

Puget Sound Regional Household Travel Survey Program

Coordinated Mobility & Accessibility Committee

18 September 2024



Puget Sound Regional Council



We are leaders in the region to realize equity for all. Diversity, racial equity and inclusion are integrated into how we carry out all our work.

psrc.org/equity

Overview



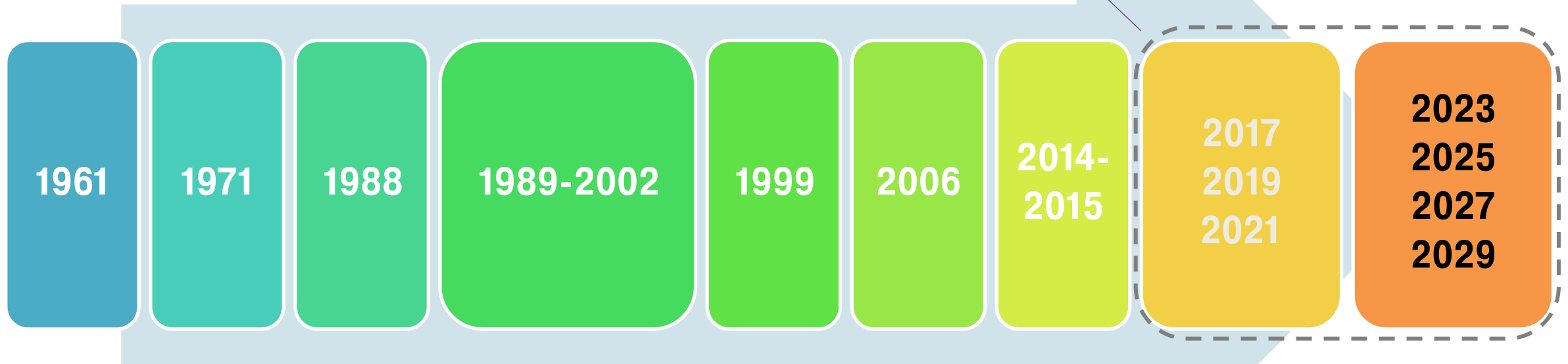
- Intro to the Household Travel Survey (HTS) Program
- Priority populations reported
- 2023 survey results: trip shares and mode share
- 2023 presentation schedule & 2025 survey



Puget Sound Regional Travel Studies

More frequent snapshots

allows for more timely analysis & monitoring of trends. Data can be combined across years.



Webpage: <https://www.psrc.org/household-travel-survey-program>



Multi-year HTS Program

Program goal: The surveys seek to capture quality, regionally representative data for activity and travel behaviors of residents on a typical weekday.

Motivations

- Frequent snapshots, ability to combine years
- “Smoother” budgets & labor roles
- More flexibility & opportunities for additions



Uses of HTS data



Analysis

- Most recent regional travel behaviors & patterns
- Trends: comparisons with previous surveys

Model development

- SoundCast
 - Activity-based travel model system
 - Estimate activity/travel choice models
- UrbanSim
 - Parcel-based land use model system
 - Estimate residential location choice model



Information in the HTS data

Who is traveling?

Where are they going?

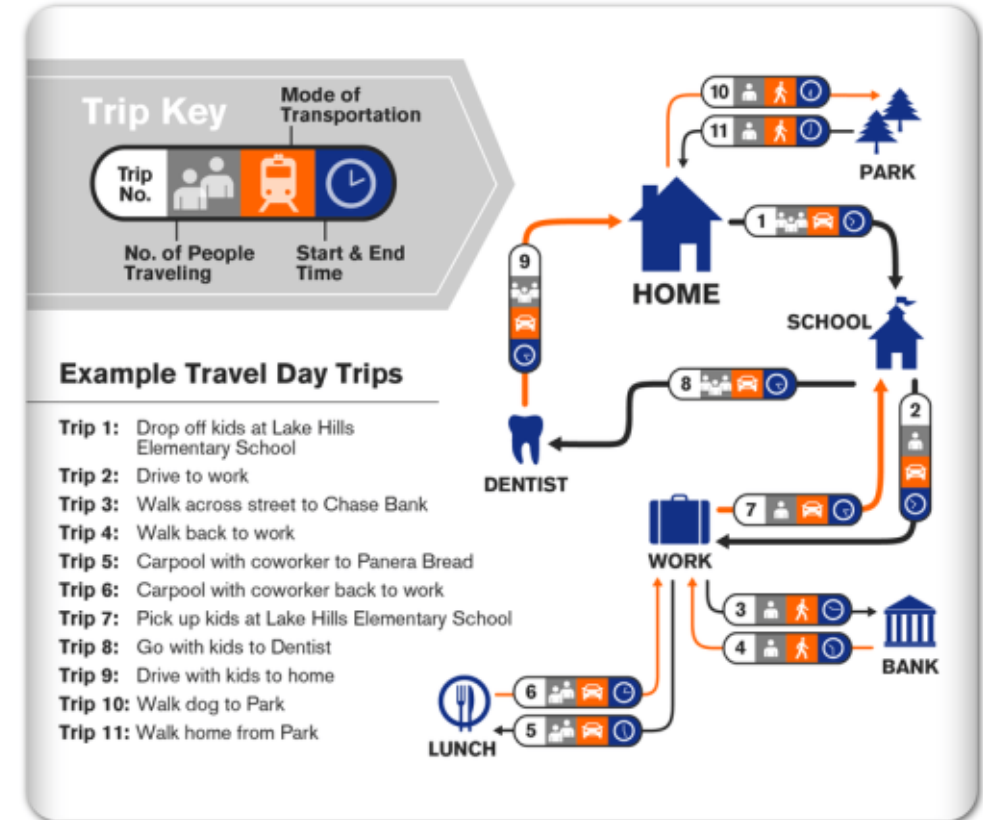
When do they travel?

Why are they going?

How do they get there?

Planning/policy questions

- How much do people walk?
- How does transit use vary by race?
- What kinds of households get home deliveries?
- How often do workers typically telecommute?
- What households are displaced from their homes?



The 2023 HTS data – The connections are the magic

Directly observed demographics:

- Age
- Disability (new)
- Education
- Gender
- Income
- Race & ethnicity
- Sexuality (new)

Examples of planning topics for analysis:

- Active travel
- Electric vehicle charging (new)
- Home deliveries
- Public transit use
- Residential displacement
- Shopping & travel purposes
- Working at home
- Vehicle miles travel & greenhouse gas emissions



2017, 2019, & 2023 samples

Representative samples

2017 sample

- 3,275 households
- Redmond & Seattle add-ons

2019 sample

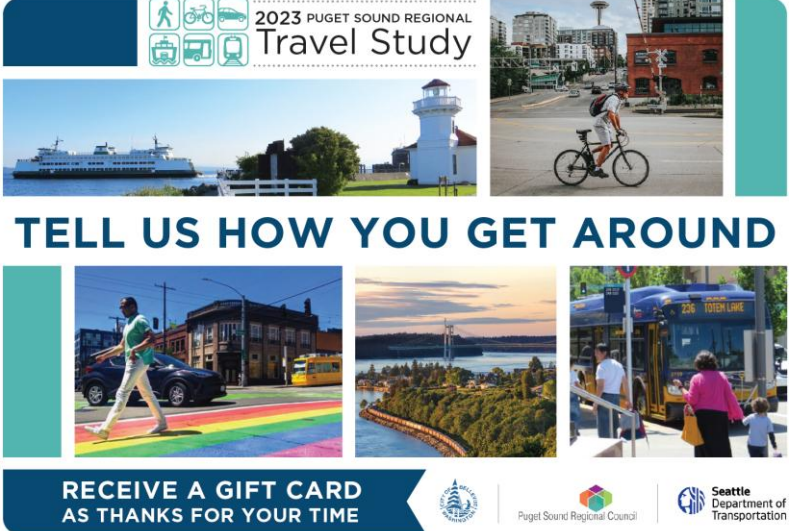
- 3,044 households
- Seattle add-on

2023 sample

- 3,661 households
- Bellevue & Seattle add-ons

Sampling & stratifications

- Random address sample from USPS
- Targeted areas for oversampling
 - Low-income, no vehicles, race, renters, young adults, Regional Growth Centers
 - Lower expected response rates including rural areas



2023 PUGET SOUND REGIONAL
Travel Study

TELL US HOW YOU GET AROUND

RECEIVE A GIFT CARD
AS THANKS FOR YOUR TIME

Puget Sound Regional Council | Seattle Department of Transportation

The banner features a collage of images illustrating various modes of transportation: a ferry, a lighthouse, a cyclist, a pedestrian on a rainbow crosswalk, a scenic view of a waterfront, and a bus stop. The text is set against a dark blue background with white and light blue accents.



Considerations when Interpreting HTS

- **Weighted to match Census American Community Survey totals:**

Geography, household size, gender, race, age, income, education, worker status, vehicle ownership

- **Specific to weekday travel**
- **Adult travel focus**
 - Only adults answer the survey
 - Joint travel is included, not travel by children alone



Priority Populations in the 2023 Survey

Available:

- Race/ethnicity
- Age 65+
- Disabilities
- Low income
- No vehicles

Partial data or inadequate sample:

- Age < 18
- Limited English



Census ACS Disability Questions

18 a. Is this person deaf or does he/she have serious difficulty hearing?

- Yes
- No

b. Is this person blind or does he/she have serious difficulty seeing even when wearing glasses?

- Yes
- No

19 a. Because of a physical, mental, or emotional condition, does this person have serious difficulty concentrating, remembering, or making decisions?

- Yes
- No

b. Does this person have serious difficulty walking or climbing stairs?

- Yes
- No

c. Does this person have difficulty dressing or bathing?

- Yes
- No

20 Because of a physical, mental, or emotional condition, does this person have difficulty doing errands alone such as visiting a doctor's office or shopping?

- Yes
- No

1yr 2022 estimate: 15% "Yes"



HTS Disability question

Do you have a disability or illness that affects your ability to travel?

Selections	Respondents	Weighted Population	Weighted Share
<input type="radio"/> Yes	472	245,500	7%
<input type="radio"/> No	5,429	2,911,000	88%
<input type="radio"/> Prefer not to answer	278	151,000	5%



Results from the 2023 Survey

- 1) Relative amount of travel: **trip shares**
- 2) Mode of travel: **mode splits**



Trip Shares

	Share of regional
	Adults (reference)
65 years or older	19%
With disability	7%
Under \$25K income	7%
No vehicle	6%

We can compare these groups' travel behavior to the region by comparing their share of the population to their share of trips.

The group share of the adult population is our reference value.



Trip Shares

	Share of regional	
	Adults (reference)	Trips
65 years or older	19%	19%
With disability	6%	7%
Under \$25K income	6%	7%
No vehicle	6%	4%

In this case, three of the groups make trips just as frequently as everyone else.

The difference is those without a vehicle. They travel two-thirds as often as the general public.



Trip Shares - Grocery

	Share of regional		
	Trips	Adults (reference)	Grocery trips
65 years or older	19%	19%	25%
With disability	7%	7%	11%
Under \$25K income	7%	7%	13%
No vehicle	4%	6%	7%

Older adults, those with disabilities, and low-income families shop for groceries during the week more frequently than the general public.

Grocery trips for households without a vehicle were no different than their reference share (accounting for the error margin).



Trip Shares - Medical

	Share of regional			
	Trips	Grocery trips	Adults (reference)	Medical trips
65 years or older	18%	25%	19%	31%
With disability	6%	11%	7%	13%
Under \$25K Income	5%	13%	7%	6%
No vehicle	4%	7%	6%	2%

Similarly, these two groups travel much more often than the average resident for medical appointments during the week.

Households without vehicles make a third as many weekday medical trips as the regional average.



Workforce

	share of regional		Within-group employment rate
	Adults	Workers	
65 years or older	19%	↔ 7%	28%
With disability	7%	↔ 4%	35%
Under \$25K income	7%	↔ 7%	49%
No vehicle	6%	↔ 4%	45%

For work trips, the adult population isn't as useful for reference as the workforce.

A significant proportion of these priority populations are not currently in the workforce. (The age 65+ category, for example, includes many retirees.)

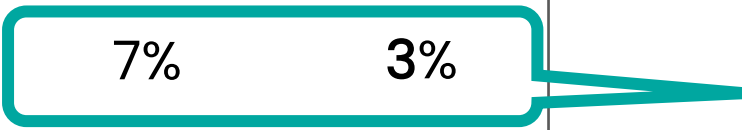


Trip Shares – Work

	share of regional		
	Adults	Workers (reference)	Work trips
65 years or older	19%	7%	8%
With disability	7%	4%	3%
Under \$25K income	7%	7%	3%
No vehicle	6%	4%	3%

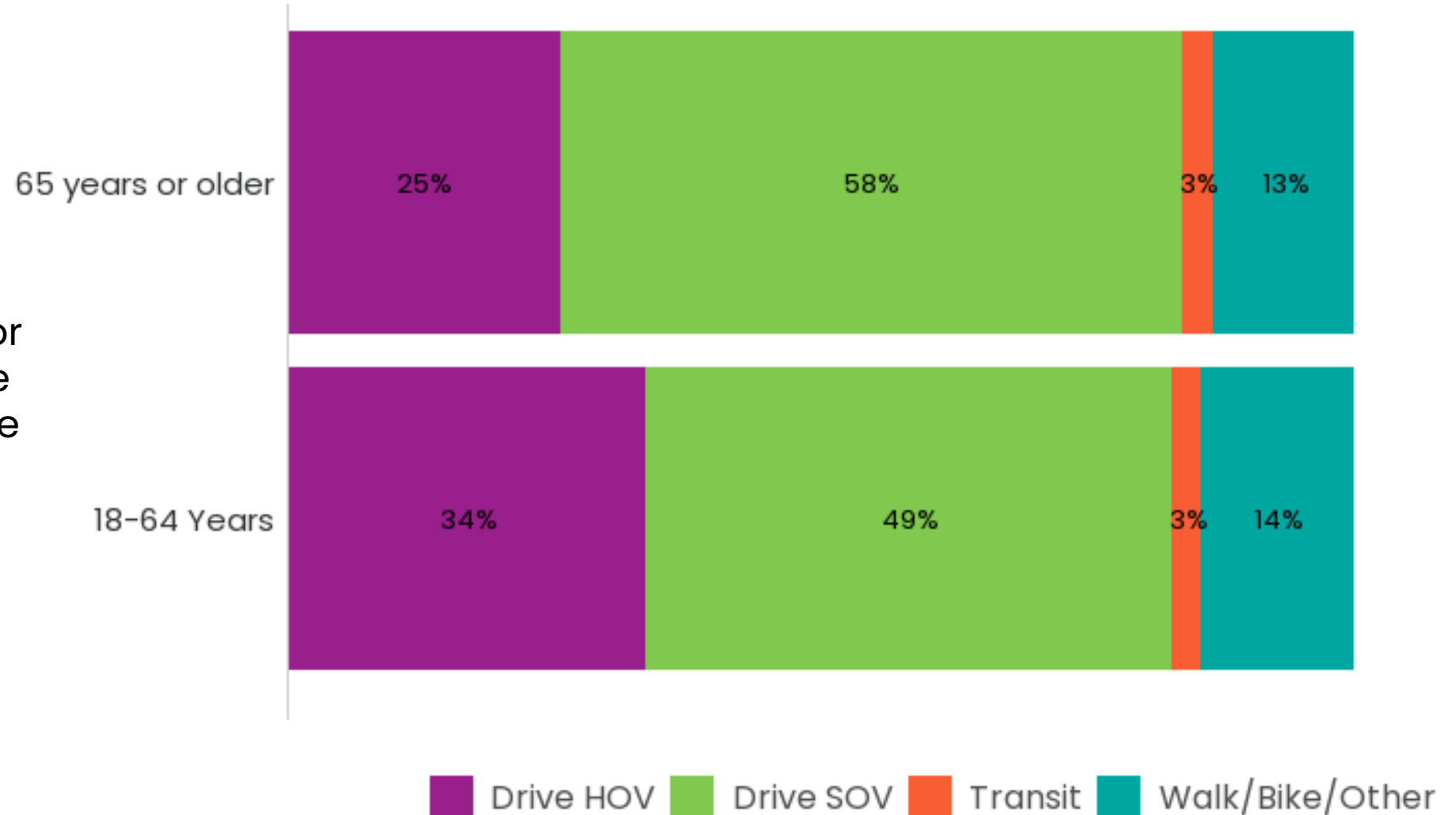
With this comparison, work trip rates make more sense.

The only significant difference is for low-income workers, who commute less than the average worker.



Travel Mode - Age

There are only minor differences in mode choice between age groups.



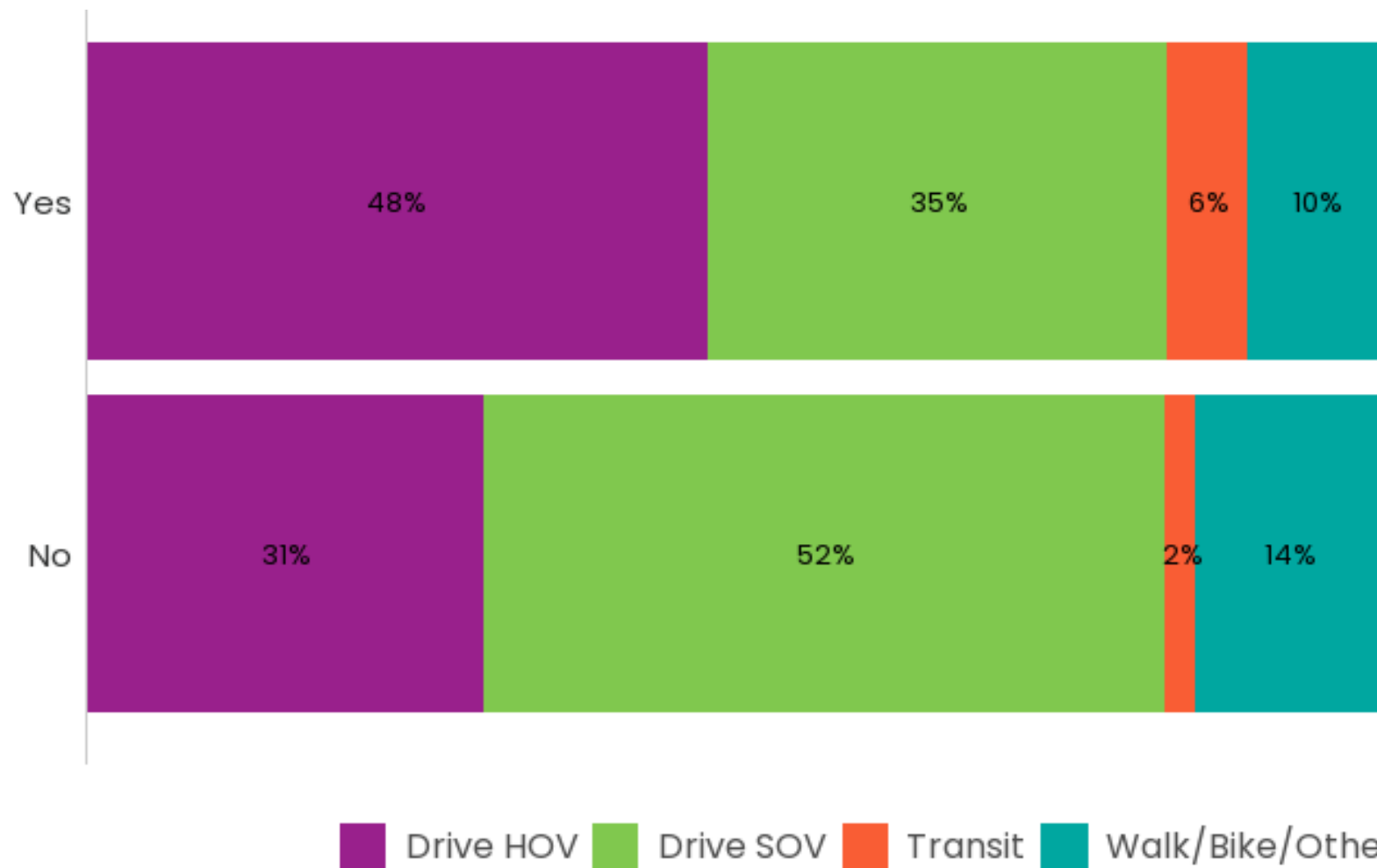
Drive HOV Drive SOV Transit Walk/Bike/Other



Travel Mode - Disability Status

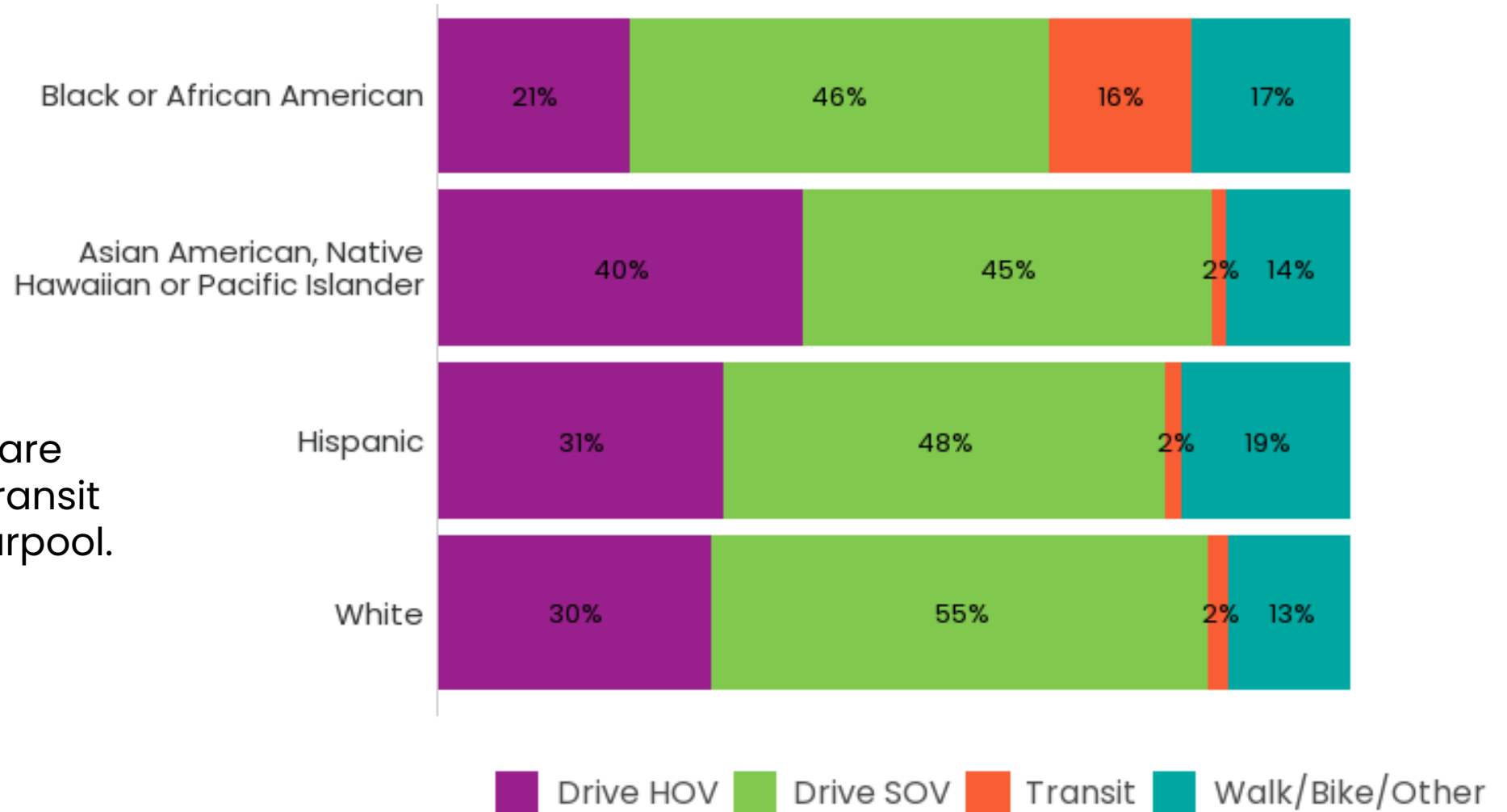
A similar proportion of trips between groups involve driving, but those with disabilities are more likely to travel with someone else.

Transit use is triple that of the rest of the population.



Travel Mode – Race & Ethnicity

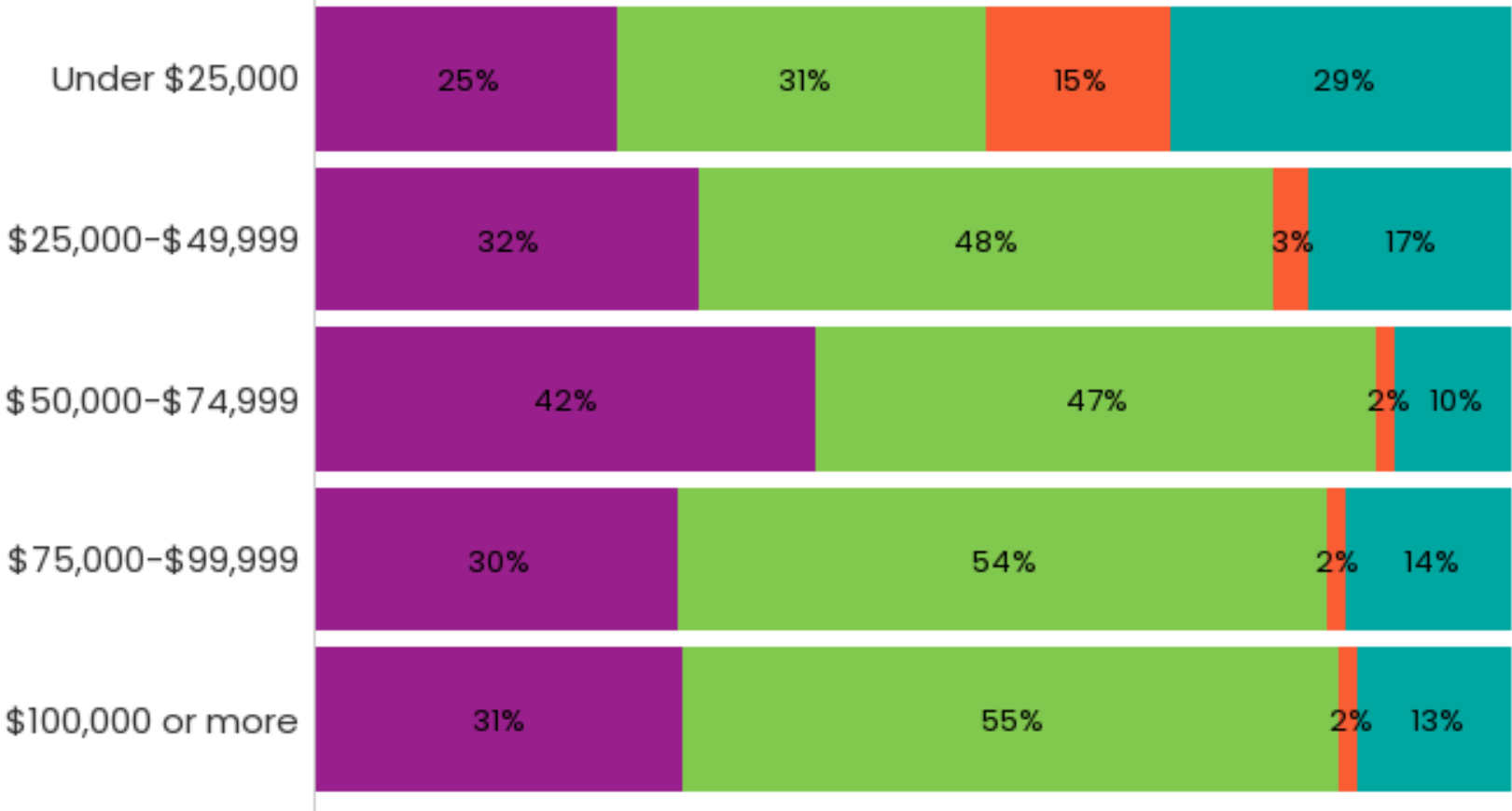
Black respondents are more likely to use transit and less likely to carpool.



Travel Mode - Income

The more notable differences from regional mode split are in households making less than \$25K annually.

These households drive alone less and use transit seven times more than those making over \$50K.



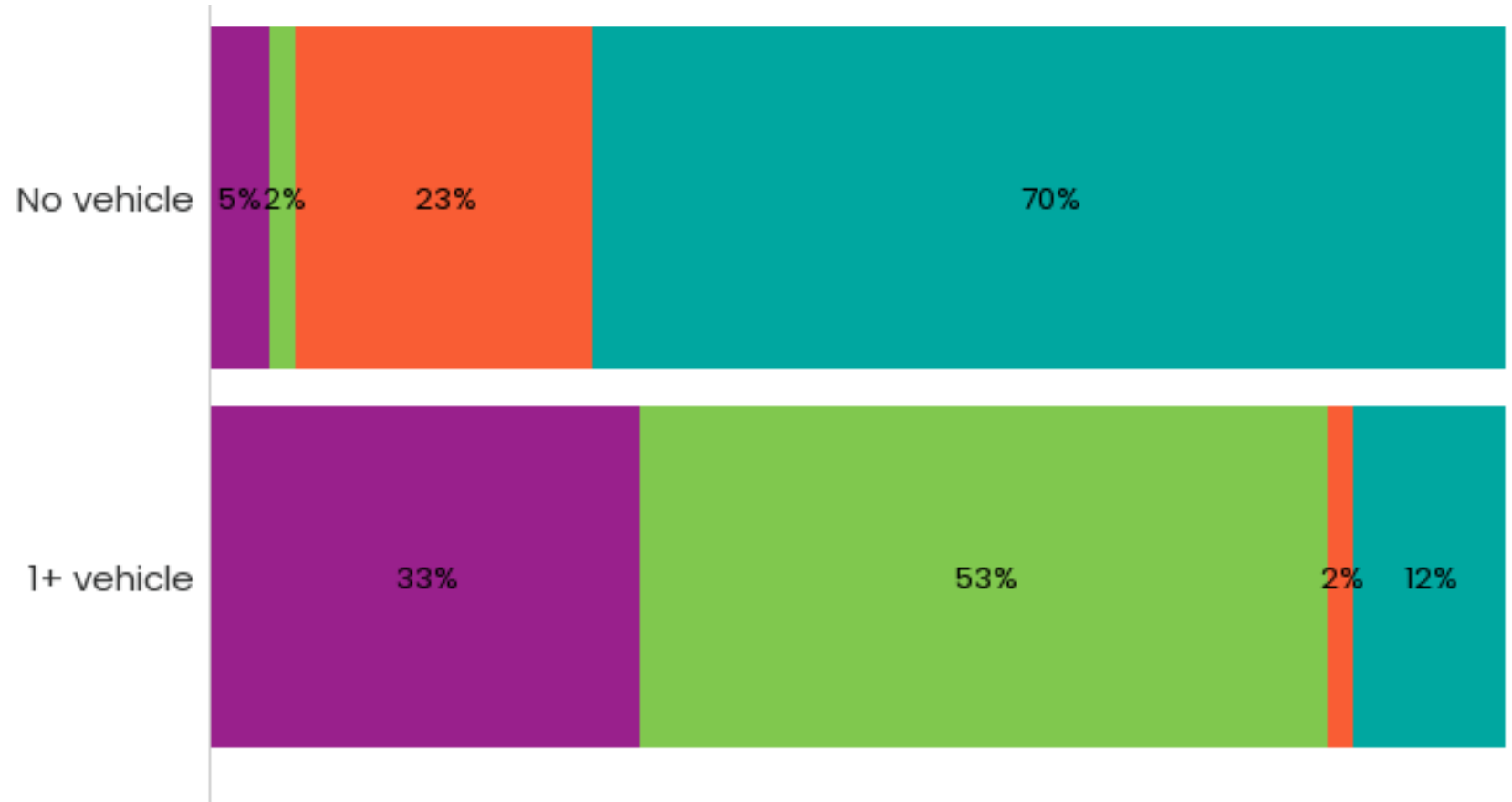
■ Drive HOV
 ■ Drive SOV
 ■ Transit
 ■ Walk/Bike/Other



Travel Mode - Vehicle Ownership

Those who own a vehicle are much more likely to drive.

The choice of where to live (including walking & transit access) and whether to own a vehicle are often intertwined.



Drive HOV Drive SOV Transit Walk/Bike/Other



2023 HTS presentation schedule

Group	Date	Time	Topic
Transportation Demand Management (TDM)	8/27 Tue	10am- 12pm	Workplaces, commutes, telework
Bicycle Pedestrian Advisory Committee (BPAC)	9/10 Tue	10am- 12pm	Walk, bike, roll
Coordinated Mobility & Accessibility Committee (CMAC)	9/18 Wed	9:30- 11:30am	People with disabilities, older adults, youth, people with lower income, people with limited English proficiency
Transit-Oriented Development (TOD)	9/20 Fri	10am- 12pm	Transit & other modes, Regional Growth Centers (RGC) & High-Capacity Transit (HCT) communities
Freight Advisory Committee (FAC)	10/9 Wed	9:30- 11am	Deliveries & other travels induced by residents
Transit Operator Committees (TOC)	10/23 Wed	10am- 12pm	Focus on transit behaviors
Regional Staff Committee (RSC)	11/21 Thu	9:30- 11:30am	Highlights from all topics



2025 HTS Timeline

2024	October	Start 2025 HTS project with consultants
2025	February – June	Data collection
	July	Data cleaning, processing, weighting begins
2026	March	Final data delivery & publication





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Thank You!



Puget Sound Regional Council

Priority Populations are Interrelated

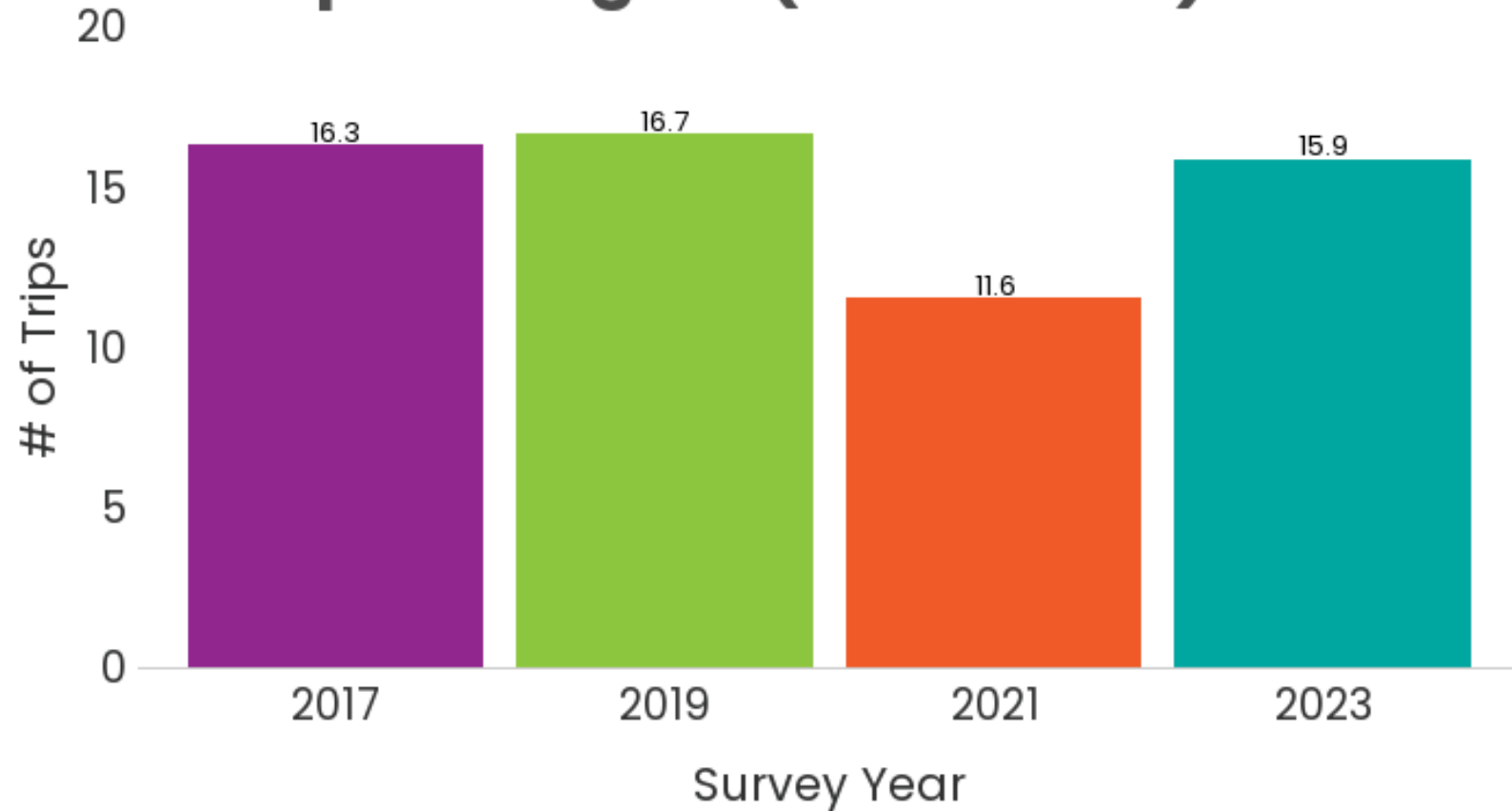
Disability Status	Without vehicle	Income < \$25K
With disability	20%	30%
No disability	5%	5%



Regional Trip Count Trend

- Number of trips made on an average weekday in 2023 is nearly back to pre-pandemic amount

Total Trips in Region (in millions)

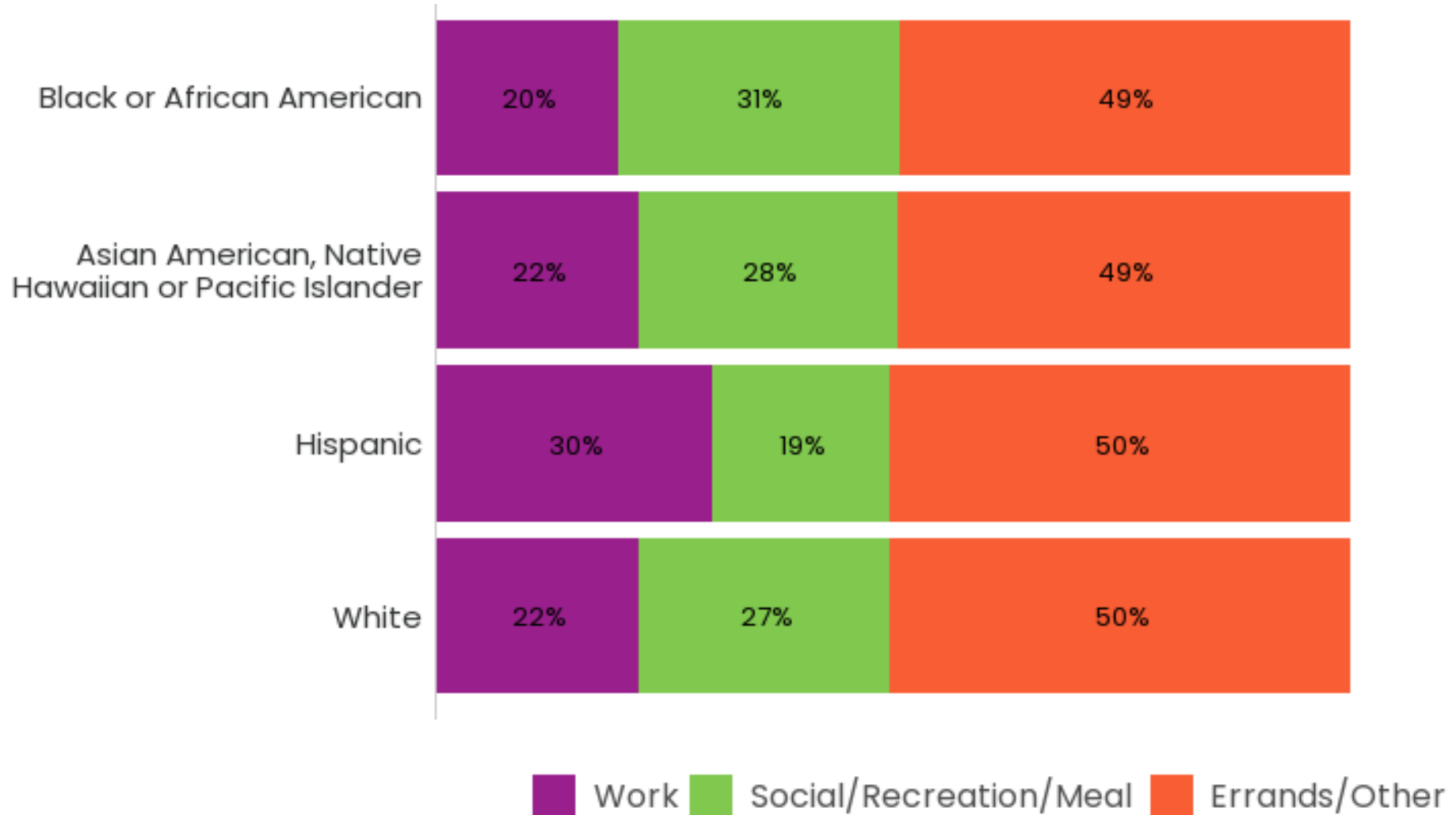


Trip Purpose by Race - 2023

Hispanic respondents, who reported the most travel overall, also reported substantially more work trips.

Black respondents reported the fewest trips (both work trips, and trips overall).

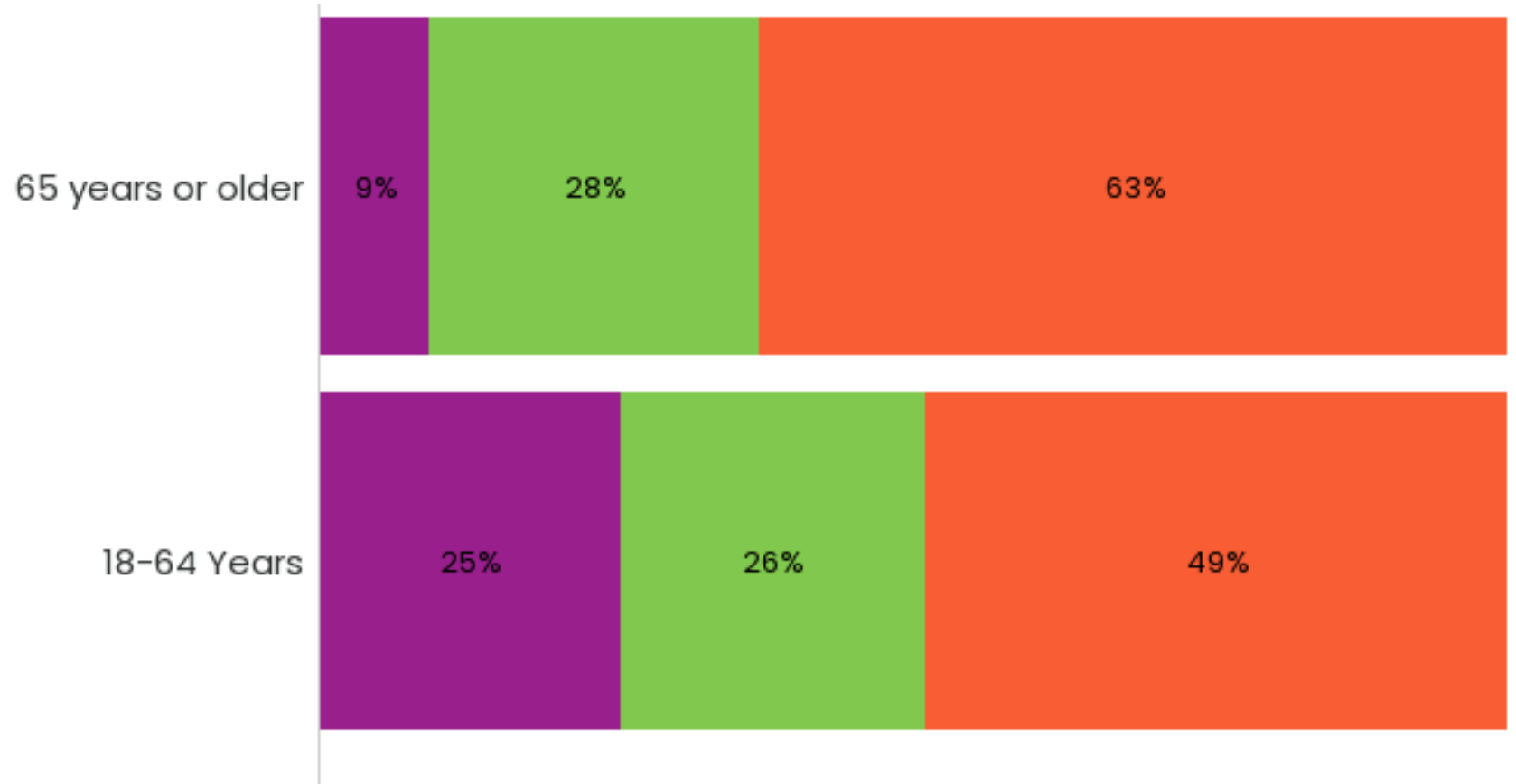
Asian and Non-Hispanic Whites travel patterns are nearly identical and fall in-between the other two.



2023 Trip Purpose by Age

The largest category for either age group is errands (e.g. medical appointments, shopping).

For retirees, work trips are largely replaced by additional errands.



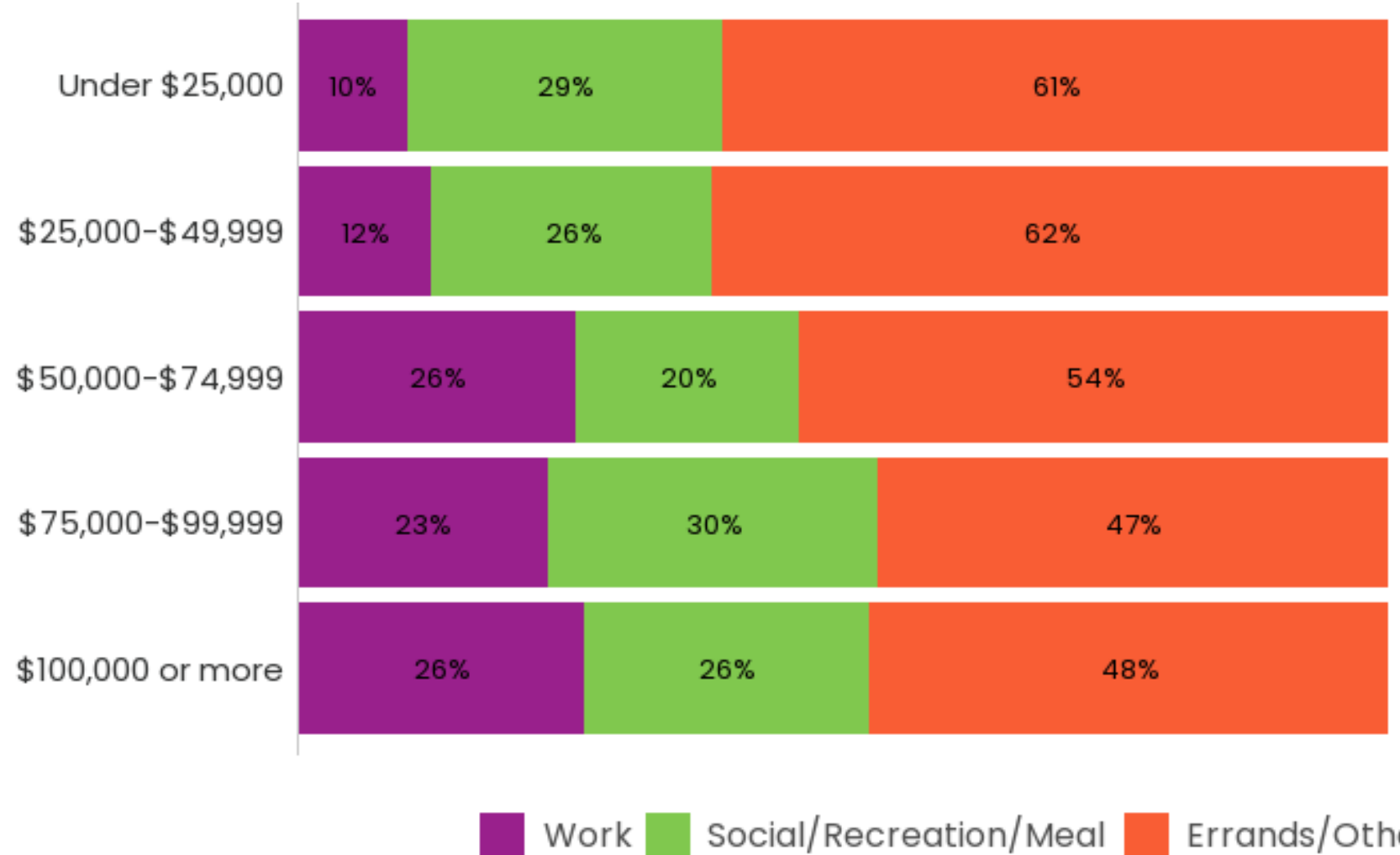
Work Social/Recreation/Meal Errands/Other



2023 Trip Purpose by Income

Households with lower income also travel less for work, and more on errands.

The share of social & recreational trips is similar across income groups.



2023 Trip Purpose by Disability Status

For those without disabilities, a greater share of travel is work-related.

A greater share of trips for those with disabilities are errands. Keep in mind they average substantially fewer trips per capita.

