The Emerging Local Policy Approach and Food Environment Change in Los Angeles County

Shasta County Sodium Forum: Building Support for Sodium Reduction

June 6, 2011

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Director
Office of Senior Health

Data and support, courtesy of the Los Angeles County Sodium Reduction Initiative (LACSRI)
What’s at Stake?
Sources of Dietary Sodium

Processed and restaurant foods 77%

Inherent 12%

At the Table 6%

During Cooking 5%

(Data from 62 adults who completed 7-day dietary records)

Mattes and Donnelly. JACN. 1991;10:383
U.S. Food Grade Salt Sales

*Increasing Use of Salt in the United States*

Mean Daily Sodium Intake (in mg) for Men and Women in the U.S., Ages 20-74 Years (NHANES)

Source: NHANES. Estimates are based on self reports and are considered underestimates of mean daily sodium intake for the U.S. population, 1971 to 2000.
Eating Out – Need to Remember That Low Calorie Doesn’t Always Mean Low Sodium

Subway Cold Cut Combo Sandwich (6-inch): 410 calories, 1,530 mg sodium

Pizza Hut All Natural Pepperoni Pizza (1 slice): 250 calories, 590 mg sodium

McDonald’s Premium Grilled Chicken Classic Sandwich: 420 calories, 1,190 mg sodium
Consequences of Elevated Blood Pressure

• Increased risk of cardiovascular disease (CVD)
  - ↑ strokes
  - ↑ heart attacks
  - ↑ heart failure

• Increased risk of renal disease
  - ↑ chronic kidney disease (CKD)
  - ↑ progression of proteinuria
    (especially among those with diabetes)
  - ↑ end stage renal disease (kidney failure)

Hypertension by Age Group in Los Angeles County and the U.S.

Source: NHANES, 2005
Leading Causes of Disability-Adjusted Life Years (DALYs) in Los Angeles County, 2005

Source: Los Angeles County Dept. Public Health, Office of Health Assessment and Epidemiology
Blood Pressure Reduction Through Reduced Salt Intake Would Save Lives in the U.S.

U.S. adults, 20-74 years

Sodium consumption (mg/day)

NHANES I
1971-74

NHANES II
1976-80

NHANES III
1988-94

NHANES IV
1999-00

Tens of thousands of lives saved

2005 U.S. Dietary Guidelines recommended limit for adults

Recommended limit for people with hypertension, blacks, middle aged and older

Population-Based Strategy

SBP Distributions

After Intervention → Reduction in BP → Before Intervention

DASH-Sodium Trial: Effect of Sodium Level on Systolic Blood Pressure, a Dose-Response Relationship

Source: Sacks, 2001 (412 pre- and stage 1 hypertensive adults)
### Table 1. Potential Decrease in Cases of Hypertension and Annual Savings in Hypertension Treatment Costs from Reducing Sodium Consumption in Los Angeles County.

<table>
<thead>
<tr>
<th>Scenario: Percent Reduction in Population Sodium Consumption (decrease in sodium intake in mg)</th>
<th>Average Systolic Blood Pressure Reduction (mm Hg)</th>
<th>Percent Decrease in the Prevalence of Hypertension</th>
<th>Decrease in the Number of Cases of Hypertension</th>
<th>Potential Annual Cost Savings [in 2010 dollars] ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10% (344 mg)</td>
<td>0.71</td>
<td>1.7%</td>
<td>31,953</td>
<td>62 million</td>
</tr>
<tr>
<td>20% (687 mg)</td>
<td>1.41</td>
<td>2.8%</td>
<td>52,629</td>
<td>102 million</td>
</tr>
<tr>
<td>30% (1,031 mg)</td>
<td>2.11</td>
<td>4.2%</td>
<td>78,944</td>
<td>153 million</td>
</tr>
<tr>
<td>40% (1,374 mg)</td>
<td>2.82</td>
<td>5.3%</td>
<td>99,619</td>
<td>193 million</td>
</tr>
<tr>
<td>50% (1,718 mg)</td>
<td>3.52</td>
<td>6.8%</td>
<td>127,814</td>
<td>247 million</td>
</tr>
</tbody>
</table>

Note: for key formulas used in the above analysis (columns a-e), see page 6.
Potential Health Impact in Los Angeles County


<table>
<thead>
<tr>
<th>SBP Rise Averted</th>
<th>Potential number of lives saved per year (% Reduction in Mortality)</th>
</tr>
</thead>
<tbody>
<tr>
<td>mmHg</td>
<td>Total</td>
</tr>
<tr>
<td>5</td>
<td>4,210 (-7)</td>
</tr>
</tbody>
</table>
Food Environment Matters
### International: Product Variability

<table>
<thead>
<tr>
<th></th>
<th>Sodium per serving</th>
<th>Sodium per 100 gm</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Burger King Double Whopper</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brazil</td>
<td>1,300 mg</td>
<td>349 mg</td>
</tr>
<tr>
<td>Australia</td>
<td>1,153 mg</td>
<td>321 mg</td>
</tr>
<tr>
<td>US</td>
<td>1,090 mg</td>
<td>291 mg</td>
</tr>
<tr>
<td>Germany</td>
<td>1,010 mg</td>
<td>285 mg</td>
</tr>
<tr>
<td>Canada</td>
<td>980 mg</td>
<td>263 mg</td>
</tr>
<tr>
<td>UK</td>
<td>875 mg</td>
<td>246 mg</td>
</tr>
<tr>
<td>Italy</td>
<td>819 mg</td>
<td>231 mg</td>
</tr>
<tr>
<td><strong>Kellogg’s Special K</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canada</td>
<td>270 mg</td>
<td>931 mg</td>
</tr>
<tr>
<td>Mexico</td>
<td>260 mg</td>
<td>867 mg</td>
</tr>
<tr>
<td>US</td>
<td>220 mg</td>
<td>710 mg</td>
</tr>
<tr>
<td>France</td>
<td>200 mg</td>
<td>450 mg</td>
</tr>
<tr>
<td>Italy</td>
<td>200 mg</td>
<td>450 mg</td>
</tr>
<tr>
<td>UK</td>
<td>100 mg</td>
<td>450 mg</td>
</tr>
<tr>
<td>Turkey</td>
<td>200 mg</td>
<td>400 mg</td>
</tr>
</tbody>
</table>

World Action on Salt and Health.
National Sodium Landscape

• IOM’s new report: “Strategies to Reduce Sodium Intake in the United States”
• FDA is investigating
  • Considering the GRAS status of sodium
  • Looking into packaged food labeling and how sodium information is displayed
• CDC working to enhance sodium surveillance at the national level
• National support for sodium reduction growing amongst packaged food and restaurant industry
National Salt Reduction Initiative
Announcement: April 26, 2010

16 Food Companies Agree to Reduce Salt
New York City Spearheads Campaign to Cut Sodium Consumption, Major Food Manufacturers, Restaurants Sign On
NSRI Goal: 20% Reduction in Sodium Intake in 5 Years

- Decrease sodium content in foods by 25% over 5 years
- Decrease population sodium intake by ~20% over 5 years

Reductions will vary among food categories
Companies Committed to NSRI

Packaged Food
• Boar’s Head
• Fresh Direct
• Goya
• Hain Celestial
• Heinz
• Kraft
• LiDestri
• Mars Food
• McCain Foods
• Red Gold
• Unilever
• White Rose

Restaurants
• Au Bon Pain
• Starbucks
• Subway
• Uno Chicago Grill
Examples of Industry Commitments for Sodium Content Reductions

- Goya canned beans: 25% by 2014
- Kraft Oscar Mayer bologna: 17% by 2012
- Heinz ketchup: 15% by 2012
- Boar's Head liverwurst: 5% by 2014

Source: Wall Street Journal, April 26, 2010
Why Local Food Policy?
Healthier Food Environment = Healthier Population

- Changing the food environment gives consumers a broader range of healthful foods from which to choose.
- Policy and environment strategies are effective at the state and local level and may help drive demand for federal action.
- One of the most promising strategies to decrease the prevalence of heart disease and stroke is to lower sodium content of processed and restaurant foods.
- Sodium reduction will benefit most individuals.
Settings Impacted by Food Procurement Policies

- Daycare facilities, schools
- Prisons, juvenile detention centers, probation camps
- Worksite cafeterias
- Distributive food programs (i.e. senior meals programs)
- Concession stands operated by the jurisdiction
LA County - Background

County of Los Angeles

- 5 Supervisors, complex governing infrastructure
- Over 101,000 employees
- 37 departments, many bigger than many municipalities and local jurisdictions in California
- Operate or contract with many food service venues
- 87 regional and local parks, 344 miles trails, and 19 public golf courses (world’s largest system)
- Several museums, libraries, theaters, and beaches also under purview of the County
Facilitators of and Barriers to Implementing a Local Policy to Reduce Sodium Consumption in the County of Los Angeles Government, California, 2009

Lauren N. Gase, MPH; Tony Kuo, MD, MSHS; Diane O. Dunet, PhD; Paul A. Simon, MD, MPH

Abstract

Key barriers were identified: 1) unique features among food service settings, 2) costs and unavailability of low-sodium foods, 3) complexity of food service arrangements, 4) lack of consumer demand for low-sodium foods, 5) undesirable taste of low-sodium foods, 6) preference for prepackaged products, 7) lack of knowledge and experience in operationalizing sodium standards, and 8) existing multiyear contracts that are difficult to change. Despite perceived barriers, several participants indicated that their organizations have successfully implemented nutritional standards that include limits on sodium.
Facilitators

- Organizations have the authority to impose nutrition standards
- Serving nutritious food is a high priority
- Take advantage of opportunities to build on existing policies
- Not restricted to just County of Los Angeles, relevant to other entities with purchasing leverage
Barriers to Implementation

- Unique features of each food service setting
- Cost and availability of low-sodium foods
- Complexity of food service arrangements
- Difficulty of modifying existing contracts
- Lack of consumer demand for low-sodium foods
- Unaccustomed/undesirable taste of low-sodium foods
- Vendors preference for prepackaged items
- Lack of knowledge and experience in operationalizing sodium standards
Health Impact Assessment

• HIA methods were adapted to estimate potential health impacts of a local food procurement policy on selected populations in the County and policy implementation costs
  – Used qualitative input and data provided by County food service vendors

• Mathematically simulated:
  – Potential costs and health impacts of implementing a food procurement policy
  – Varying levels of reductions in the sodium content of foods served
  – Estimated potential impacts on the mean Systolic Blood Pressure (SBP) in the targeted patron groups
Model Considerations

- Cafeteria patrons in County food service settings are relatively stable
- Average sodium consumption of patrons mirrored national averages
- Prevalence of hypertension among patrons mirrored the Los Angeles population
- The model assumed that the relationship between sodium consumption and SBP is linear at all levels of sodium reduction
- Health care costs could be reduced if number of uncontrolled hypertension cases could be reduced
Preliminary Study Findings

Results

- Analysis predicted that adults eating at the targeted food service venues could consume 233 fewer mg of sodium each day.

This corresponded to:
  - a decrease of approximately 0.71 mm Hg in SBP among adult hypertensives;
  - fewer cases of uncontrolled hypertension in the study population;
  - lower costs of treatment

- Preliminary findings suggests that a food procurement policy can contribute to positive health impacts in Los Angeles County
Local Efforts: RENEW LA County and Los Angeles County Sodium Reduction Initiative

1) Adopt healthy food and beverage policies in eight cities
2) Adopt healthy food/beverage policies in three L.A. County departments
3) Improve school meal nutrition in four local districts, including LAUSD
4) Adopt nutrition and physical activity guidelines for preschools
5) Adopt policies to support breastfeeding in county and private firms
6) Increase teacher capacity to implement physical education requirements
7) Adopt or strengthen joint-use policies in school districts
8) Adopt land use policies to increase pedestrian activity and biking
9) Sodium reduction strategies
I THEREFORE MOVE THAT THE BOARD OF SUPERVISORS:

Instruct the CEO and County Departments to consult with the Director of the Department of Public Health prior to the release of any Requests for Proposals for County food services contracts that involve the purchase, distribution, and/or sale of food and beverages in County facilities and programs to ensure that dietary requirements within the final contract promote healthy nutrition and comply with previously adopted Board policies. The Director of the Department of Public Health will work directly with affected agencies to incorporate nutrition recommendations to the extent feasible within each contract.
Estimated Reach of Food Procurement Policies in Los Angeles County

- RENEW & LACSRI work with LAUSD and School Districts (over 730 schools; 690,000+ students; 500,000 meals produced each day)

- County of Los Angeles Food Procurement Policies in the various department food service venues
  * Hospital cafeterias: 90,000+ visitors each year; serves approx. 593 adults/day.
  * Senior meals program: serves approx. 9,200 adults/day
  * Childcare venues: serves approx. 24,000 children/day
  * Other County cafeterias: serves approx. 1,800 adults/day
Sodium Reduction Efforts

- “Salt Shocker” videos
- http://www.youtube.com/choosehealthla

- RENEW LA County’s social media campaign – Choose Health LA – kicked off during World Salt Awareness Week, March 21-27.

- Current total views of the “Salt Shocker” videos: more than 7,000
Next Steps
Local Efforts Can Compliment National Efforts

- National Action
  - National efforts to influence food quality and supply (regulation)
- Public education, product labeling (supporting consumers)
- Local procurement policies

Signal to food suppliers to lower sodium content of products
Data are Critical for Driving Change

• To Understand the Problem (Assessment)

• Identify Potential Solutions (Policy Development)

• Monitor Progress (Assurance)
Change is Difficult at All Levels

"This really is an innovative approach, but I'm afraid we can't consider it. It's never been done before."
Thank you! Q & A

Citations:
Gase LN, Kuo T, Dunet DO, Simon PA. Facilitators and barriers to implementing a local policy to reduce sodium consumption in the County of Los Angeles government, California, 2009. Prev Chronic Dis 2011;8(2).
http://www.cdc.gov/pcd/issues/2011/mar/10_0060.htm

Gase LN, Kuo T, Dunet D, Schmidt SM, Simon P, Fielding JE. Estimating the potential health impact and costs of implementing a local policy for food procurement to reduce the consumption of sodium in the County of Los Angeles. Accepted for publication in the Am J Public Health (in press).

http://www.naccho.org/toolbox/tool.cfm?id=2187