



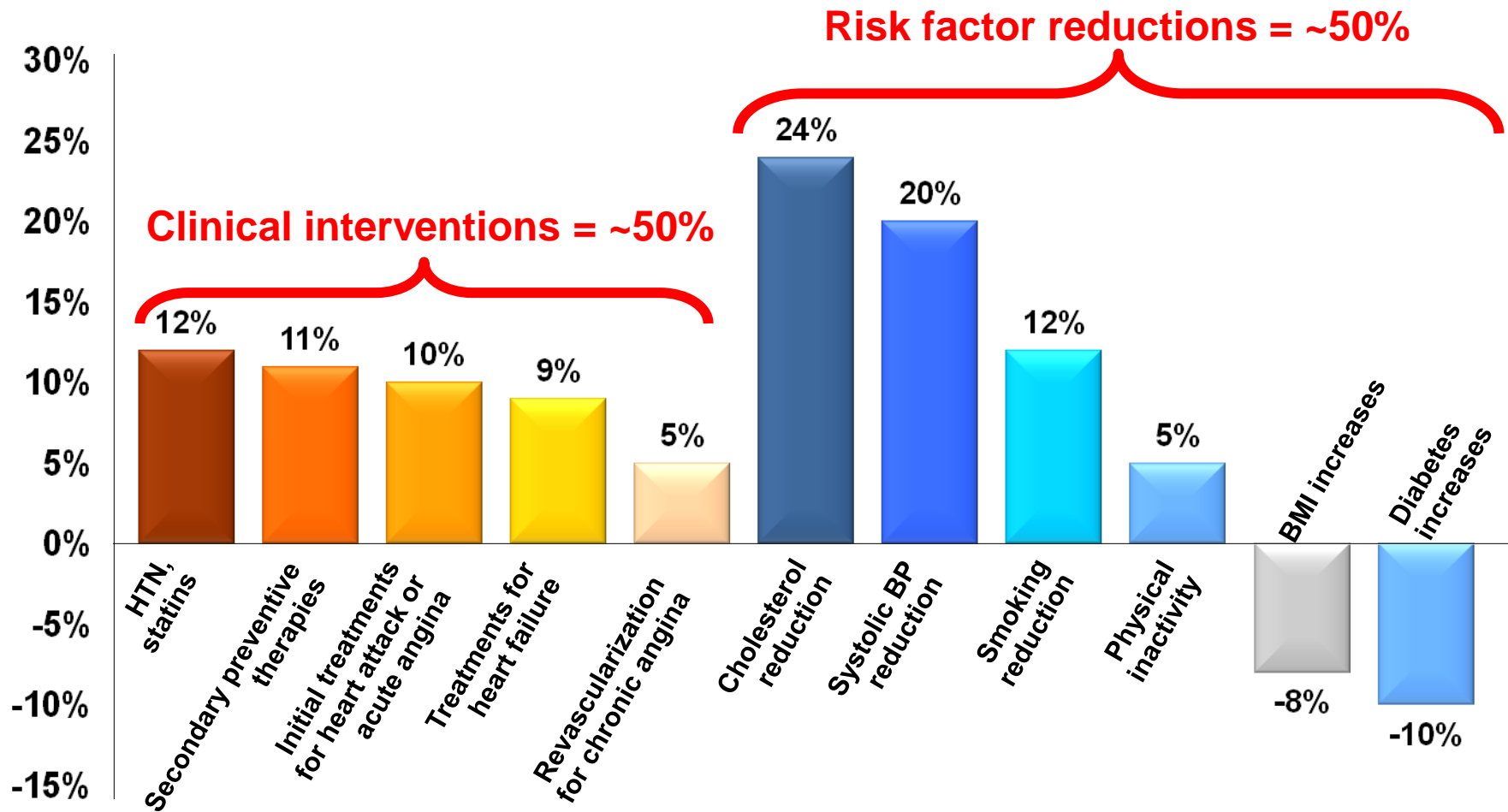
Kim La Croix, MPH, RD
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Center for Prevention & Health Promotion
Health Promotion Chronic Disease Prevention

Objectives

- ❑ Describe the Million Hearts Initiative and the impact of sodium and trans fats on population-level risk factors for heart disease and stroke
- ❑ Examine key heart disease and stroke surveillance data for Oregon
- ❑ List and describe sodium reduction strategies nationally and in Oregon
- ❑ Examine trans fats regulations and policy implications
- ❑ Describe key strategies public health practitioners can use in their community to contribute to a heart-healthy food environment

Clinical and Public Health Progress

Each Contributed About Half to the 50% Reduction in Heart Disease Deaths, US, 1980–2000



Ford ES, et al. NEJM 2007;356(23):2388-97

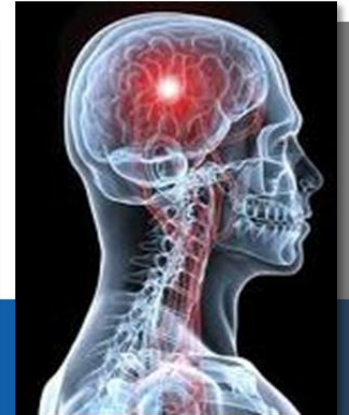
HTN, Hypertension

BP, Blood pressure

BMI, Body mass index

Heart Disease and Strokes Leading Killers in the United States

- ❑ **Cause 1 of every 3 deaths**
- ❑ **Over 2 million heart attacks and strokes each year**
 - 800,000 deaths
 - Leading cause of preventable death in people <65
 - \$444 B in health care costs and lost productivity
 - Treatment costs are ~\$1 for every \$6 spent
- ❑ **Greatest contributor to racial disparities in life expectancy**



Heart Disease and Stroke Data

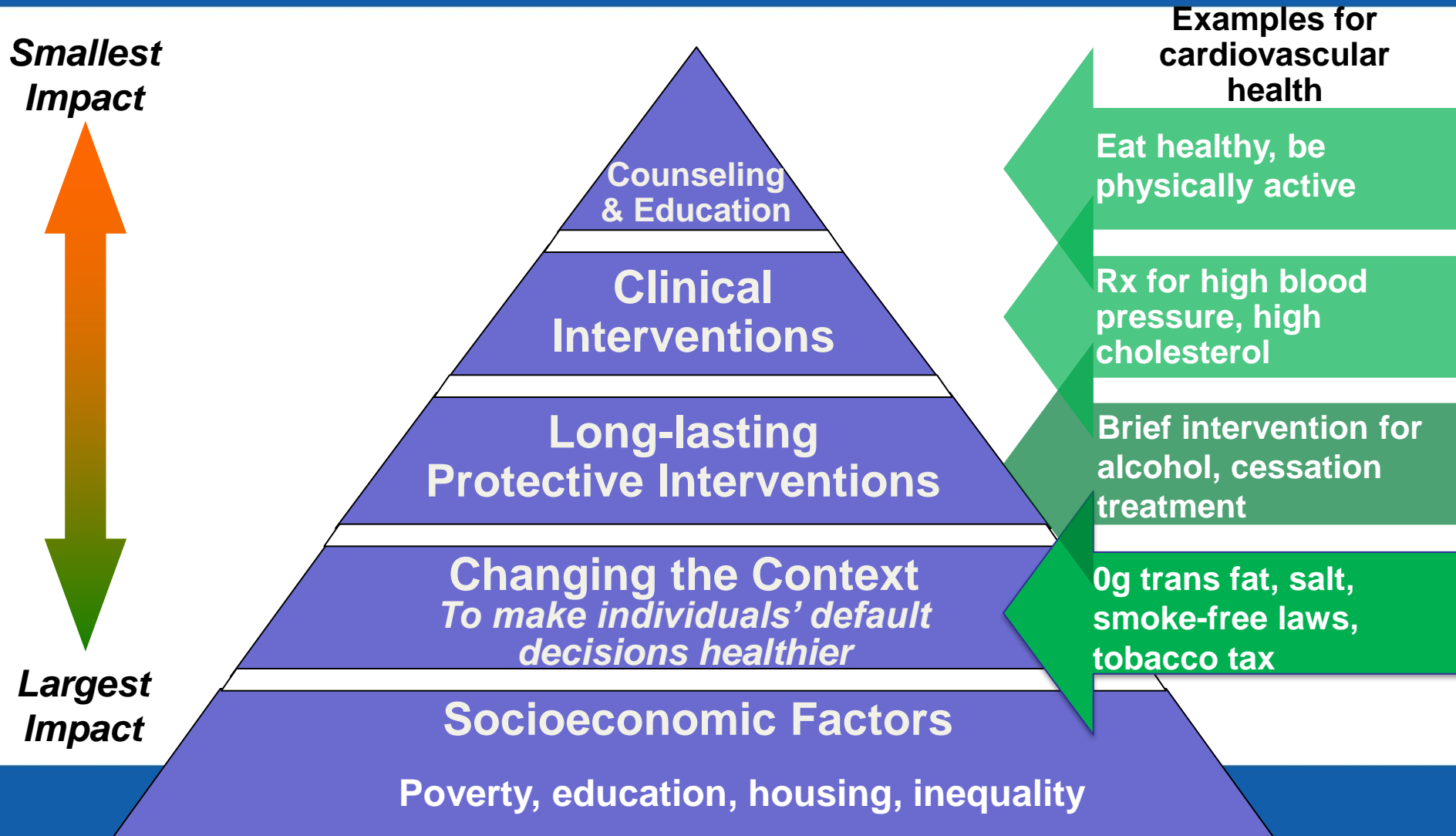
- ❑ 1st and 4th leading causes of death in the United States
- ❑ 2nd and 4th leading causes of death in Oregon as of 2010
- ❑ CVD accounted for ¼ (25%) of all deaths in Oregon in 2010
 - 32.5% of Oregon adults reported high cholesterol
 - 29% reported high blood pressure
 - 20% smoked cigarettes
 - 24.1% obese; 36.1% overweight

Risk Factors for Heart Disease & Stroke

- ❑ High Blood Pressure
- ❑ High Cholesterol
- ❑ Diabetes
- ❑ Smoking
- ❑ Obesity
- ❑ Age
- ❑ Race
- ❑ Gender

Most risk factors for heart disease and stroke—specifically high blood pressure, high cholesterol, smoking, and obesity—are preventable and controllable. Controlling these risk factors could reduce risk of heart attack or stroke by more than 80%.¹

Factors That Affect Health



Million Hearts™

National initiative co-led by CDC and CMS

Partners across federal and state agencies and private organizations



**Goal: Prevent 1 million heart attacks
and strokes in 5 years**

<http://millionhearts.hhs.gov>

Key Components of Million Hearts

CLINICAL PREVENTION *Optimizing care*

**Focus on
ABCS**



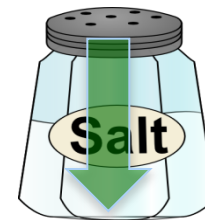
**Health
information
technology**



**Clinical
innovations**



COMMUNITY PREVENTION *Changing the context*



Getting to Goal

Intervention	Baseline	Target	Clinical target
A spirin for those at high risk	47%	65%	70%
B lood pressure control	46%	65%	70%
C holesterol management	33%	65%	70%
S moking cessation	23%	65%	70%
Sodium reduction	~ 3.5 g/day	20% reduction	
Trans fat reduction	~ 1% of calories	50% reduction	

Unpublished estimates from Prevention Impacts Simulation Model (PRISM)

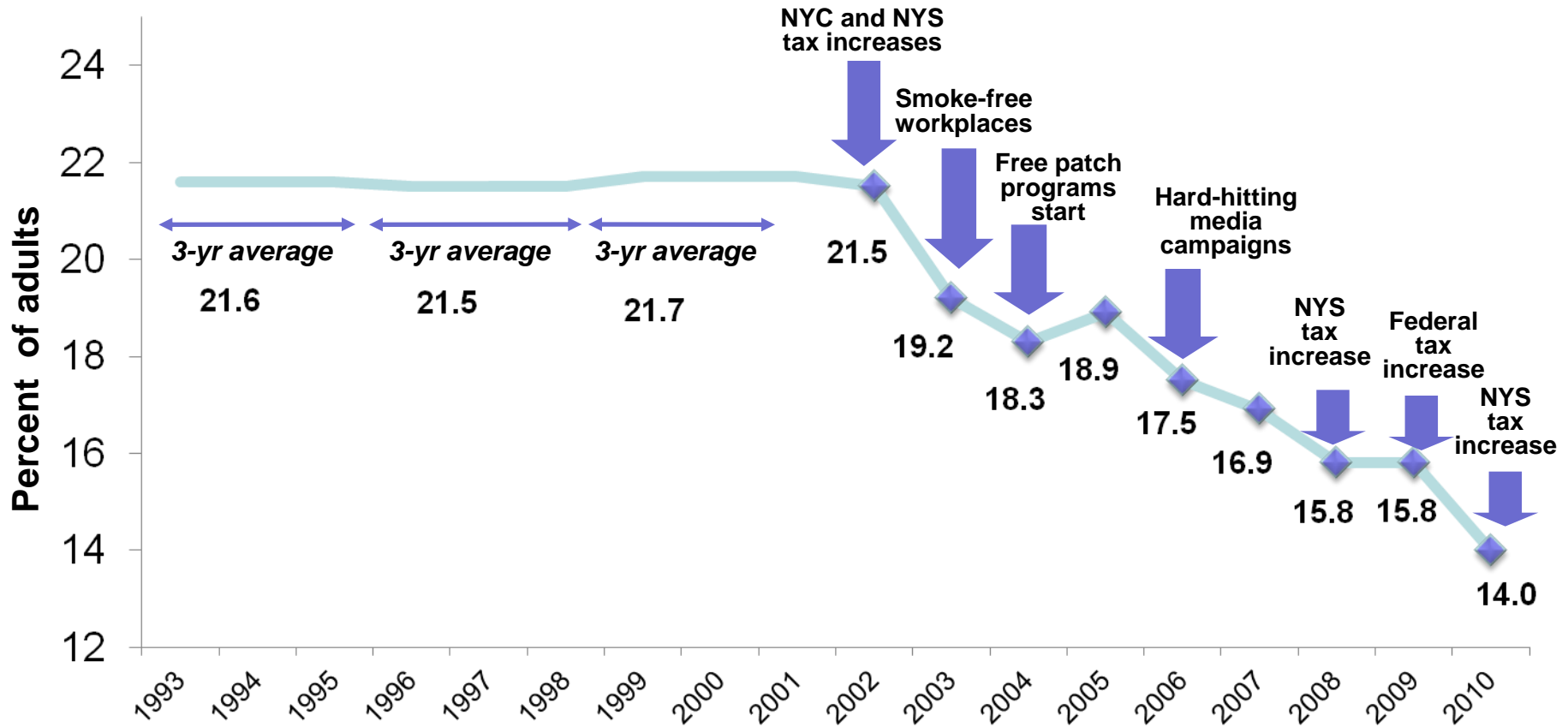
Community Prevention: Reducing the Need for Treatment by Reducing Tobacco Use

- ❑ **Comprehensive tobacco control programs are most effective**
- ❑ **Graphic mass media campaign**
- ❑ **Smoke-free public places and workplace policies**
- ❑ **Cigarette price increases**
- ❑ **Grants to communities for tobacco use prevention and cessation programs**
- ❑ **Best Practices for Comprehensive Tobacco Control Programs:**
 - http://www.cdc.gov/tobacco/stateandcommunity/best_practices/index.htm



Decline in Smoking in New York City, 2002–2010

450,000 Fewer Smokers



New York City Community Health Survey

Community Prevention: Reducing the Need for Treatment by Reducing Trans Fat

❑ Trans fat

- Increases LDL (bad) and decreases HDL (good) cholesterol

❑ IOM: Reduce intake as close to zero as possible

❑ FDA: Requires labeling of trans fat content

❑ Replacing artificial trans fat is feasible and it does not increase cost or change flavor or texture of foods

❑ Monitor and publish trans fat levels in the population

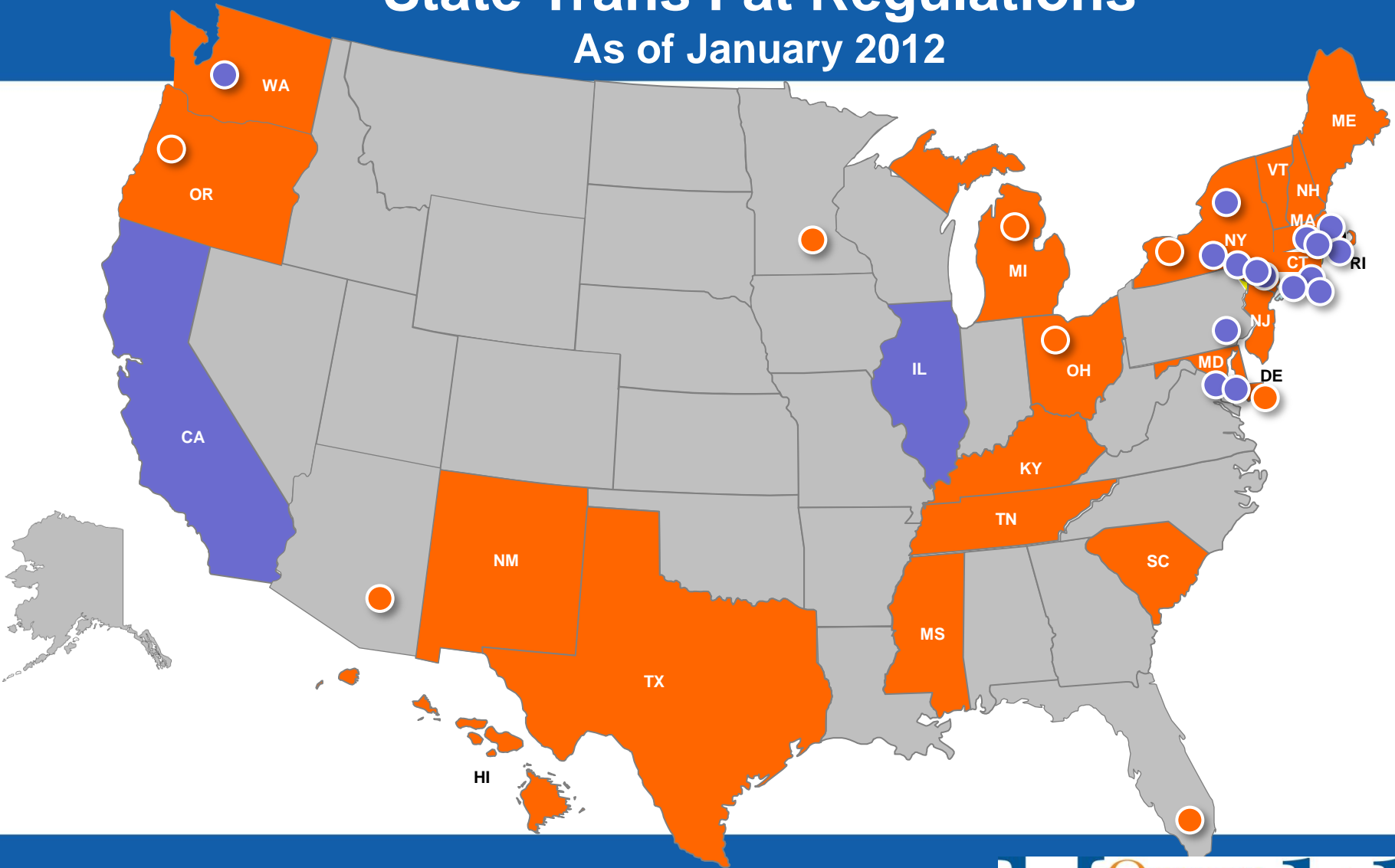
❑ Encourage food industry to eliminate trans fats



❑ Strong Trans Fats Standards

- National School lunch and Breakfast program
- HHS/GSA Healthy and Sustainable Food Guidelines

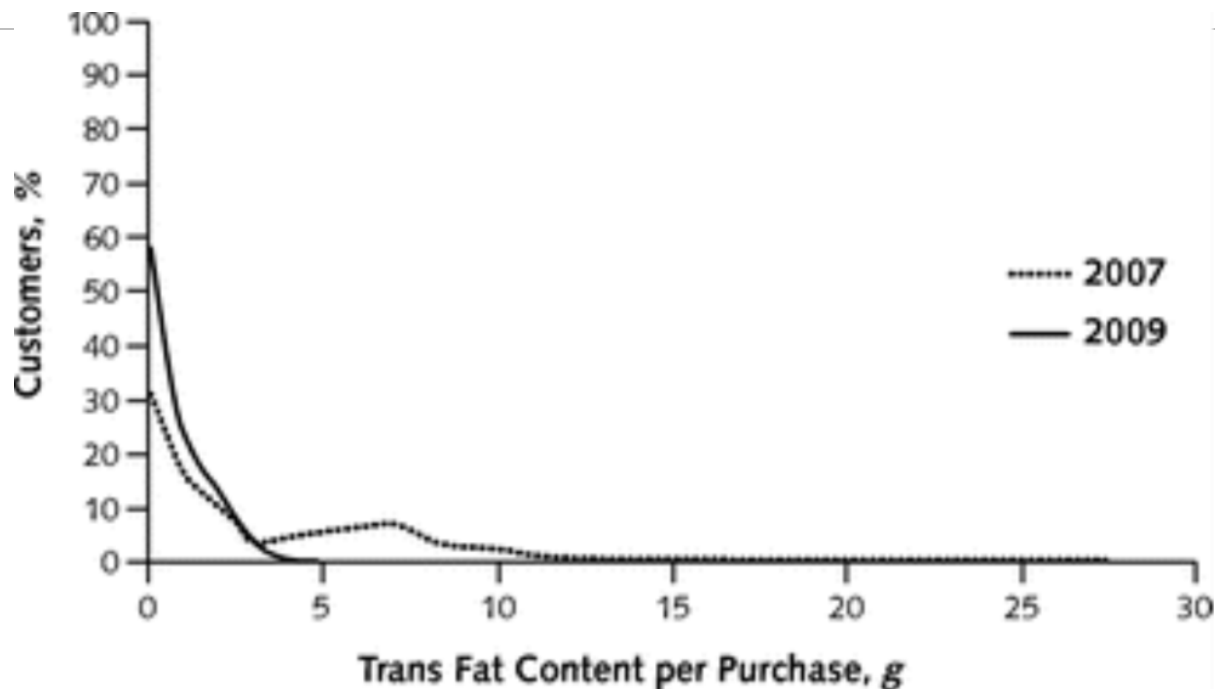
Community Prevention: State Trans Fat Regulations

As of January 2012



-  Enacted or passed trans fat regulation in food service establishments (FSEs)
-  Trans fat regulation in FSEs introduced, defeated, or stalled

From: Change in Trans Fatty Acid Content of Fast-Food Purchases Associated With New York City's Restaurant Regulation: A Pre-Post Study



Distribution of trans fat content per purchase.

Trans fat content may be underestimated because companies can report trans fat values less than 0.5 g as zero grams of trans fat. In 2007, only 32% of customer purchases had zero grams of trans fat vs. 59% of customer purchases in 2009. Similarly, the maximum amount of trans fat in an individual purchase was 28 g in 2007 vs. 5 g in 2009.

The Effect of Sodium Intake on Blood Pressure

- ❑ **Sodium intake is one of several dietary factors that increases blood pressure.**
- ❑ **Sodium affects blood pressure by changing blood volume.**
- ❑ **Absorbed sodium remains in extracellular compartments as a component of plasma, interstitial fluid, plasma water, and muscle tissue, which maintain blood pressure in the normal range.**
 - ❑ Increased sodium intake = increased blood volume = higher blood pressure.
 - ❑ Sodium reduction = decreased blood volume = lower blood pressure.

Reducing Sodium Intake Reduces Blood Pressure

- ❑ **Reducing average population sodium intake to 1,500 mg/day may:**
 - Reduce cases of hypertension by 16 million.
 - Save \$26 billion health care dollars.
 - Gain 459,000 quality-adjusted life years (QALYs).
- ❑ **Even reducing sodium intake to 2,300 mg/day could:**
 - Reduce cases of hypertension by 11 million.
 - Save \$18 billion health care dollars.
 - Gain 312,000 QALYs.



Sacks FM, et al. Effects on blood pressure of reduced dietary sodium and the Dietary Approaches to Stop Hypertension (DASH) diet. DASH-Sodium Collaborative Research Group. *N Eng J Med.* 2001;344:3-10.

Palar K, et al. Potential societal savings from reduced sodium consumption in the U.S. adult population. *Am J Health Promot.* 2009;24(1):49-57.

Sodium Intake Levels: Recommended and Actual

- ❑ **Recommended levels of daily sodium intake from the *2010 Dietary Guidelines for Americans*:**
 - Reduce sodium to < 2,300 mg/day.
 - Specific populations: 1,500 mg/day.
 - Age 51+
 - African Americans
 - Individuals with hypertension, diabetes, or chronic kidney disease
 - Specific populations account for about **half the U.S. population** and the majority of adults.
- ❑ **Actual daily sodium intake:**
 - Average intake for U.S. adults is > 3,300 mg/day.
 - 90% of Americans exceed recommended sodium intake

USDA and HHS. *Dietary guidelines for Americans, 2010*. 7th edition.

Washington, DC: Government Printing Office; 2010.

CDC. Vital Signs: food categories contributing the most to sodium consumption

—United States, 2007–2008. *MMWR*. 2012;61(Early Release):1-7.

44% of U.S. Sodium Intake Comes from 10 Types of Foods

Rank	Food Types	%
1	Bread and rolls	7.4
2	Cold cuts and cured meats	5.1
3	Pizza	4.9
4	Poultry	4.5
5	Soups	4.3
6	Sandwiches	4.0
7	Cheese	3.8
8	Pasta mixed dishes	3.3
9	Meat mixed dishes	3.2
10	Savory snacks	3.1

CDC. Vital Signs: food categories contributing the most to sodium consumption—United States, 2007–2008. *MMWR*. 2012;61(Early Release):1-7.

Sodium in Food Environments

- ❑ Bread
 - Largest sodium contribution to diet
 - Bread is still largely made in Oregon
 - Food Innovation Center
 - Product development, publish sensory and consumer acceptance data
 - Influence reformulations, large procurement
- ❑ Promote or require changes in sodium content of foods through:
 - Comprehensive Nutrition Standards
 - Procurement policies
 - Healthy meeting policies
 - Vending Machines
 - Retail outlets
 - National Efforts
 - NSRI
 - FDA

EDITORIALS

**Can We Finally
Make Progress
on Sodium
Intake?**

*Sonia Y. Angell, MD, MPH
Thomas A. Farley, MD, MPH*

Sodium & Trans Fats are one piece of the puzzle



□ Healthy Food Environments

- More than just salt, fat or sugar
- Increase fruits and vegetables (K)
- Increase whole grains, decrease refined grains
- Less Calories, Trans Fat and Saturated Fat
- Less added sugars esp. from sugary drinks
- Lean protein and low fat dairy

Increase access to healthy foods

Decrease access to unhealthy foods?

School Nutrition Policies

- ❑ School Wellness Policies
- ❑ Nutrition Standards in National School Lunch and Breakfast
- ❑ Restrictions on Competitive Foods
 - (HB 2650)

PEDIATRICS®

OFFICIAL JOURNAL OF THE AMERICAN ACADEMY OF PEDIATRICS

**Weight Status Among Adolescents in States That Govern Competitive Food
Nutrition Content**

Daniel R. Taber, Jamie F. Chriqui, Frank M. Perna, Lisa M. Powell and Frank J.
Chaloupka

Pediatrics; originally published online August 13, 2012;
DOI: 10.1542/peds.2011-3353

The screenshot shows the Pew Health Group website. The main navigation bar includes Home, Health Highlights, Topics, Projects, Reports & Analysis, Biomedical Research, Experts, Get Involved, and About Us. The current page is a report titled "Health Impact Assessment: National Nutrition Standards for Snack and a la Carte Foods and Beverages Sold in Schools" dated Jan 26, 2012. The report includes a "Quick Summary" section with a video player and a "Full Report" link. The "Executive Summary" section is also visible, starting with an "Introduction" that discusses the impact of school food and beverage policies on children's health.

Government Dollars and Property

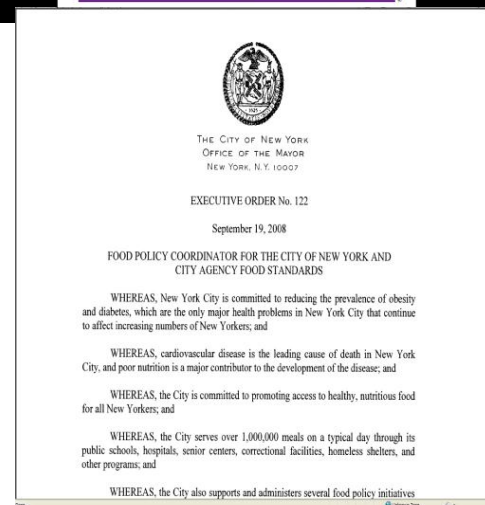
❑ Foods purchased with Government \$

- MA EO #509
- NYC EO #122

❑ Healthy Food on Government Property

- Health and Sustainability Guidelines for Federal Concessions and Vending Operations
- Portland Parks and Rec
- LA County-vending
- DE-Vending EO #19
- Full list on CSPI website:

http://www.cspinet.org/new/pdf/state_policy_descriptions.pdf



Menu Labeling-mixed results

REVIEW

Open

Calorie menu labeling on quick-service restaurant menus: an updated systematic review of the literature

Jonas J Swartz^{1*}, Danielle Braxton² and Anthony J Viera^{1,3}

Abstract

Nutrition labels are one strategy being used to combat the increasing prevalence of overweight and obesity in the United States. The Patient Protection and Affordable Care Act of 2010 mandates that calorie labels be added to menu boards of chain restaurants with 20 or more locations. This systematic review includes seven studies published in the BMJ

and Google labeled menu items in 100 restaurants. Obesity prevalence, quality of menu labeling, and the effect of labeling on calorie intake are discussed.

BMJ 2011;343:d4464 doi: 10.1136/bmj.d4464

Keywords:
Act, obesity

RESEARCH

Changes in energy content of lunchtime purchases from fast food restaurants after introduction of calorie labelling: cross sectional customer surveys

Tamara Dumanovsky *independent consultant*¹, Christina Y Huang *doctoral fellow*², Cathy A Nonas *director of Physical Activity and Nutrition*³, Thomas D Matte *professor of Urban Public Health Program*⁴, Mary T Bassett *director of African Health Initiative*⁵, Lynn D Silver *assistant commissioner*³

Journal of the Academy of Nutrition and Dietetics
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Journal of the Academy of Nutrition and Dietetics
Volume 112, Issue 8, Pages 1169-1176, August 2012

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ADVERTISMENT

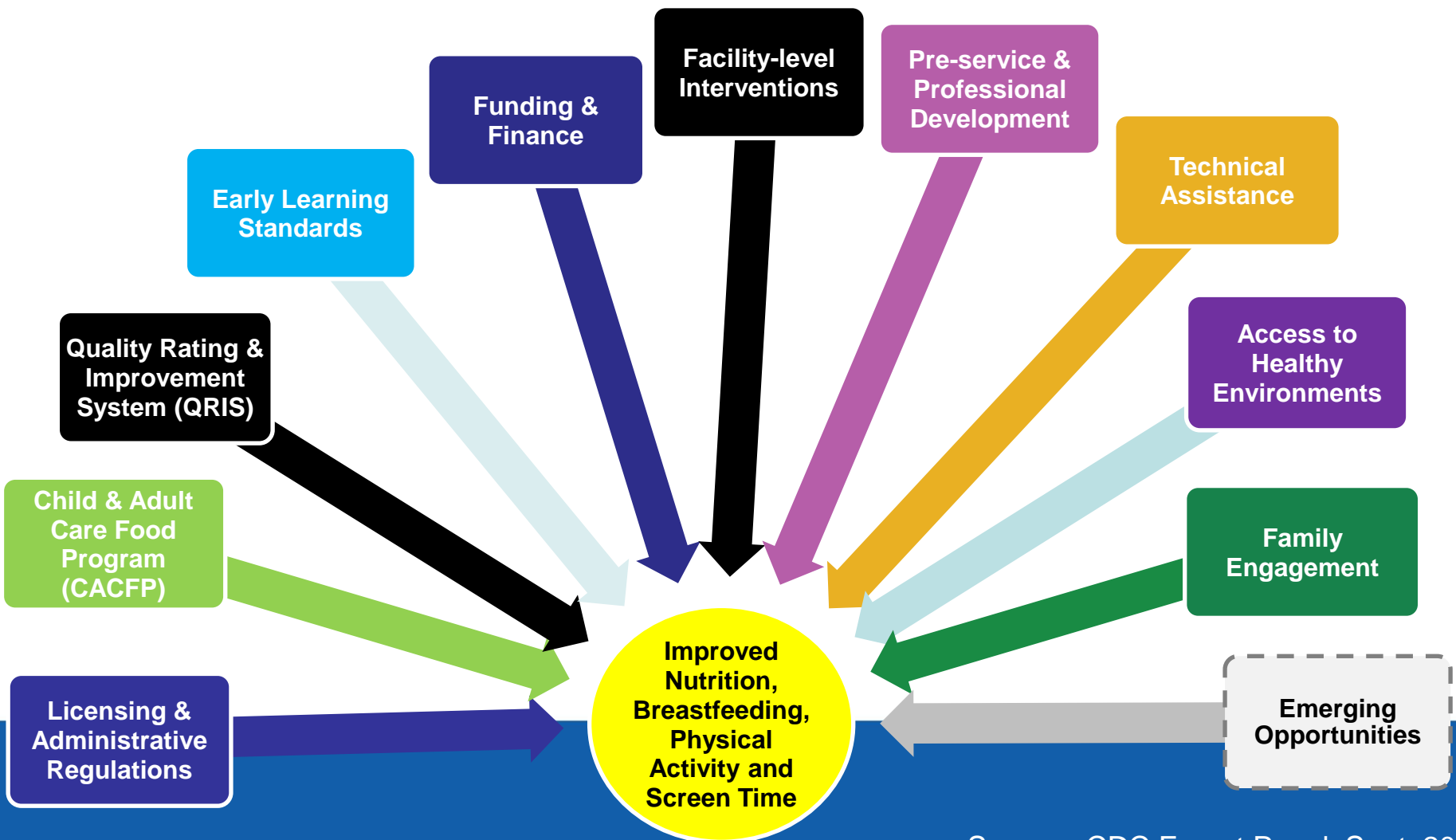
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ling have been proposed as a method to improve the food environment. However, there is little information on the in restaurant menu items and changes over time.

y, saturated fat, and sodium content of entrées 6 and 18 months post-implementation of restaurant menu labeling shington State for items that were on the menu at both time periods, and across all items at 6 and 18 months and intent to recommendations provided by the 2005 Dietary Guidelines for Americans.

cluded sit-down and quick-service chains (eg, burgers, pizza, sandwiches/subs, and Tex-Mex) subject to King

CDC's Spectrum of Opportunities for State Action in Early Care and Education for Obesity Prevention



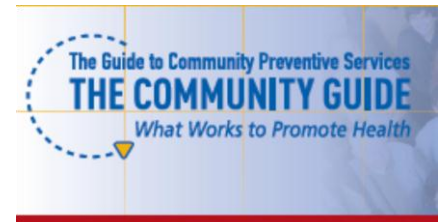
Thank You!



[Kim La Croix; Kimberly.w.lacroix@state.or.us](mailto:Kimberly.w.lacroix@state.or.us); 971-673-0606

Resources

- ❑ Vital Signs: Where's the Sodium?
 - <http://www.cdc.gov/VitalSigns/Sodium/index.html>
- ❑ Vital Signs: Getting Blood Pressure Under Control
 - <http://www.cdc.gov/vitalsigns/Hypertension/index.html>
- ❑ Team Up. Pressure Down.
 - <http://millionhearts.hhs.gov/resources/teamup pressuredown.html>



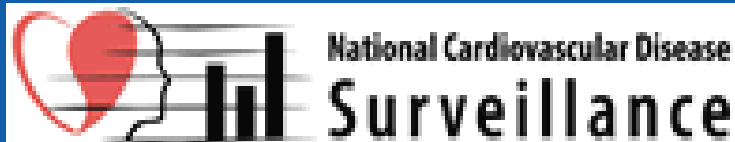
- ❑ Community Guide: Team-Based Care
 - <http://www.thecommunityguide.org/cvd/teambasedcare.html>
- ❑ SDOH Workbook: Promoting Health Equity, a Resource to Help Communities Address Social Determinants of Health
 - <http://www.cdc.gov/nccdphp/dach/chhep/pdf/SDOHworkbook.pdf>
- ❑ A Program guide for public health: Partnering with Pharmacists in the Prevention and Control of Chronic Diseases
 - http://www.cdc.gov/dhdsp/programs/nhdsp_program/docs/Pharmacist_Guide.pdf
- ❑ HDSP: Data Trends and Maps
 - http://apps.nccd.cdc.gov/NCVDSS_DTM/



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Indicators Spotlight

SODIUM REDUCTION

Background for Sodium Reduction

Funded programs can play a role in reducing population-based sodium consumption by implementing policy and systems changes in communities. Policy- and systems-level interventions, such as changes to procurement policies at the state, local, and organizational levels as well as community and clinical interventions, will ultimately affect adults who have high blood pressure.

Purpose of the Indicators Spotlight

The purpose of this document is to give funded programs working on sodium reduction a list of potential indicators to explore for planning and evaluation purposes. Multiple indicators can be chosen as outcomes for logic models and measures for companion evaluation plans. This Indicators Spotlight should be used with the Expert Panel Indicator Ratings Table and Indicator Profiles found in *Outcome Indicators for Policy and Systems Change: Controlling High Blood Pressure*.

Using Indicators for Planning

- Step 1** Determine the setting in which you want to intervene. Many sodium reduction activities occur in the community or worksite arena. See Intervention Examples on Page 2 for ideas.
- Step 2** Select a short-term policy/systems change indicator from the setting of choice. Interventions should be implemented at the highest level to impact the largest population. Sodium reduction policy and systems change approaches that successfully affect short-term outcomes will—with sufficient time and sustained effort—affect intermediate outcomes related to behavioral and physiological risk factors among individuals affected by the environmental changes.
- Step 3** Map outcomes of interest over time. It is advantageous to determine the logic model pathway of one or more intermediate outcomes. Measuring short-term and intermediate outcomes along a logic model pathway allows programs to identify gaps in program implementation before completing a comprehensive evaluation that focuses on long-term outcomes related to death and disability.


```

graph LR
    A[Policy, systems, or Environmental Changes] --> B[Knowledge and Behavior Changes]
    B --> C[Health Outcomes]
            
```
- Step 4** Enhance the evaluation with practice-based indicators. As the literature continues to develop and emerge around sodium reduction it is useful to consider practice-based indicators. These indicators are measures that show change from sodium reduction initiatives that have been implemented in the field but currently lack a sufficient evidence base. See Practice-Based Indicator Examples on the reverse for ideas.

National Center for Chronic Disease Prevention and Health Promotion
Division for Heart Disease and Stroke Prevention



Under Pressure

Strategies for Sodium Reduction in Worksites

National Center for Chronic Disease Prevention and Health Promotion
Division for Heart Disease and Stroke Prevention

