public School Students Nationwide**



# School Foods & Beverages

- Need for strong policies that regulate availability and nutritional content of foods/beverages available in schools
  - 2004 Federal Child Nutrition and WIC Reauthorization Act required all school districts participating in national school meals programs to adopt a “wellness policy” by start of 2006/07 school year
  - 2010 Federal Healthy, Hunger-Free Kids Act calls for strengthening of wellness policies, USDA guidelines for competitive foods in schools, and more

# Relationship between **policies limiting fat content** and ES **availability of regular-fat cookies**<sup>a</sup>, SY 06-07 thru 10-11



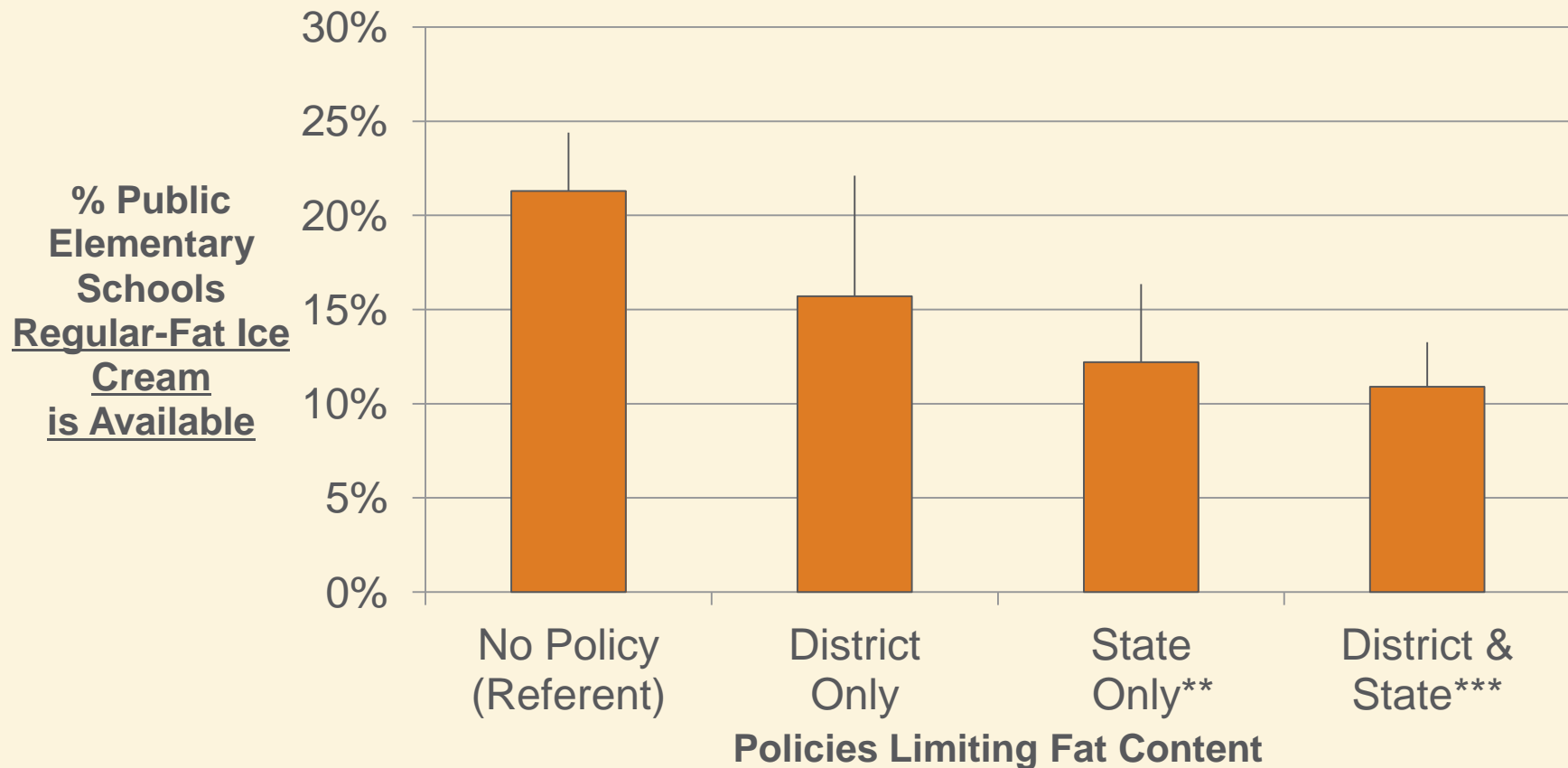
<sup>a</sup>Adjusted for year, region, race/ethnicity, SES, locale, school size, state obesity rates

\*p<.05    \*\*p<.01    \*\*\*p<.001

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**Source:** Chriqui, Turner, Taber, Chaloupka, in press, *JAMA Pediatrics*

# Relationship between **policies limiting fat content** and ES **availability of regular-fat ice cream**<sup>a</sup>, SY 06-07 thru 10-11



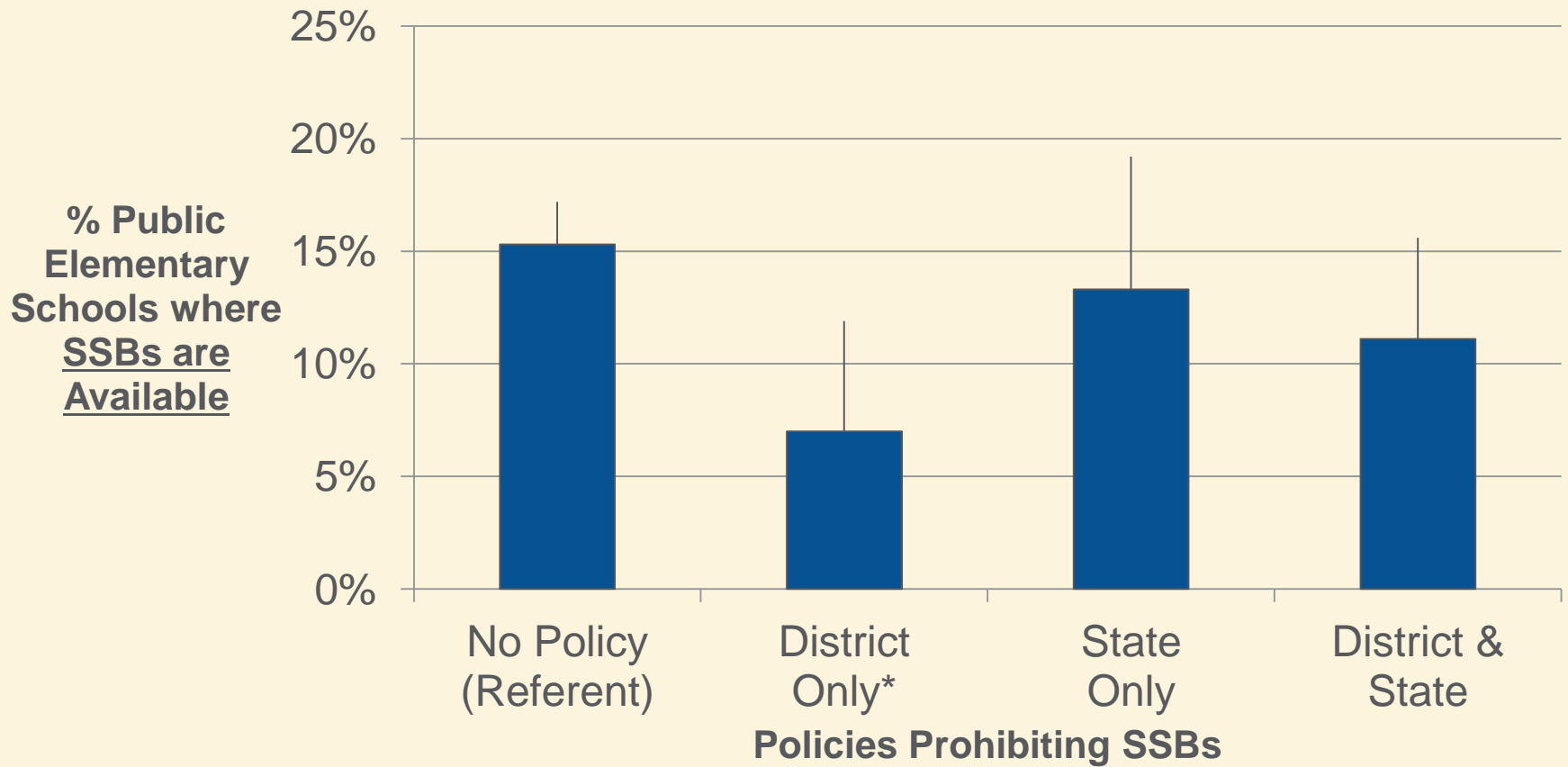
<sup>a</sup>Adjusted for year, region, race/ethnicity, SES, locale, school size, state obesity rates

\*\*p<.01    \*\*\*p<.001

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**Source:** Chriqui, Turner, Taber, Chaloupka, in press, *JAMA Pediatrics*

# Relationship between **policies prohibiting SSBs** and ES **availability of SSBs<sup>a</sup>**, SY 06-07 thru 10-11



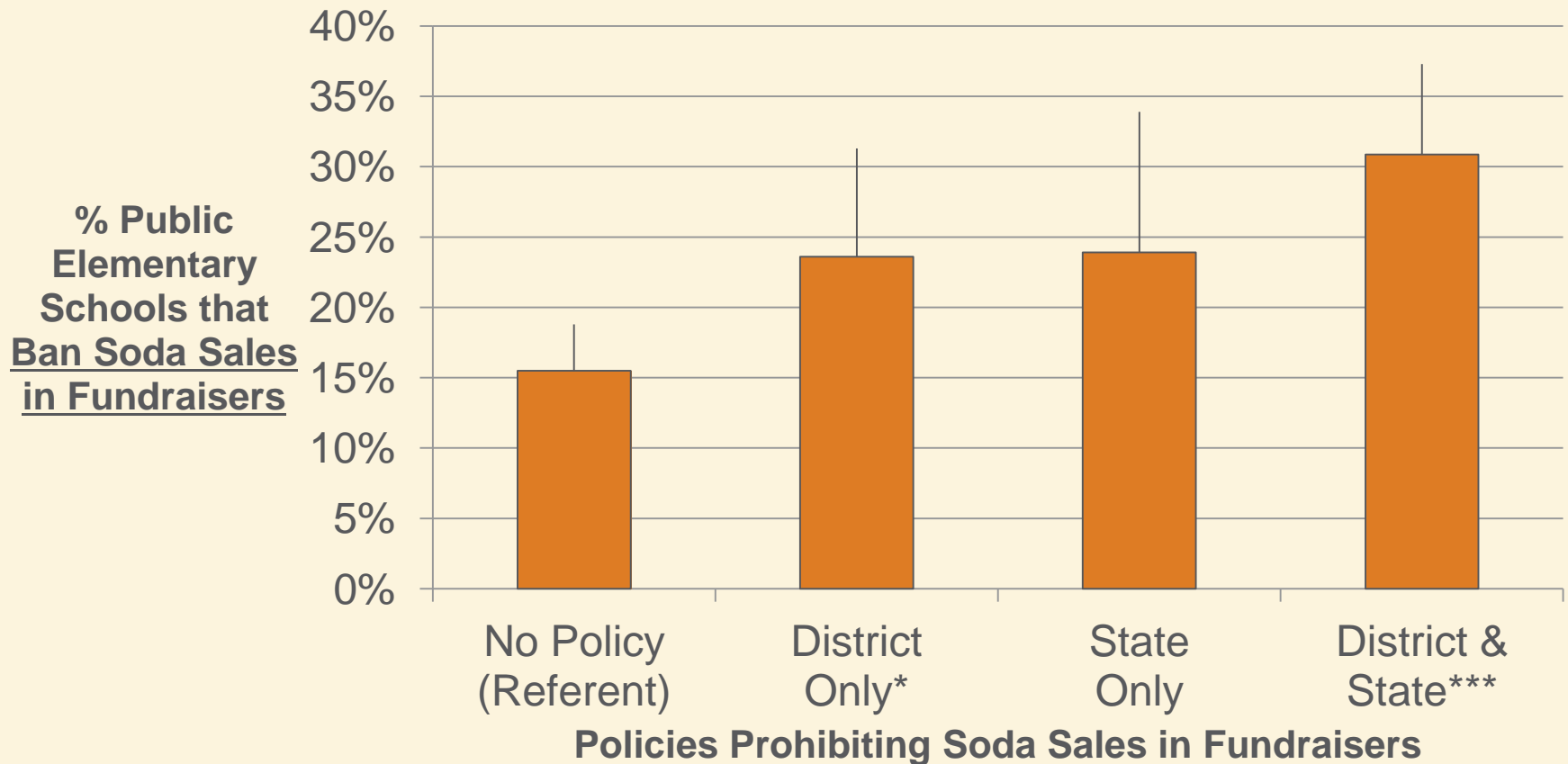
<sup>a</sup>Adjusted for year, region, race/ethnicity, SES, locale, school size, state

\* $p < .05$

obesity rates  
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**Source:** Chriqui, Turner, Taber, Chaloupka, in press, *JAMA Pediatrics*

# Relationship between policies prohibiting soda sales in fundraisers and ES ban on soda sales in fundraisers<sup>a</sup>, SY 09-10 and 10-11



<sup>a</sup>Adjusted for year, region, race/ethnicity, SES, locale, school size, state obesity rates

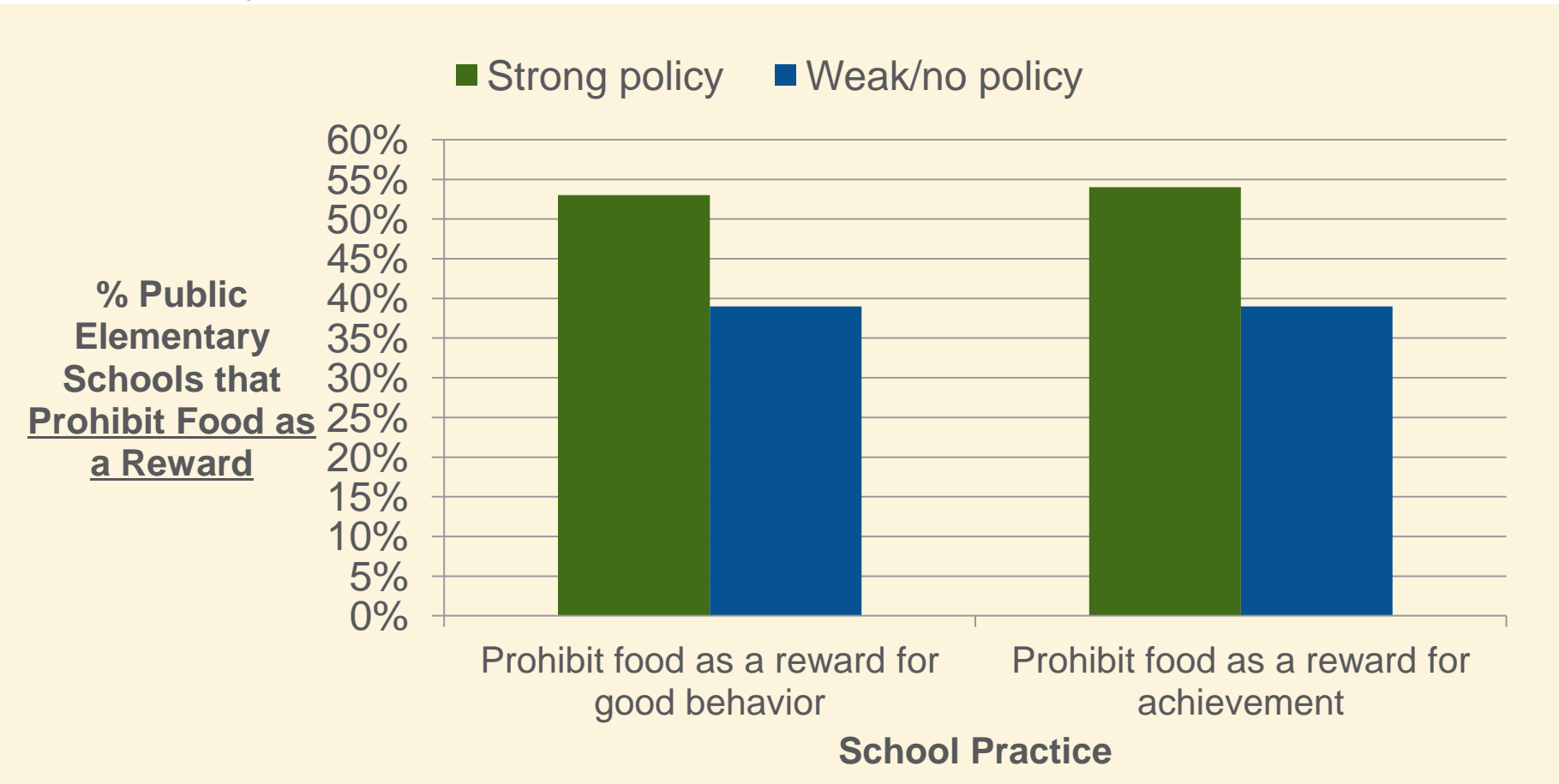
\*p<.05 \*\*\*p<.001

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**Source:** Turner, Chriqui, Chaloupka, *PLoS One* 2012



# Relationship between district policies prohibiting food as a reward and ES food as a reward restrictions, SY 07-08 thru 09-10



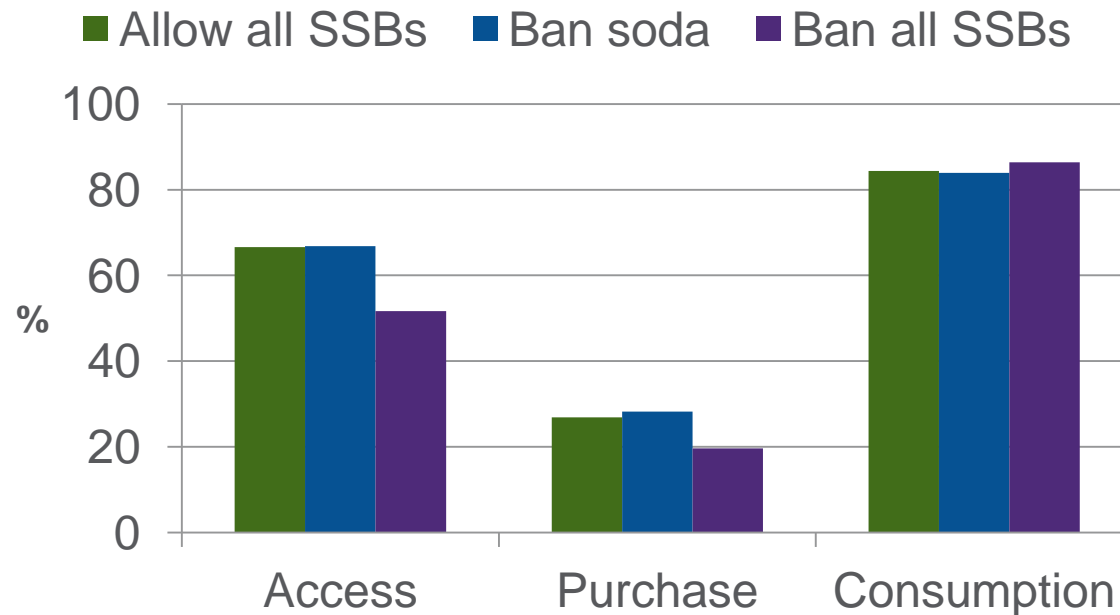
# Summary of Relationships between Policies and School Food/Beverage Environment

- Promulgation of voluntary guidelines not sufficient to eliminate access to unhealthy foods & beverages at school.
- Stronger district and state policies are associated with improvements in the school competitive food/beverage and fundraising environments.
- It's not just state policies that matter—rather district policies, both alone and in concert with equivalent state policies, are associated with positive changes in the school competitive food and fundraising environments

# Relationship between state competitive food/beverage laws, behaviors, and weight outcomes

# Sugar-sweetened beverage laws

- State laws that prohibit all sugar-sweetened beverages reduce the prevalence middle school student in-school SSB **access** and **purchasing**, but do not reduce overall **consumption**



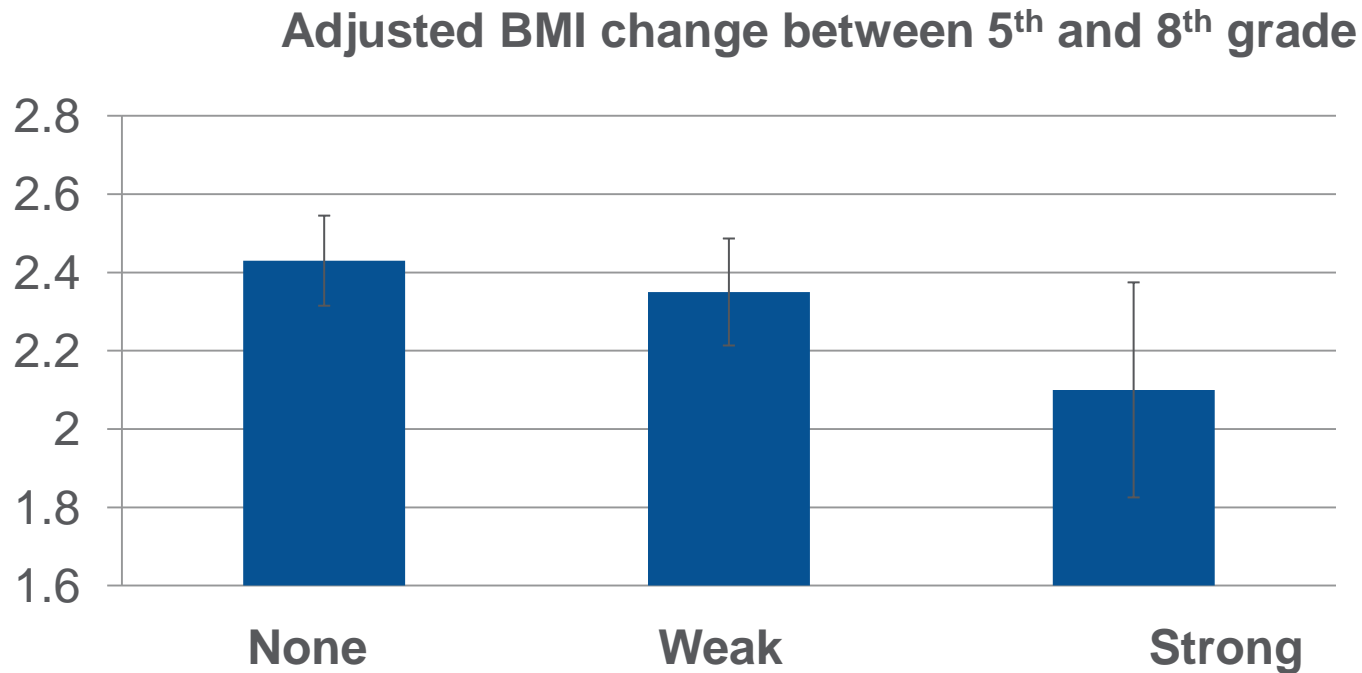
# California competitive food laws

- California has particularly strict laws regarding fat, sugar, and caloric content of competitive foods
- High school students in CA reported less in-school intake of fat, sugar, and total calories compared to students in states that do not regulate competitive food nutritional content

	California	Other states
Sugar (g)	19.8	30.9
Fat (g)	14.2	20.4
Total calories	352.6	509.1

# Competitive food laws

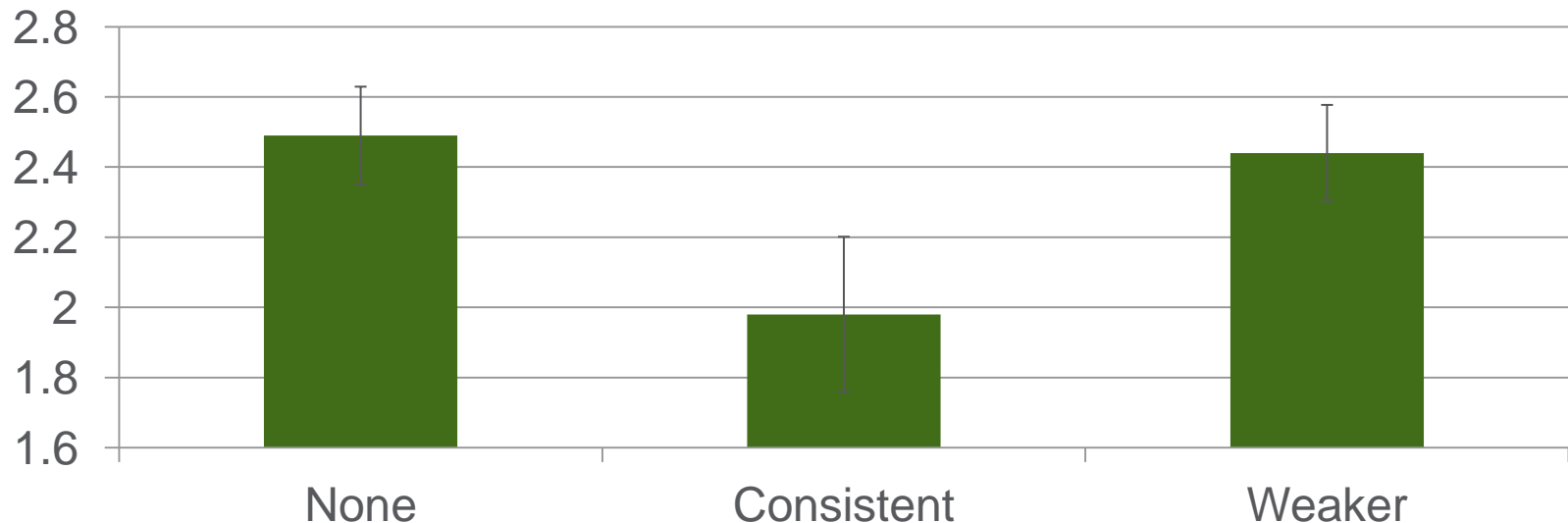
- Students gain less weight if they are in states with strong, specific competitive food nutrition standards



# Competitive food laws

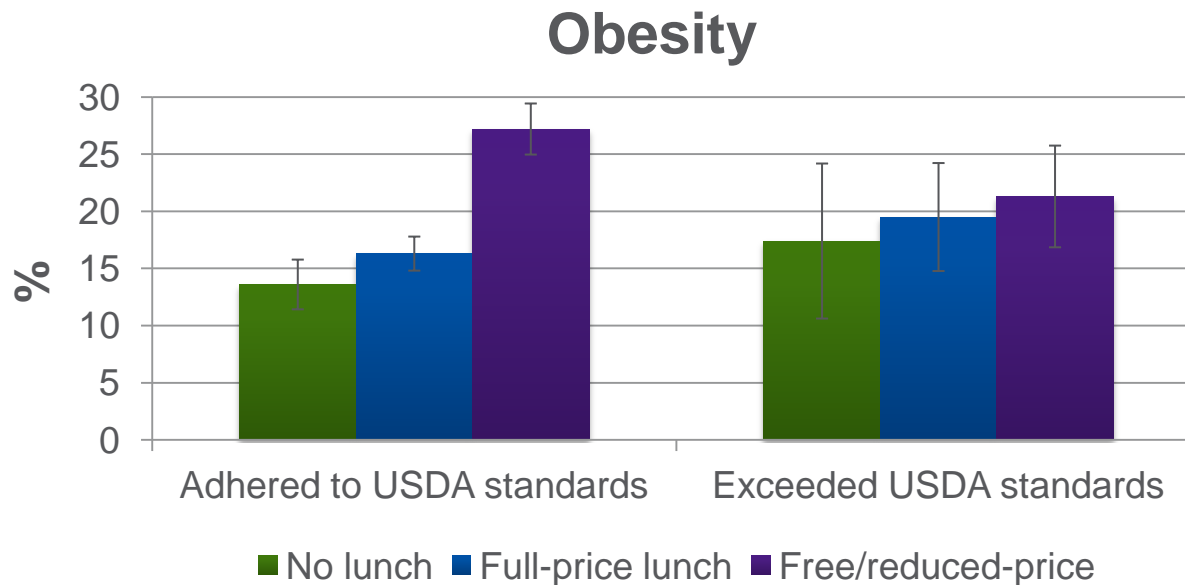
- Laws must be consistent over time and across grade levels
- Students who were exposed to weaker laws as they moved from elementary to middle school gained just as much weight as those who were never exposed

Adjusted BMI change between 5<sup>th</sup> and 8<sup>th</sup> grade



# School meal standards

- Overall, students who obtain free/reduced-price lunches are more likely to be obese
- Disparities were eliminated, however, in states that exceeded old USDA standards for school meals





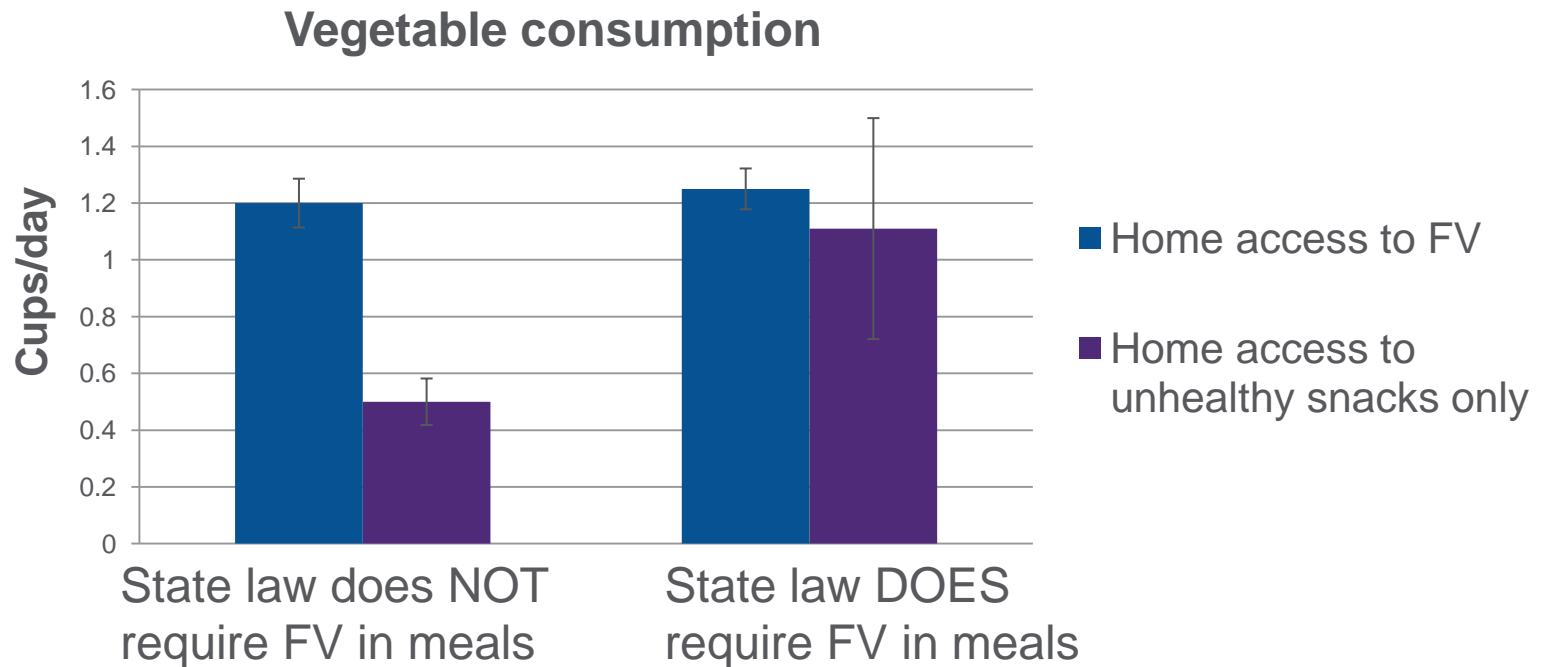
# School meal laws – fruit/vegetable requirements

- Students who have limited access to fruits/vegetables (FV) at home consume more FV if they live in a state that requires a minimum # of FV in school meals

	State law requires minimum # FV in school meals	Mean	Adjusted difference	
			$\beta$	95% CI
Cups fruit/day	No	0.79	-	-
	Yes	1.24	<b>0.45</b>	<b>0.07, 0.84</b>
Cups veg/day	No	0.50	-	-
	Yes	1.11	<b>0.61</b>	<b>0.21, 1.00</b>

# School meals – fruit/vegetable requirements

- As a result, disparities in diet are reduced when states require FV in school meals



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**Source:** Taber, Chriqui, and Chaloupka, *Am J Prev Med*, 2013

# Summary of Relationships between Policies and Secondary School-level food and beverage availability, consumption, and weight outcomes

- State laws are associated with changes to the school competitive food and school meal environments.
  - Findings are encouraging given new USDA school meal standards and recently proposed competitive food standards
- Strong, comprehensive laws that address all venues, all grades, all beverages (e.g., not just soda but all SSBs) are critical to improving the school food environment
- Strong, required state laws are associated with reductions or slowing down of BMI slower weight gain
- State laws help to reduce disparities in FV consumption and increase availability of healthier options in low-income schools

# Food & Beverage Marketing

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# Food & Beverage Marketing

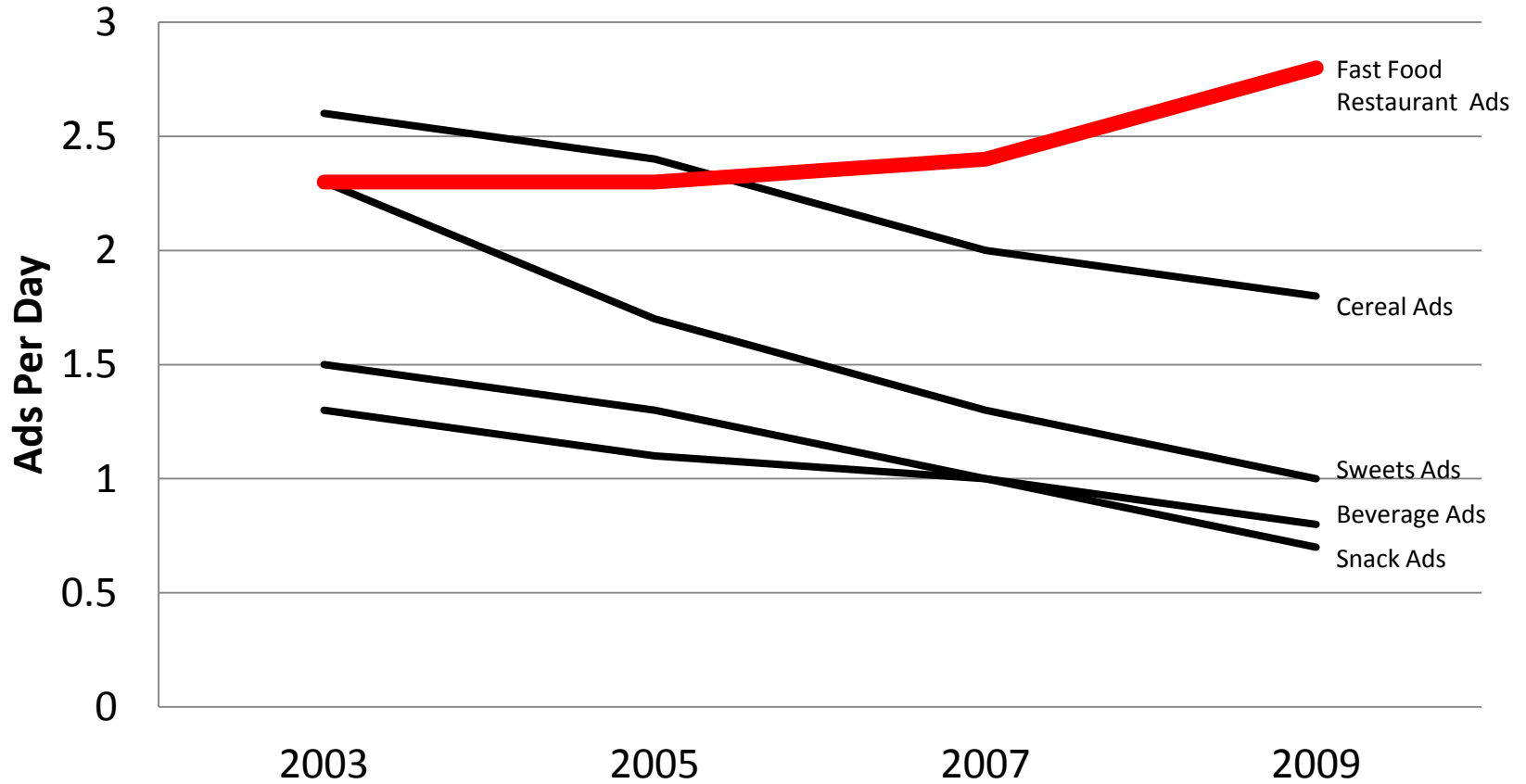
- Industry self-regulation through the Children's Food and Beverage Advertising Initiative (CFBAI)
  - Launched by the Council of Better Business Bureaus in 2006
  - Participating food & beverage companies pledge to market healthier or 'better-for-you' products to kids
  - Initially, standards varied by company
  - Over time, increasing uniformity in standards
    - Focus on children under 12 years of age
    - Define 'children's programming' as TV shows with 35% or greater child audience
    - Uniform nutritional standards to take effect at end of 2013

# Advertising Data

- Targeted Ratings Points (TRPs) data on exposure to ads seen on TV obtained from Nielsen Media Research
- Ratings cover all programming seen by children
- Ratings points measure the reach and frequency of advertising. For example, a commercial with 80 TRPs for 2-5 year olds per month is estimated to have been seen an average of one time by 80% of children 2-5 over the defined period
- Ratings by:
  - Year: 2003, 2005, 2007, and 2009 (2011 in progress)
  - Age Groups: 2-5y, 6-11y, and 12-17y
  - Race: All children, separately by white and black. Study does not include separate ratings for Hispanic children nor does it cover Spanish Language TV
- Food-related advertising categorized as:
  - Cereal, Sweets, Snacks, Beverages, Fast Food Restaurants, Full-service Restaurants, and Other

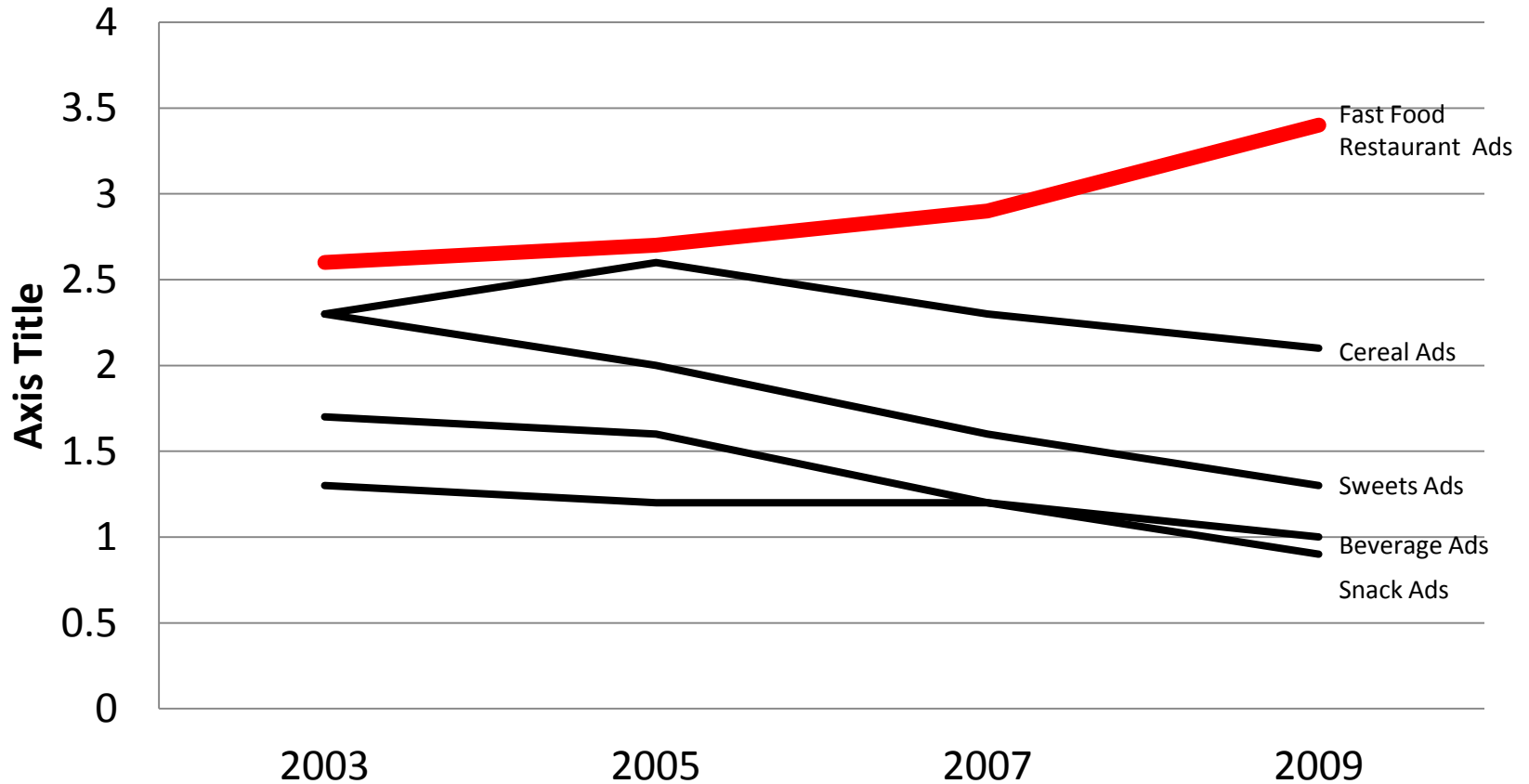
# Exposure to Food Advertisements per Day for Children by Year

## Children Ages 2-5 Years



# Exposure to Food Advertisements per Day for Children by Year

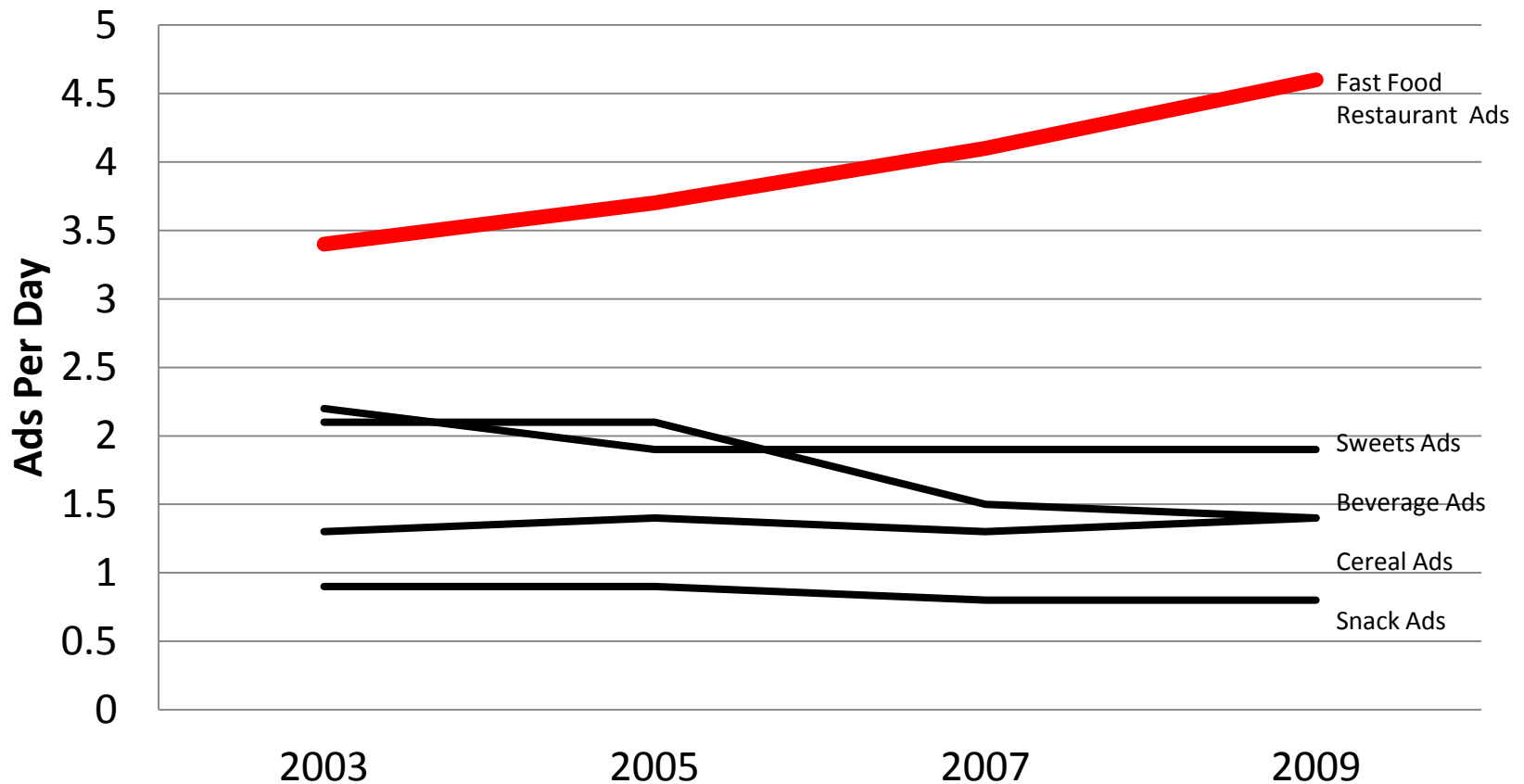
## Children Ages 6-11 Years





# Exposure to Food Advertisements per Day for Adolescents by Year

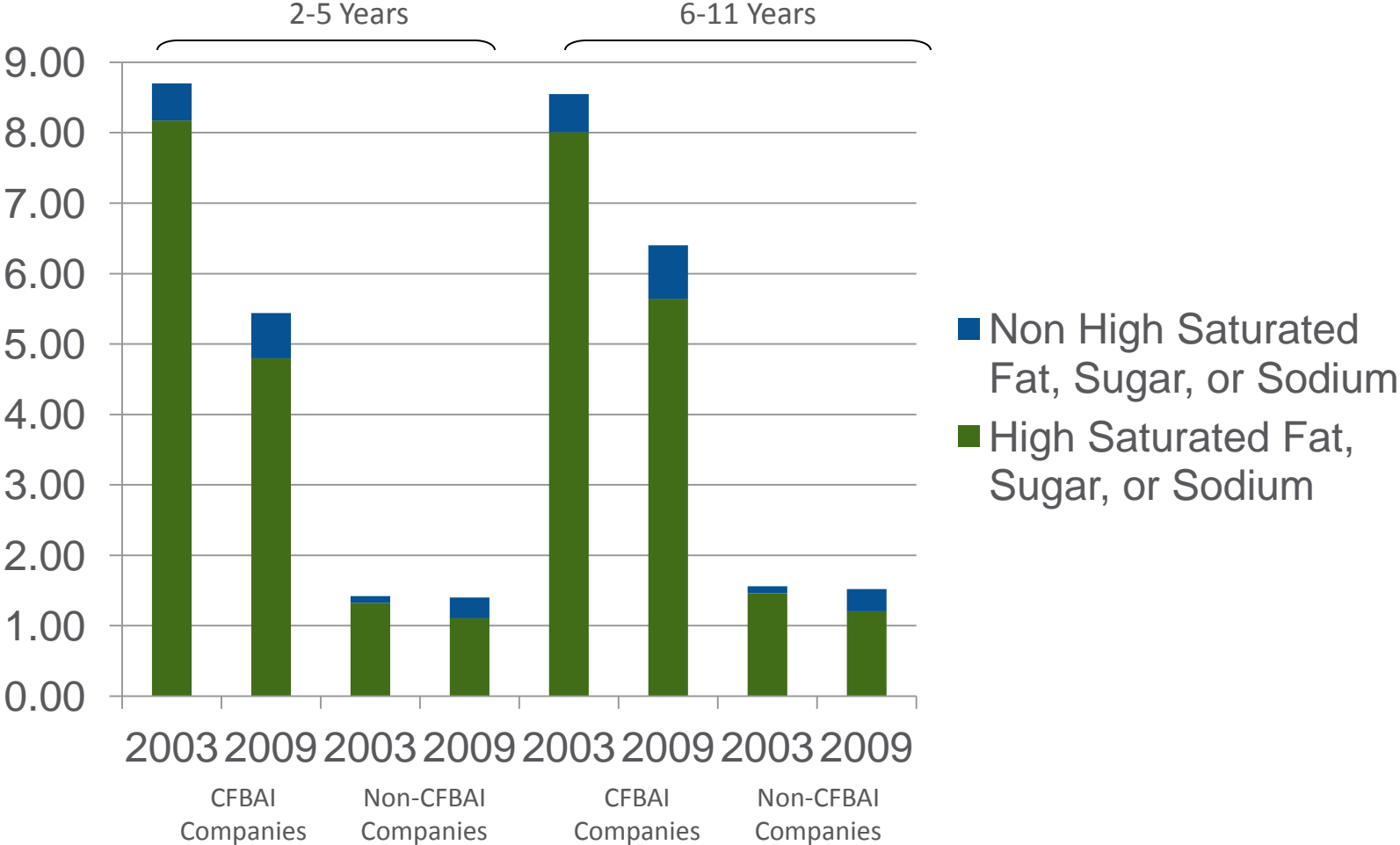
## Adolescents Ages 12-17 Years



# Nutritional Content Analysis

- Food and beverage advertisements were assessed on the basis of:
  - **Saturated Fat** (% Kcal): High >10% Kcal from saturated fat
  - **Sugar** (%Kcal): High >25% Kcal from sugar
  - **Sodium** (mg per 50g portion): High >200mg of sodium per 50g portion
  - **Fiber** (g per 50g portion): Low <1.15g of fiber per 50g portion
- Nutritional Content was weighted by the ratings data to provide estimates of exposure to nutritional content

# Exposure to Food and Beverage Advertisements by High Saturated Fat, Sugar, or Sodium Status, by CFBAI Membership, by Age, and by Year



# Percent Change in Nutritional Indicators for Advertised Food and Beverage Products by Parent Company

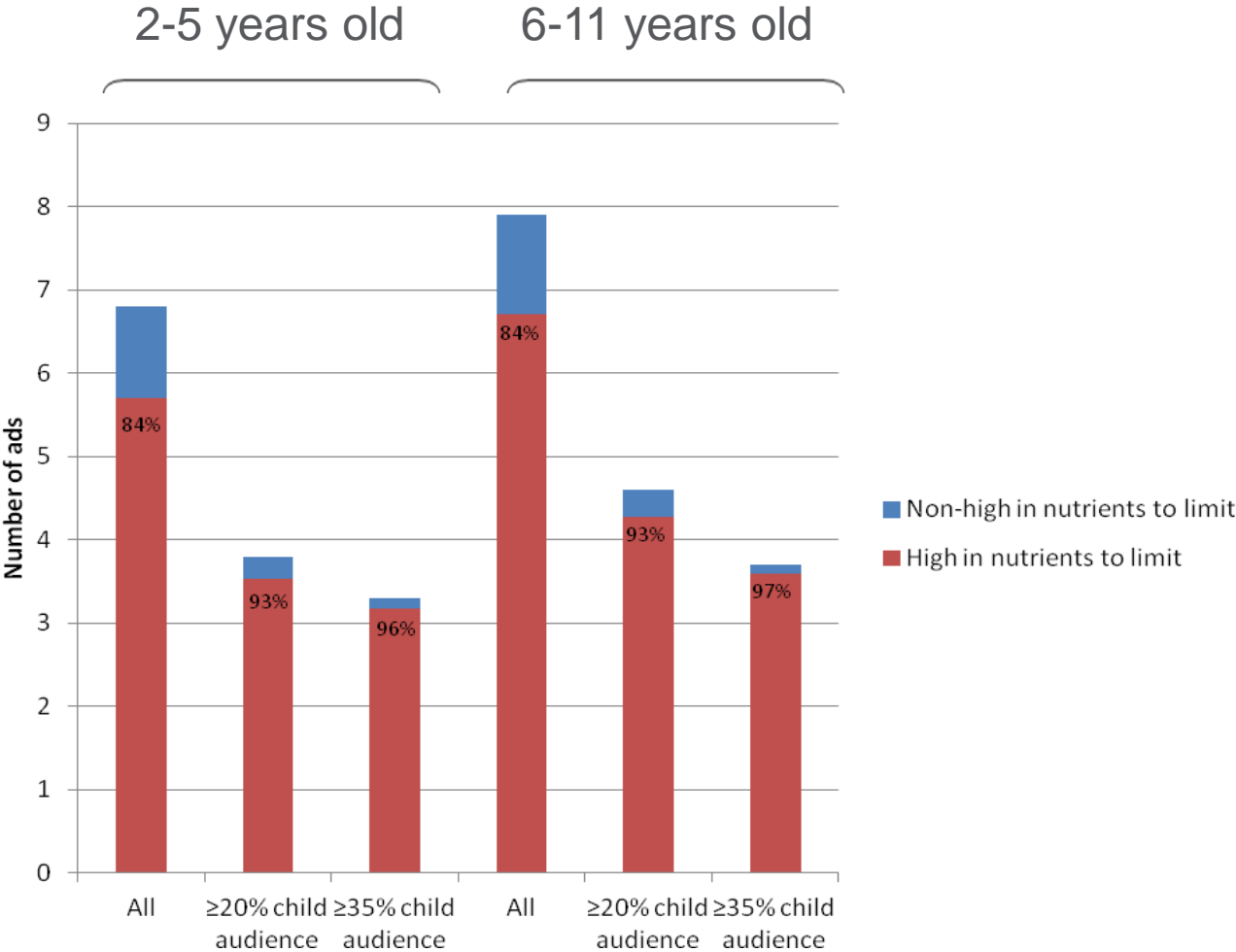
Children Ages 2-5 Years

CFBAI Companies	% of Ads High in Saturated Fat		% of Ads High in Sugar		% of Ads High in Sodium		% of Ads High in Saturated Fat, Sugar or Sodium	
	2009	% Change 03-09	2009	% Change 03-09	2009	% Change 03-09	2009	% Change 03-09
<i>Cadbury</i>	0.0%	--	17.2%	--	0.0%	--	17.2%	--
<i>Campbell</i>	8.2%	-71.8%	26.0%	-33.5%	46.7%	-13.8%	70.7%	-19.8%
<i>Coca-Cola</i>	0.0%	--	41.4%	-50.1%	0.0%	--	41.4%	-56.0%
<i>ConAgra</i>	20.8%	-48.8%	9.8%	-24.5%	48.4%	86.9%	63.1%	-1.2%
<i>Dannon</i>	11.3%	-86.4%	99.9%	-0.1%	0.0%	--	99.9%	-0.1%
<i>General Mills</i>	18.3%	23.3%	83.3%	-10.1%	61.1%	20.9%	97.4%	0.2%
<i>Hershey</i>	89.1%	31.1%	100.0%	22.7%	0.0%	--	100.0%	22.7%
<i>Kellogg</i>	12.0%	-16.0%	67.4%	-6.7%	61.1%	-19.1%	89.2%	-9.8%
<i>Kraft</i>	30.1%	-26.8%	36.2%	-45.0%	60.1%	61.0%	94.3%	-3.5%
<i>Mars</i>	54.6%	-11.8%	72.9%	-22.1%	1.3%	-50.9%	75.1%	-21.4%
<i>Nestle</i>	55.2%	-23.6%	18.6%	-67.9%	16.3%	1.6%	72.3%	-20.5%
<i>Pepsi</i>	3.2%	-81.1%	58.2%	-12.3%	23.4%	-47.8%	81.6%	-11.0%
<i>Post</i>	0.0%	--	82.6%	-4.6%	96.7%	7.4%	96.7%	1.5%
<i>Unilever</i>	65.6%	-1.4%	37.7%	18.0%	37.0%	-38.2%	92.2%	-3.1%
<b>Total</b>	<b>23.0%</b>	<b>-24.1%</b>	<b>63.3%</b>	<b>-15.4%</b>	<b>48.0%</b>	<b>10.2%</b>	<b>88.2%</b>	<b>-6.2%</b>

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Source: Powell et al. Book Chapter, in press.

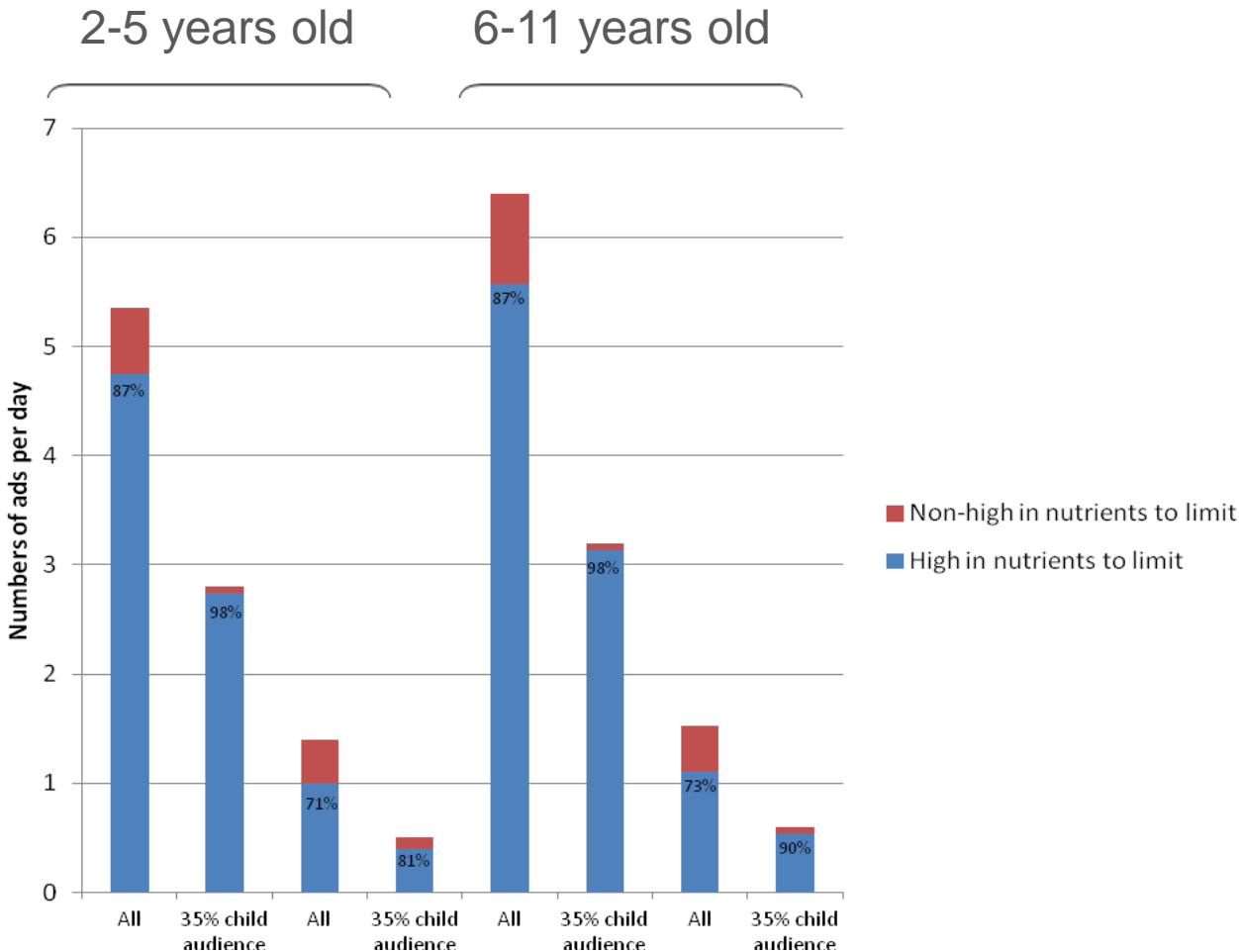
# Children's Exposure to Food and Beverage (Non-Restaurant) Product Advertisements and Nutritional Content from All and Children's Programming, by Age, 2009



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Nutrients to limit include saturated fat, trans fat, sodium, and sugar

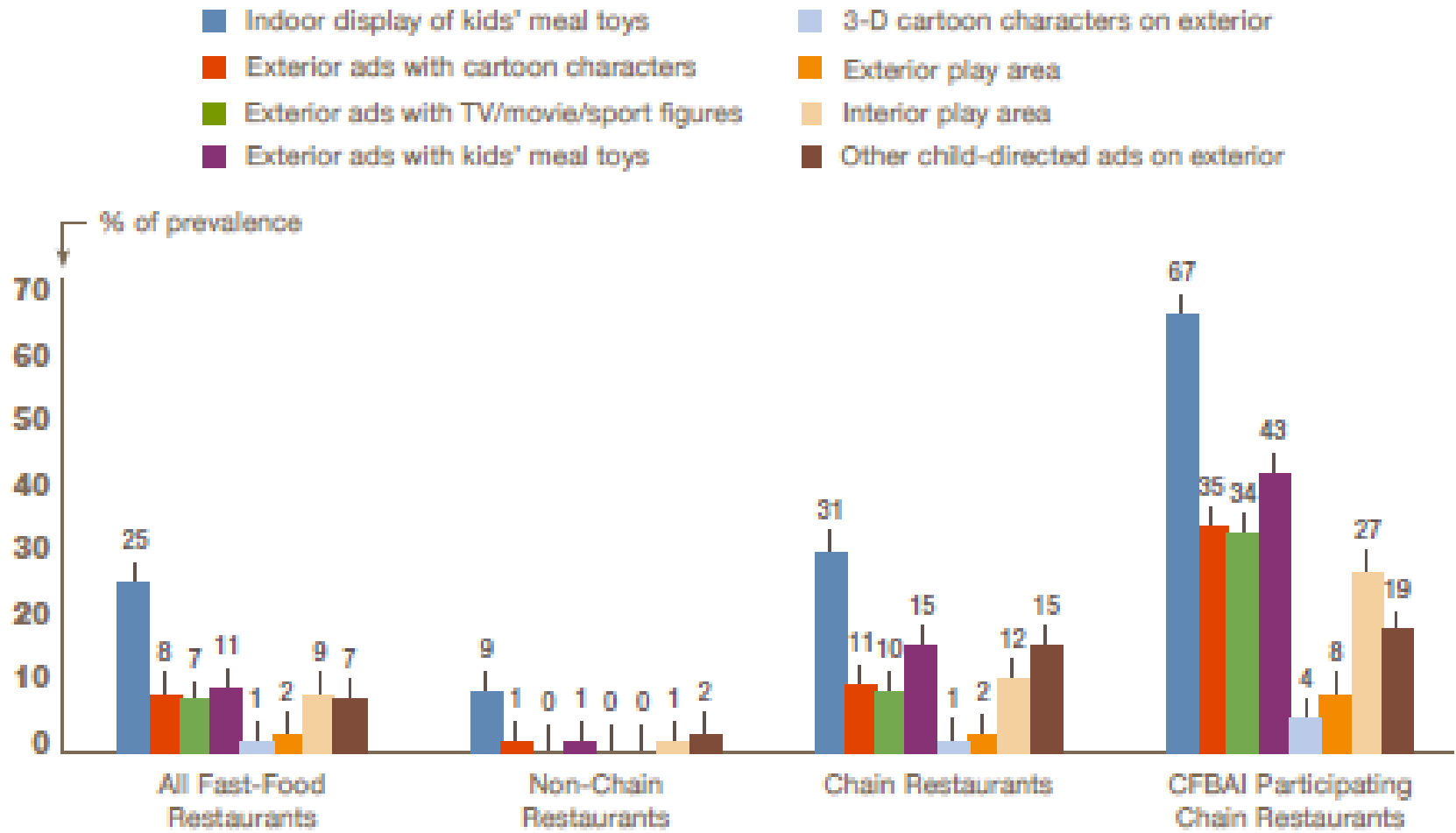
# Children's Exposure to Food and Beverage Product Advertisements and Nutritional Content, by CFBAI Membership and Age, 2009



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Nutrients to limit include saturated fat, trans fat, sodium, and sugar

**FIGURE 2** Prevalence of Various Child-Directed Marketing Strategies Used Within and Around Fast-Food Restaurants that Serve Kids' Meals, By Chain Status



# Policy Implications of Trends in Ad Content

- Children and teens continue to be exposed mainly to food and beverage ads for products that are high in saturated fat, sugar or sodium
- Children and teens are exposed to a variety of other food and beverage marketing
- Data suggest that industry self-regulation is limited in its effectiveness to substantially improve food-related advertising seen by children on TV
- Key issues of concern for policymakers regarding CFBAI self-regulation:
  - Inadequate nutritional standards
  - IWG agency recommendations
  - No uniform definition of child audiences
  - Does not address reach of ads in non-child programming
  - Does not apply to children age 12 and over

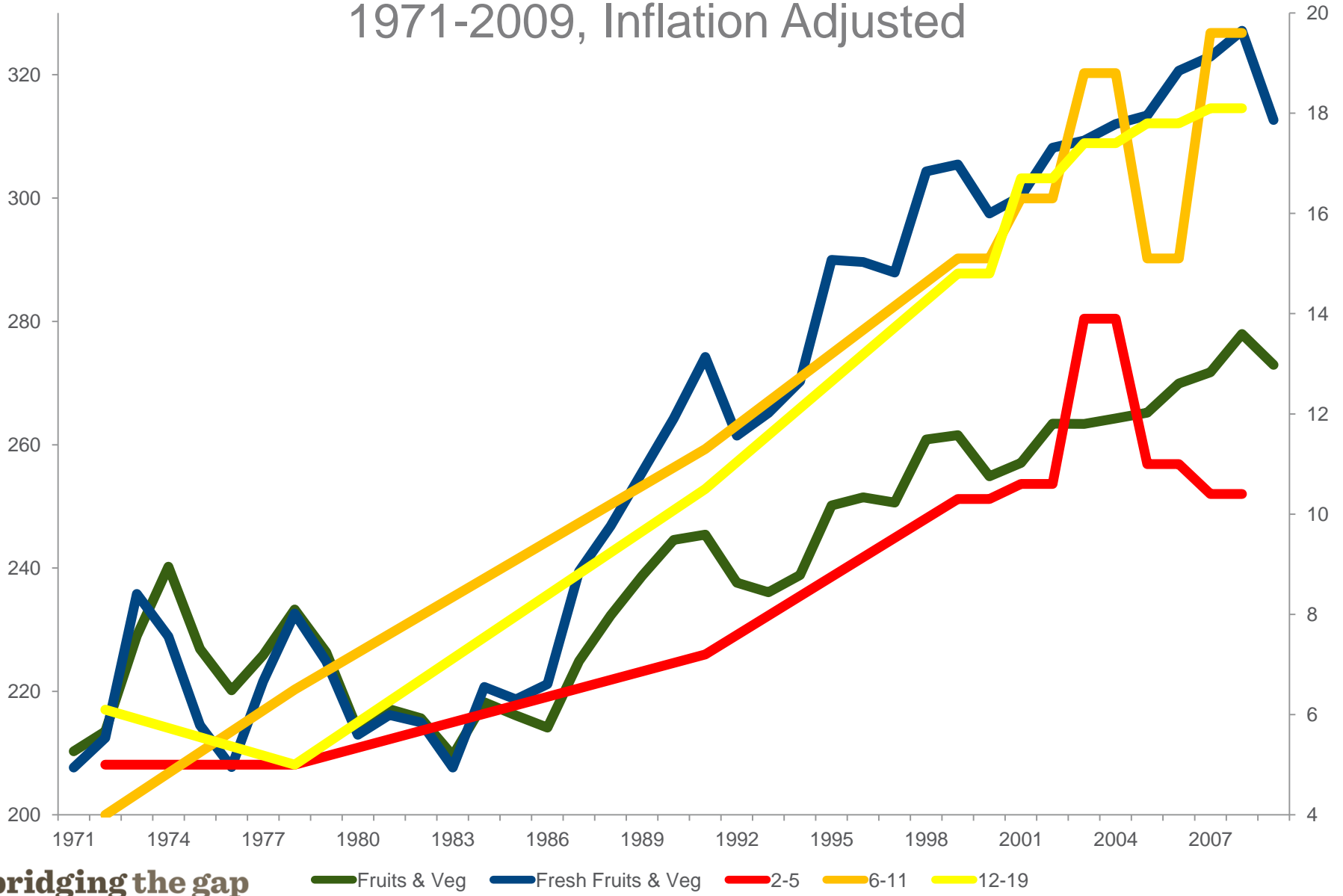


# Food & Beverage Pricing

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# Selected Food Price & Youth Weight Trends

## 1971-2009, Inflation Adjusted

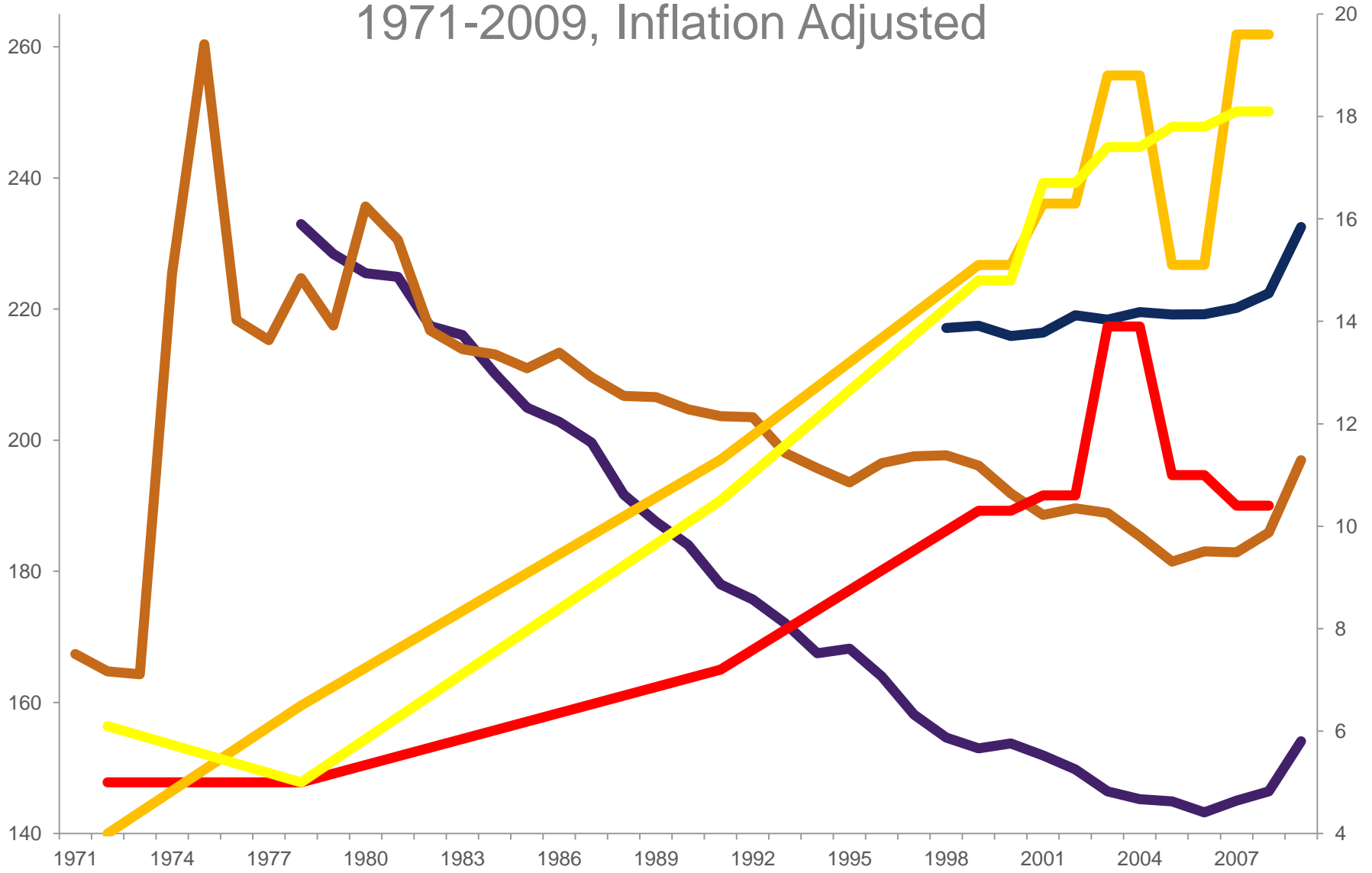


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— Fruits & Veg   
 — Fresh Fruits & Veg   
 — 2-5   
 — 6-11   
 — 12-19

# Selected Food Price & Youth Weight Trends

## 1971-2009, Inflation Adjusted



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■ Carb. Bev.  
 ■ Sweets  
 ■ Fast Food  
 ■ 2-5  
 ■ 6-11  
 ■ 12-19

# Food Prices and Consumption

Extensive economic research on the impact of food and beverage prices on consumption of various products; estimates suggest 10% own-price increase would reduce:

- Fruit consumption by 4.9%
- Vegetable consumption by 4.8%
- Sugar-sweetened beverage consumption by 12.1%
- Fast food consumption by 5.2%

# Food Prices and Weight Outcomes

While mixed, weight of the existing evidence suggests that changes in relative prices for healthier and less healthy foods may affect weight outcomes, with greater impact on:

- Lower income, less educated populations
- Younger populations
- Populations at greater risk for obesity

# Implications for Obesity Prevention

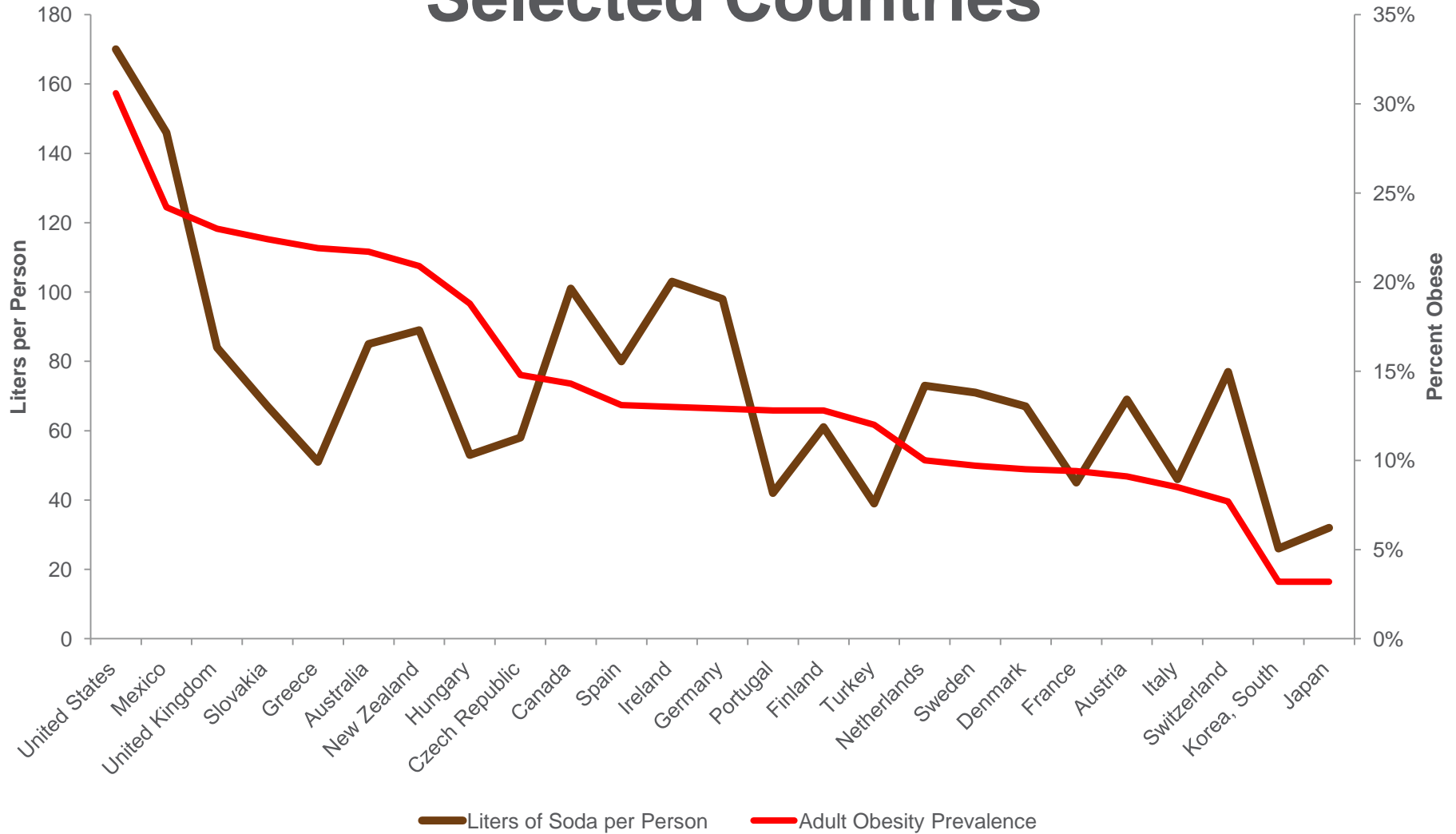
Policy options for altering relative prices include policies that:

- Increase prices of less healthy options
  - taxes
  - elimination of corn subsidies
  - disallow purchases under food assistance programs
- Reduce prices of healthier options
  - subsidies
  - expanded or favored treatment under food assistance programs

# Why SSB Taxes?

- Link to obesity
  - Several meta-analyses conclude that increased SSB consumption causes increased weight, obesity
  - Increased calories from SSBs not offset by reductions in calories from other sources
- Other health consequences
  - type 2 diabetes, lower bone density, dental problems, headaches, anxiety and sleep disorders

# Soda Consumption & Obesity Selected Countries



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Source: Soda consumption from Euromonitor, 2011; Obesity prevalence from OECD Health Data, 2005



# Carbonated Beverage Prices & Youth Obesity

## 1995-2009, Inflation Adjusted



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Carb. Bev.

Obese

# Types of SSB Taxes

- From a public health perspective, specific excise tax preferable to sales tax or ad valorem excise tax for several reasons:
  - More apparent to consumer
  - Easier administratively
  - Reduces incentives for switching to cheaper brands, larger quantities
  - Revenues not subject to industry price manipulation
  - Greater impact on consumption; more likely impact on weight outcomes
  - Disadvantage: need to be adjusted for inflation

# Summary

# Summary

Clear public health and economic rationale for policies and regulation to promote healthier eating and reduce obesity

Growing awareness of the importance of environmental factors in influencing diets and weight outcomes

Industry self-regulation unlikely to achieve significant changes in behavior that lead to significant reductions in obesity

Growing evidence on the effectiveness of policy interventions in improving diets and reducing obesity and its consequences

For more information:

[fjc@uic.edu](mailto:fjc@uic.edu)

<http://www.bridgingthegapresearch.org/>