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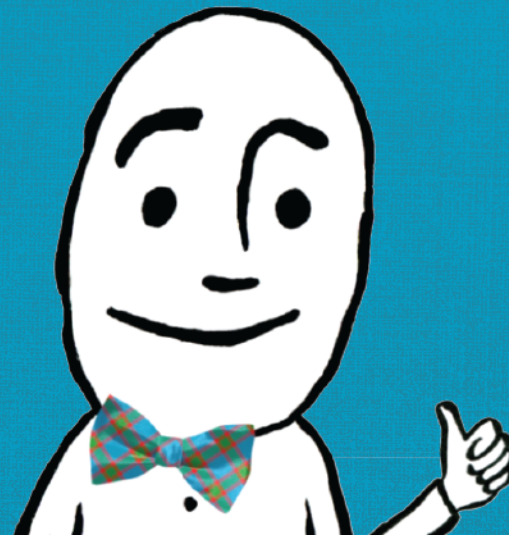
October 9, 2014



We will begin at **2:05** to allow participants time to join the webinar

- **Spotlight—Insights into Landmark Calorie Declines in the U.S. Food Marketplace**
- **One on One**
- **Funding Opportunity**

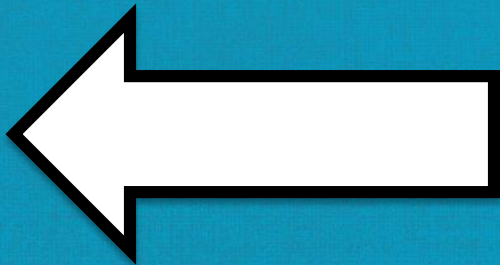
TODAY'S PROGRAM



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Type your question(s) in the chat
box located on the left and a
representative will respond shortly.





Today's Panel



Todd Phillips

Director

National Collaborative for Childhood Obesity Research



Tracy Orleans

Senior Program Officer/Senior Scientist

Robert Wood Johnson Foundation



Shu Wen Ng

Assistant Professor

Gillings School of Public Health

University of North Carolina, Chapel Hill

HealthDay
News for Healthier Living

Major U.S. Food Makers Cut 6.4 Trillion Calories From Products: Report

USNews HEALTH

6.4 Trillion Calories Cut From Unhealthy Grocery Store Foods

Sixteen food and drink companies have banded together to tackle the obesity crisis.




npr

the salt

Sayonara To 'Super-Size Me?' Food Companies Cut Calories, So Do We

by ALLISON AUBREY

September 25, 2014 3:24 AM ET



Los Angeles Times

Science Now

Discoveries from the world of science and medicine

Science / Science Now

f t r e c


Households with kids ate less junk food in 2012 than '07, report says



U.S. households with kids are buying fewer calories, a new report says. (Luke Sharrett / Bloomberg)

SCIENCE WORLD REPORT scienceworld.com

6.4 Trillion Calories Cut From Major Food Products



THE BALTIMORE SUN

Households with kids ate less junk food in 2012 than '07, report says

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**Insights into Landmark Calorie Declines
in the U.S. Food Marketplace:**

Tracking Our Foods From Factory to Fork

Shu Wen Ng, PhD

University of North Carolina at Chapel Hill

UNC Food Research Program (UNCFRP)



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Genesis: The HWCF Marketplace Pledge

Sixteen major consumer packaged goods (CPG) food and beverage manufacturers pledged to cut sales by 1.5 trillion calories by 2015 relative to 2007 (including 1 trillion calories by 2012).

- How do we measure this?
- Who might be most affected? Children; SES subpopulations
- Compare HWCF to non-HWCF brands and private labels (store brands)
- Actual reduction (via reformulation and/or lower caloric options), or other economic or market forces driving the change?

Robert Wood Johnson Foundation (RWJF) funded independent evaluations

- Calories Sold: 2007 vs 2012
- Calories Purchased: 2000-2007 vs. 2008-2012
- Children's Caloric Intake and BMI: 2007-2008 vs. 2011-2012
- Effect of HWCF pledge on purchase disparities: 2007-2013
- Effect of HWCF pledge on diet and BMI disparities: 2007-2012

How to Measure? Items Sold/Purchased

Items sold/purchased from HWCF vs. others (barcode level)

Nielsen Scantrack point-of-sale

- Stores represented: food, drug, mass; convenience
- 52 markets; projected to be nationally representative of F/D/M+C
- Sales data of each barcode (product description, brand, manufacturer)

Nielsen Homescan household purchases

- Disaggregated data of each barcode purchased at every reported shopping episode (date, store, price)
- Across 35-60K households from 76 markets; household weights for national representativeness
- Annual demographic information allows us to study specific populations

ID HWCF vs. non-HWCF brands vs. private labels (PL) over time

- Brands often acquired/sold from one company to another
- New product lines/brands; retiring product lines/brands

How to Measure? Calories (& Other Nutrients)

Calories (and other available nutrients) of each item

Nutrition Facts Panel (barcode level) data

- Multiple sources; records go back to 1996; constantly updated
- Serving size and nutrient information
- Ingredient list
- Pack size and weight information
- Claims

Merge with Nielsen Scantrack & Homescan

- Based on UPC and NFP date-stamp

Evaluations on Sales and Purchases

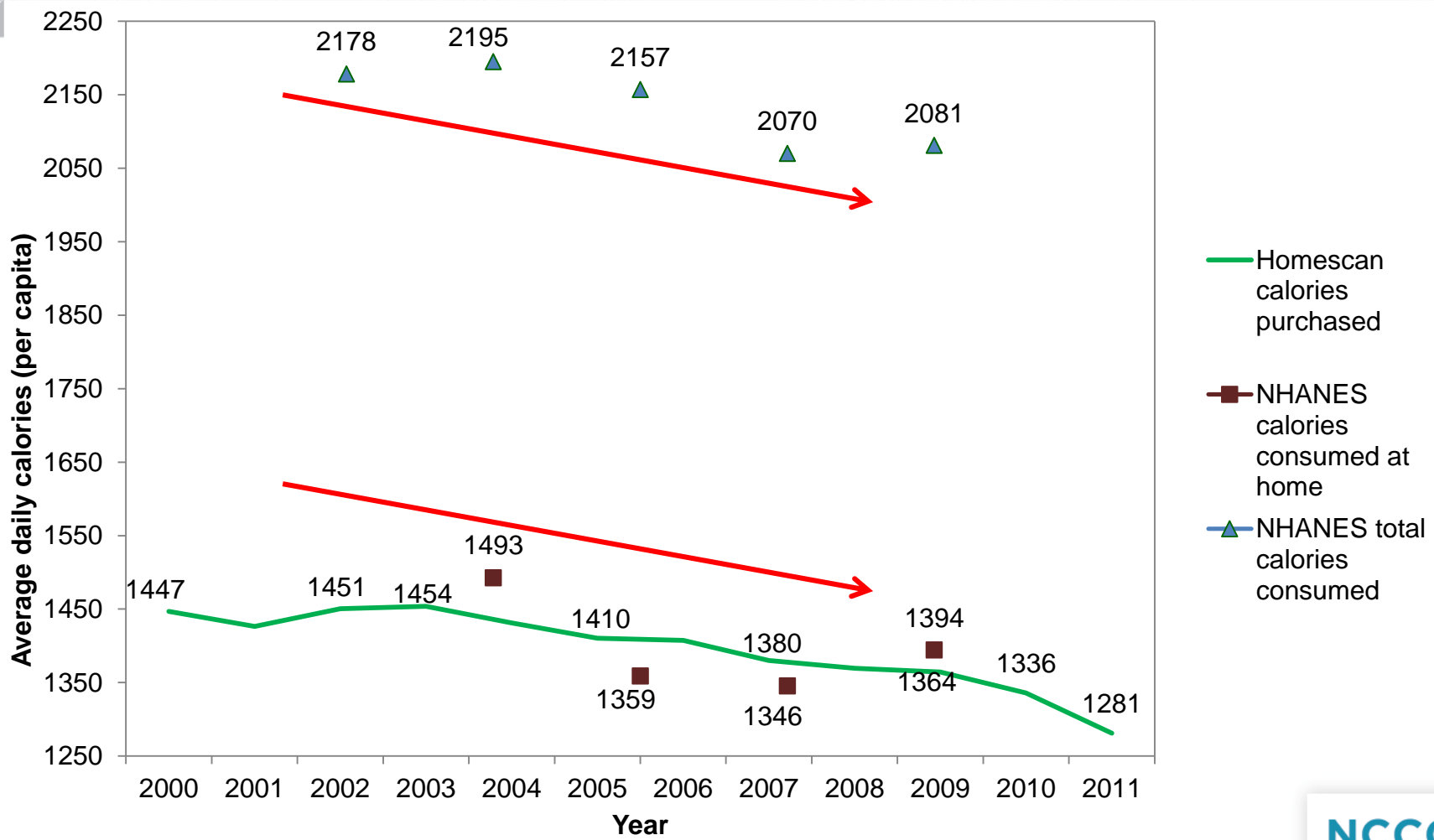
Two new papers in *American Journal Preventive Medicine*

- Ng SW et al, 2014. “The Healthy Weight Commitment Foundation pledge: Calories sold from U.S. consumer packaged goods, 2007-2012.” *Amer J Prev Med* 47(4): 508–519
- Ng SW, Popkin BM, 2014. “The Healthy Weight Commitment Foundation pledge: Calories Purchased by U.S. households with children, 2000-2012.” *Amer J of Prev Med* 47(4):520–530.

What does this mean for diets (intake) and ultimately child obesity?

- Next steps: Measuring how CPG changes affect diets via factory to fork system

Per Capita Calories Reported Consumed (WWEIA 2001-2010) for All Americans Aged 2+ Years vs. Caloric Purchases Per Capita from CPGs (Homescan 2000-2011)



Ng SW, et al. 2014. "A turning point for U.S. diets: Recessionary effects or behavioral shifts in foods purchased and consumed?" *American Journal of Clinical Nutrition*. 99:609-616.

Economic Conditions or Secular Trends?

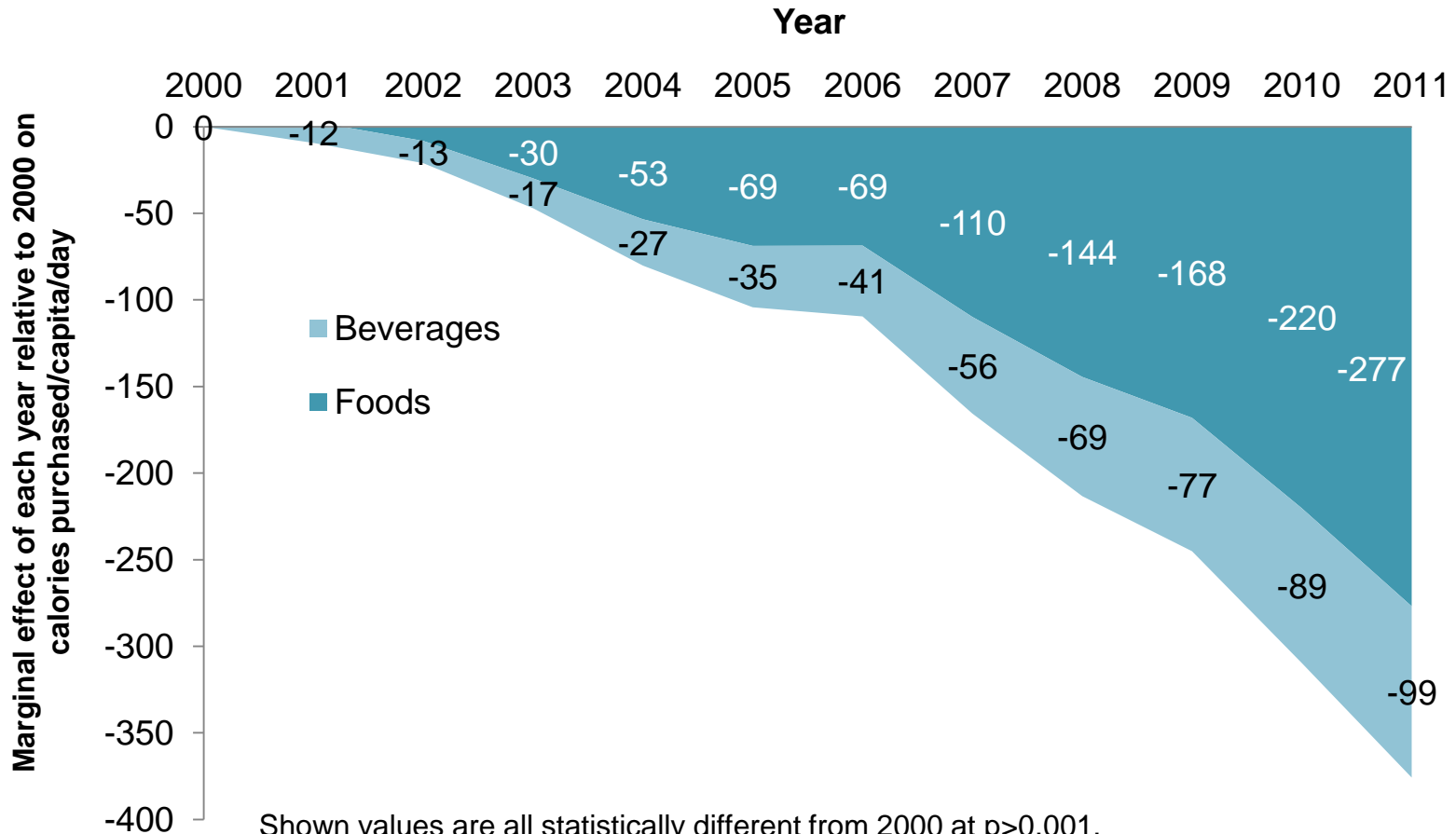
Unclear if changes over time are due to:

- Recessionary economic climate
- Food price changes
- Demographic changes
- Secular trends (changes in consumer preferences)

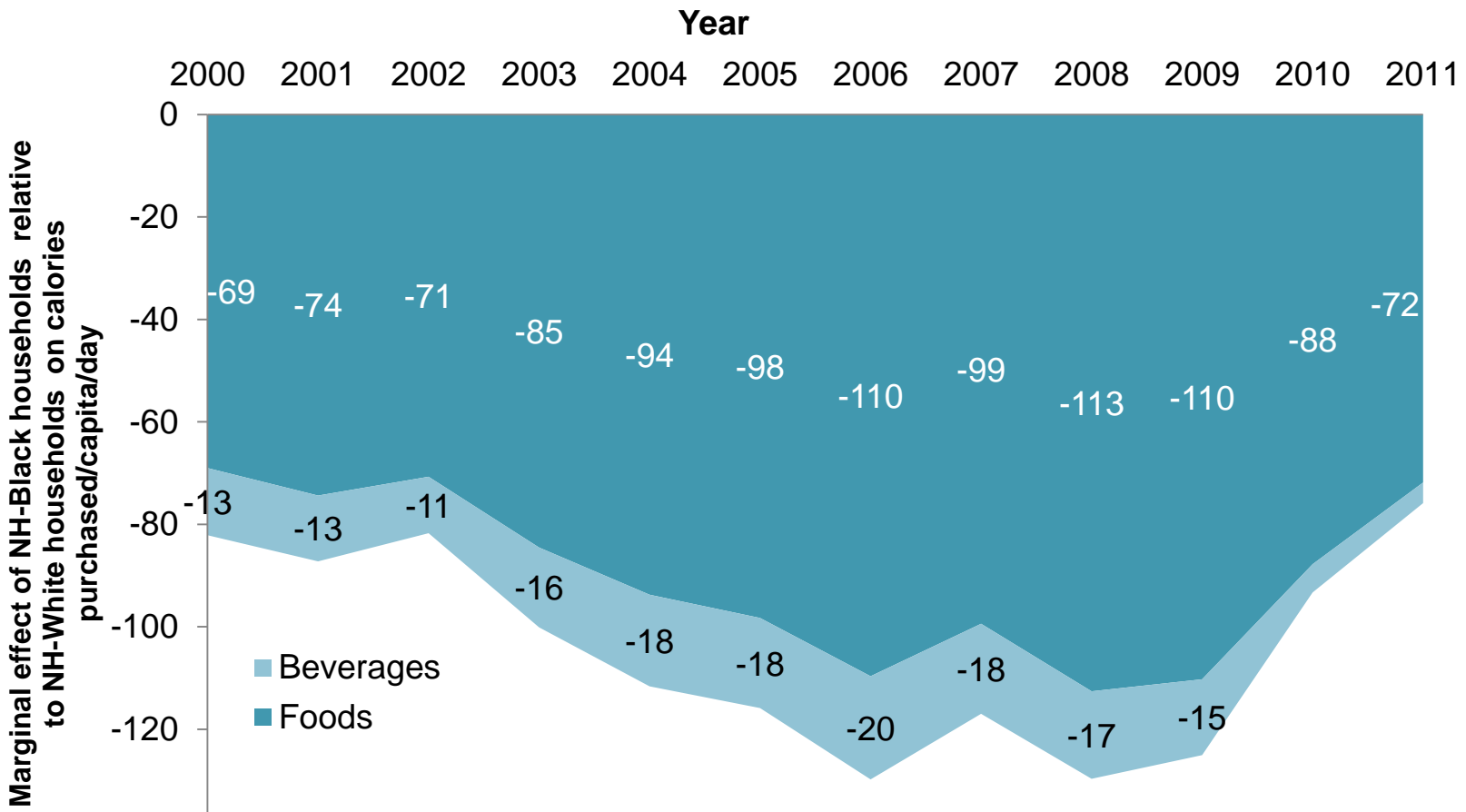
Longitudinal model using Homescan data controlling for:

- Unemployment
- Deflated food prices
- Household composition, race/ethnicity, income, education
- Time

Year Effects Are Strongly Negative and Statistically Significant, Especially for Households with Children

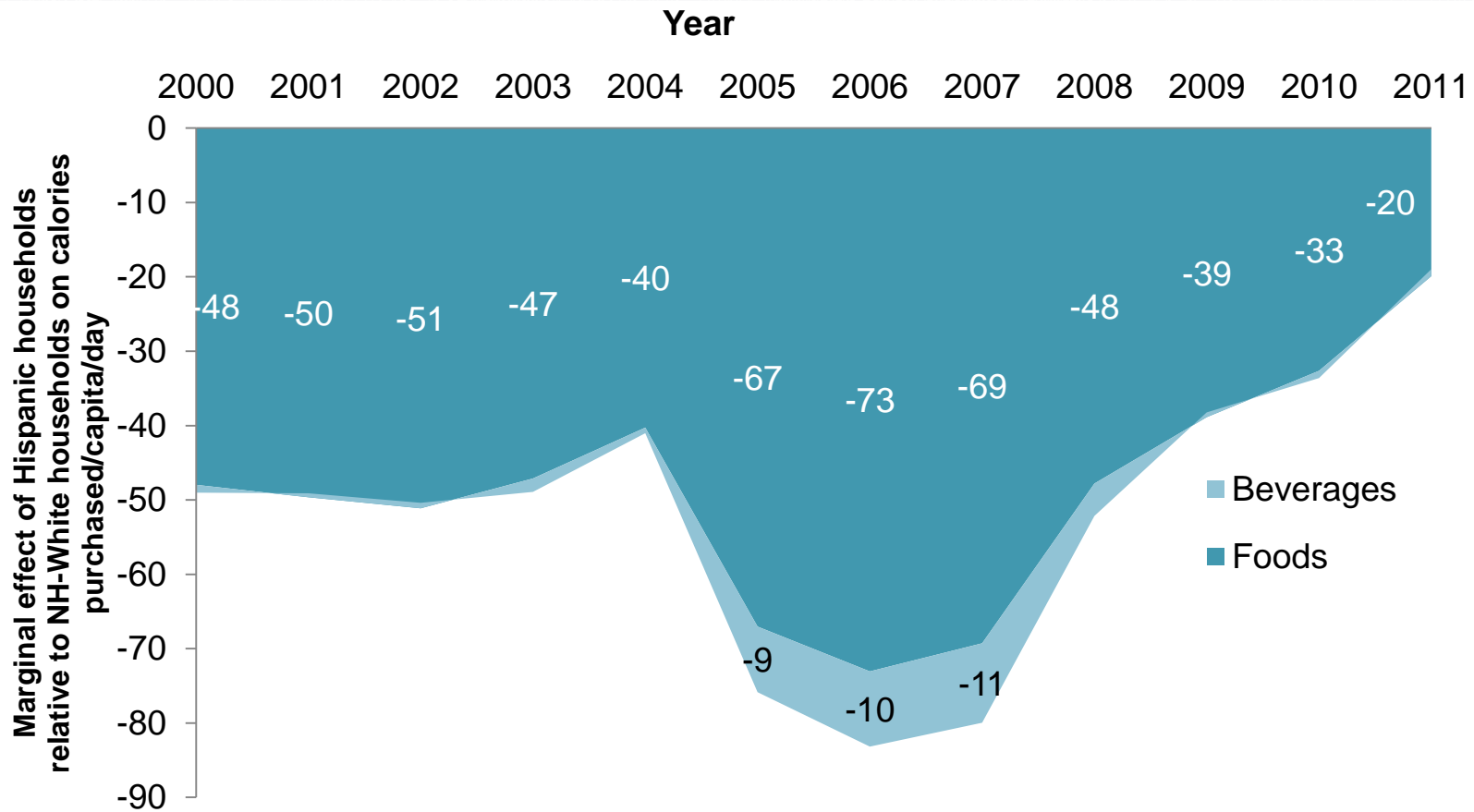


Year-specific Difference in Calories Purchased by NH-Black Households Relative to NH-White Households with Children



Shown values are all statistically different from 2000 at $p > 0.001$.
 Controls for household composition by age and gender, income, education, food prices, and unemployment.

Year-specific Difference in Calories Purchased by Hispanic Households Relative to NH-White Households with Children

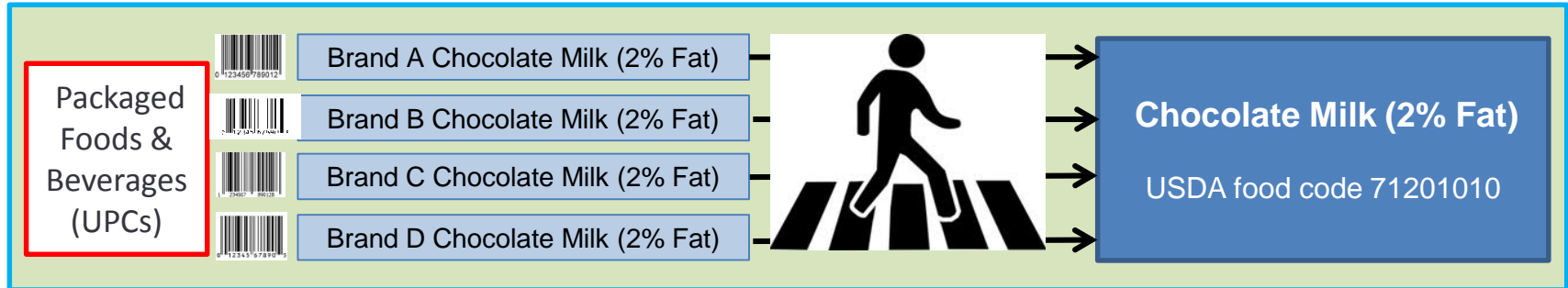


Shown values are all statistically different from 2000 at $p > 0.001$.
 Controls for household composition by age and gender, income, education, food prices, and unemployment.



Measuring How CPG Changes Affect Diets

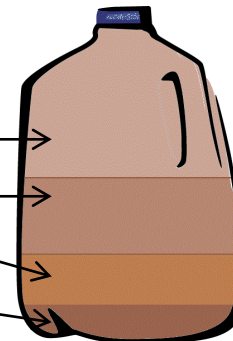
Factory to Fork: Barcode to USDA Food Code Crosswalk



Composite Nutrient Profile Weighted by Purchase Volume

UNCFRP creates a new Nutrient Profile for each USDA food code. The composite Nutrient Profile is weighted by sales volume of all UPCs linked with that USDA food code.

| UPC Description | Sales (%) |
|-----------------|-----------|
| Brand A | 40% |
| Brand B | 30% |
| Brand C | 20% |
| Brand D | 10% |



Factory to Fork: Key Findings

| Food/Beverage Groups | # USDA food codes | # UPC codes linked to USDA food codes |
|---------------------------|-------------------|---------------------------------------|
| Sugar Sweetened Beverages | 50 | 14,567 |
| Energy Drinks | 10 | 641 |
| Sports Drinks | 4 | 519 |
| Fluid milk | 58 | 8,839 |
| Fruit juice | 46 | 9,373 |
| Yogurt products | 17 | 6,645 |

- When UNCFRP nutrient profile is applied to reported consumption:
 - Small, significant differences in consumption compared to USDA's FNDDS 4.1
- 2007-2008 (baseline) differences not expected to be large
- Value and importance of UNCFRP Nutrient Database is in capturing changes (in product offerings and formulations of existing products) over time
- Ability to create subpopulation specific nutrient profiles using subpopulation specific purchase weights
- Completing 2007-2008 and moving to 2009-2010 and 2011-2012 soon with completion by fall 2015

Critical Issues that We Can Begin Addressing

- A. Identify new products and formulations that emerge
- B. Measure degree of processing and convenience and their nutritional implications
- C. Understand where people shop and nutritional implications
- D. Understand sodium trends and sources
- E. Estimate added sugars in products, purchases, and diets

Select examples in the next slides

**Information on this slide has
been temporarily removed,
pending publication in
academic journals.**

A2. Examine Degree of Reformulation

Monitor changes in nutrient density of Grain Based Dessert (GBD) products

- Energy and sugar density of GBD products remained the same (2005-2012)
- Increase in saturated fat density

| | | Percentiles | | | Mean |
|--|------|-------------|------|------|-------------|
| | | 10th | 50th | 90th | |
| Energy Density (kcal/100 g) | 2005 | 314 | 424 | 500 | 411 ± 4 |
| | 2012 | 306 | 424 | 510 | 413 ± 5 |
| Sat Fat Density (g/100 g) | 2005 | 1.8 | 5.5 | 12.8 | 6.5 ± 0.02 |
| | 2012 | 2.1 | 7.1 | 14.5 | 7.9 ± 0.02* |

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Factory to Fork: Extensions

Improved and more timely understanding of changing nutrient composition (calories, sodium, added sugars) of 600,000 CPGs and their impact on individual dietary intake once crosswalk completed for 2007-2012

- Children of various race/ethnicity, maternal education, SES
- Are there certain food groups where largest changes are coming from?

Distributions of dietary intake (focus on top end)

- Usual intake adjustments to each individual using NCI method
- Quantile regressions to look at differential affects at different points on the intake distribution
- Build off earlier work by Mendez et al (*J Nutr* 2014) to evaluate effect of industry changes on usual dietary intake over time, then determine BMI/obesity change

Acknowledgments

Expert Advisory Committee

- Steven Gortmaker (Chair), Harvard University
- Frank Chaloupka, University of Illinois in Chicago
- Lisa Powell, University of Illinois in Chicago
- Jennifer Seymour, CDC
- Anna-Maria Siega-Riz, UNC Chapel Hill
- Mary Story, Duke University
- Jay Variyam, Economic Research Services, USDA
- Y. Claire Wang, Columbia University

Program Advisors

- Sue Krebs-Smith, NCI
- Shiriki Kumanyika, University of Pennsylvania

RWJF

- Elaine Arkin, RWJF
- James Marks, RWJF
- C. Tracy Orleans, RWJF

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Meghan Slining, PhD

Daniela Sotres-Alvarez, PhD

Julie Wandell, MPH, RD

Emily Yoon, MPH, RD

FUNDING

RWJF (2010-2015)

NIH (2013-2018)

Doctoral Students (not funded via grants)

Carmen Piernas (graduated)

Kevin Mathias (graduated)

Jennifer Poti (All But Dissertation)

Lindsey Smith (ABD)

Dalia Stern (ABD)

Chris Ford (ABD)

Elyse Powell

Thank you!

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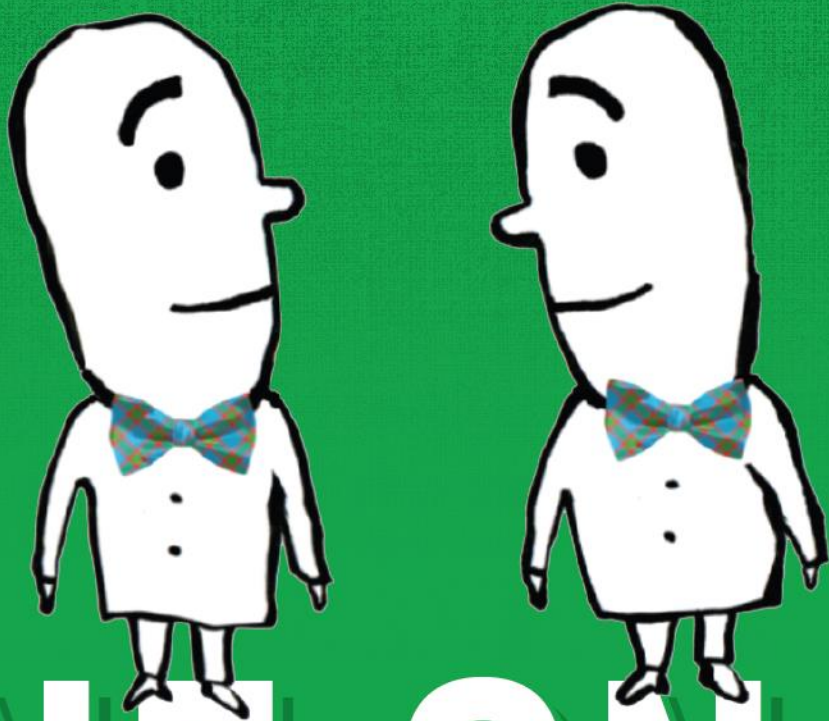
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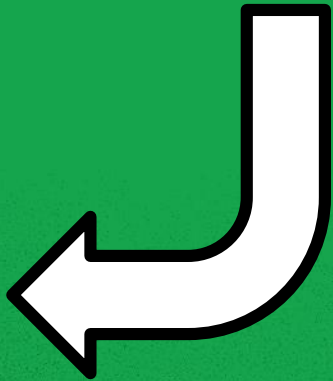
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ONE ON ONE

Questions?

Please type your question(s) in the chat box located on the left.



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One on One

Question:

What other insights can the data offer?

Estimate Added Sugars (NIH-funded)

Estimate added sugar content of products

- In labs, added sugars are not distinguishable from intrinsic sugars (e.g., lactose in milk)
- Similar method used by USDA for imputing missing nutrient values
- Uses Nutrition Fact Label information on nutrients per serving, serving sizes, and ingredient lists (ordered by weight)

Identify added sugars; operational definitions may change under new FDA regulations

- Fruit juice concentrates? Fruit juice?
- Batch-mode allows use to change parameters as needed

Done for CPG beverages purchased in 2007-2008; working on CPG foods

Next steps

- Expand to other years to estimate amounts of added sugars in products over time
- Estimate amounts of added sugars in purchases over time
- Estimate amounts of added sugars in diets over time

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One on One

Question:

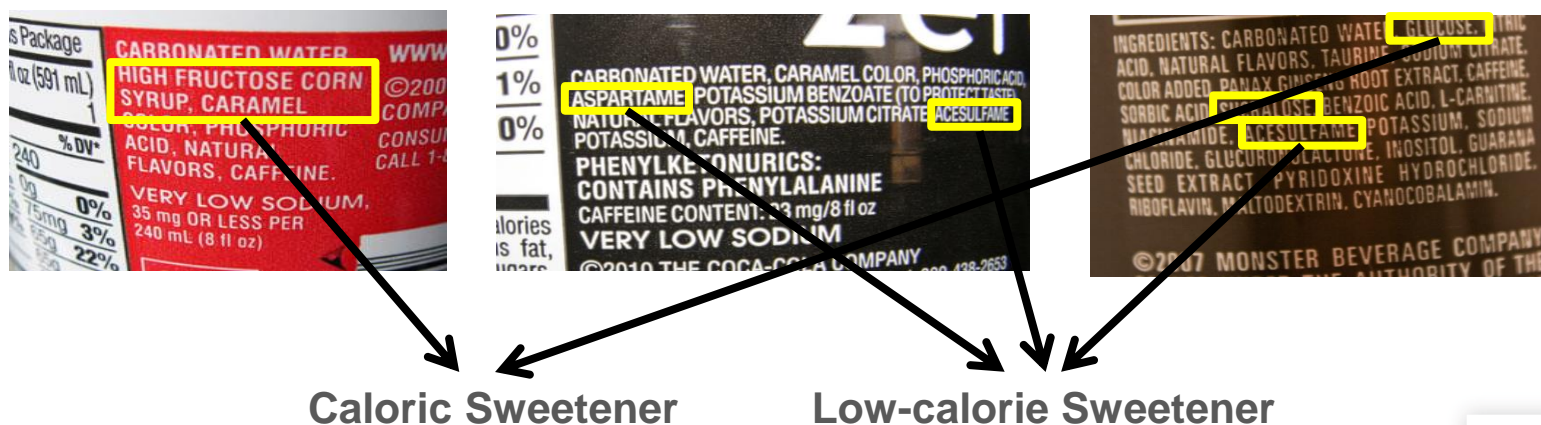
What kinds of surveillance opportunities are now possible?

A3. Identifying Presence of Sweeteners

In NHANES, products that contain both low-calorie sweeteners (LCS) and caloric sweeteners (CS):

- Cannot be identified as the descriptions only indicate one sweetener or the other;
- Likely not included in food composition tables as these are newly introduced; or
- Misclassified as LCS or CS.

In Nielsen-NFP data, can identify products that contain CS, LCS and both using ingredient lists:



Piernas C, et al, 2013. "Trends in purchases and intake of foods and beverages containing caloric and low-calorie sweeteners over the last decade in the U.S." *Pediatric Obesity* 8(4):294-306

A3. Identifying Presence of Sweeteners



**Caloric
sweetener**



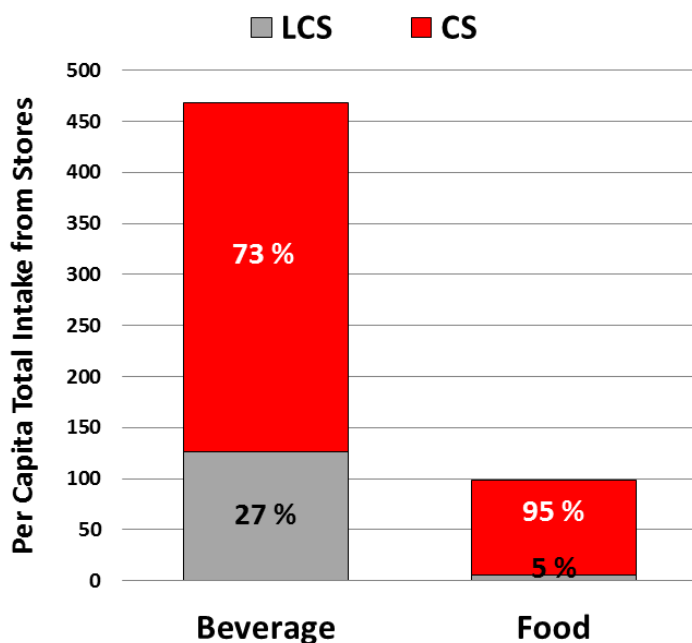
**Low calorie
sweetener**



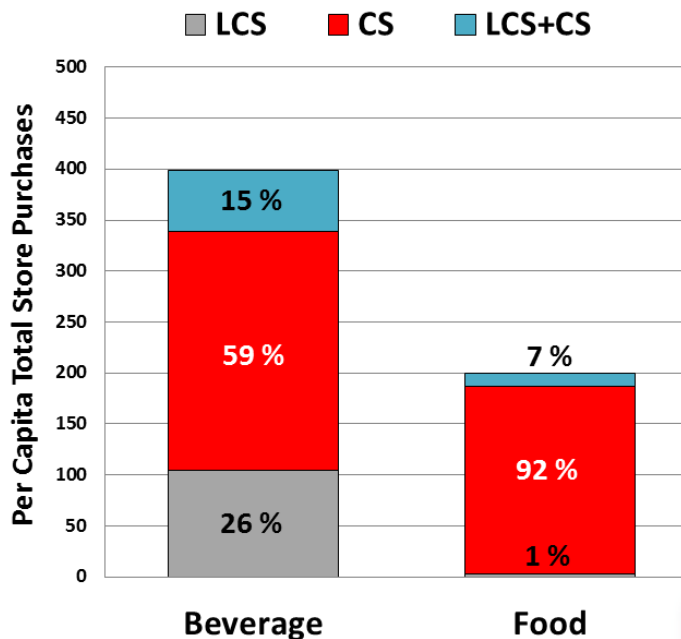
LCS and CS

ALL FOODS AND BEVERAGES THAT CONTAIN ANY SWEETENER

a. NHANES, 2007-2010



b. HOMESCAN, 2007-2010



* Means per capita for beverages (mL/d) and foods (g/d). LCS, low-caloric sweetened beverages or foods; CS, caloric-sweetened beverages or foods

One on One

Question:

How does this data shed light on opportunities to collaborate with industry leaders to find solutions that benefit both the health of Americans and companies' bottom line?

One on One

Questions from the Audience

FUNDING OPPORTUNITIES



Understanding Factors in Infancy, Early Childhood (Birth to 24 months) that Influence Obesity Development (R01)

- **Funder:** NIH
- **Open date:** Jan. 5 (earliest submission)
- **Purpose:** To identify novel risk factors in early childhood that influence obesity and/or to fill methodological/measurement research gaps relevant to understanding the development of obesity in children.
- **Note:** Applicants requesting more than \$500,000 direct costs in any year must contact NIH program staff at least six weeks before submission, and follow all applicable policies.
- **RFA:** <http://grants.nih.gov/grants/guide/pa-files/PAR-14-323.html>

Further Questions?

Other questions about funding opportunities generated by NCCOR's funders?

- Email the NCCOR Coordinating Center at coordinatingcenter@nccor.org, and we'll get you the answer.



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NCCOR Communications

Green Health: Building Sustainable Schools for Healthy Kids Workshop - Final Report

Infographics

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Surveillance

Research and Evaluation

Leadership

Non-Health Partners

Other Resources



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READ ABOUT OUR UPCOMING FUNDING OPPORTUNITIES



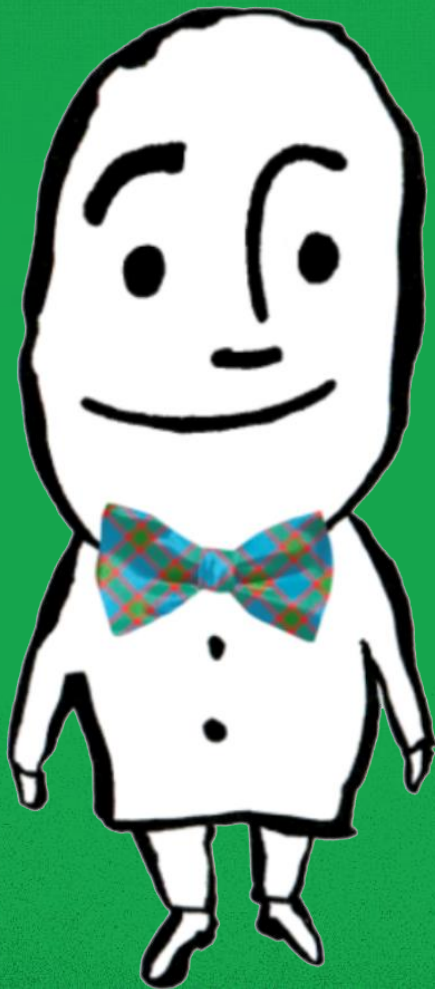
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We Want Your Feedback!

- Please consider completing a brief, five-question survey.
- Your responses will help shape future webinars and maximize attendees' time.
- We'll switch over to the Feedback Form momentarily. You can write-in your input on the screen and hit submit.
- **IT'S EASY!!!**