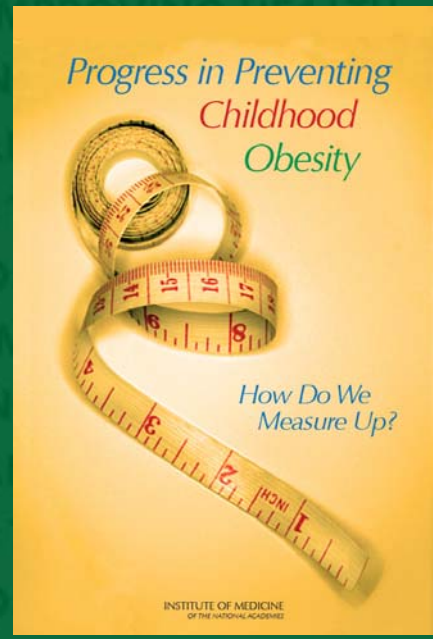


## **Progress in Preventing Childhood Obesity: How Do We Measure Up?**

**Susan Foerster, Eduardo Sanchez,  
Toni Yancey, Ross Brownson, Russ Pate,  
Jeff Koplan, Vivica Kraak,  
Cathy Liverman**

**California Childhood Obesity Conference  
Anaheim, CA January 24, 2007**

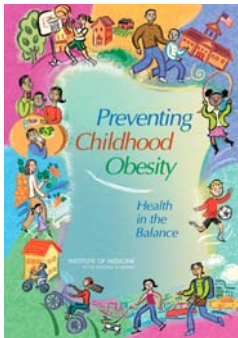


## Discussion Points

- Background
- Obesity prevalence trends
- Conclusions
- Elements of an effective response
- Evaluation framework and approach
- Recommendations
- Next steps



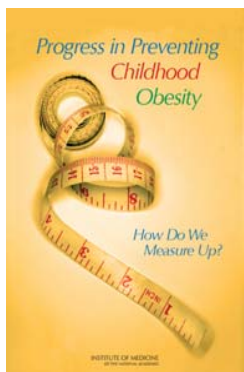
# Background



**2004** – IOM report released

## *Preventing Childhood Obesity: Health in the Balance*

- Sponsor – CDC, as per Congress
- Blueprint for comprehensive action plan



**2005** – New IOM report released (Sept 13, 2006)

## *Progress in Preventing Childhood Obesity: How Do We Measure Up?*

- Sponsor - Robert Wood Johnson Foundation
- 21-month study
- Committee charge
  - Assess progress in preventing childhood obesity
  - Conduct 3 regional workshops



# IOM Committee on Progress in Preventing Childhood Obesity

**JEFFREY KOPLAN** (*Chair*)

Emory University

**ROSS BROWNSON**

St. Louis University

**ANN BULLOCK**

Health and Medical Division,  
Eastern Band of Cherokee Indians

**SUSAN FOERSTER**

California Department of Health Services

**JENNIFER GREENE**

University of Illinois Urbana-Champaign

**DOUGLAS KAMEROW**

RTI International

**MARSHALL KREUTER**

Georgia State University

**RUSSELL PATE**

University of South Carolina

**JOHN PETERS**

Procter & Gamble Company

**KENNETH POWELL**

Georgia Division of Public Health

**THOMAS ROBINSON**

Stanford University

**EDUARDO SANCHEZ**

Texas Department of State Health  
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University of Pennsylvania

**DONNA NICHOLS**

Texas Department of State Health  
Services

## *IOM Staff*

**VIVICA KRAAK, CATHY LIVERMAN,  
SHANNON WISHAM, JON SANDERS**



# IOM Regional Symposia

- Three regional symposia
  - June 2005, Wichita, KS – Focus on schools
  - October 2005, Atlanta, GA – Focus on communities
  - December 2005, Irvine, CA – Focus on industry
- Discuss current and promising initiatives
- Identify barriers and assets to sustainability and evaluation
- Identify areas of convergence and next steps for stakeholders and sectors



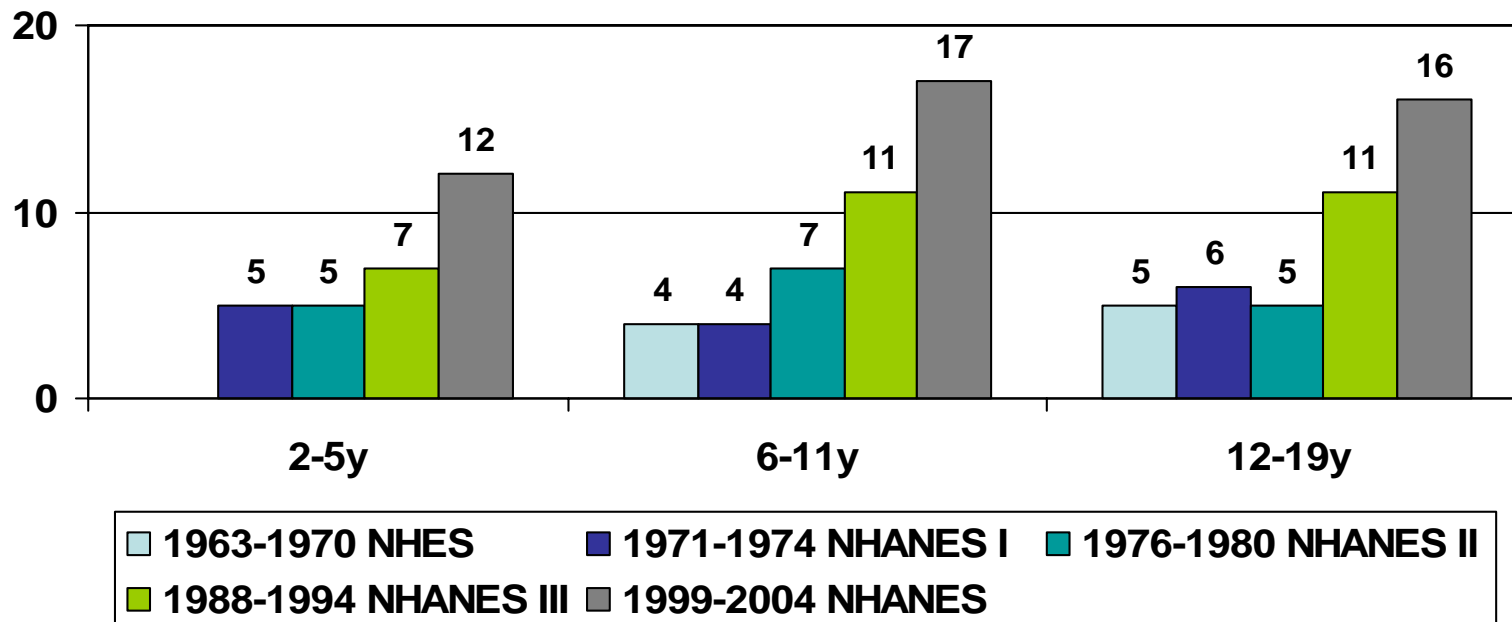
# National Obesity Prevalence for Children and Youth

- One third (33.6 percent) of 2- to 19-year olds are obese or at risk
- Obesity (defined as BMI  $\geq$  95<sup>th</sup> percentile) for based on NHANES data:
  - 13.9 percent in 1999–2000
  - 15.4 percent in 2001–2002
  - 17.1 percent in 2003–2004 (obese); 16.5 percent (at risk)
- By 2010, an estimated 20 percent of U.S. children and youth in the United States will be obese if the current trajectory continues
- No sign of plateau or reversal

Sources: Ogden et al. (2006); Sondik (2004)



# U.S. Childhood Obesity Epidemic Trends



Obesity prevalence in U.S. children and adolescents by age and time frame, 1963-2004



## Conclusions

- U.S. beginning to recognize childhood obesity as a **serious public health problem** that has substantial health, financial, and social costs
- Actions and interventions to reduce childhood obesity are **encouraging, vast, and dynamic but fragmented and small scale**
- Progress **is slow** in reducing childhood obesity
  - Some progress made toward short-term and intermediate outcomes – federal policy changes, changes to built environment, increased public awareness of problem
  - No progress made on long-term health outcomes as BMI levels are increasing



# INSTITUTE OF

## Conclusions

- Marked **underinvestment in childhood obesity prevention interventions** - current investment does not match extent of problem
- With interventions in place, build a **robust evidence base** to identify **promising practices** so effective interventions can be scaled-up and supported in diverse settings
- Need for **collective responsibility and collective action** across sectors
- Tracking, evaluation of ongoing efforts is needed - **adequate resources need to be committed**



# Definitions

## Obesity

- Children and adolescents who have a BMI for age at or above the sex-specific 95th percentile of the BMI charts developed by the CDC in 2000

## At Risk for Obesity

- BMI for age at or above the sex-specific 85th percentile but less than the 95th percentile of the CDC BMI charts
- In most children and youth, a BMI level at or above the 95th percentile indicates elevated body fat and reflects the presence or risk of related chronic disease



# Evaluation Needed

- Many promising practices but short-fall in evaluation
- Robust evidence base needed to identify best practices
- Evaluation will identify interventions that should be scaled up, refined, or replaced
- Evaluations should focus on achieving range of outcomes
  - Policy, environment, social, behavioral, BMI outcomes
  - Evaluation should examine outcomes most relevant to the scope and timeline of intervention



# Promising and Best Practices

## Promising Practices

- Interventions have been evaluated and seem likely to prevent obesity, but they lack sufficient evidence and certainty to link to reduced obesity and co-morbidities
- Promising practices always have evaluation components

## Best Practices

- Interventions with sufficient evidence to provide certainty that they are linked to reducing childhood obesity and co-morbidities
- Few best practices available to guide childhood obesity prevention efforts



# Characteristics of Effective Interventions

- Evaluation component built in from the outset
- Include relevant outcome measures given the scope of the intervention (e.g., formative, process, and outcome measures)
- Consider diverse perspectives and attend to community and population context
- Link with other programs to produce synergistic effect
- Range across all sectors and all types of outcomes

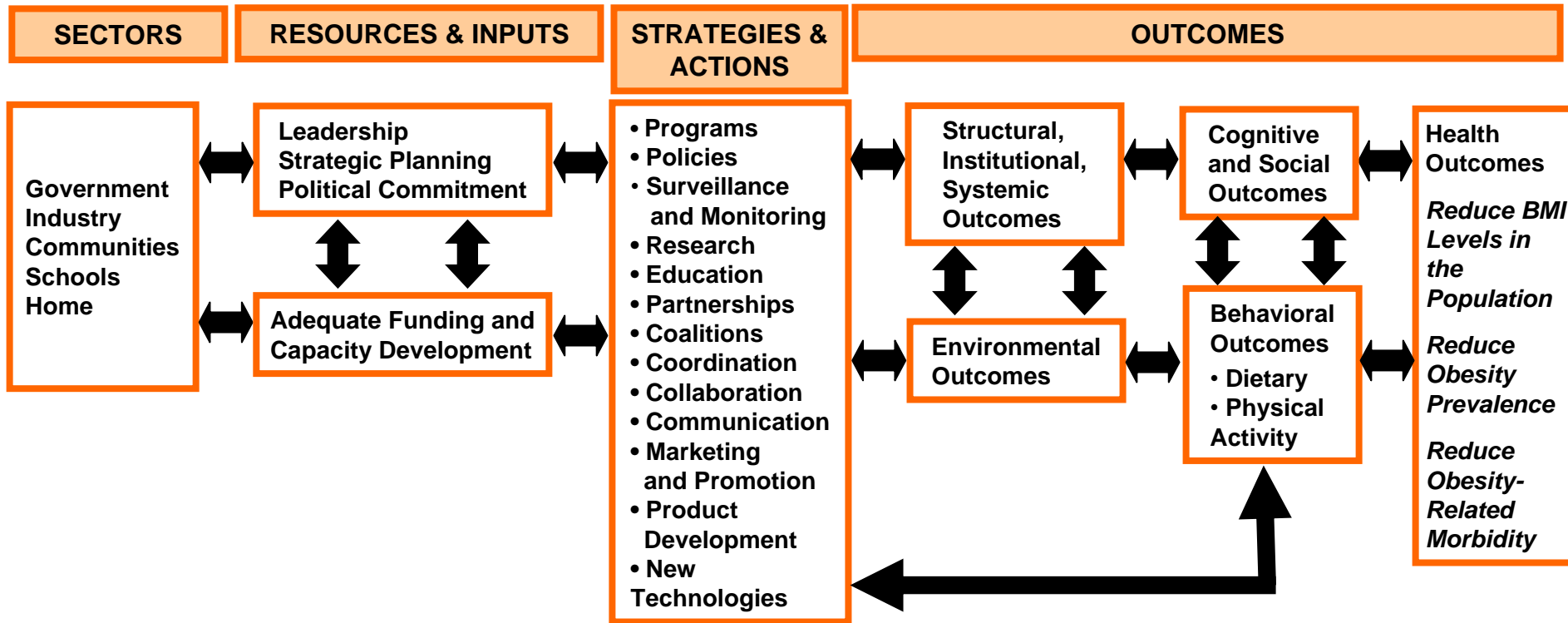


# New Evaluation Framework

- Sectors
- Resources and inputs
- Strategies and actions
- Continuum of outcomes
  - Policy (e.g., structural, institutional, systemic)
  - Environmental
  - Social and cognitive
  - Behavioral
  - Health, especially overweight/obesity



# IOM Evaluation Framework for Obesity Prevention Policies and Interventions



## Cross-Cutting Factors that Influence the Evaluation of Policies and Interventions

Age; sex; socioeconomic status; race and ethnicity; culture; immigration status and acculturation; biobehavioral and gene-environment interactions; psychosocial status; social, political, and historical contexts.

## Recommendations

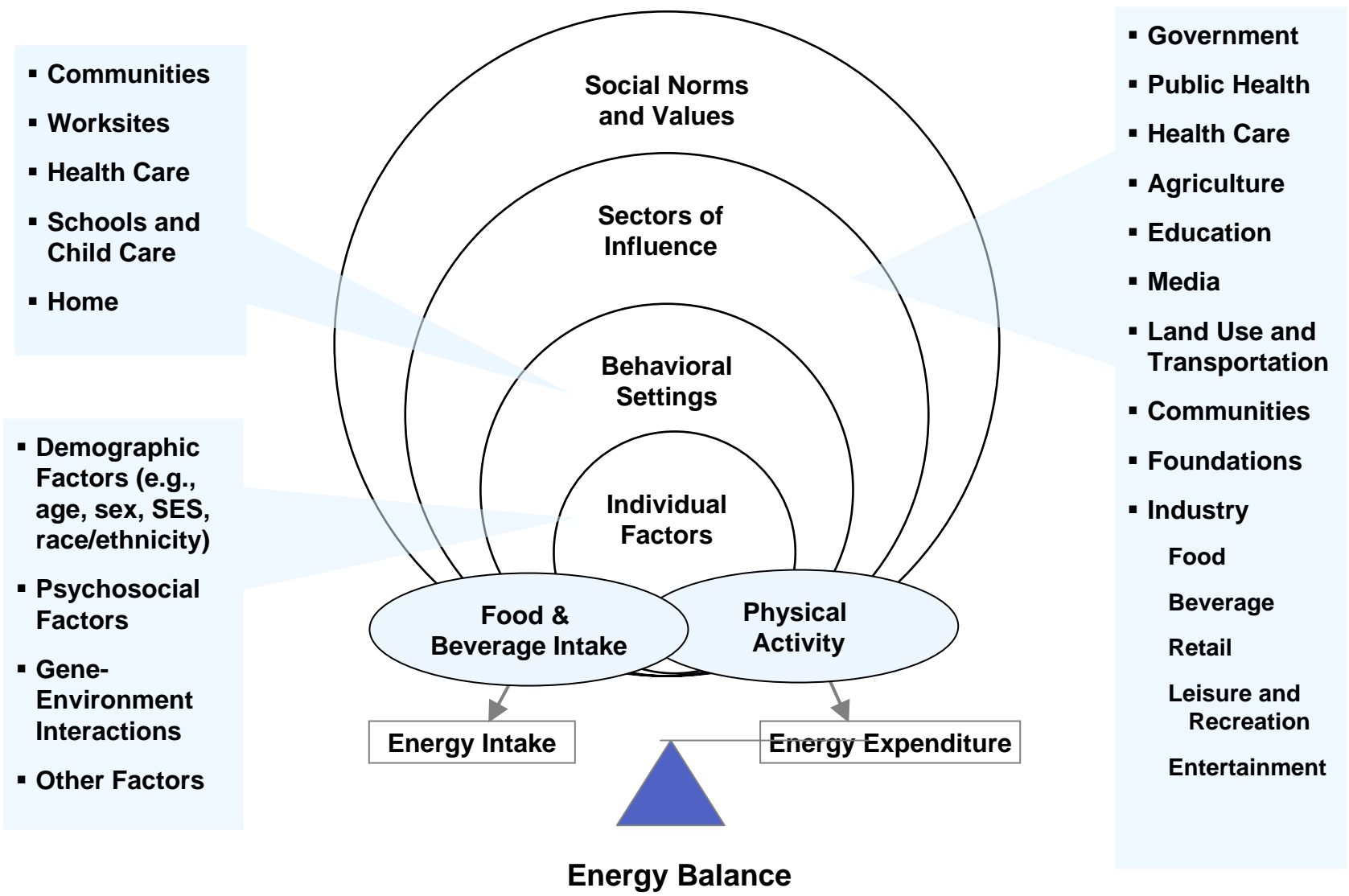
- Lead and commit to childhood obesity prevention, e.g., mobilize resources
- Evaluate policies and programs; build evaluation capacity, including diverse pop's
- Develop monitoring systems, conduct research
- Share info, disseminate promising practices, scale-up efforts



# Sectors to Involve in Childhood Obesity Response

- **Government** - establish childhood obesity as urgent public health priority, galvanize effort (federal, state, local)
- **Industry** (food, beverage, restaurant, food retailers, entertainment, recreation, leisure)
- **Media** (unpaid and paid)
- **Communities** (non-profits, foundations, faith-based groups, child- and youth-related organizations, health care sector)
- **Schools** (including preschool, after school, child care)
- **Home** (families and care providers)





- Communities
- Worksites
- Health Care
- Schools and Child Care
- Home

- Government
- Public Health
- Health Care
- Agriculture
- Education
- Media
- Land Use and Transportation
- Communities
- Foundations
- Industry
- Food
- Beverage
- Retail
- Leisure and Recreation
- Entertainment

- Demographic Factors (e.g., age, sex, SES, race/ethnicity)
- Psychosocial Factors
- Gene-Environment Interactions
- Other Factors

**Energy Balance**

# Examples of Promising Practices

## Government

- USDA's DoD Fresh; Free Fruit and Vegetable Snack Program
- CDC's 5-year VERB campaign had positive evaluation results in promoting physical activity among tweens (funding discontinued in 2006)
- CDC's Nutrition and Physical Activity Program to Prevent Childhood Obesity and Other Chronic Diseases (\$16 million to 28 states in 2005-06 provided to increase capacity to implement programs and evaluations)
- Federal Safe Routes to School Program (initiated in 2005) has evaluation underway



# Examples of Promising Practices

## Industry

- Changes reported by food, beverage, restaurant, recreation and entertainment companies based on company market testing and consumer marketing research
- Companies have developed new products, reformulated products, changed product packaging (100-calorie packs), expanded meals to help consumers eat according to the 2005 Dietary Guidelines for Americans
- Data, documentation and evaluation rarely available to public
- Many innovative interventions not evaluated
  - Physical gaming, use of characters to promote fruit & vegetables



# Examples of Promising Practices

## Communities

- Coalitions are tracking changes in policies and programs to promote physical activity and expand access to healthier foods and beverages (built environment)
- DHHS Steps to a Healthier US Initiative (Steps Program) supports 40 communities nationwide (\$35.8 million provided for FY 2004-2006) and has evaluation underway
- Community-academic partnerships
- Public-private partnerships (implement statewide obesity prevention action plans – GA, WV, NC, TX)



# Examples of Promising Practices

## Schools

- School nutrition standards
- Awards programs for healthy schools (e.g., Utah Gold Medal Schools Program)
- Public-private partnerships
  - Alliance for a Healthier Generation has evaluation underway
- After-school programs
  - CATCH Kids Club, Georgia Fit Kid Project, SPARK
- Need to systematically evaluate school wellness policies as they are adopted and promoted
  - Kansas Coordinated School Health Program
  - Local school wellness policies



# Examples of Promising Practices

## Home

- Fit WIC, pilot-tested in 4 states in 1999, evaluated parents' behaviors to reduce obesity in preschoolers. Parents who participated were more likely to introduce positive behaviors to their children
- Hip Hop to Health Jr., a preschool intervention with low-income Af-Am children in Head Start provided incentives to parents to encourage healthy eating behaviors and physical activity in children
- Stanford SMART (Student Media Awareness to Reduce Television) classroom curriculum reaches parents to reduce 3rd-4th graders' leisure screen time
- NIH's We Can! (Ways to Enhance Children's Activity and Nutrition) – evaluation underway



# Next Steps for Addressing the Childhood Obesity Epidemic

## Government

- Establish high-level task forces (federal, state, local) to identify priorities for action, galvanize effort, coordinate public-sector efforts, and establish effective interdepartmental collaborations
- Provide sustained commitment and long-term investment in childhood obesity prevention initiatives and surveillance efforts



# Next Steps for Addressing the Childhood Obesity Epidemic

## Industry and Media

- Support and market product innovations and reformulations
- Develop sustainable funding strategies
- Conduct independent evaluations of industry's efforts
- Develop/strengthen public–private partnerships
- Share proprietary data that can expand understanding of consumer purchasing and marketing trends
- Evaluate progress in developing and communicating storylines and programming that promote healthy lifestyles
- Conduct long-term media and PR campaigns
- Develop sustainable funding strategy (includes foundations)



# Next Steps for Addressing the Childhood Obesity Epidemic

## Communities

- Develop community health index toolkit through government–academic–community partnerships to help examine factors relevant to creating healthy communities
- Expand collection and dissemination of local data
- Compile and widely share community-based evaluation results, lessons learned, and community action plans



# Next Steps for Addressing the Childhood Obesity Epidemic

## Schools

- Elevate the priority placed on sustaining a healthy school environment
- Increase resources for technical assistance to evaluate changes in schools (physical activity and food)
- Expand surveillance and data collection efforts
- Compile and widely share school-based evaluation results and lessons learned



# Next Steps for Addressing the Childhood Obesity Epidemic

## Home

- Families should assess the home environment to ensure that foods and beverages supporting a healthful diet are consumed by children and youth at home and served in reasonable portion sizes
- Families should emphasize physical activity as a family priority and establish rules or guidelines that limit leisure screen time (e.g., television, DVDs, videos, movies, videogames, and computers)



## For More Information

- Fact sheets

[www.iom.edu/obesity](http://www.iom.edu/obesity)

- Read the report online or purchase it at

[www.nap.edu](http://www.nap.edu)

