

# Puget Sound Regional Household Travel Survey Program

Freight Advisory Committee  
October 9, 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](https://psrc.org/equity)



# Overview



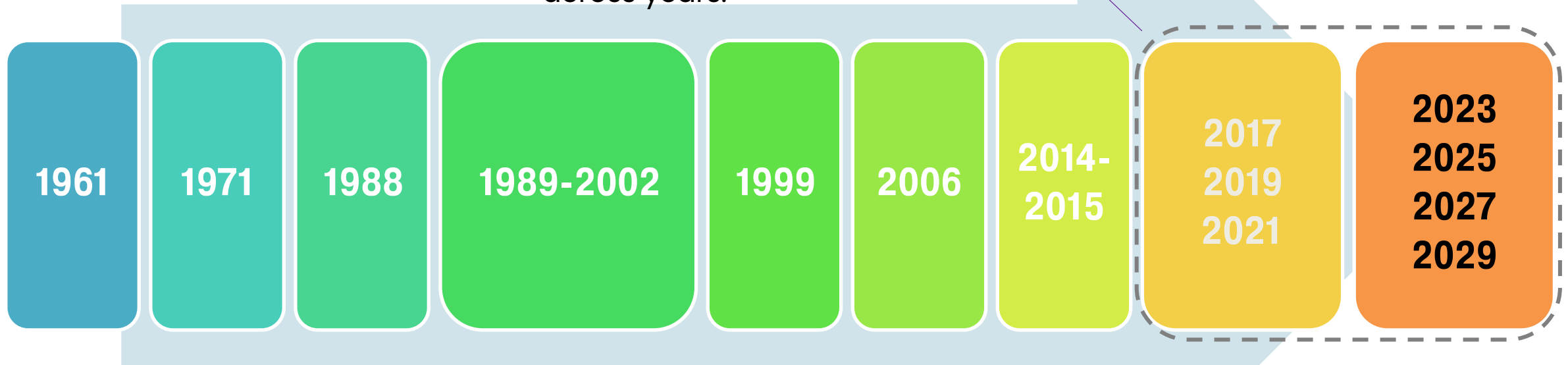
- **Intro to the Household Travel Survey (HTS) Program**
- **General Travel Trends\***
- **Delivery Trends\***
- **2023 presentation schedule & 2025 survey**

\* Unless otherwise noted, all data reported are from Puget Sound Regional Household Travel Surveys



# 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 multiple years of data
- “Smoother” budgets & labor roles
- More flexibility & opportunities for add-ons



# 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



# Information in the HTS data

**Who** is traveling?

**Where** are they going?

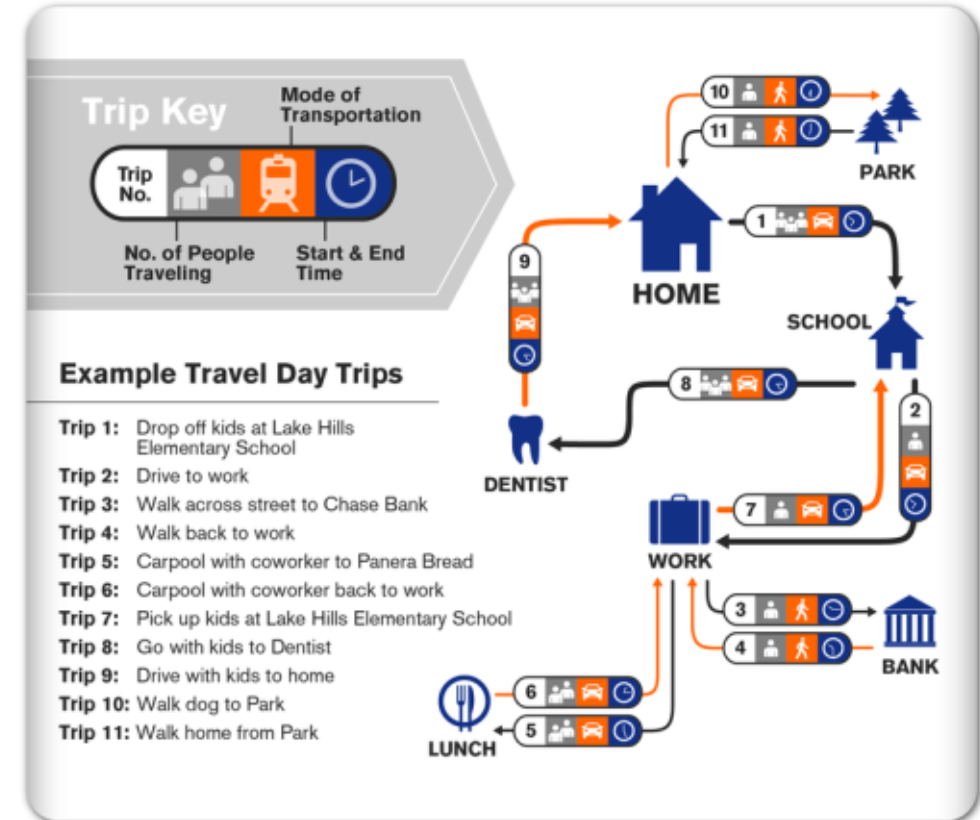
**When** do they travel?

**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?





# 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



# 2017, 2019, & 2023 samples

## Representative samples

### 2017 sample

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

### 2019 sample

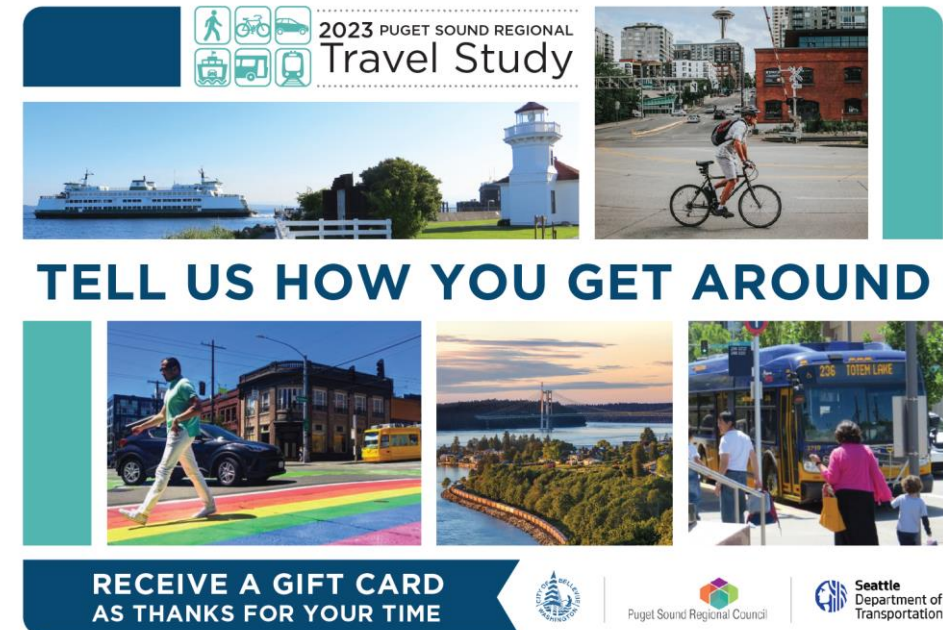
- 3,044 households
- Seattle add-on

### 2023 sample

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

## Sampling & stratifications

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



The banner for the 2023 Puget Sound Regional Travel Study features a top header with icons for walking, cycling, driving, and public transit, alongside the text "2023 PUGET SOUND REGIONAL Travel Study". Below this, there are three main images: a ferry on the water, a cyclist on a city street, and a person walking on a rainbow-painted crosswalk. At the bottom, a dark blue banner reads "RECEIVE A GIFT CARD AS THANKS FOR YOUR TIME". Logos for the Puget Sound Regional Council and the Seattle Department of Transportation are also present.

2023 PUGET SOUND REGIONAL  
Travel Study

**TELL US HOW YOU GET AROUND**

RECEIVE A GIFT CARD  
AS THANKS FOR YOUR TIME

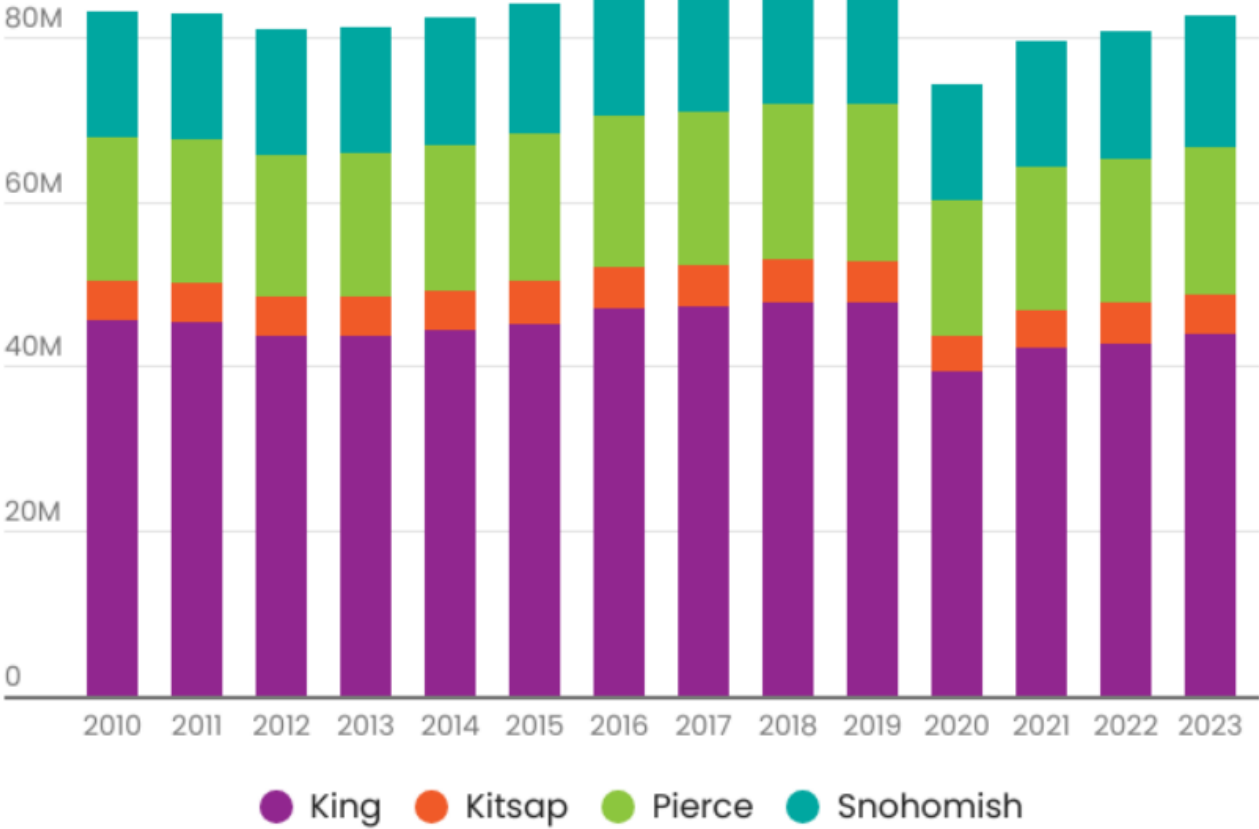
Puget Sound Regional Council  
Seattle Department of Transportation





# Regional daily Vehicle Miles Traveled (VMT)

## Daily Vehicle Miles Traveled, 2010–2023



VMT from trips made by all vehicles, including freight

Regional VMT peaked in 2019 at 88 million miles daily. Then, dropped in 2020, but has been increasing since

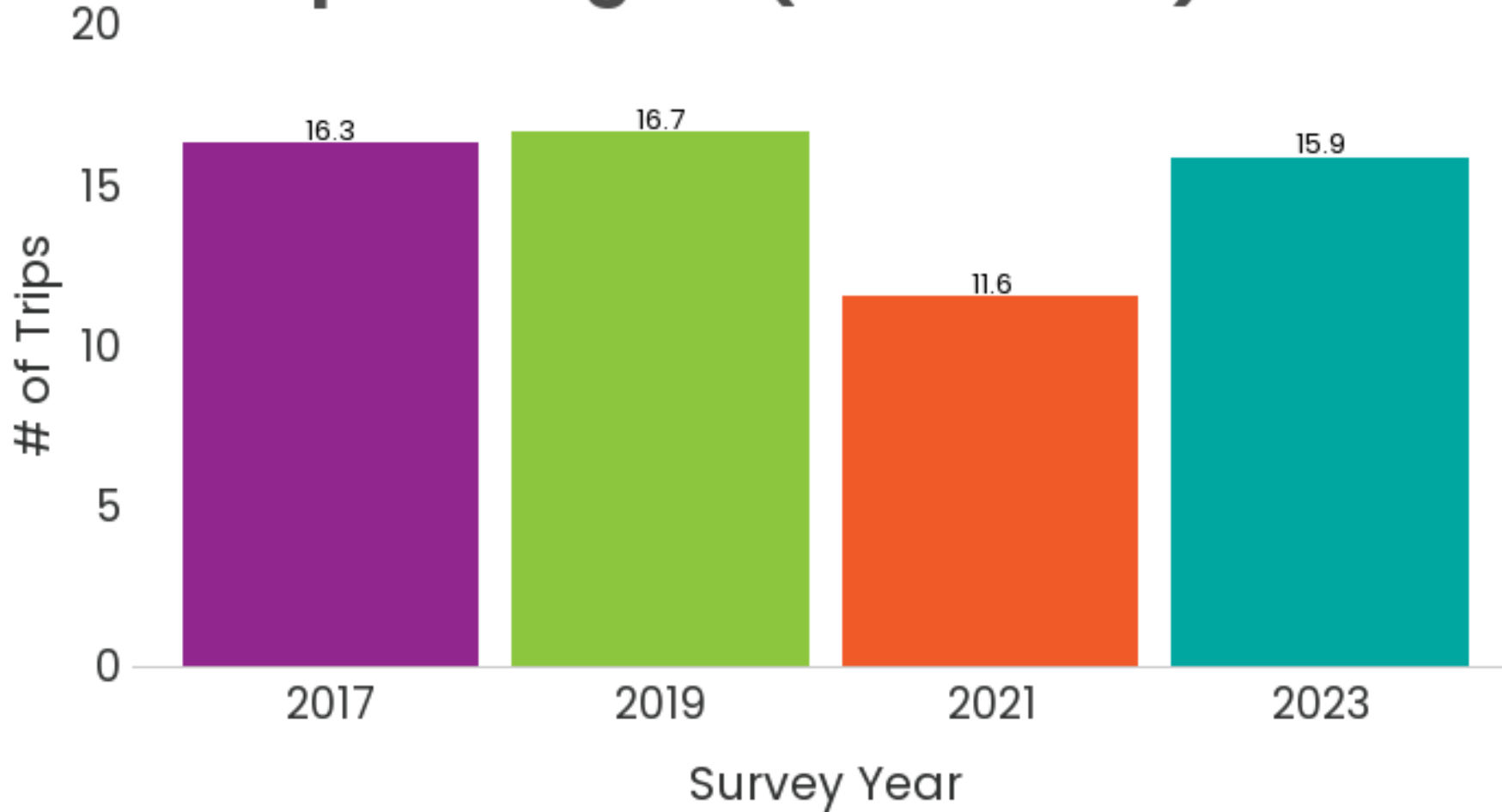
In 2023, 7% of VMT were made by trucks

Source: WSDOT Highway Performance Monitoring System (HPMS)



# Average weekday trips for residents

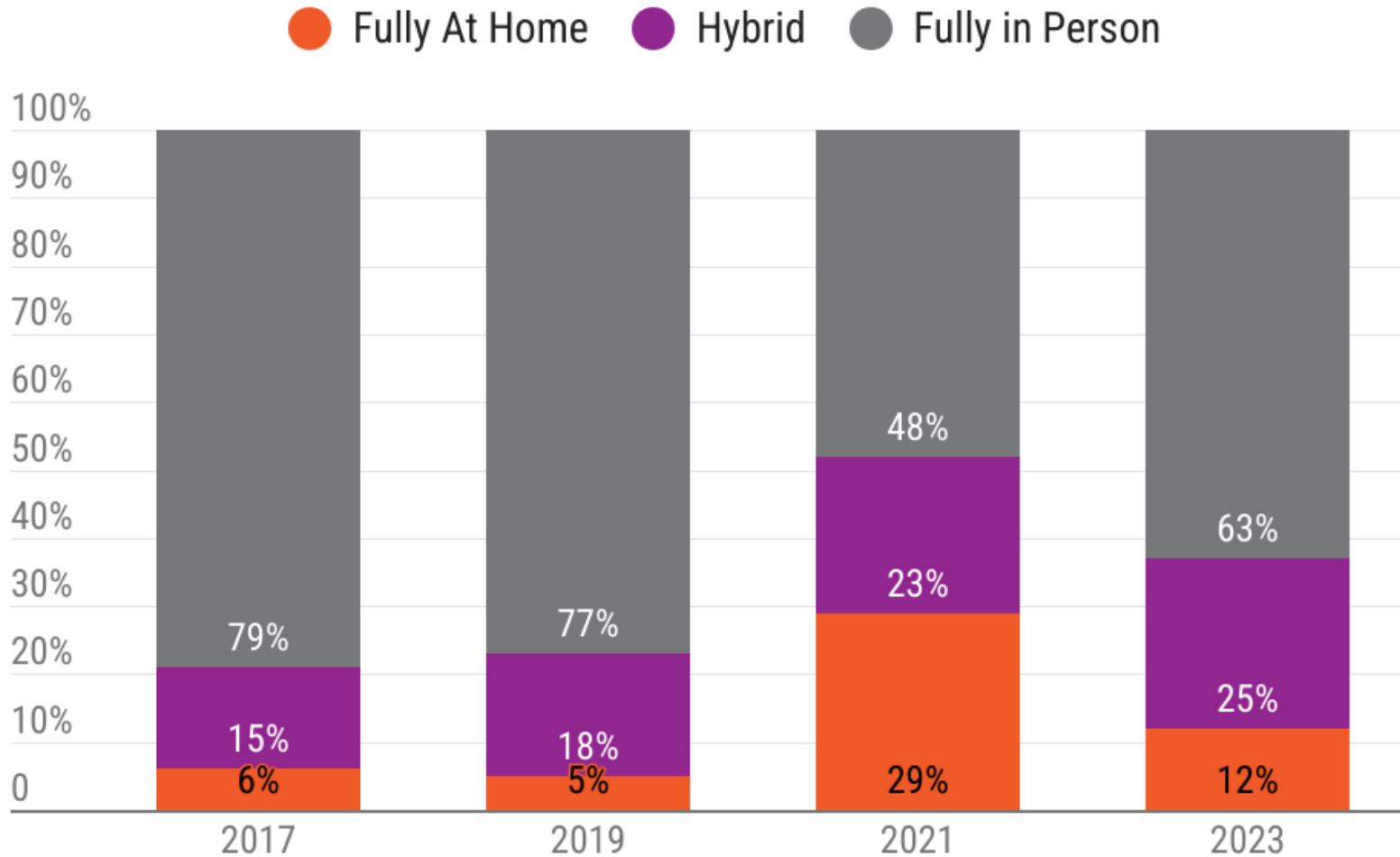
## Total Trips in Region (in millions)



2023 average weekday trips for residents nearly back to pre-pandemic level



# Work location share (% of workers)



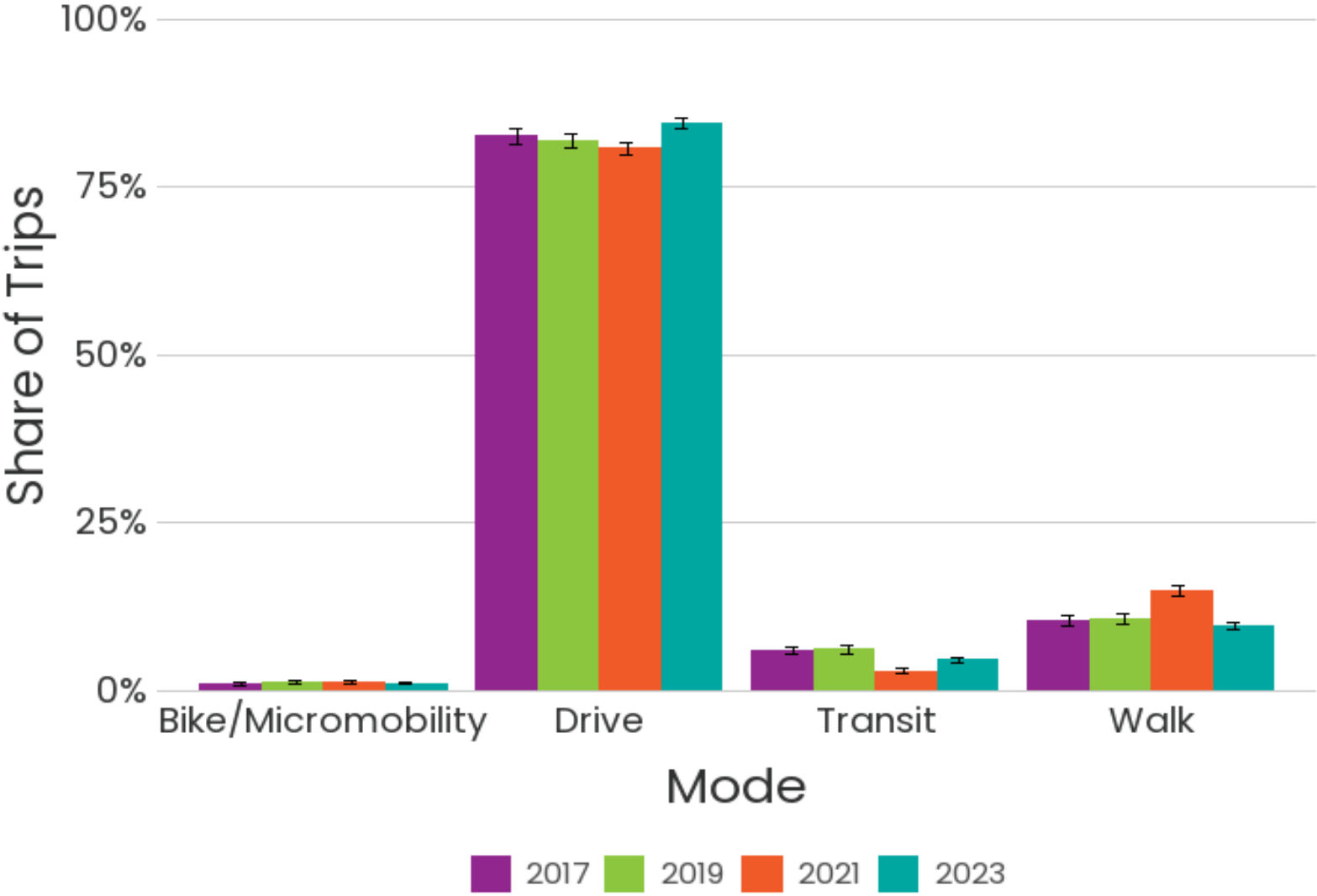
Those who work fully at home peaked in 2021, but 2023 rate remained 2x higher than 2017.

Almost 2/3 of workers always left home for their jobs in 2023.





# Mode shares for all trips by residents



In 2023, walking decreased to pre-pandemic numbers and transit saw a post-pandemic increase.



# 2023 delivery survey question

We want to know how delivery and household services contribute to travel.

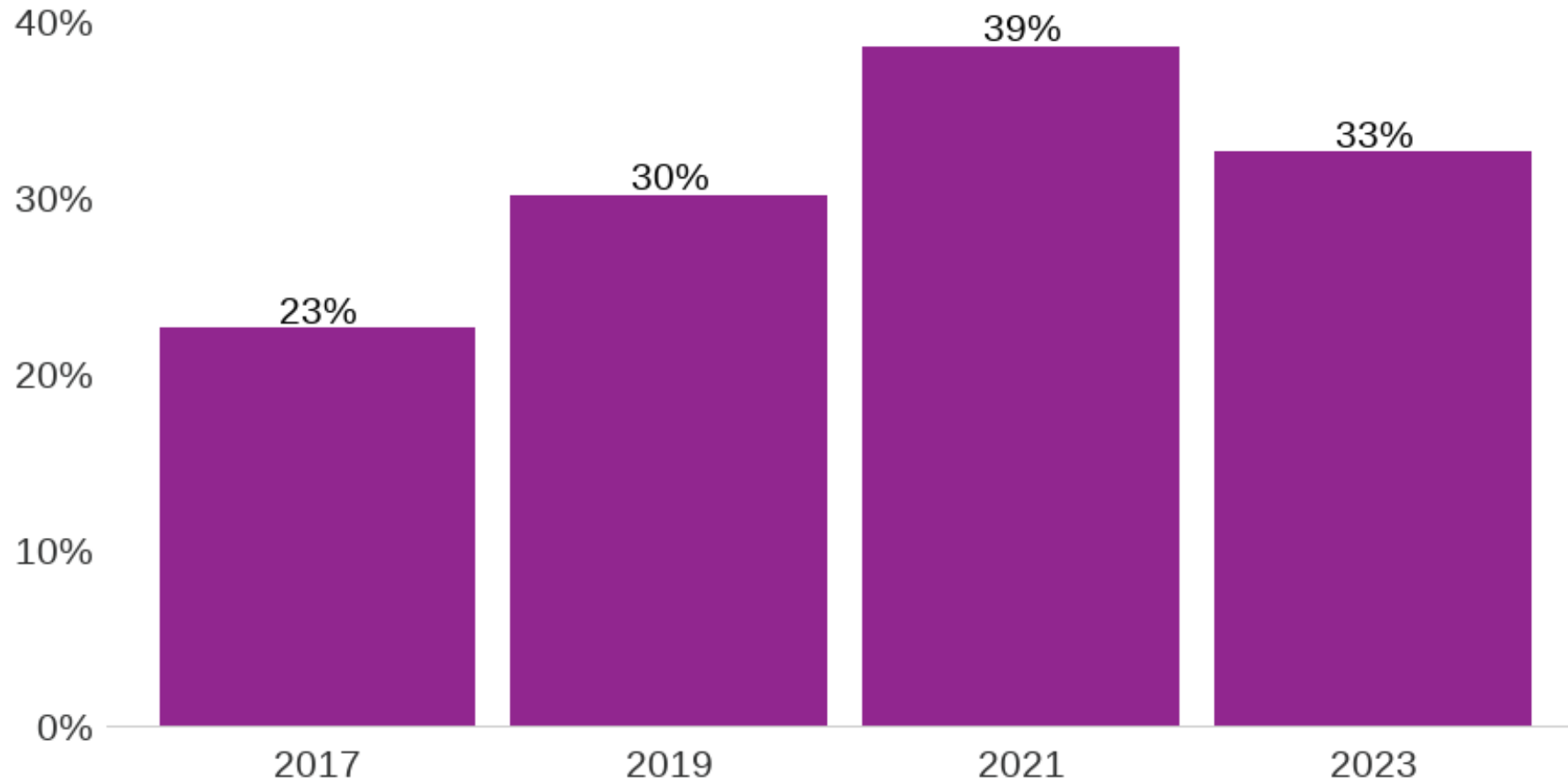
**Today, which of the following occurred?**

Select all that apply.

- Received **packages at home** (e.g., USPS, FedEx, UPS)
- Received personal **packages at work**
- Received **packages at another location** (e.g., Amazon locker, package pick-up point)
- Take-out/prepared food** delivered to home
- Groceries** delivered to home
- Someone came to do work** at home (e.g., babysitter, housecleaning, lawn)
- Other item** delivered to home (e.g., appliance)
- None of the above



# Households receiving a package at home on average weekday (%)



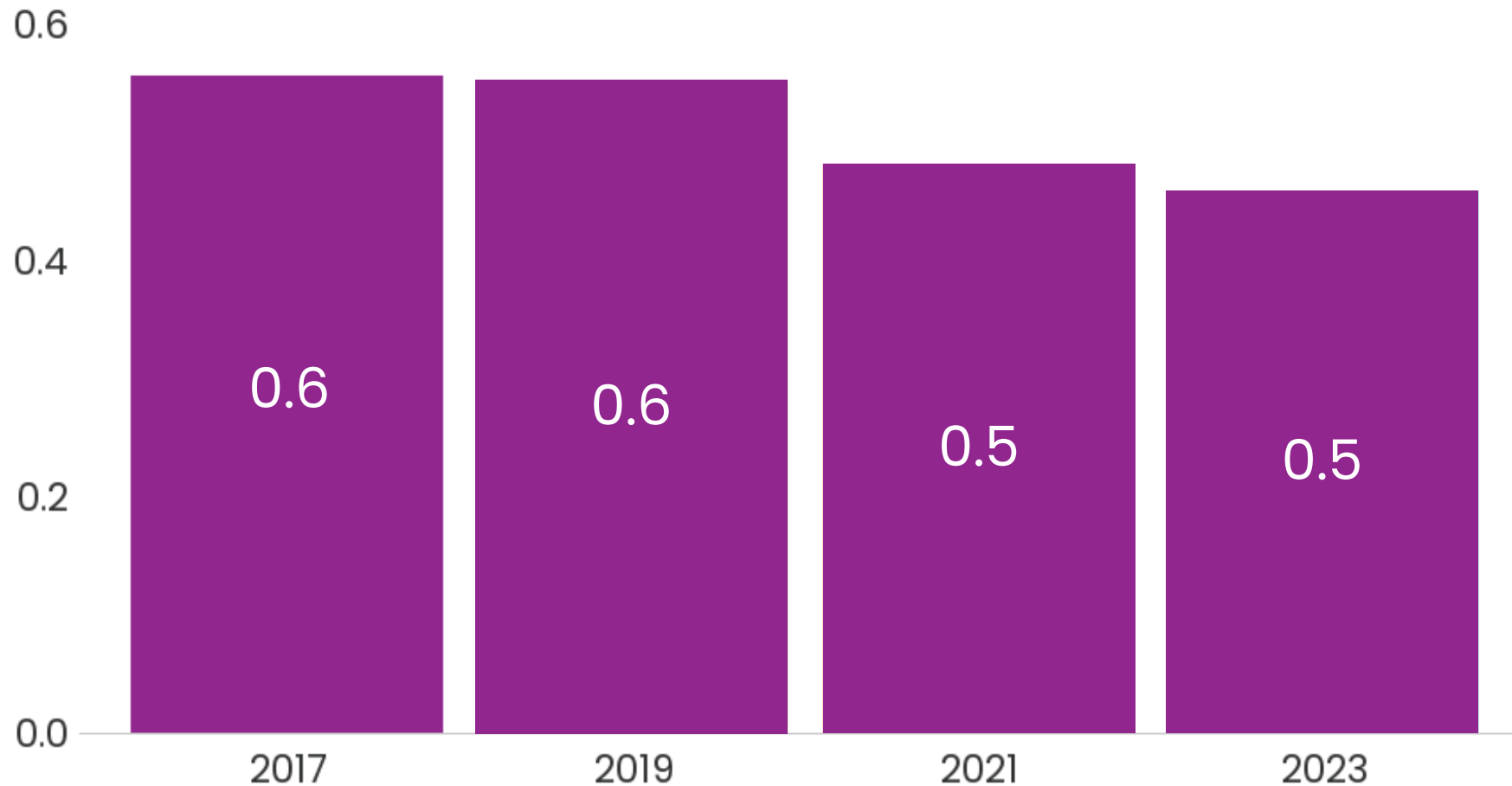
Home package deliveries peaked in 2021

A third of regional households got a package on an average weekday in 2023.





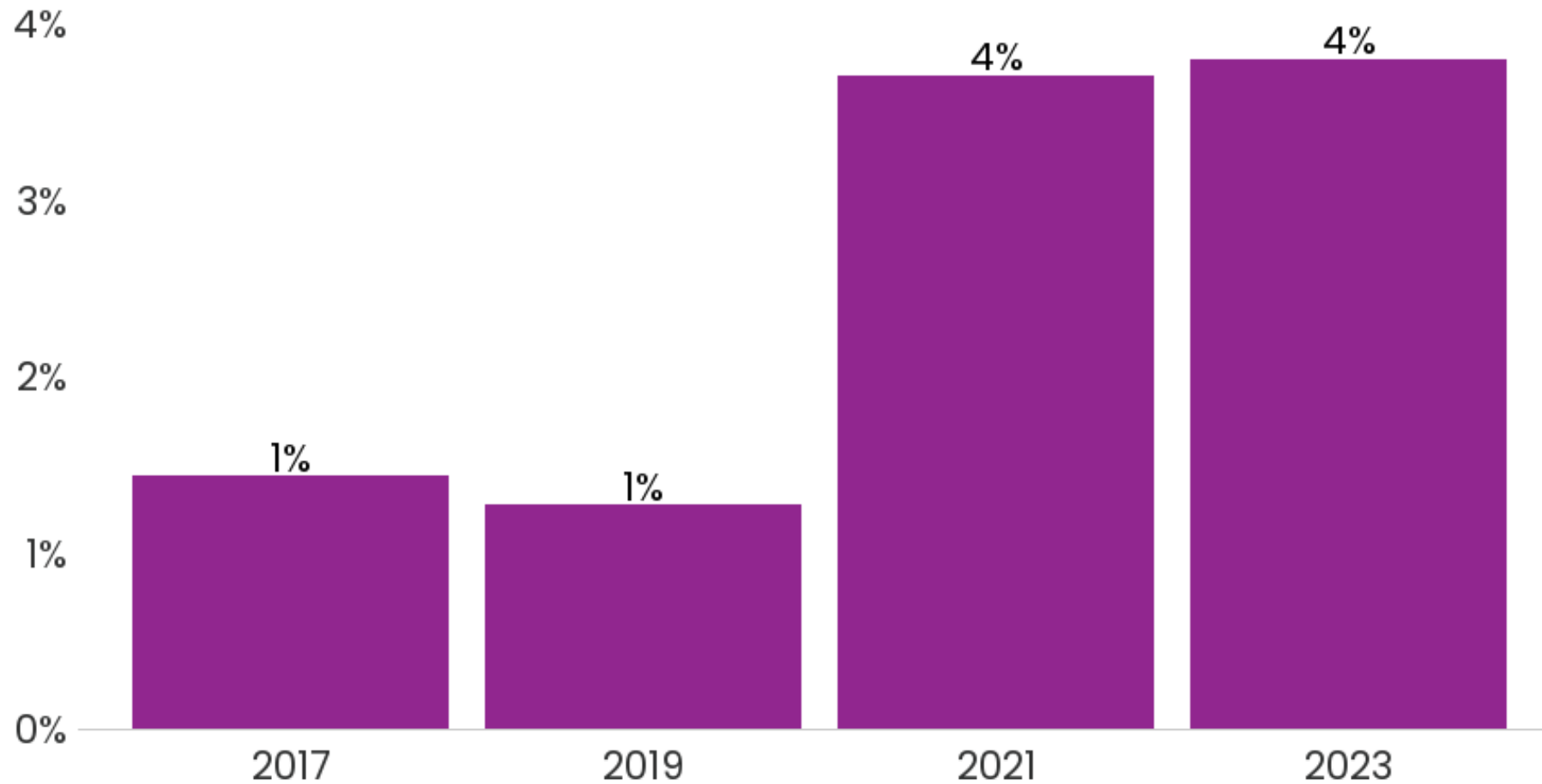
# Average number of shopping trips per person on an average weekday



The average number of shopping trips per person on an average weekday decreased in 2021 and stayed down.



# Households having take-out/prepared food delivered on average weekday (%)

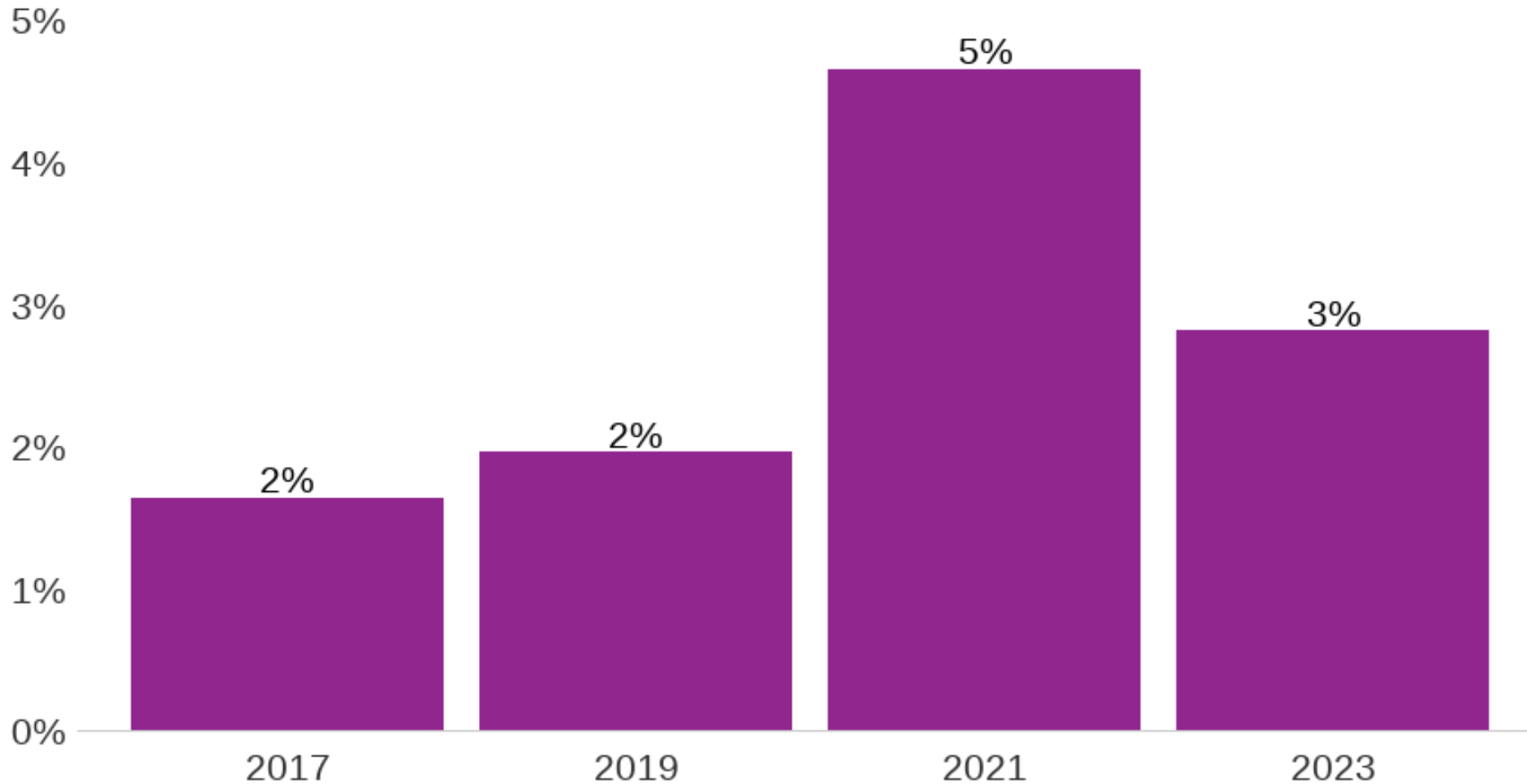


About 1 out of 25 households get food delivery on an average weekday.

Food delivery became more popular during pandemic and rate remained similar in 2023.



# Households having grocery delivered on an average weekday (%)



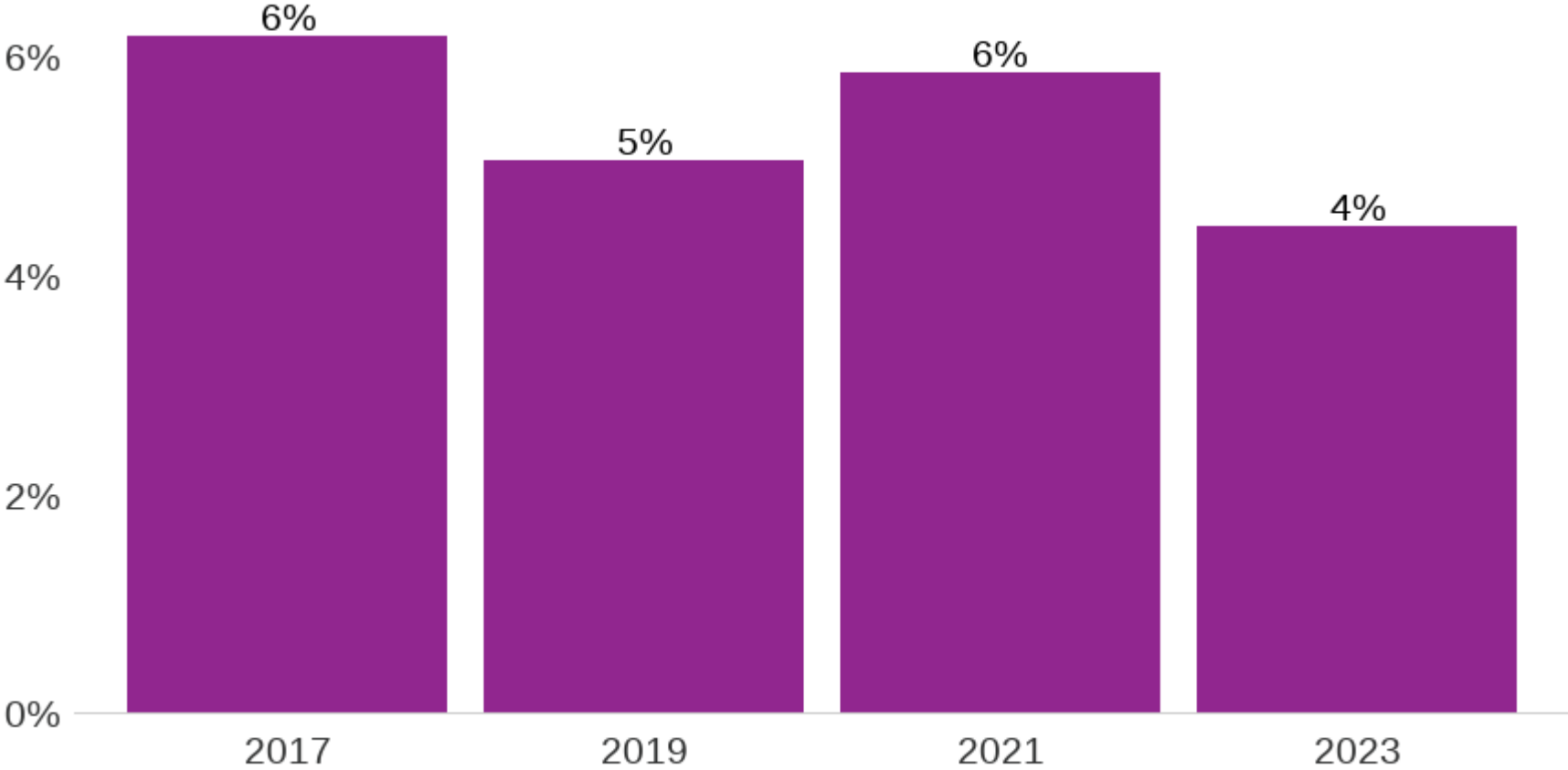
Grocery delivery doubled in 2021 compared to pre-pandemic rates.

It has since dropped in 2023.





# Households who had someone come to do work

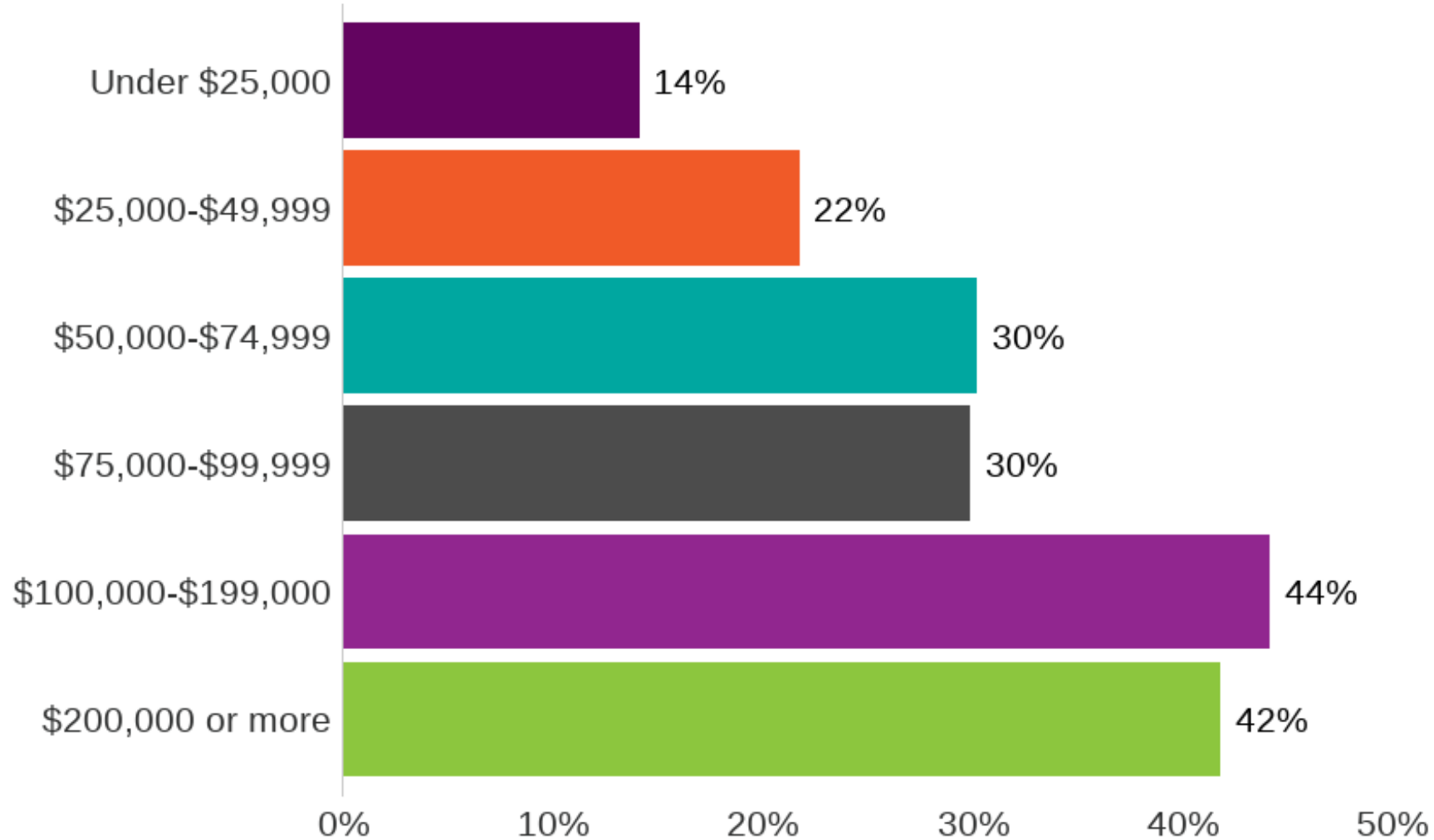


This category shows no clear trend.

Could its relative stability be attributed to constraints in supply of skilled labor?



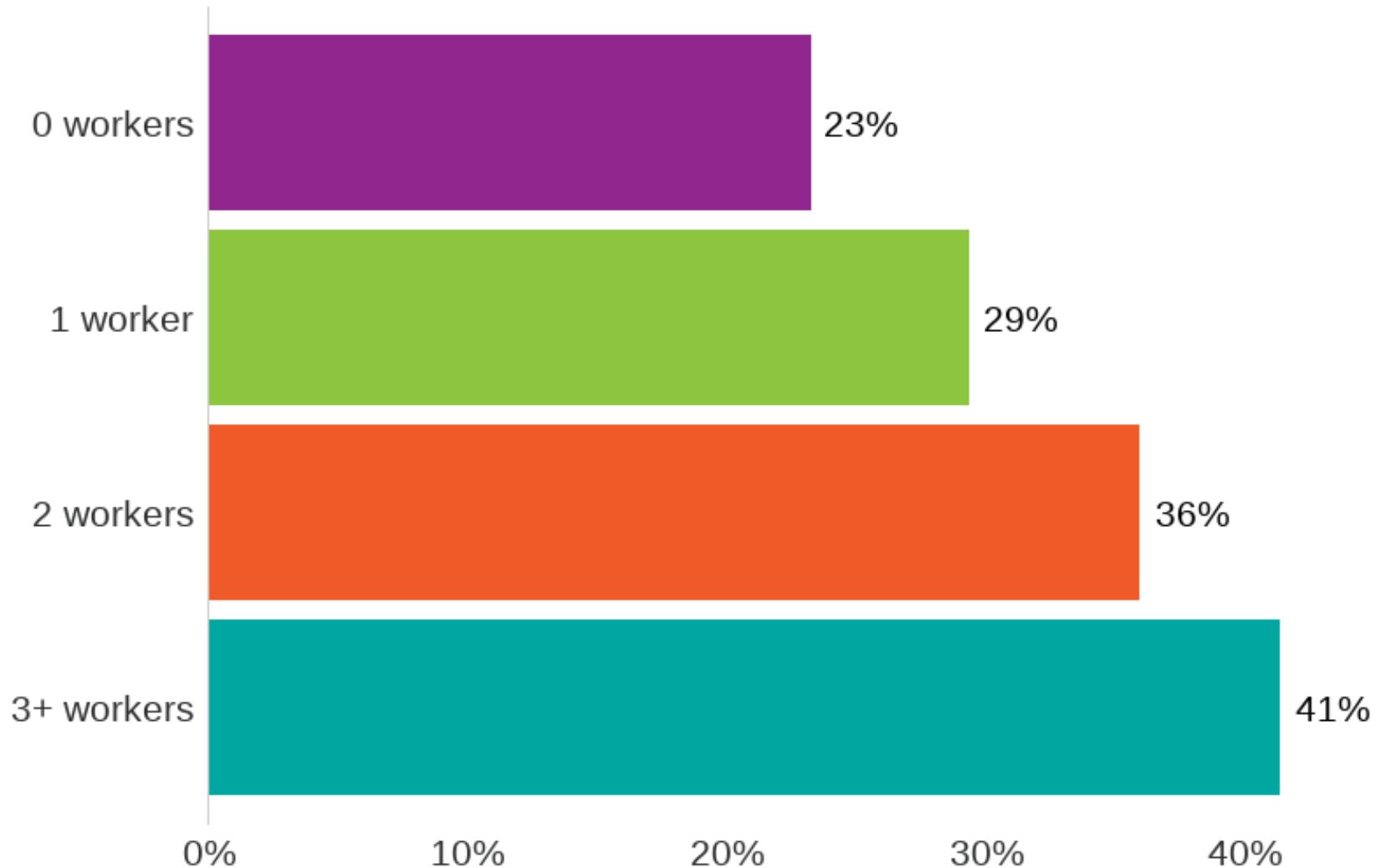
# 2023 households receiving a package on an average weekday by household income



Households with higher incomes are more likely to receive packages.



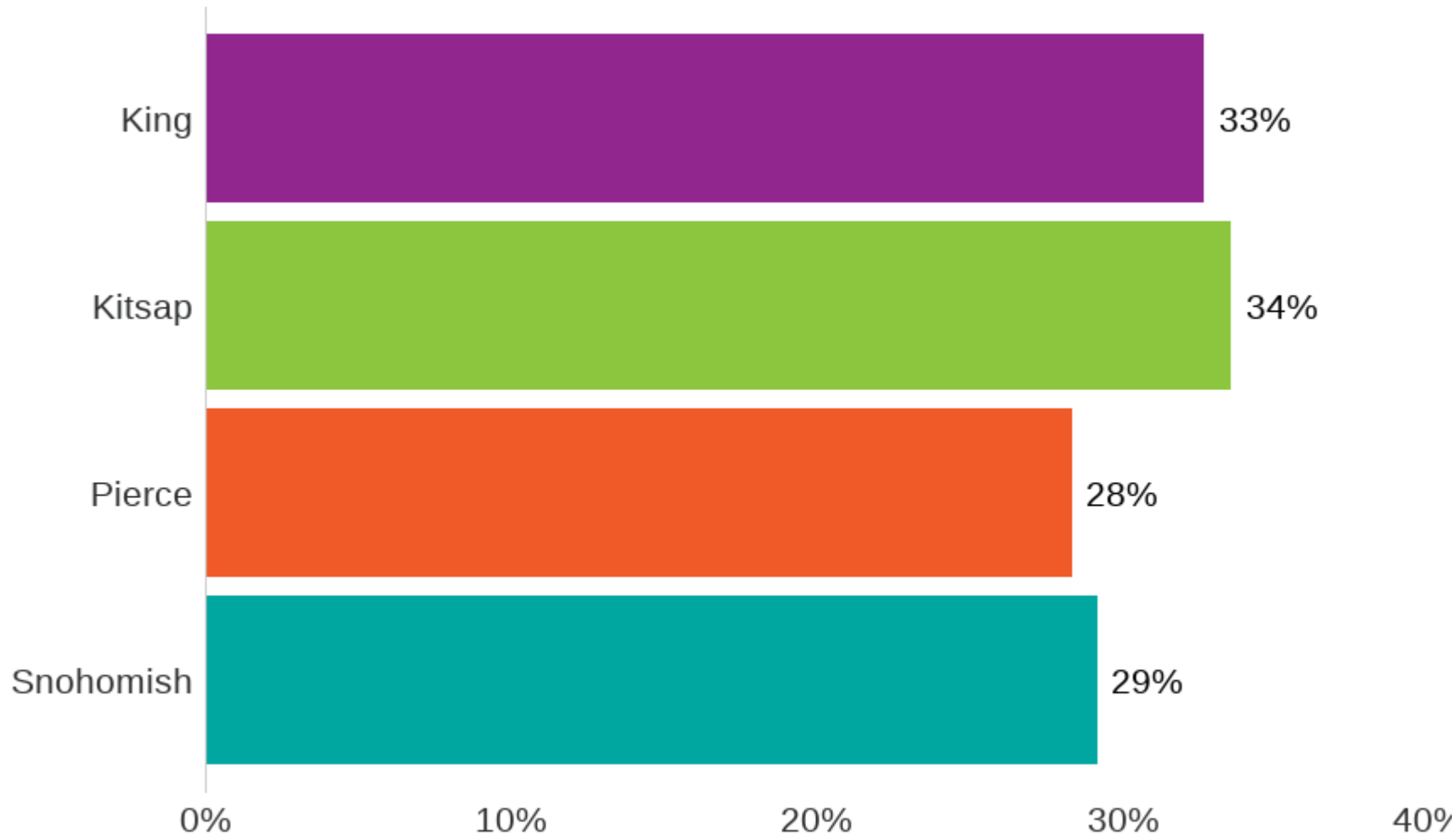
# 2023 households receiving a package on an average weekday by number of workers



Households with more workers receive more packages, and the rate of increase is relatively linear.



# 2023 households receiving a package on an average weekday by home county

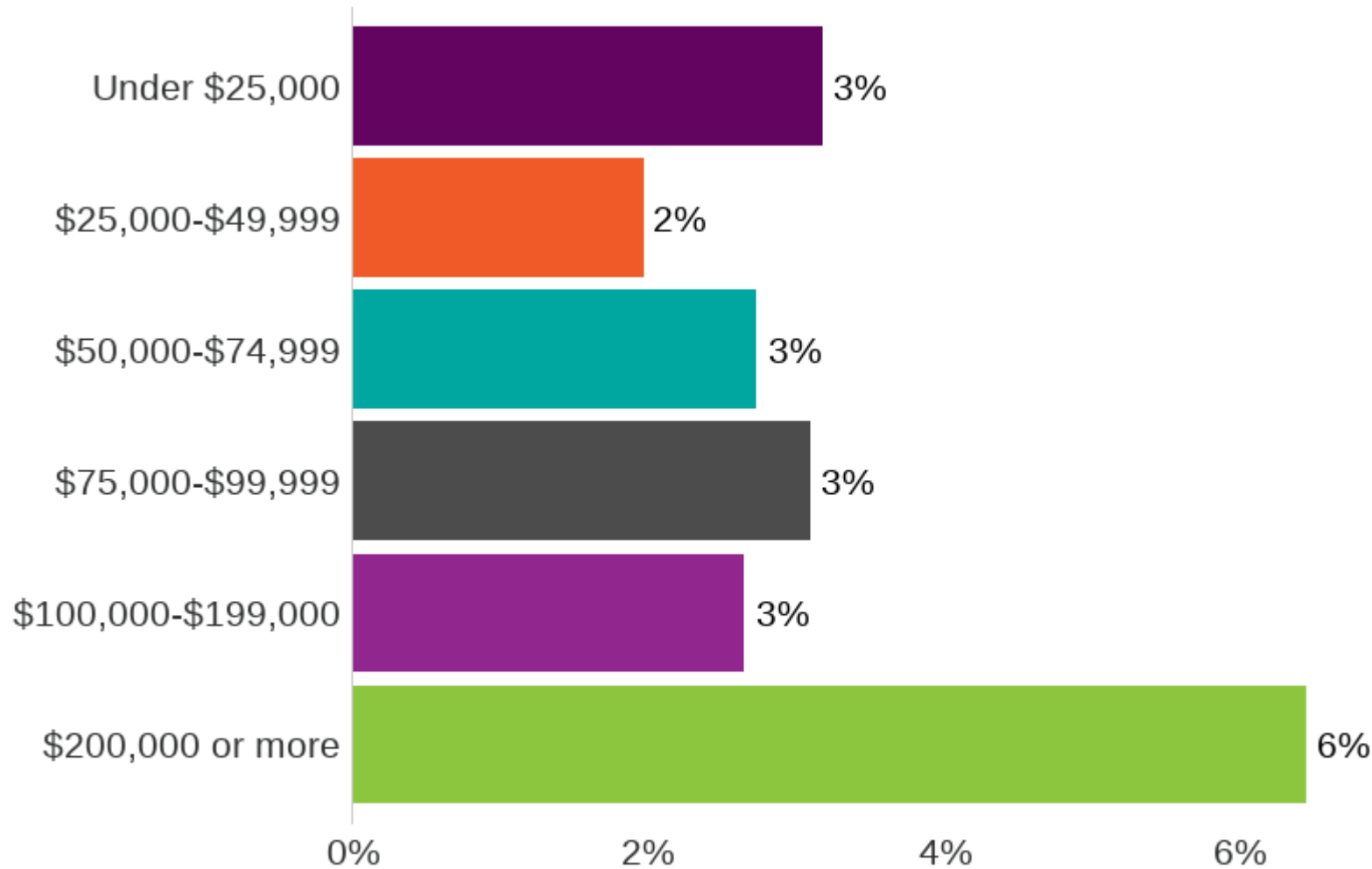


Households from all counties get packages at similar rates.

No noticeable differences were found with Regional Geographies or Regional Centers.



# 2023 households receiving food delivery on an average weekday by household income

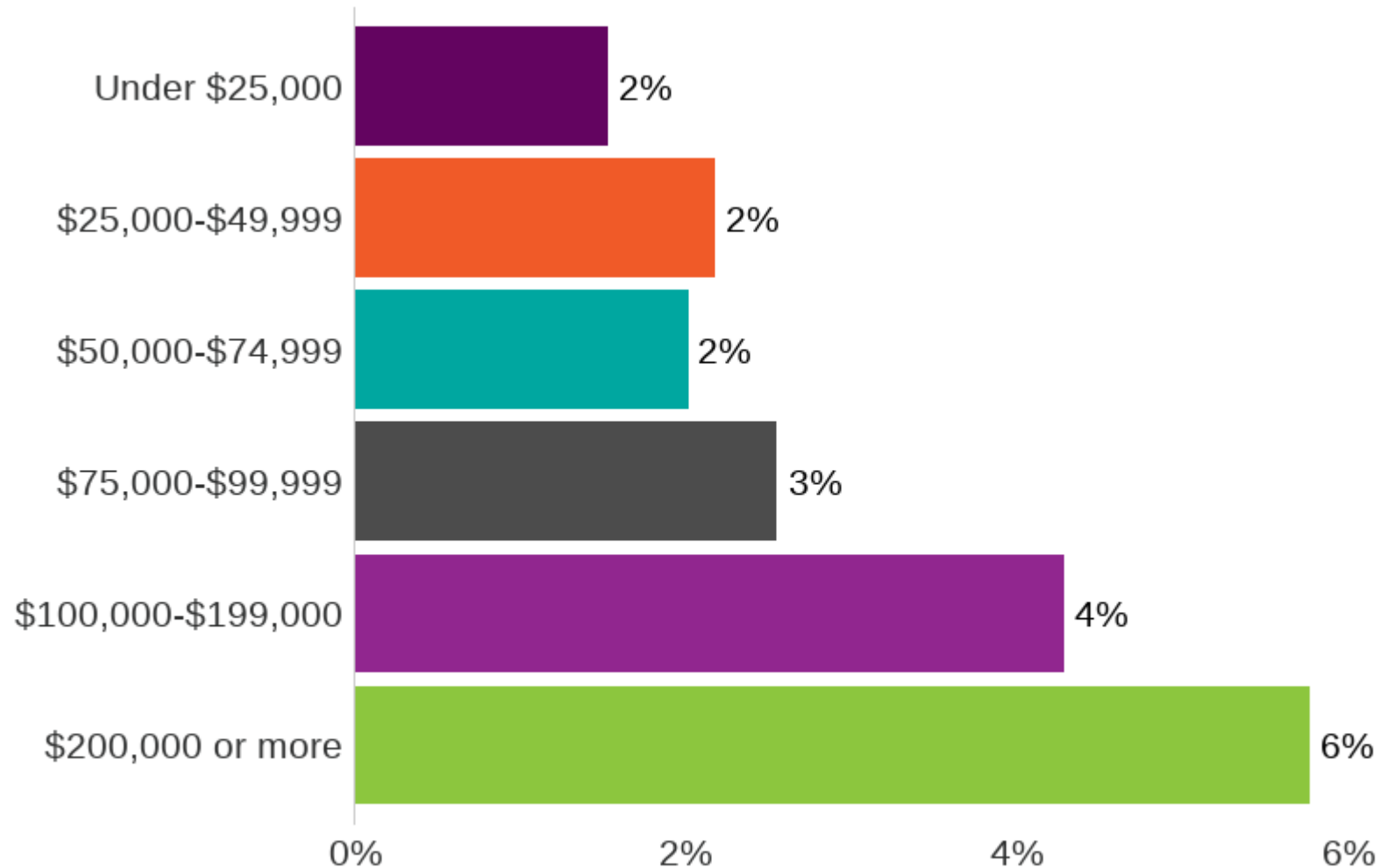


The highest income group is much more likely to have food delivered.





# 2023 households receiving grocery deliveries on an average weekday by household income



The two highest income groups are much more likely to get grocery deliveries.



# Delivery summary

**1/3 of Households received a package at home an average weekday in 2023, down from 2021.**

**Package delivery correlates with household income and number of workers, but not with home geography.**

**Households with food and grocery delivered is less than 5% on a weekday. Food and grocery delivery became more popular during COVID-19 and are most popular among the highest income households.**



# 2023 HTS presentation schedule

Group	Date	Time	Topic
<a href="#">Transportation Demand Management (TDM)</a>	8/27 Tue	10am- 12pm	Workplaces, commutes, telework
<a href="#">Bicycle Pedestrian Advisory Committee (BPAC)</a>	9/10 Tue	10am- 12pm	Walk, bike, roll
<a href="#">Coordinated Mobility &amp; Accessibility Committee (CMAC)</a>	9/18 Wed	9:30- 11:30am	People with disabilities, older adults, youth, people with lower income, people with limited English proficiency
<a href="#">Transit-Oriented Development (TOD)</a>	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

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







**Joanne Lin**

Associate Data Analyst and Programmer, [jlin@psrc.org](mailto:jlin@psrc.org)

**Suzanne Childress**

Principal Data Scientist, [schildress@psrc.org](mailto:schildress@psrc.org)

**Brian H. Y. Lee, Ph.D.**

Program Manager, [blee@psrc.org](mailto:blee@psrc.org)

**Thank You!**



Puget Sound Regional Council