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Ohio Cardiovascular Health Collaborative

SCHOOL OF MEDICINE
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MedTAPP

OHIO COLLEGES OF MEDICINE GOVERNMENT RESOURCE CENTER

Ohio Department of Medicaid

Project ECHO®

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# Cardi-OH ECHO Weight Management

## A Patient-Centered Approach

Thursday, November 14, 2019

# Disclosure Statements

The following planners, speakers, moderators, and/or panelists of the CME activity have financial relationships with commercial interests to disclose:

- Adam T. Perzynski, PhD reports being co-founder of Global Health Metrics LLC, a Cleveland-based software company and royalty agreements for forthcoming books with Springer publishing and Taylor Francis publishing.
- Siran M. Koroukian, PhD received funds for her role as a site PI on a subcontract with the Cleveland Clinic.
- Christopher A. Taylor, PhD, RDN, LD, FAND reports grant funding and travel support for his role as a consultant, researcher, and presenter for Abbott Nutrition, and is also a member of the Scientific Advisory Council of Viocare, Inc.
- These financial relationships are outside the presented work.

All other planners, speakers, moderators, and/or panelists of the CME activity have no financial relationships with commercial interests to disclose.

# Obesity and the built environment


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# Objectives

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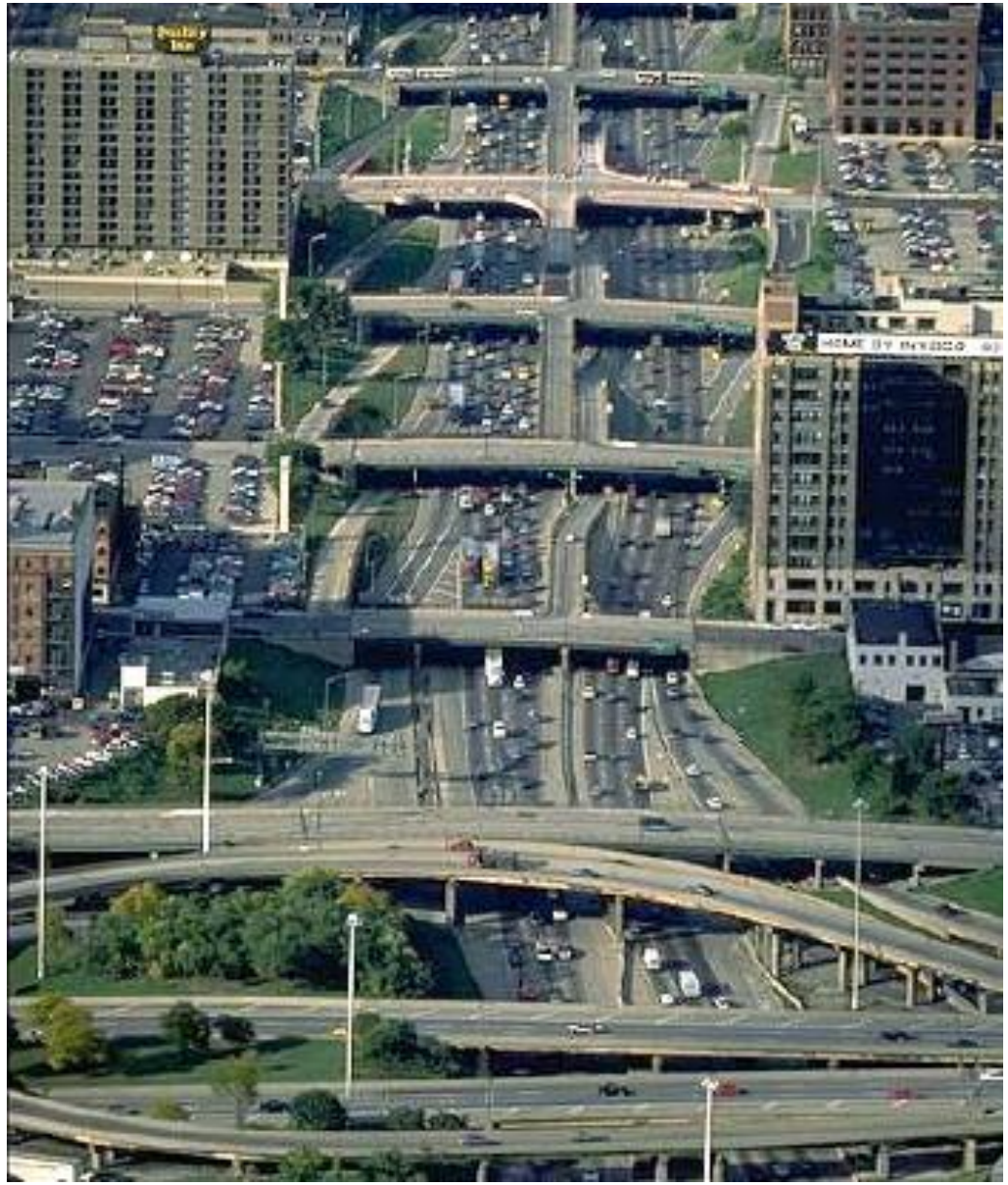
- Define the built environment.
- List and define different levels of measure of the built environment.
- Explain the influence of the built environment upon body weight.

# The Built Environment

- Environment: "All that is external to the individual."
- Built environment: "Encompasses aspects of a person's surroundings which are man made."
- Broad definition:
  - Schools, cities, workplaces
  - Community-based practices
  - Restaurants/grocery stores



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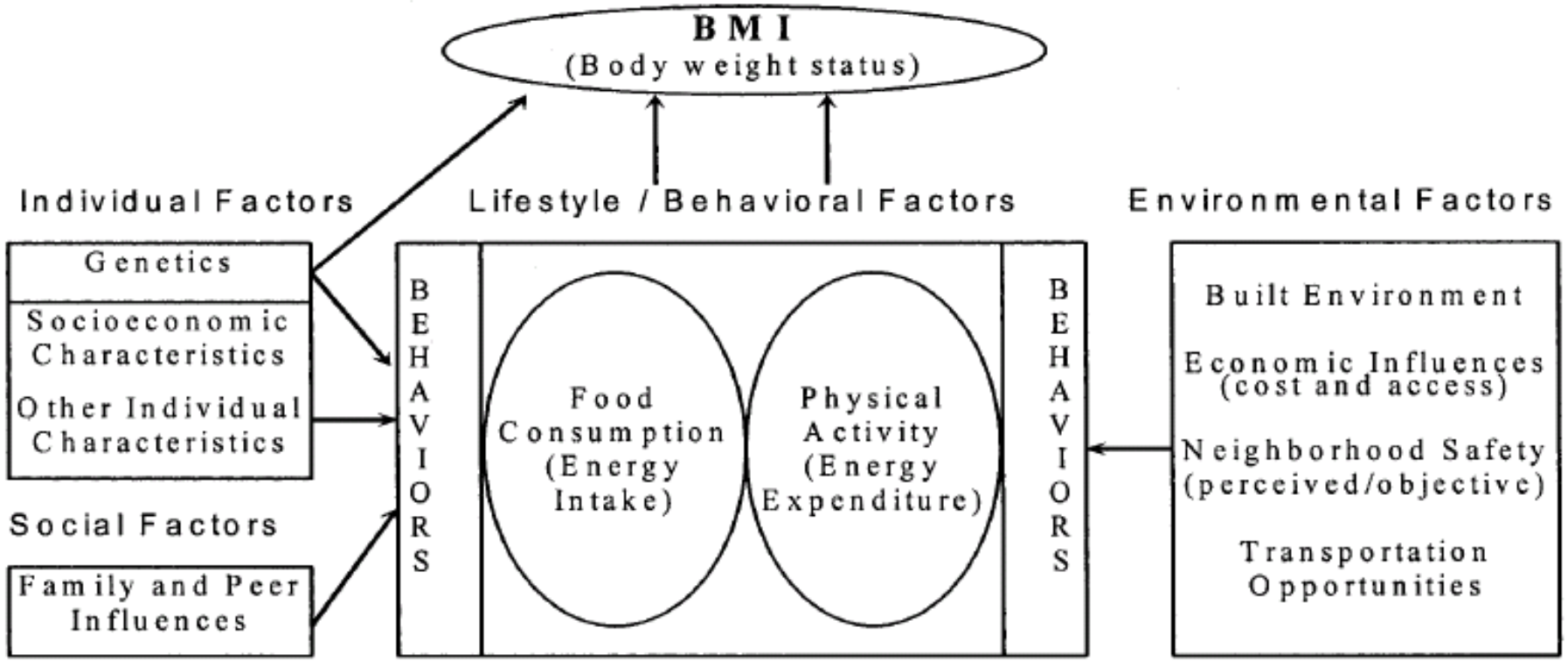
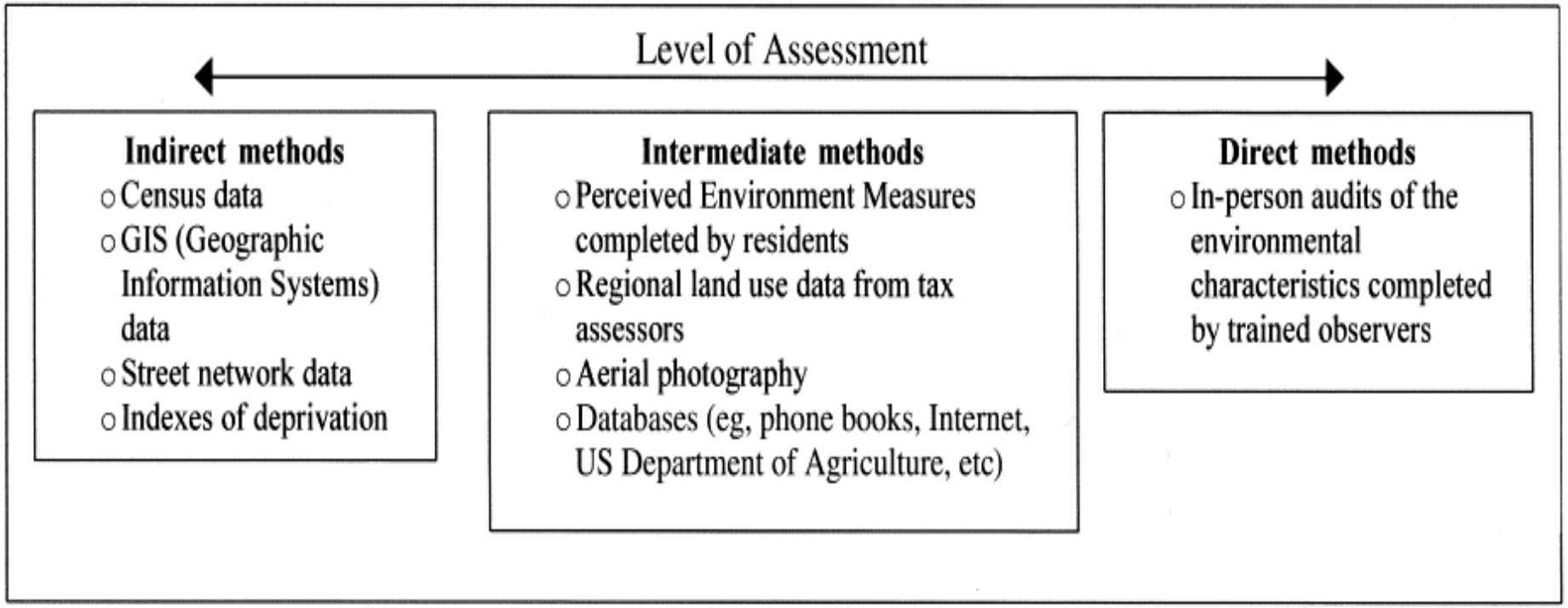

BMI
(Body weight status)
Individual Factors
Lifestyle / Behavioral Factors
Environmental Factors
Genetics
Socioeconomic Characteristics
Other Individual Characteristics
Social Factors
Family and Peer Influences
BEHAVIORS
Food Consumption (Energy Intake)
Physical Activity (Energy Expenditure)
BEHAVIORS
Built Environment
Economic Influences (cost and access)
Neighborhood Safety (perceived/objective)
Transportation Opportunities

# Levels of Measurement



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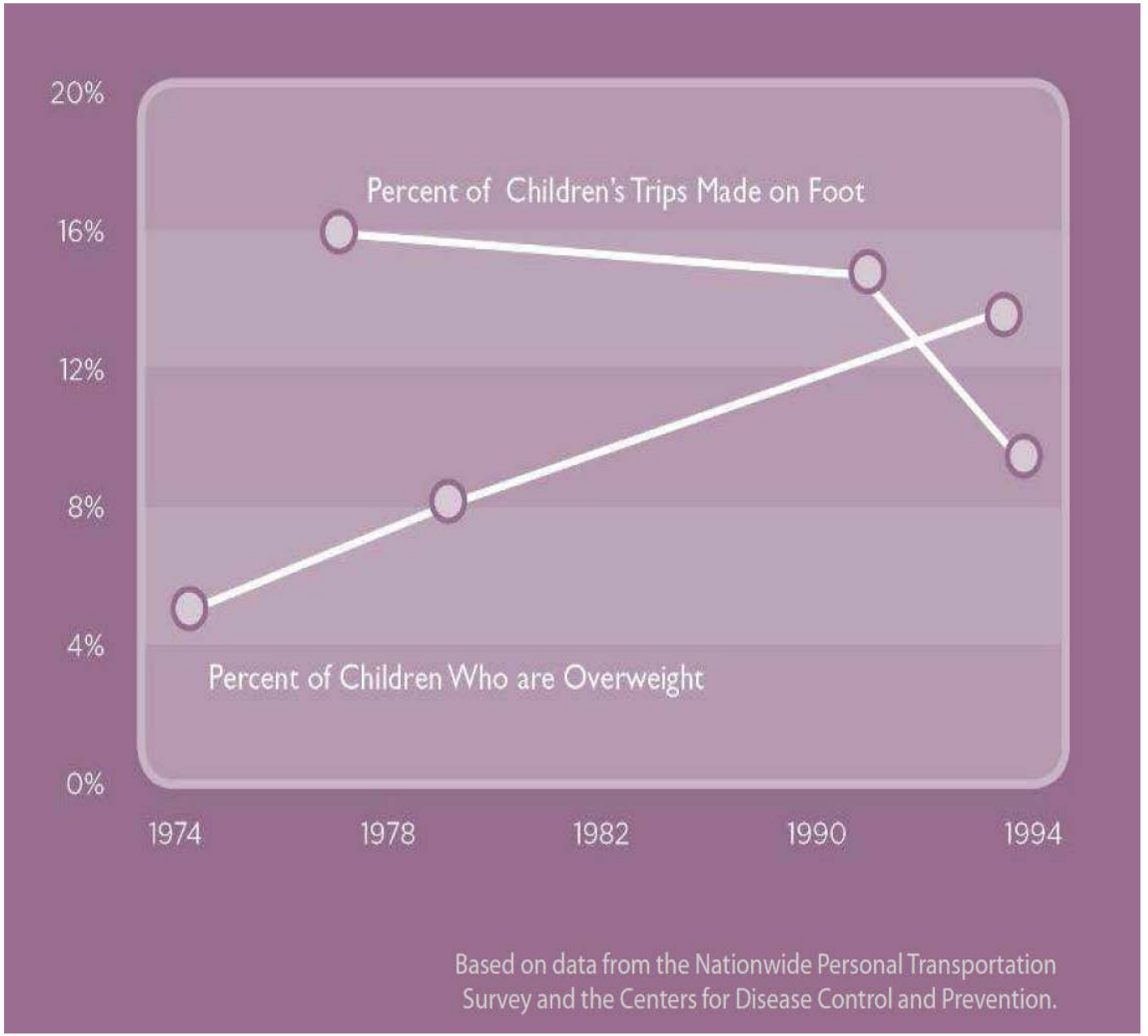
# Is a healthier built environment associated with lower levels of obesity?

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# Wall Street Journal 6/29/2007

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**Bison Don't Roam,**
**And It's a Problem**
**For the Polish Herd**
**Plan Is to Get Lazy Beasts**
**To Travel Abroad and Breed;**
**The EU Looks for Solution**

# The Built Environment

- Difficult to study.
- Conflicting results.
- For example, two studies report higher obesity rates in communities with higher fast food density; two others do not.

# Access to Physical Activity

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- Proximity to play space/recreational facilities
- No relationship in young children
- Positive association of overweight with distance among adults
- Net residential density
- Greater the density, less the risk of having overweight
- Land use mix
- Greater land use mix, less the risk of having overweight
- Neighborhood walkability
- Greater walkability, less the risk of having overweight
- Number of recreational facilities
- Higher the number of facilities, the less the risk of having overweight
- Sprawl/Commuting time
- Mixed results. Generally associated with increased risk of overweight

# Access to Food Sources

- Supermarkets
  - Lower risk of overweight
  - Concept of food deserts being cast in doubt

  http://www.nytimes.com/2012/04/18/health/research/pairing-of-food-deserts-and-obesity-challenged-in-studies.html?_r=0

- Convenience stores
  - Increased risk of overweight
- Fruit and vegetable prices
  - Predicted lower gains in BMI among children over 3 year period beginning at age 4 or 5

# The Built Environment

- Uses a different language:
  - Density:  “amount of activity in an area”
  - Diversity: “diversity in the spatial arrangement of land use”
  - Connectivity: “ease of travel between places.”
  - Design: “features of individual streets or structures.”
  - Spatial access: “intensity of the possibility for interaction”

# The Built Environment

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- Challenges
  - "Place"
  - "Context"
  - "Endogeneity": Bias through neighborhood selection by residents)

# Environmental Obesogens

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- Bisphenol A (BPA)
- Organotins (TBT) & TPT
- Perfluorooctanoic acid (PFOA)
- Phthalate
- Phytoestrogens

# Bottom Line

- Conclusive evidence for the role of obesogens in promoting obesity is lacking.
- Regulating environmental obesogens may be a wise thing to do, but as an obesity-control measure, it should be a very low priority.

# What should we do?

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- 2005 Institute of Medicine Report on Childhood Obesity:
  - "Knowing that it is impossible to produce an optimal solution a priori, we more appropriately adopt surveillance, trial, measurement, error, success, alteration, and dissemination as our course, to be embarked on immediately. Given that the health of today's children and future generations is at stake, we must proceed with all due urgency and vigor."

# Elements of Safe Routes to School Programs

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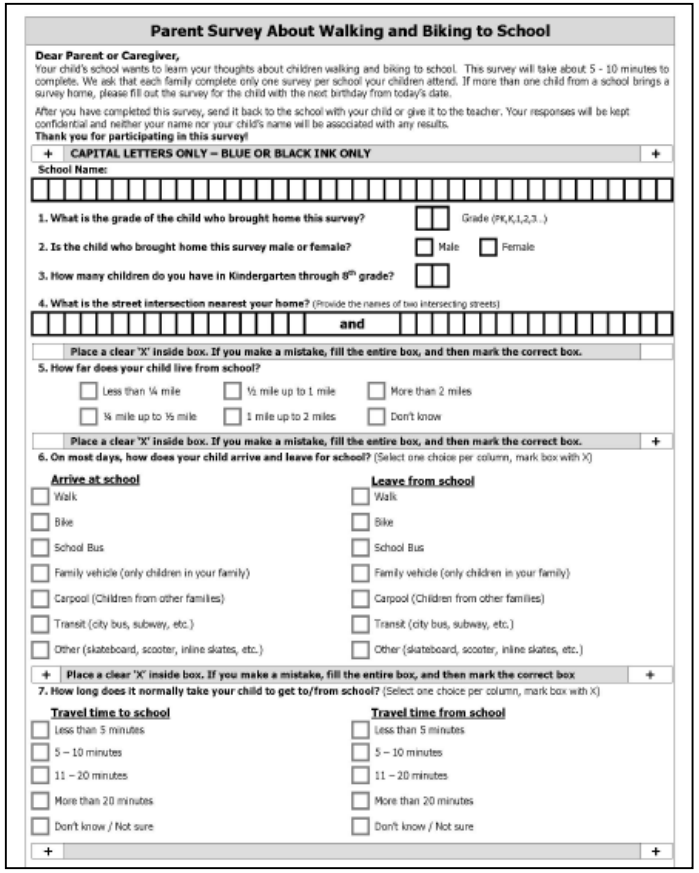
- Education
- Encouragement
- Enforcement
- Engineering
- Evaluation

# Evaluation



**Parent Survey About Walking and Biking to School**

**Dear Parent or Caregiver,**

Your child's school wants to learn your thoughts about children walking and biking to school. This survey will take about 5 - 10 minutes to complete. We ask that each family complete only one survey per school your children attend. If more than one child from a school brings a survey home, please fill out the survey for the child with the next birthday from today's date.

After you have completed this survey, send it back to the school with your child or give it to the teacher. Your responses will be kept confidential and neither your name nor your child's name will be associated with any results.

**Thank you for participating in this survey!**

+ CAPITAL LETTERS ONLY – BLUE OR BLACK INK ONLY +

**School Name:**

1. **What is the grade of the child who brought home this survey?** ☐☐ Grade (PK,K,1,2,3…)
2. **Is the child who brought home this survey male or female?** ☐ Male ☐ Female
3. **How many children do you have in Kindergarten through 8th grade?** ☐☐
4. **What is the street intersection nearest your home?** (Provide the names of two intersecting streets)

and

Place a clear 'X' inside box. If you make a mistake, fill the entire box, and then mark the correct box.

5. **How far does your child live from school?**

☐ Less than ¼ mile ☐ ½ mile up to 1 mile ☐ More than 2 miles
☐ ¼ mile up to ½ mile ☐ 1 mile up to 2 miles ☐ Don't know

Place a clear 'X' inside box. If you make a mistake, fill the entire box, and then mark the correct box.

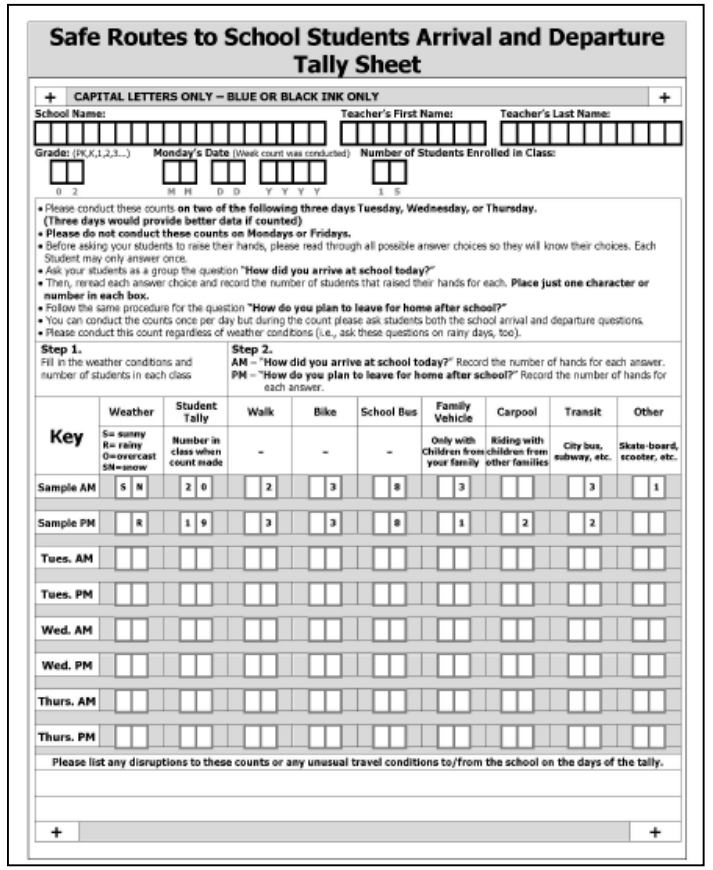
6. **On most days, how does your child arrive and leave for school?** (Select one choice per column, mark box with X)

| Arrive at school | Leave from school |
|---|---|
| ☐ Walk | ☐ Walk |
| ☐ Bike | ☐ Bike |
| ☐ School Bus | ☐ School Bus |
| ☐ Family vehicle (only children in your family) | ☐ Family vehicle (only children in your family) |
| ☐ Carpool (Children from other families) | ☐ Carpool (Children from other families) |
| ☐ Transit (city bus, subway, etc.) | ☐ Transit (city bus, subway, etc.) |
| ☐ Other (skateboard, scooter, inline skates, etc.) | ☐ Other (skateboard, scooter, inline skates, etc.) |

Place a clear 'X' inside box. If you make a mistake, fill the entire box, and then mark the correct box

7. **How long does it normally take your child to get to/from school?** (Select one choice per column, mark box with X)

| Travel time to school | Travel time from school |
|---|---|
| ☐ Less than 5 minutes | ☐ Less than 5 minutes |
| ☐ 5 – 10 minutes | ☐ 5 – 10 minutes |
| ☐ 11 – 20 minutes | ☐ 11 – 20 minutes |
| ☐ More than 20 minutes | ☐ More than 20 minutes |
| ☐ Don't know / Not sure | ☐ Don't know / Not sure |



**Safe Routes to School Students Arrival and Departure Tally Sheet**

+ CAPITAL LETTERS ONLY – BLUE OR BLACK INK ONLY +

**School Name:** **Teacher's First Name:** **Teacher's Last Name:**

**Grade:** (PK,K,1,2,3…) **Monday's Date** (Week count was conducted) **Number of Students Enrolled in Class:**

☐☐ (0 2) ☐☐ (M M) ☐☐ (D D) ☐☐☐☐ (Y Y Y Y) ☐☐ (1 5)

- Please conduct these counts **on two of the following three days Tuesday, Wednesday, or Thursday. (Three days would provide better data if counted)**
- **Please do not conduct these counts on Mondays or Fridays.**
- Before asking your students to raise their hands, please read through all possible answer choices so they will know their choices. Each Student may only answer once.
- Ask your students as a group the question **"How did you arrive at school today?"**
- Then, reread each answer choice and record the number of students that raised their hands for each. **Place just one character or number in each box.**
- Follow the same procedure for the question **"How do you plan to leave for home after school?"**
- You can conduct the counts once per day but during the count please ask students both the school arrival and departure questions.
- Please conduct this count regardless of weather conditions (i.e., ask these questions on rainy days, too).

**Step 1.** Fill in the weather conditions and number of students in each class

**Step 2.** **AM** – **"How did you arrive at school today?"** Record the number of hands for each answer. **PM** – **"How do you plan to leave for home after school?"** Record the number of hands for each answer.

| Key | Weather<br>S= sunny<br>R= rainy<br>O=overcast<br>SN=snow | Student Tally<br>Number in class when count made | Walk<br>- | Bike<br>- | School Bus<br>- | Family Vehicle<br>Only with Children from your family | Carpool<br>Riding with children from other families | Transit<br>City bus, subway, etc. | Other<br>Skate-board, scooter, etc. |
|---|---|---|---|---|---|---|---|---|---|
| Sample AM | S N | 2 0 | 2 | 3 | 8 | 3 | | 3 | 1 |
| Sample PM | R | 1 9 | 3 | 3 | 8 | 1 | 2 | 2 | |
| Tues. AM | | | | | | | | | |
| Tues. PM | | | | | | | | | |
| Wed. AM | | | | | | | | | |
| Wed. PM | | | | | | | | | |
| Thurs. AM | | | | | | | | | |
| Thurs. PM | | | | | | | | | |

**Please list any disruptions to these counts or any unusual travel conditions to/from the school on the days of the tally.**

+ +

Is the program making a difference?

# Moving Ahead for Progress in the 21st Century (MAP-21)

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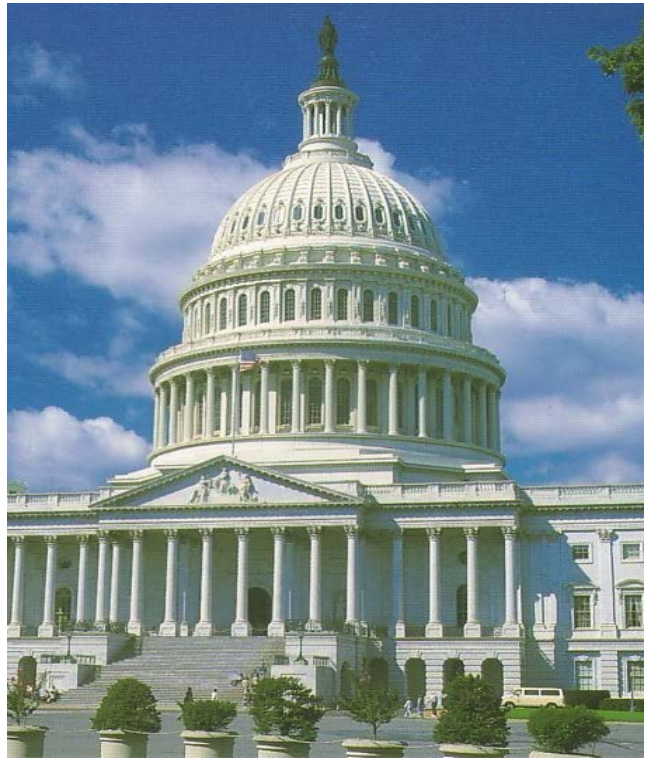
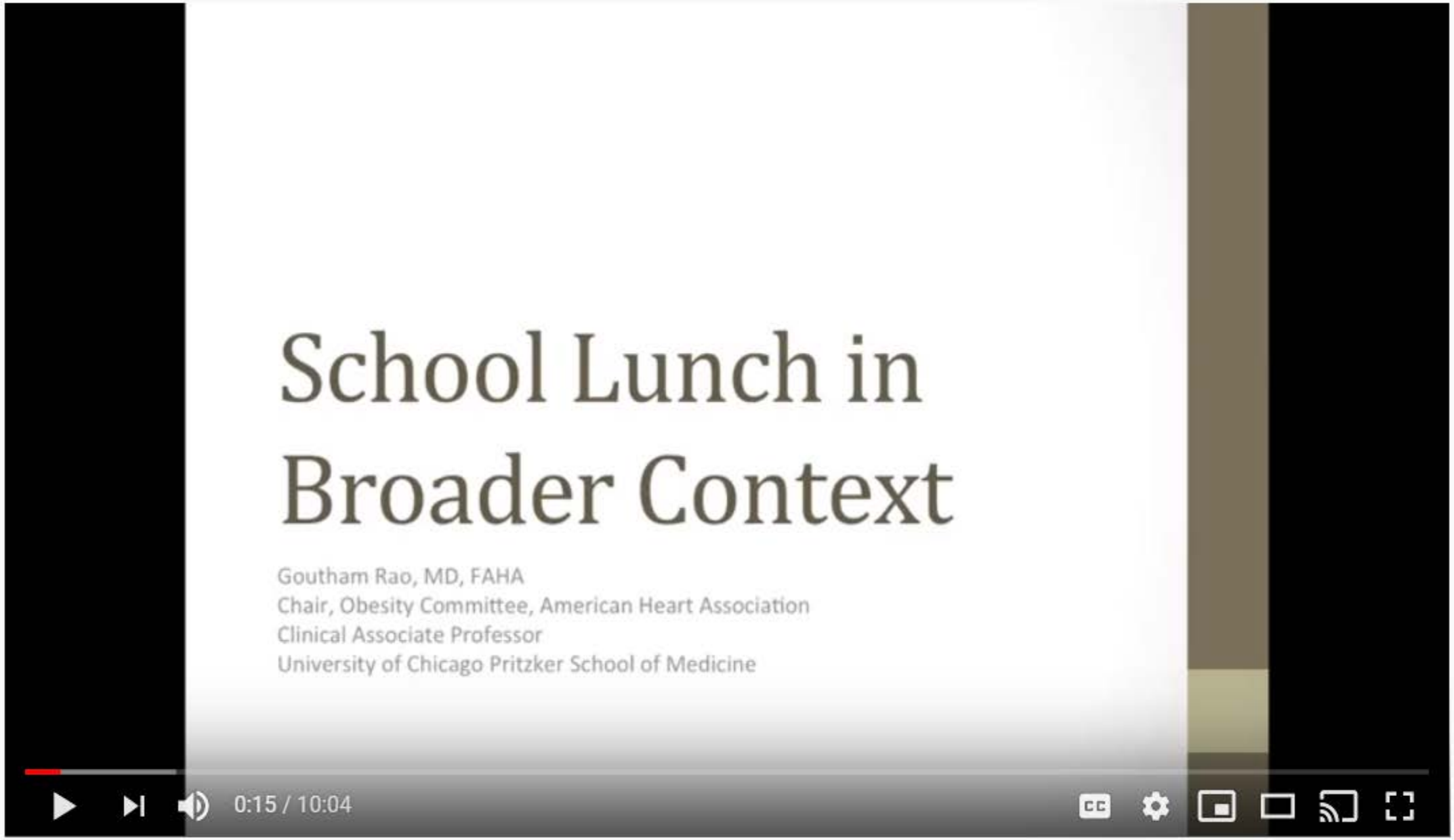
- Legislation passed in 2012
- Established new program: Transportation Alternatives
- SRTS activities eligible to compete for funding
- States transitioning to new legislation
- Many states have SAFETEA-LU funds remaining



More Information:
www.saferoutesinfo.org




Goutham Rao, M.D.,Congressional Briefing: The State of Nutrition on the School Lunch Tray

# Where should we invest our advocacy efforts?

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- Safe routes to school
- Promoting healthier workplaces
- Promoting healthy beverage consumption

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# Thank you!

# Questions/Discussion