

Active Transport: Data for Decision-Making

Nancy McGuckin

Travel Behavior Analyst

Center for Disease Control

Active Transportation Expert Panel

Goals for Active Transport Expert Panel:

- Members include experts in the measurement of active transportation from academia, private industry, and from federal government agencies such as the Department of Transportation, Department of Labor, Census Bureau, National Institutes of Health, and Centers for Diseases Control
- First, to document the current state of active transportation measurement, particularly at the national level, in each field
- Ultimate Goal: to provide recommendations for key action items for near-term and longer-term collaboration between public health, labor, and transportation.
- Steering committee: David Berrigan (NIH), Dianna Carroll (CDC), Janet Fulton (CDC), Kevin Krizek (Univ of Colorado), Gabe Rousseau (DOT/FHWA), and Tom Schmid (CDC)

Data Needs:

Ground-Level

- Volume
- Location
- Time or speed (exposure)

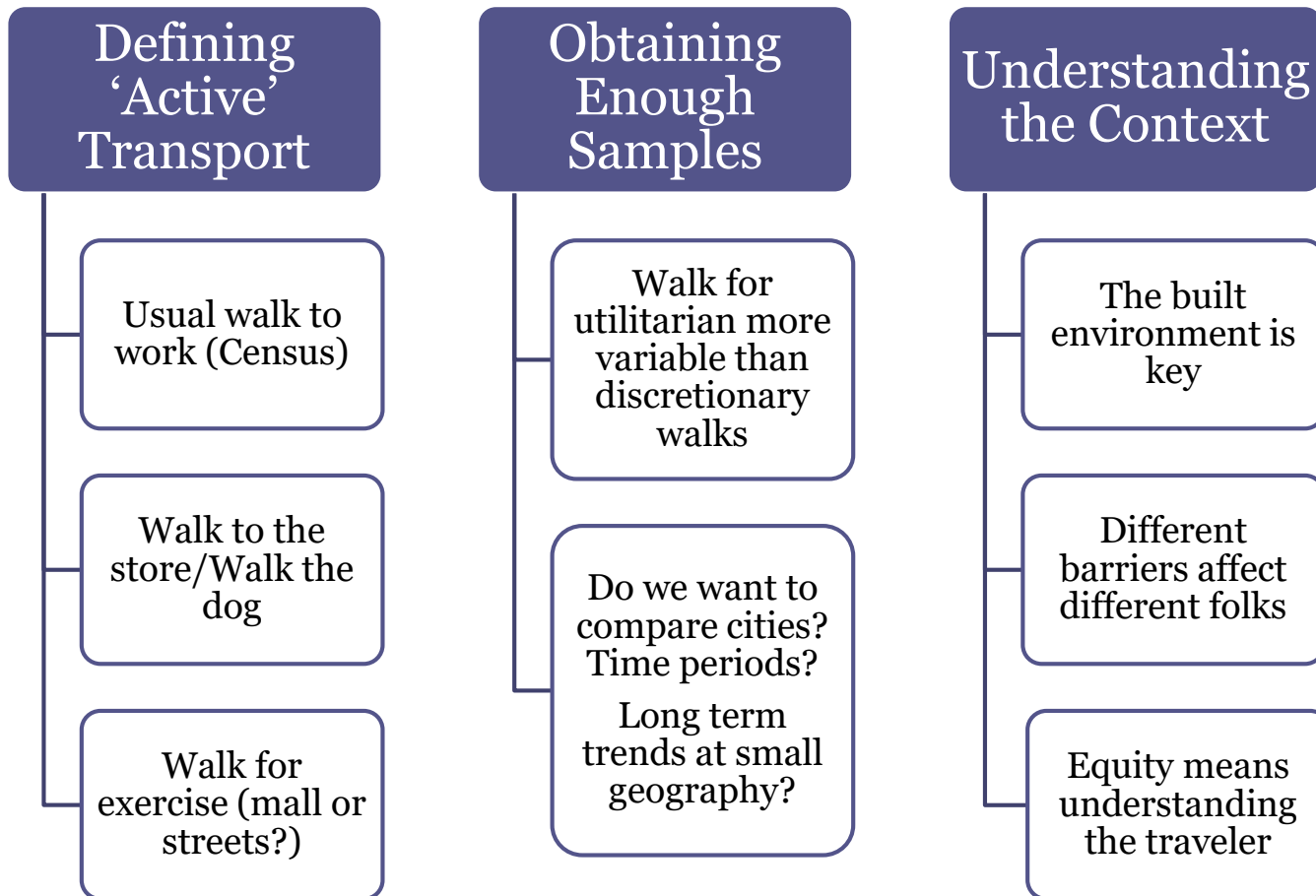
Behavior

- Demographics
- Special populations
- Unique behaviors

Built Environment

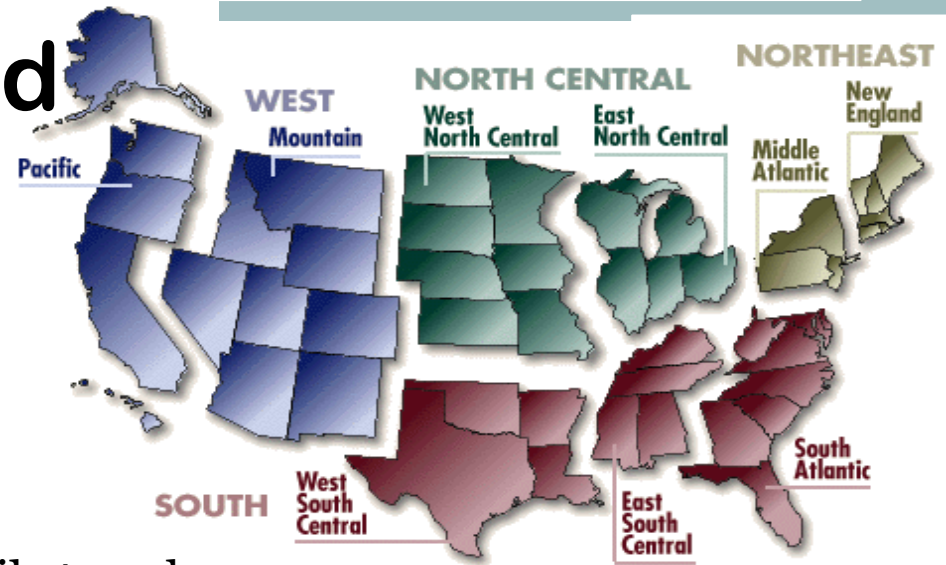
- Density/Sprawl
- Design factors (e.g. complete streets or barriers)
- Opportunities and accessibility

Three Challenges:



National Household Travel Survey

- A snapshot of travel by people in the U.S. (all ages)
- Conducted by FHWA periodically since 1969
- Only national source of trends in daily travel

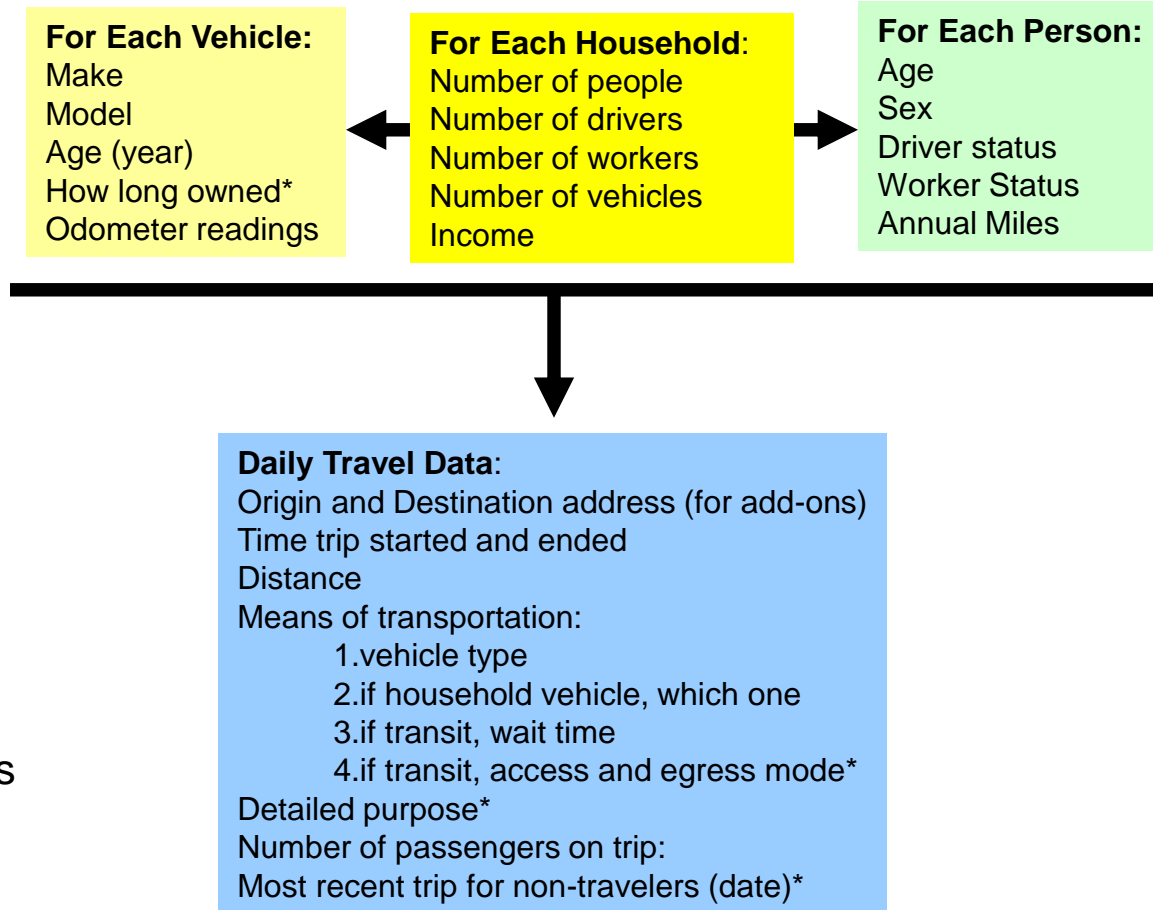


Survey Method:

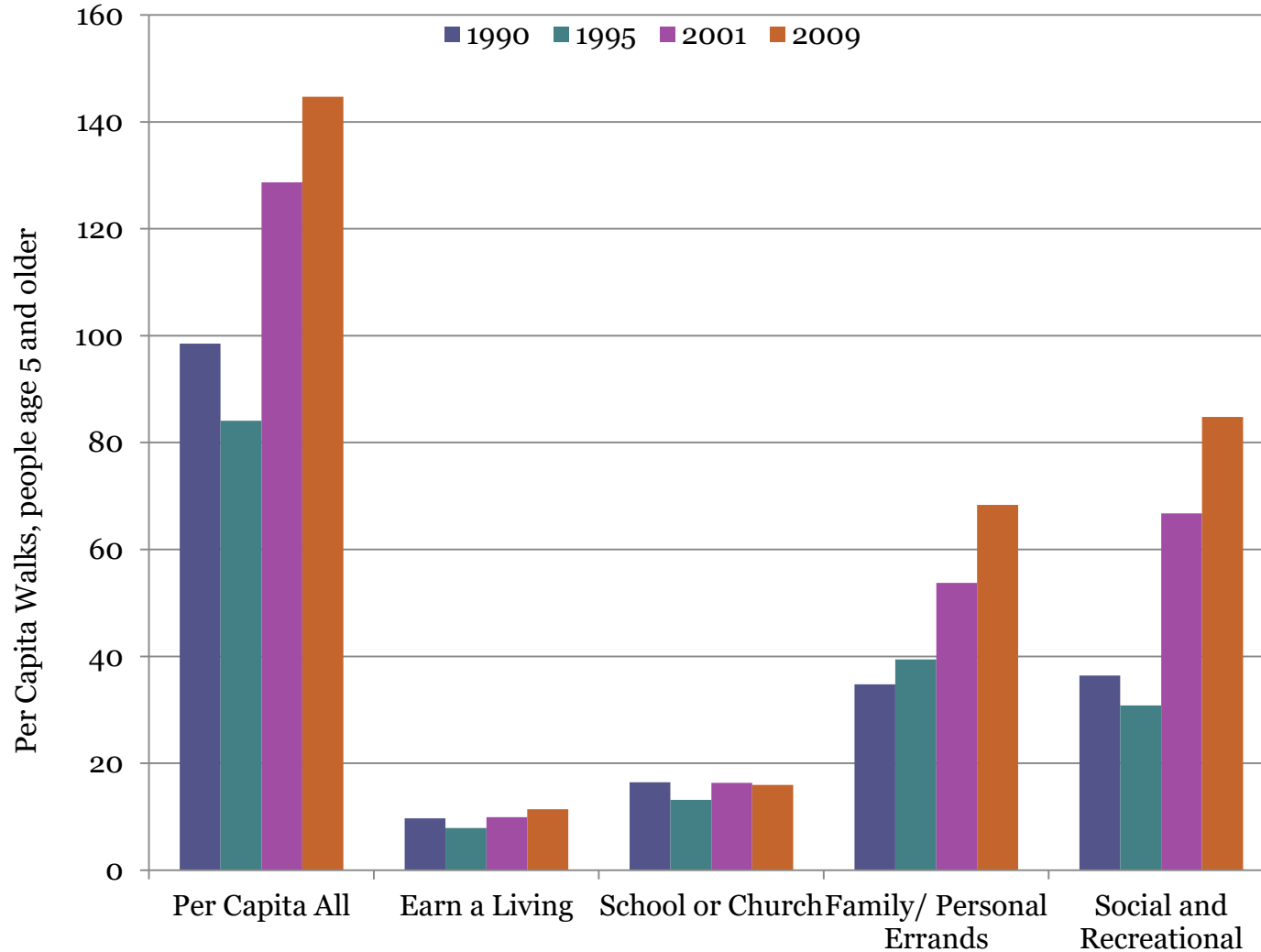
- Samples from all state and regions, inc. rural and urban areas
- Conducted in English and Spanish
- Telephone recruit--travel-diary mail out
- Telephone retrieval using Computer Assisted Telephone Interviews (CATI)
- Single-day travel-diary for each person's travel, covering 365 days
- Weighted to represent annual and daily person travel in the U.S.
- All trips, all purposes, all modes on an assigned day for all people

NHTS Content Overview

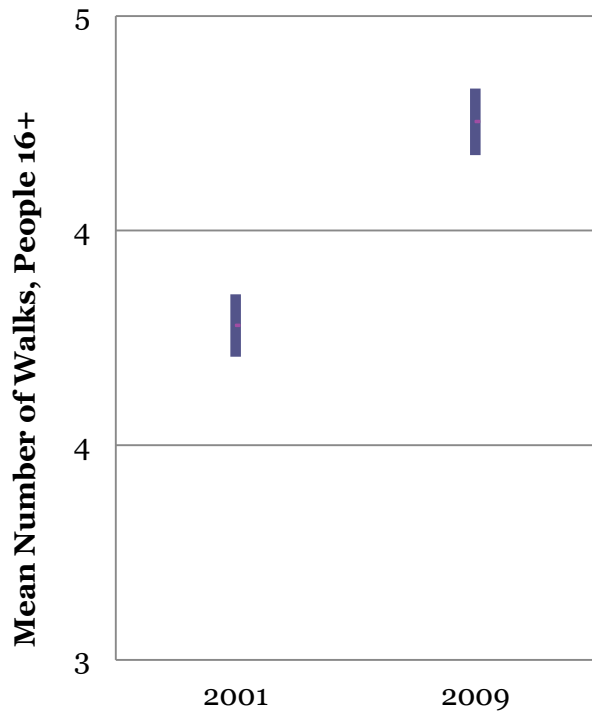
- Descriptive statistics
 - Households
 - People (workers/drivers)
 - Vehicles
 - Trips
- Travel Behavior
 - Mode share distribution
 - Travel time, speed, distance,
 - Work and Non-Work Travel
 - Travel to school
- Special Populations
 - Older Drivers and non-Drivers
 - Bike and Pedestrian
 - People with Disabilities
 - New Immigrants



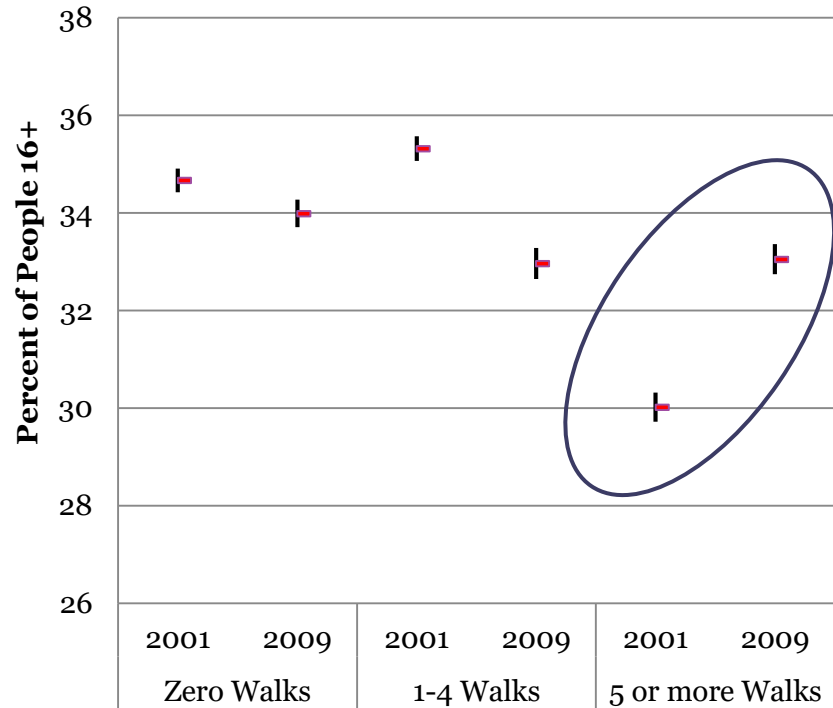
Trends in walking by purpose



Mean number of walks increased between 2001 and 2009, fueled by increases in 5 or more walks per week...



Percent of People aged 16 and Older by Number of Walks 'Last Week'



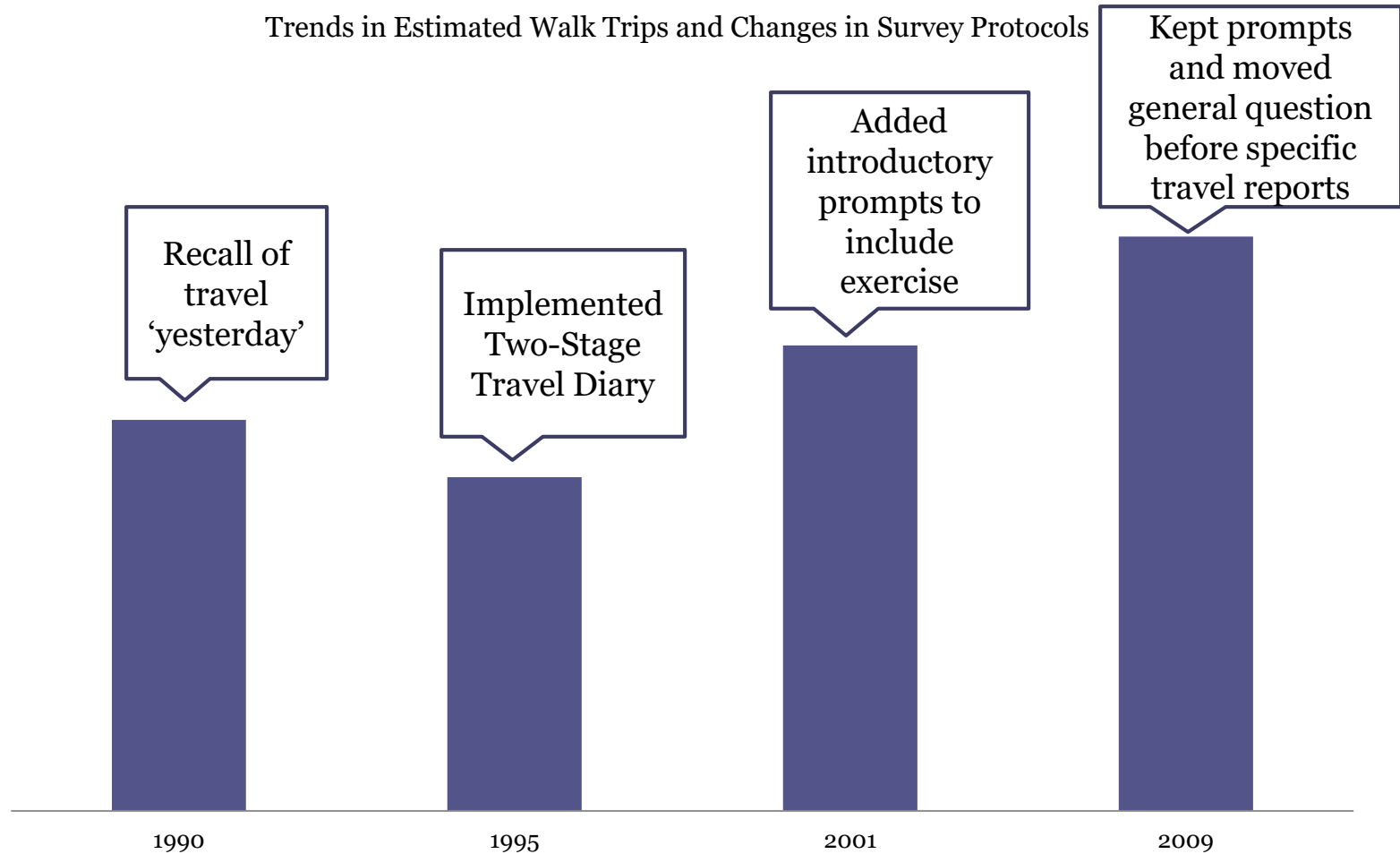
NHTS includes prompts during interview:

Prompts to remind respondents to include walk and bike trips are read by the interviewer at various places in the questionnaire:

- In the past week, how many times did you take a walk or a jog outside including walk the dog and walks for exercise? (This includes walks from home, work, or some other place)
- Please tell me about all the trips you took on {TRIPDATE}. A "trip" is any time you went from one address to another. Be sure to include stops made for **any** reason, such as buying gas or taking someone somewhere. And please include any trips made by walking, biking or transit.
- Before we continue, did you take any other walks, bike rides, or drives on {TRIPDATE}? Please include any other trips where you started and ended in the same place.

Changes in methods and protocol:

Trends in Estimated Walk Trips and Changes in Survey Protocols



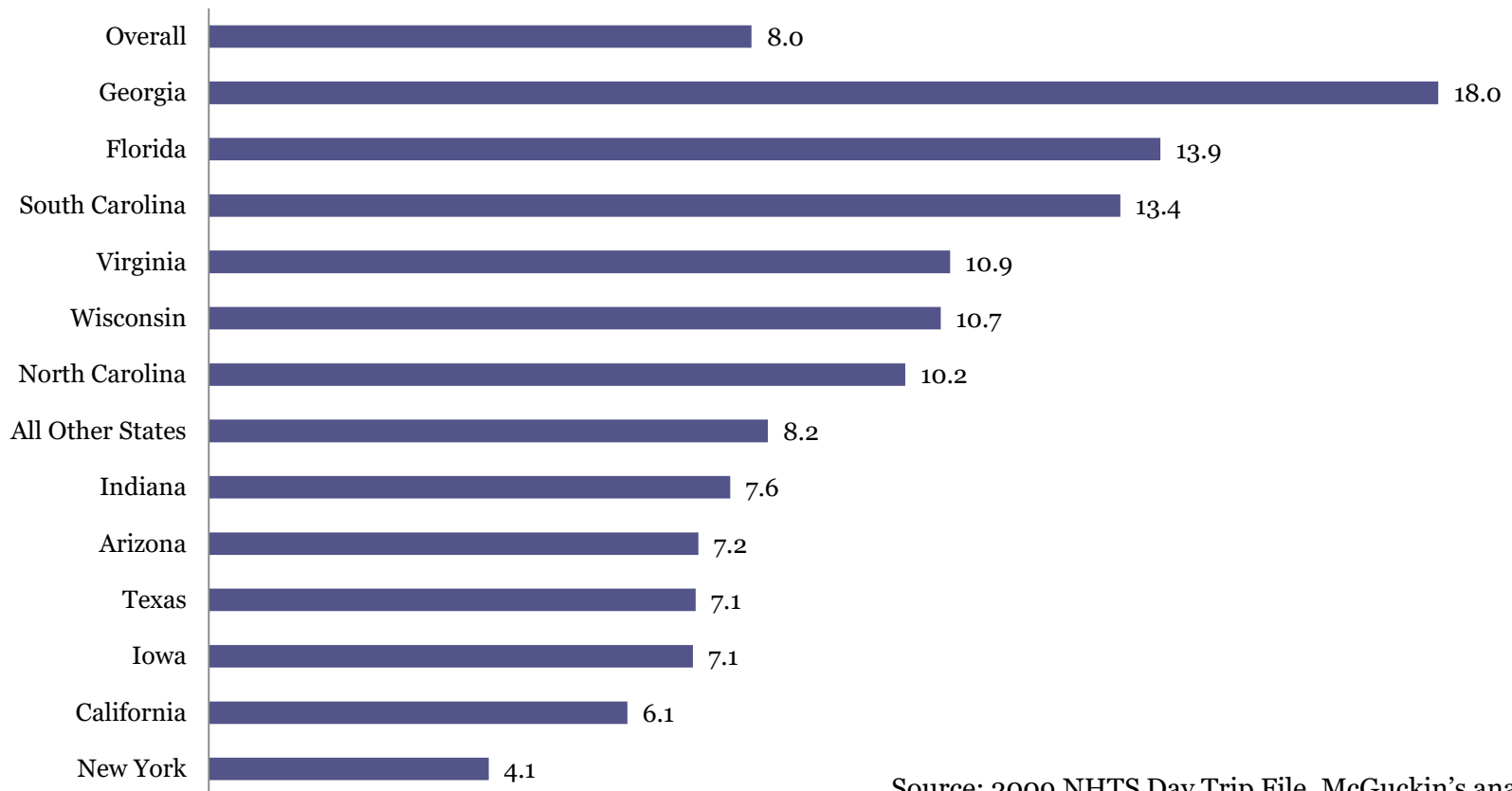
‘Safe Routes to School’ module includes detail on travel to school, including attitudes of parents:

- How many people does your child walk/bike to school with? [If walk/bike is mode]
- At what grade would you allow your child to walk or bike without an adult to/from school? [If walk/bike is not mode]
- Please tell me how much the following issues affect your decision to allow or not to allow your child to walk or bike to or from school:
 - Distance
 - Amount or Speed of Traffic
 - Poor Weather
 - Crime
- Are there any other issues that affect your decision to allow or not allow your child to walk or bike to or from school? (open-ended response)

Challenge: Defining a ‘walk trip’

In 2001, NHTS added a purpose of ‘walk the dog’

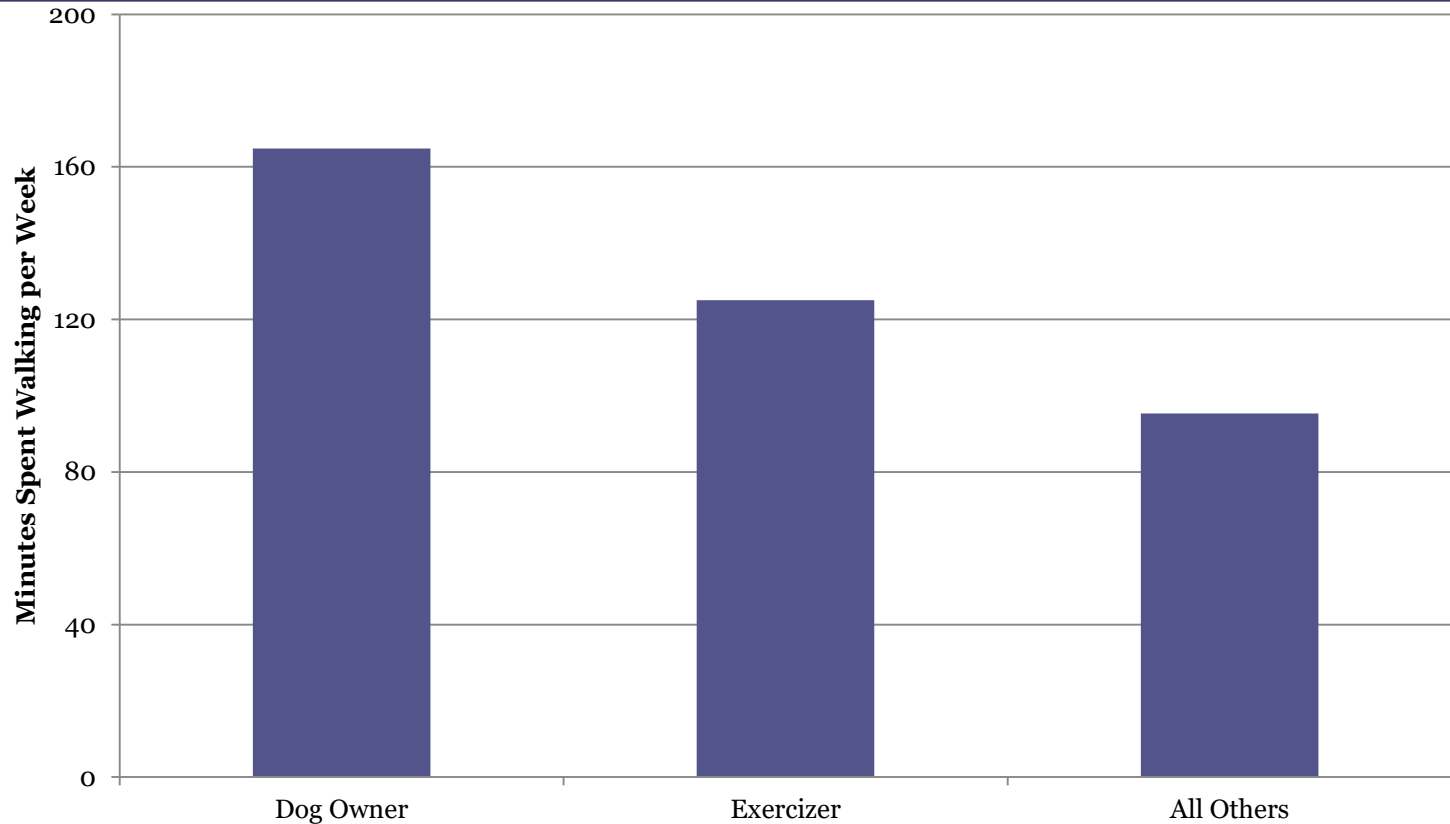
2009 NHTS Percent of Daily Walk Trips to “Walk the Dog”



Source: 2009 NHTS Day Trip File, McGuckin’s analysis

Challenge: measuring real activity e.g. how intense if the activity?

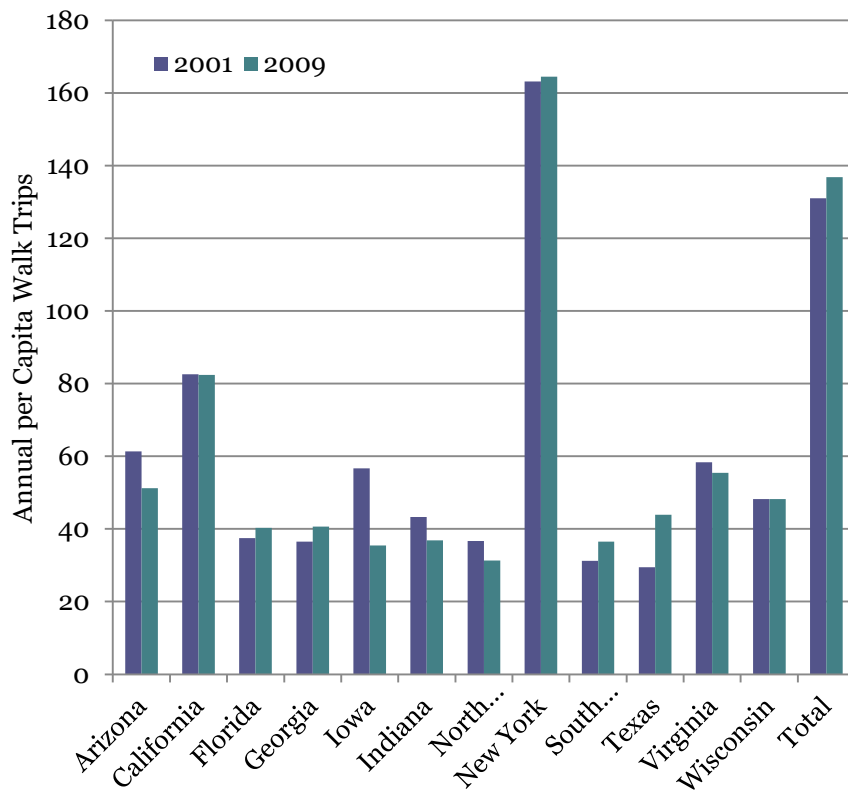
"In the past week about how many minutes did you spend walking outside, including walking the dog and walks for exercise?"



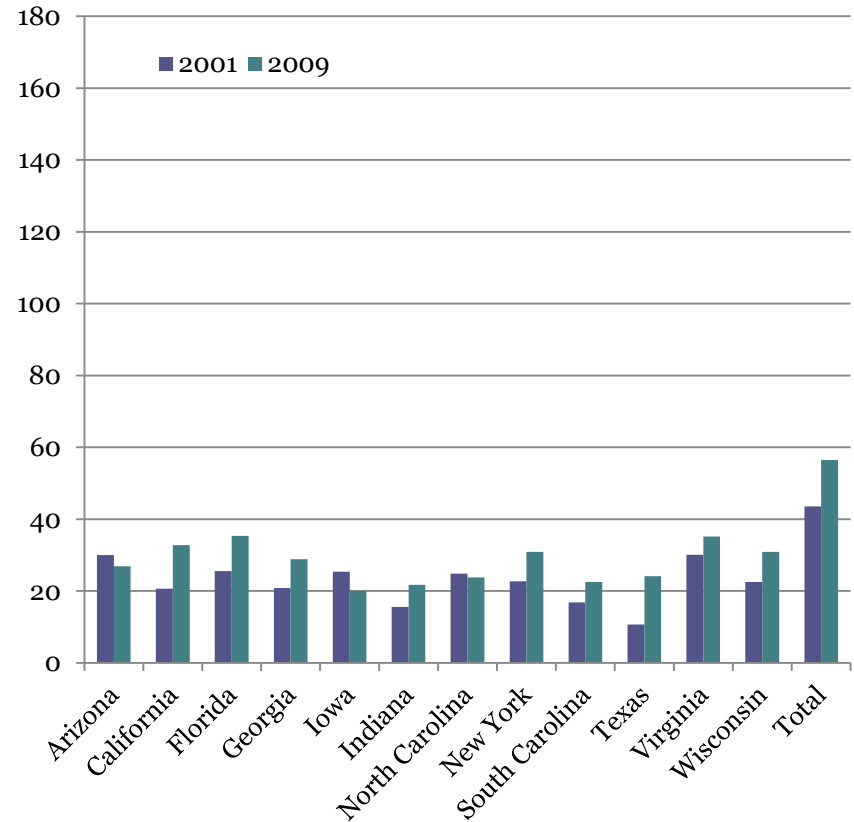
Challenge: Defining a legitimate walk trip

Utilitarian vs. discretionary walks

Utilitarian Purposes



Walk the Dog/Exercise

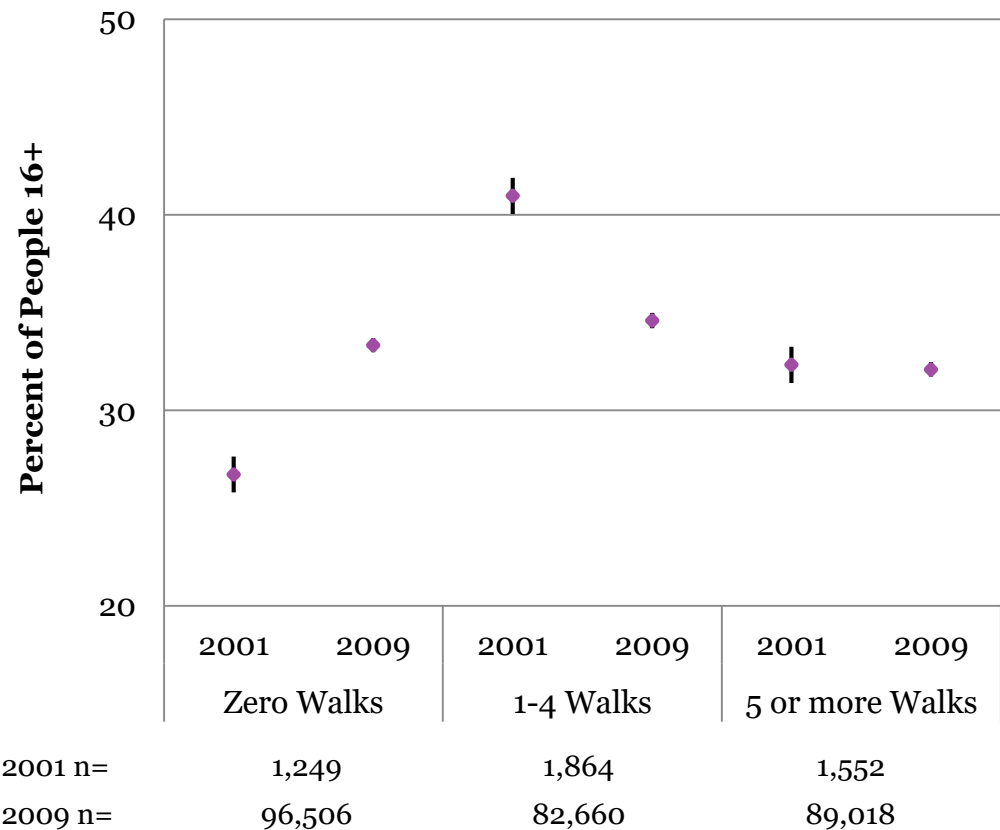


Challenge: Determining Sample Size

"In the past week how many times did you take a walk outside, including walking the dog and walks for exercise?"

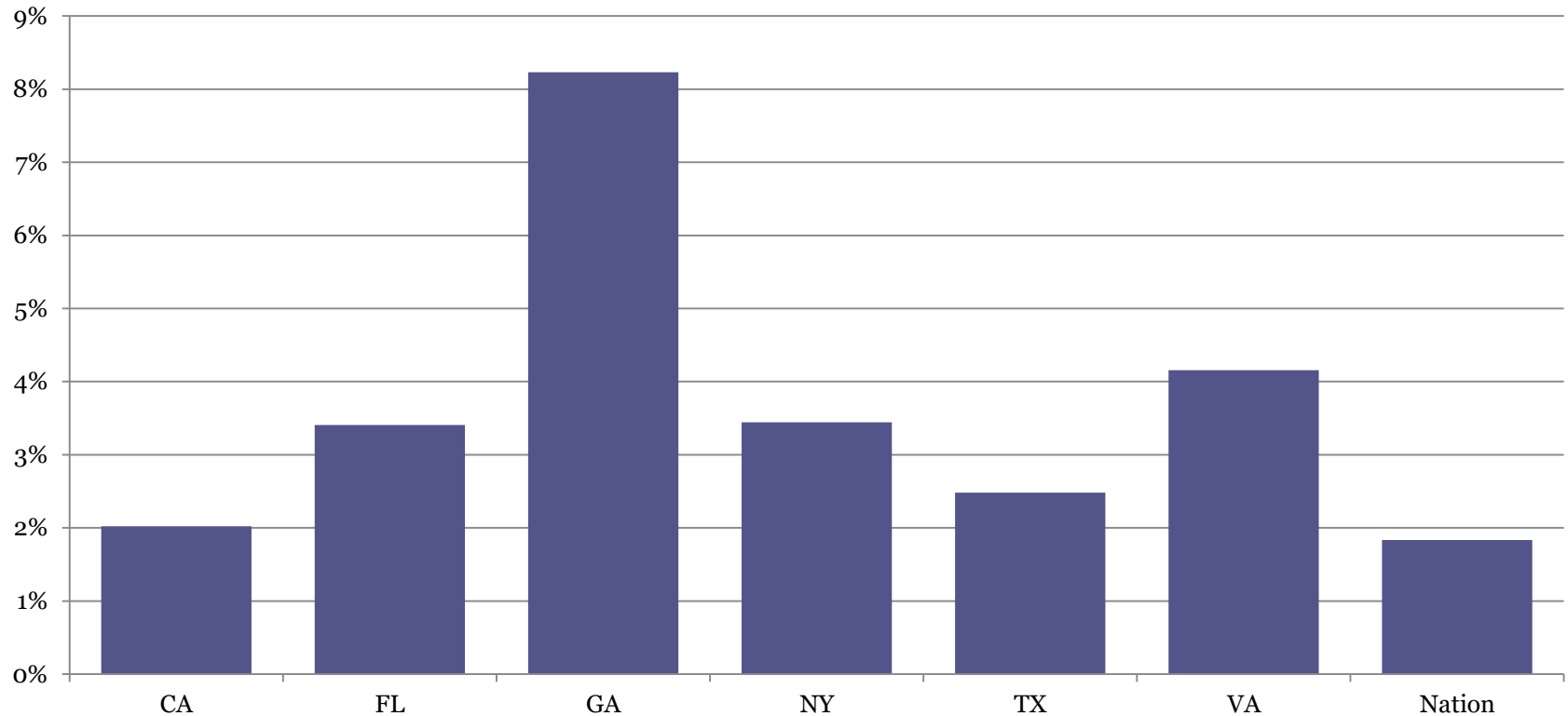
- To compare states or metro areas in walk activity (trips)?
- To estimate mean miles or minutes for walk by demographic groups
- To estimate the percent/number of non-walkers by demographic
- To estimate miles walked at smaller geography for safety

Number of Walks 'Last Week' in California

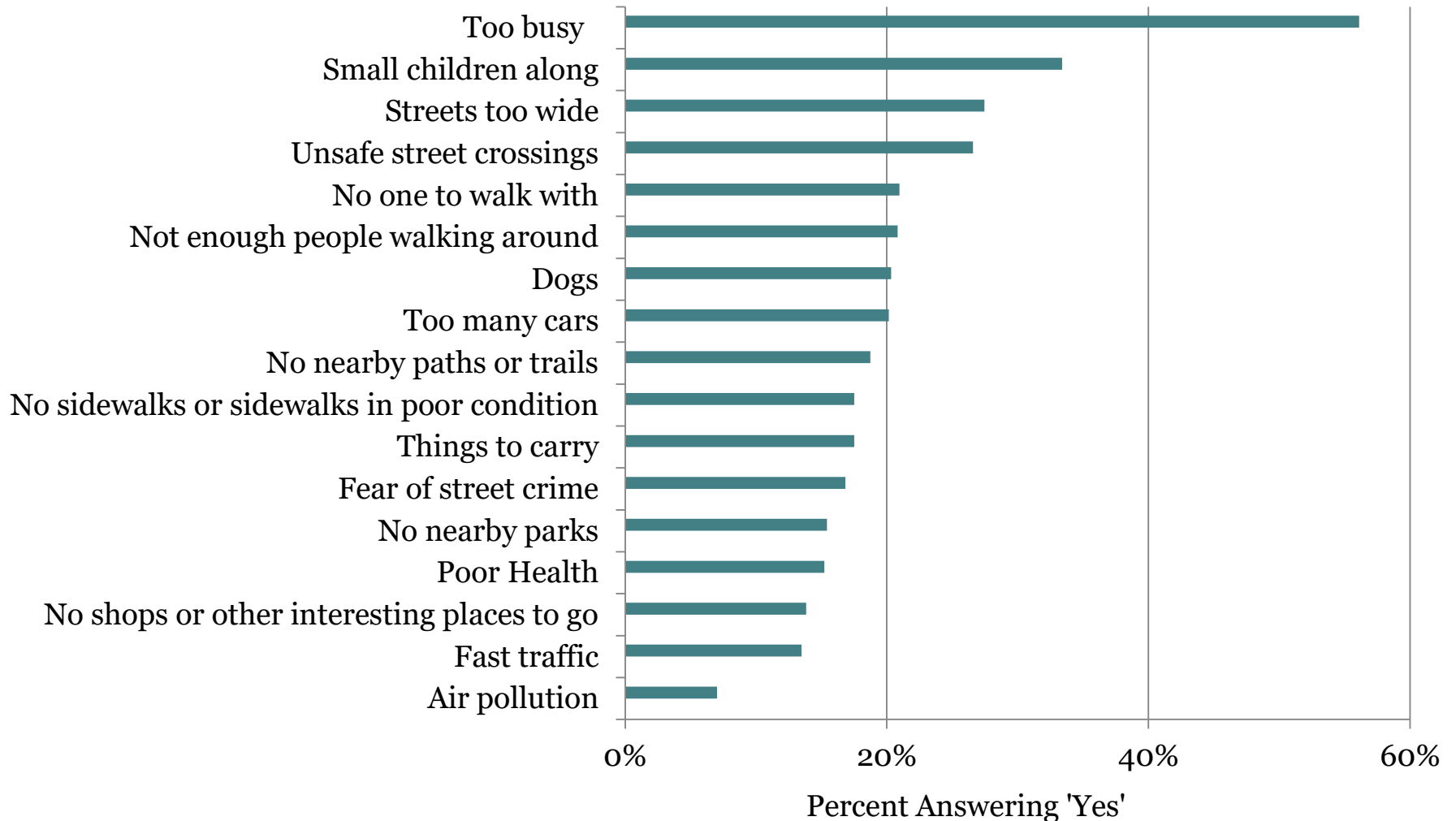


Challenge: Determining Sample Size to compare States

Estimate of Walk Trips by State:
Percent Std Deviation



Understanding the barriers:



Transportation planning and policy can:

- Remove barriers to walking and biking through healthy community design (livability)
- Promote safe and convenient opportunities for physical activity through complete streets and active transportation infrastructure
- Reduce the carbon footprint of daily travel while also improving air quality
- Ensure that all people have access to safe, healthy, convenient, and affordable transportation

A vision:

Can we assemble and sustain a

Volunteer Mobility Measurement Population

Using sensing data, social media, and panel
upkeep

To obtain information on activity?

Nancy McGuckin
www.travelbehavior.us

Thank you!