Connecting you with experts. Exploring the latest childhood obesity news and research.

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

- *Childhood Obesity Declines and Disparities—A Complicated Relationship*
- *Tackling Inequities: Rethinking Intervention and Policy Design*

One on One

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Today’s Speakers

Elaine Arkin
National Collaborative on Childhood Obesity Research

Shiriki Kumanika
Emeritus Professor, Epidemiology
University of Pennsylvania Perelman School of Medicine,
Chair, African American Collaborative Obesity Research Network
President, American Public Health Association

Tim Lobstein
Director of Policy
World Obesity Federation
Interactive Poll
How familiar are you with childhood obesity declines and disparities research?

A) Very familiar

B) Somewhat familiar

C) Not familiar
Childhood Obesity Declines and Disparities—A Complicated Relationship

Shiriki Kumanyika, Emeritus Professor, Epidemiology, University of Pennsylvania Perelman School of Medicine, Chair, African American Collaborative Obesity Research Network President of the American Public Health Association (APHA)
Obesity Prevalence Trends
Children ages 2-5 in three ethnic groups (BMI > 95th percentile); both sexes

Obesity Prevalence Trends
Children ages 6-11 in three ethnic groups
(BMI > 95th percentile); boys

Obesity Prevalence Trends
Children ages 6-11 in three ethnic groups (BMI > 95th percentile); girls

* 1988-94 estimate for white girls has SE greater than 30%

Obesity Prevalence Trends
Children ages 12-19 in three ethnic groups
(BMI > 95th percentile); boys

Obesity Prevalence Trends
Children ages 12-19 in three ethnic groups (BMI > 95th percentile); girls

* 1988-94 estimate for Mexican American girls has SE greater than 30%

Obesity Prevalence Trends
Children ages 6-11
(BMI > 95th percentile)

% obese

Below 100%
100%–199%
200%–399%
400% or more

1988-94
1999-02
2003-06
2009-12

* 1988-94 data not shown due to unreliable estimate; 2009-12 data estimate has SE greater than 30%

Obesity Prevalence Trends
Children ages 12-19
(BMI > 95th percentile)

Obesity Prevalence Trends by Socioeconomic Status Differ by Both Gender and Race/Ethnicity

• **Gender:** Obesity prevalence increased from 17% to 23% in girls whose head of household had not finished high school, but decreased from 11% to 7% in girls whose head of household had completed college
  - No such interaction was seen in boys

• **Race/ethnicity and gender:** In white boys and girls, obesity prevalence was lowest in those whose head of household had completed college
  - No association of obesity prevalence with education of head of household in black boys
  - Obesity prevalence lower in black girls whose head of household had completed college (compared to other black girls), but did not show a net decrease over time

**Source:** Centers for Disease Control and Prevention. CDC Health Disparities and Inequalities Report—United States, 2013. *MMWR.* November 22, 2013, 62(Suppl. 3); 120-128
Key Points

- Notably higher obesity rates at most ages
- Current solutions are not closing gaps
- Effects vary at the intersections of race/ethnicity, gender, and socioeconomic status
- Do we have any clues as to causal pathways with implications for solutions?
- How would we act on those solutions?
Five Interacting Areas

- Integrate physical activity every day in every way
- Strengthen schools as the heart of health
- Make healthy foods available everywhere
- Market what matters to a healthy life
- Activate employers and health care professionals

THE SOLUTIONS
Meeting the challenge of achieving equity requires transforming inequitable environments

- Social, political, and historical contexts influence the starting point, opportunities, and responses to changes in environments for physical activity and eating
- These factors must be taken into account when considering inequities in obesity prevalence and trends by race/ethnicity, gender, socioeconomic status, and residential area

Inequitable Food Environments

Physical Environment
- Fewer supermarkets
- Limited availability of fresh fruits and vegetables
- More fast food outlets
- More outdoor ads for fast food and other high calorie products

Economic Environment
- Cost of healthier foods
- Deals on unhealthy foods
- Limited funds available for school meals
- Fast food and soft drink company jobs and sponsorship

Message Environment
- Relatively heavier advertising and promotion of sugary beverages and fast foods
- High media use of Black youth
- Ethnically tailored advertising

Table 2. Odds of Purchasing Foods on Sale Versus Not on Sale Among Shoppers Who Purchased These Foods, Philadelphia, Pennsylvania, April through August 2010 and December 2010 through October 2012

<table>
<thead>
<tr>
<th>Food Category</th>
<th>ORa (95% CIb)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low-calorie foods</td>
<td>1.3 (1.0–1.7)</td>
<td>.08</td>
</tr>
<tr>
<td>Fruit</td>
<td>1.1 (0.7–1.7)</td>
<td>.61</td>
</tr>
<tr>
<td>Vegetables</td>
<td>1.3 (0.9–1.8)</td>
<td>.15</td>
</tr>
<tr>
<td>Low-fat dairy</td>
<td>4.7 (0.9–24.9)</td>
<td>.07</td>
</tr>
<tr>
<td>High-calorie foods</td>
<td>2.4 (2.0–3.0)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Sweet snacks</td>
<td>5.9 (3.5–10.0)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Savory snacks</td>
<td>1.1 (0.6–2.0)</td>
<td>.77</td>
</tr>
<tr>
<td>Sugar-sweetened beverages</td>
<td>2.6 (1.9–3.7)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Grain-based snacks</td>
<td>6.6 (3.6–12.0)</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

Abbreviations: OR, odds ratio; CI, confidence interval.

a Fixed effects logistic regression models predict that food was purchased (“1”) compared with not purchased (“0”) in weeks that food was on sale (“1”) compared with weeks food was sold at full price (“0”). Estimates are based on 79,087 observations from 81 households that had purchase data on more than 1 day. Models adjusted for household exposure time in the study.

b 95% CIs constructed from robust standard errors.

Physical Activity Environments

Physical, economic, and sociocultural factors in black communities may discourage certain types of physical activity, making it harder to meet health recommendations. Messages may encourage sedentary behavior.

- **Physical Environment**
  - Concern about crime
  - Low quality of parks, recreation centers, walking/biking trails, sidewalks
  - Concern about traffic
  - Urban blight in inner city neighborhoods

- **Economic Environment**
  - Cost of private gyms
  - Long hours on feet during labor-intensive jobs
  - Cars and modern conveniences are associated with “moving up” the economic ladder
  - Marketing of electronic media for entertainment

- **Message Environment**
  - Promotion of cars?
  - Digital media?
  - Promotion of sedentary entertainment?
  - Promotion of spectator sports?
Sociocultural Environment

Attitudes may not encourage being active. Costs and neighborhood conditions may reinforce those attitudes by making inactivity seem easier or more attractive.

- Traditional cuisine
- Concerns about food insecurity
- Body size norms
- Prevalent obesity
- Food related aspects of women’s roles

- Attitudes about importance of rest
- Decline of physically active forms of recreation
- Lack of social support or role models for physical activity among family and friends
Target Marketing

Information Environments

Youth Targeting
(General Population)

Ethnic Targeting
(All Ages)

Targeting of Ethnic Minority Youth
<table>
<thead>
<tr>
<th>Ethnic Targeting Approaches</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Psychographics</td>
</tr>
<tr>
<td>• Community relations</td>
</tr>
<tr>
<td>• Sponsorship</td>
</tr>
<tr>
<td>• Scholarships</td>
</tr>
<tr>
<td>• Outdoor advertising</td>
</tr>
<tr>
<td>• Product placements in movies, songs</td>
</tr>
<tr>
<td>• Street teams</td>
</tr>
<tr>
<td>• Giveaways</td>
</tr>
<tr>
<td>• Retail locations</td>
</tr>
<tr>
<td>• Ethnic media</td>
</tr>
<tr>
<td>• Social networking sites</td>
</tr>
<tr>
<td>• Word of mouth</td>
</tr>
<tr>
<td>• Cultural symbols</td>
</tr>
<tr>
<td>• Employment opportunities</td>
</tr>
<tr>
<td>• Advertising revenue</td>
</tr>
<tr>
<td>• Special products (including sweetness and flavors)</td>
</tr>
</tbody>
</table>

System of Solutions from People-Centered Perspective

Increase positive access and potential for effectiveness

Add financial resources

Increase receptivity

Decrease deterrents

- Food retail
- Schools/child care
- Worksites
- Parks and recreation
- Health services
- Relevance
- Quality and appeal

- Economic development
  - Subsidies
  - Discounts
  - Anti-hunger efforts

- General education
  - Health education
  - Health literacy
  - Messaging
  - Positive experiences

Reduce harmful messaging
Remove/transform adverse access
Shiriki Kumanyika
Emeritus Professor, Epidemiology
University of Pennsylvania Perelman School of Medicine,
Chair, African American Collaborative Obesity Research Network
President, American Public Health Association
Questions?

Please type your question(s) in the chat box located on the left.
Tackling Inequities: Rethinking Intervention and Policy Design

Tim Lobstein, Director of Policy, World Obesity Federation
Overview

• Global trends in child overweight and obesity: Rapid rise in lower-income nations
• European examples of inequities in child obesity prevalence
• Policy debate: Targeted and population-wide interventions
• Two conclusions from the international evidence
Educational Gradient Common in Many Countries

- Social gradient for children in most European Union (EU) member states
- Slope of gradient varies between member states
- Overall prevalence also varies between member states
Reminder: In *Developed* Economies, Strong Gradient in Child Overweight by Family Socioeconomic Status (e.g., *income, parental education, area deprivation*)

![Bar chart showing obesity prevalence by age and deprivation level.](chart.png)  

Social Gradients and Interventions

Some population approaches *increase* the gradient (e.g., social marketing, gym membership)
Social Gradients and Interventions

Some highly targeted interventions benefit only the highest risk
Universal Approach vs. Universal Proportionality

‘Perfect’ universal approach where all benefit equally, but the gradient remains the same

‘Universal proportionality’ benefits all, with additional benefits to those at greatest risk
Case Study: Restricting TV Advertising for Junk Food

United Kingdom: Children’s TV watching by household income levels

Results

<table>
<thead>
<tr>
<th>Exposure to ads...</th>
<th>greatest for lower SES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reach of intervention...</td>
<td>all</td>
</tr>
<tr>
<td>Implementation...</td>
<td>all (except cross-border)</td>
</tr>
</tbody>
</table>

Reduction in exposure applies to all, and is greatest among higher risk groups

= proportional universality
## Case Study: Three-week School Intervention to Teach Healthy Eating

<table>
<thead>
<tr>
<th>Topic</th>
<th>Outcome</th>
<th>Additional Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low intake of fruits and vegetables...</td>
<td>greatest for lower SES</td>
<td></td>
</tr>
<tr>
<td>Reach of intervention...</td>
<td>all if school willing</td>
<td></td>
</tr>
<tr>
<td>Implementation...</td>
<td>all if teacher willing</td>
<td></td>
</tr>
<tr>
<td>Response to intervention...</td>
<td>all for 3 weeks</td>
<td></td>
</tr>
<tr>
<td>Take-home transfer...</td>
<td>more likely in higher SES</td>
<td></td>
</tr>
<tr>
<td>Resilience of take-home transfer...</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enthusiasm of parents</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resources of household</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Challenges: rest of family, normal diet pattern</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Effect likely to be greatest in higher SES

*increases SES gradient*
Conclusions

All income groups are stakeholders in the process
• Are they all consulted on interventions?
• Do they have a role in designing the intervention?
• Do they share the same priorities for health improvement?

Work across sectors to improve health
• Social determinants, with a focus on the commercial determinants
Conclusions

Create equitable opportunities for healthy choices and environments

- Intervening across the life-course: Turn compounding disadvantage into compounding assets
- Different socioeconomic groups = Different underlying mechanisms
  - Not a matter of doing more of the same for disadvantaged groups

Improve the quality, efficiency, and equity of health and health care systems

- Prejudice and stigma in the health services?
- Address the media narratives and stigma around obesity
Contact Information

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http://www.worldobesity.org/
ONE ON ONE
Questions?
Please type your question(s) in the chat box located on the left.
Question:

We’ve traditionally been looking at the issues through a settings perspective. How do we now incorporate the people perspective?
Question:

Does Europe have a similar issue with racial/ethnic group differences within areas seeing declines in childhood obesity?
Questions from the Audience
What’s Next?
Studying Childhood Obesity Declines

- **Purpose:** To explore communities’ perceptions of potential drivers of reported declines in childhood obesity, particularly those that influenced disparities.
- **Where did we dive deeper?**
  - Anchorage, AK;
  - New York, NY;
  - Granville County, NC; and
  - Philadelphia, PA
## Data Collection and Results

### Data Collection

- **Scan of contextual data** Scan of local, state, and federal policies in place at each community
- **Inventory of strategies across key settings**
  - Schools
  - Early child education
  - Health care
  - Community
- **Interviews with stakeholders**
  - Policy/Program developers
  - Policy/Program implementers
  - Community members
  - Evaluators

### Results

- Cross-Site Report
- Webinar
- Peer-Reviewed Journal Manuscript
- *Findings expected for early 2016!*
Further Questions?

Other questions about NCCOR or upcoming activities?

• Email the NCCOR Coordinating Center at nccor@fhi360.org
Thank you!