

### **INTRODUCTION**

The NHTS series is a rich source of data regarding travel trends. Like most travel surveys, the NHTS documents the who, what, where, when and how of daily household and personal travel for an assigned 24-hour period.

The NHTS documents both actual travel that took place on the assigned travel day as well as details about typical travel "last week" or "in the past month."

The information provided in response to these questions about "typical" travel provide insights into how the actual commute trip varies in terms of mode or travel time. In addition, questions about non-auto modes can help monitor emerging trends and patterns for travel by walk, bike, transit and rideshare.

# **RESEARCH QUESTIONS**

In this poster, three questions are considered:

- 1. How does the "typical" commute last week compare to the "actual" commute reported on the travel day in terms of travel mode and travel time?
- 2. How well do reports of "usually" working from home match actual working from home on the travel day? And how does weekday travel vary between those who usually work from home and those who do not?
- What can be gleaned from the questions about walking and biking in the past week and transit and rideshare usage in the past month?

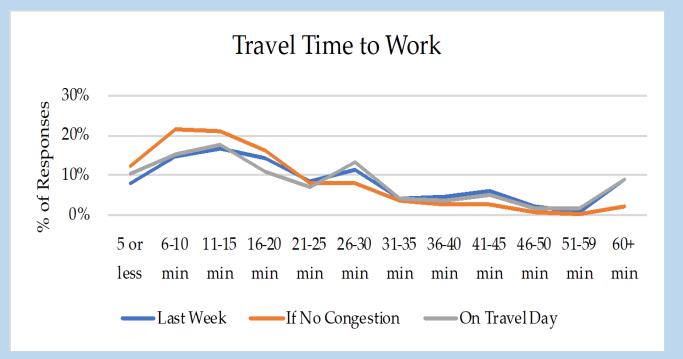
# Trends in typical vs. actual travel: An analysis of NHTS data over time.

Stacey Bricka<sup>1</sup>, Tim Reuscher<sup>2</sup>, Traci Bricka<sup>3</sup>

# **Actual vs. Typical Commute**

Commute Mode	Match Rate (Typical to Actual)		
	2001	2009	2017
Auto	98%	97%	98%
Transit	92%	90%	91%
Bike	76%	88%	84%
Walk	65%	70%	63%
Other	35%	40%	51%
Overall	97%	96%	96%

Travel Time	Match Rate (	Match Rate (Typical to Actual)		
	2001	2009	2017	
<15 min	75%	73%	70%	
15-29 min	71%	71%	67%	
30-44 min	57%	56%	52%	
45-59 min	45%	49%	44%	
60+ min	55%	58%	55%	
Overall	67%	67%	62%	



# **Typically Work from Home**

Usually work from home

• 12% of workers are homebased

Home-based workers

- •81% of home-based workers report trips on their travel day
- Average daily weekday person trip rates:
- 3.87 for home-based workers
- •3.90 for non-home-based workers

Trip Destination Purpose	Reported Activities (Mon-Fri)		
Trip Destination i ai pose	Home-based	Commuter	
Work from home (paid)	7.7%	0.5%	
Work	11.6%	25.9%	
Work-related meeting / trip	4.0%	2.1%	
Home (at home activities)	25.2%	33.2%	
Serve Passenger	10.0%	7.4%	
Shop/ Pers Bus/ Errands	26.4%	18.9%	
Social/ Rec	8.9%	7.2%	
Other	6.3%	4.7%	
All Trips	100.0%	100.0%	

# **Typical Travel in General**

#### Walk

Urban Dwellers, ages 18-34, Students, in excellent health

Higher Levels of **Typical Travel** 

#### Bike

Urban Dwellers, ages 0-13, in excellent health

#### **Transit**

Urban Dwellers, ages 14-17, in excellent health

#### Rideshare

Urban Dwellers, ages 18-34, workers, in excellent health

**MacroSys** 

<sup>1</sup> Senior Research Scientist, MacroSys LLC, stacey.bricka@macrosyrt.com, corresponding author <sup>2</sup> Senior Analyst, MacroSys LLC, reuschertr@ornl.gov <sup>3</sup> Graduate Teaching Assistant, Experimental Psychology, The University of Texas at Arlington, traci.bricka@mavs.uta.edu



## **RESULTS**

- The typical vs. actual commute mode was fairly consistent but travel times less so.
- Walk commutes showed the greatest variation while auto showed the least.
- The shortest commutes (>30 min) matched 70% of the time while longer commutes matched about 50% of the time.
- 2. Those who usually telework are more likely to work from home on the travel day, although this group reports similar levels of travel as the more traditional workers.
- 3. The use of other typical modes is reported more by urban dwellers, those not retired, and those reporting to have excellent or very good health.

### **FUTURE RESEARCH**

Additional research is needed to better understand where and how typical travel differs from actual travel. One approach might be to set a flag in the survey program to activate when the actual reported commute mode differs from the typical mode in order to ask why.

This research suggests that the level of trip-making among teleworkers is the same as that of workers who commute to a work location, only comprised of different activities. More study is needed to better understand this phenomenon.

Additional research is needed to better word questions about typical travel in order to strengthen the ability to compare typical vs. actual for these less frequent modes.