

What Demographic Differences Exist Between American Community Survey Data Collection Modes?

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R. Chase Sawyer
Social, Economic, and Housing Statistics Division

American Community Survey Basics

- Ongoing monthly survey sent to 3.5 million addresses per year to produce detailed population and housing estimates each year
 - Visit 20,000 Group Quarter facilities and sample approximately 167,000 residents each year
- Designed to produce critical information on small areas and small population groups previously collected on the decennial long form
- Covers 35+ topics and supports over 300 known Federal government uses
- Used to distribute more than \$675 billion federal funds each year
- Data released annually
 - 1-year estimates (12 months of data)
 - 5-year estimates (60 months of data)

The image shows a stack of three documents. The top document is a 'Housing' questionnaire with various questions about housing characteristics. The middle document is a 'Welcome to the American Community Survey' letter from the U.S. Department of Commerce, Economics and Statistics Administration. The bottom document is a 'Please Log In' page with a barcode and a 10-digit User ID field.

ACS Content

35+ TOPICS → 1000+ TABLES → 11 BILLION ESTIMATES

POPULATION		HOUSING
SOCIAL Ancestry Citizenship Disability Educational Attainment Fertility Grandparents Language Marital Status Migration School Enrollment Veterans	DEMOGRAPHIC Age Hispanic Origin Race Relationship Sex	Computer & Internet Use Costs (Mortgage, Taxes, Insurance) Heating Fuel Home Value Occupancy Plumbing/Kitchen Facilities Structure Tenure (Own/Rent) Utilities Vehicles Year Built/ Year Moved In
	ECONOMIC Class of Worker Commuting Employment Status Food Stamps (SNAP) Health Insurance Hours/Week, Weeks/Year Income Industry & Occupation	

People and Households Represented in Each American Community Survey Data Collection Mode

- Provides insight on what type of people are represented in each ACS response mode
- Multiple ways to access

census.gov/library/visualizations/interactive/acs-collection.html

People and Households Represented in Each American Community Survey Data Collection Mode

Introduction

The American Community Survey (ACS) collects data in every state, county, and community in the United States. In an effort to reach as many respondents as possible, the U.S. Census Bureau uses several data collection techniques. These techniques, also referred to as response modes, have changed over time. This visualization allows you to explore multiple variables, including housing and people. It provides the overall distributions, as well as the information on response metrics for the four ACS response modes that include Internet, mail, telephone interviews, and personal interviews. You are also able to switch to a specific data collection year, or toggle through the years to observe changes, such as the addition of the Internet response mode in 2013. Click or hover over the graphics to get more information.

Select a Category

Select a Topic

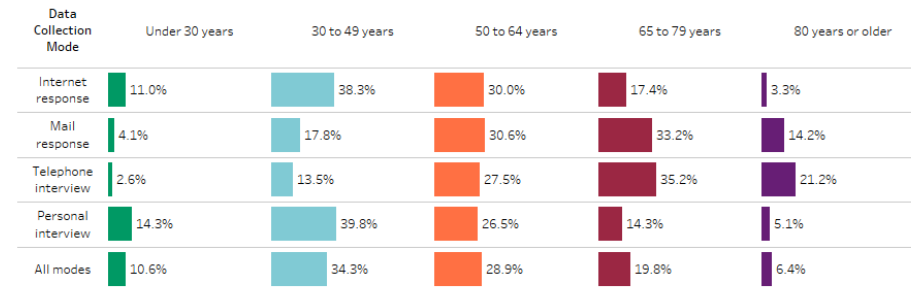
Select a Year

Housing Level Data
Age of Householder, Building Type, Household Income, Household Type, Internet Access, Region, Rent, Tenure, Urban or Rural Households, Value of Home, Year Structure Built

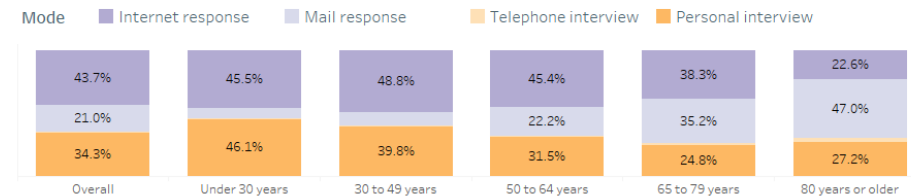
Person Level Data

2018

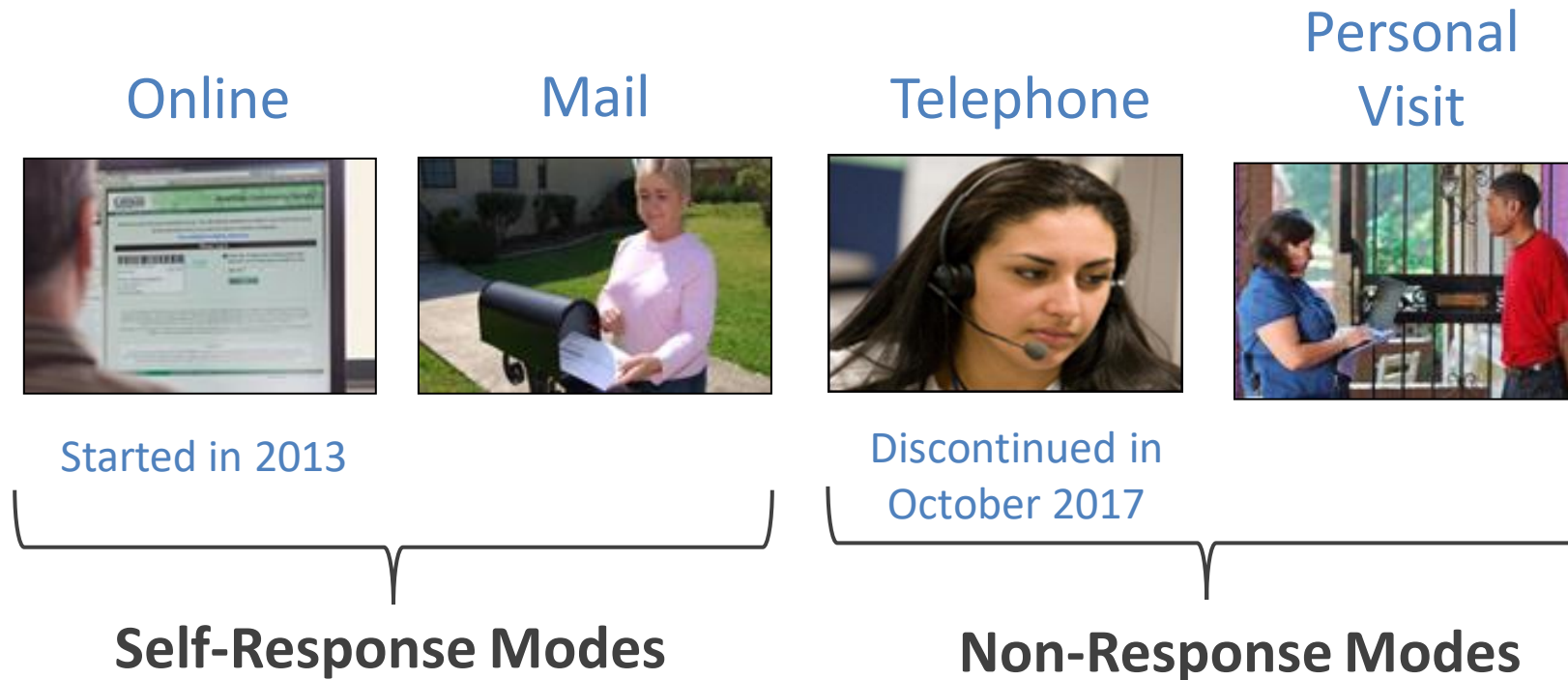
How Does the Age of Householder Vary by Response Mode?



What Response Mode Is Used by Each of the Age of Householder Categories?



ACS Data Collection Process - A Sequential Multi-Modal Survey



ACS Data Collection Process

Data Collection Process (Internet Response)

- Implemented in 2013
- Internet response is initially encouraged in the first mailing and throughout the survey
- Available through entire survey process



ACS Data Collection Process

Data Collection Process (Mail Response)

- Currently sent in reminder package
- Available through entire survey process

The image shows two overlapping forms for the American Community Survey. The top form is the 'Housing' section, which includes questions about the type of housing, number of units, and various amenities like hot water, bathrooms, and refrigerators. The bottom form is the 'Start Here' section, which provides instructions on how to respond, including online and mail options, and includes a section for printing the form and a section for providing contact information for the respondent.

ACS Data Collection Process

Data Collection Process (Telephone Interview)

- Calls begun 1 month after mail out
- Non-response follow-up phased out and discontinued in October 2017
- Respondents can still call telephone questionnaire assistance



ACS Data Collection Process

Data Collection Process (Personal Interview)

- Interviews begin about 2 months after initial mail out
- Households that are unmailable
- Reluctant responders
- Vacant households



The American Community Survey

Data Collection Process (January 2013 – September 2017)

**Internet
response**



**Mail
response**



**Telephone
interview
(CATI)**



**Personal
interview
(CAPI)**

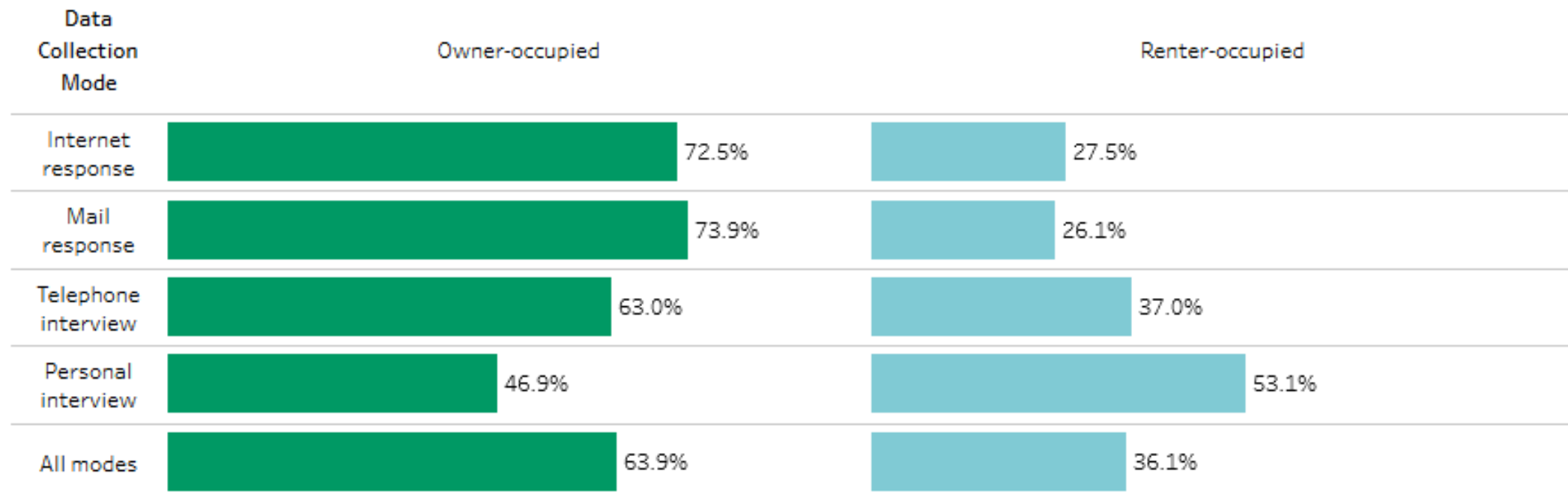


Characteristics by Mode Data Visualization

- Data is representative of the population living in households
- Includes 2010-2018 1-year estimates
- Relationships between characteristics and response mode don't imply causation
 - Not a measure of mode bias
 - Mode selection is not random – modes are introduced sequentially

Distribution of Characteristics by Response Mode

How Does Tenure Vary by Response Mode?

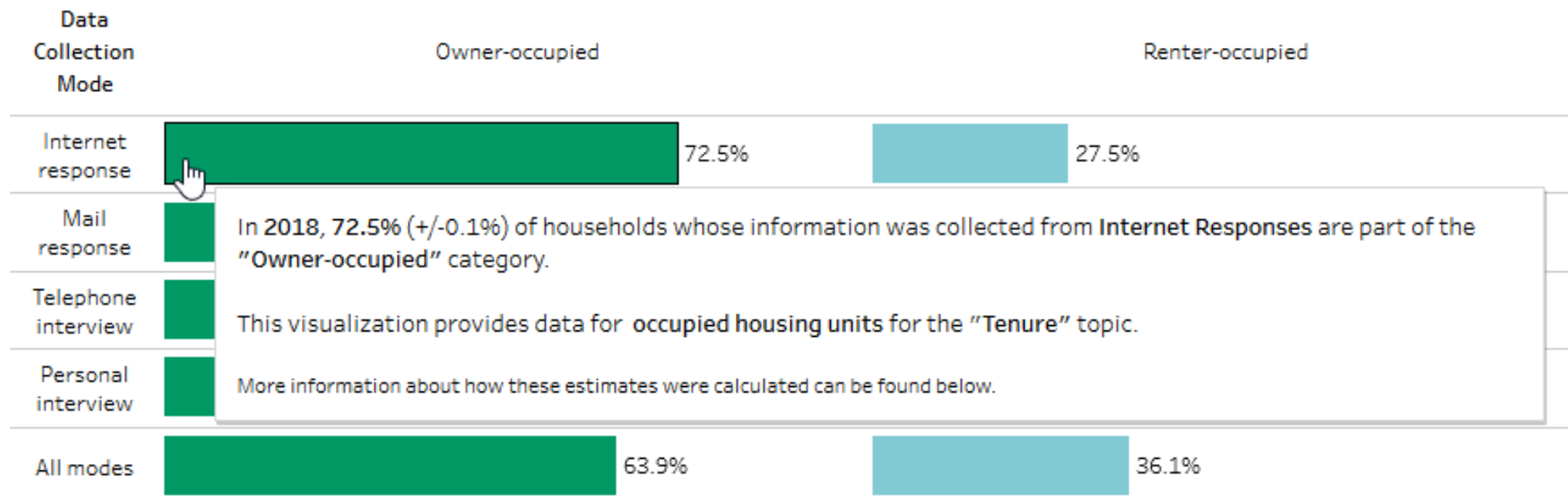


Source: 2018 ACS 1-Year Estimates

Distribution of Characteristics by Response Mode (Hover Information)

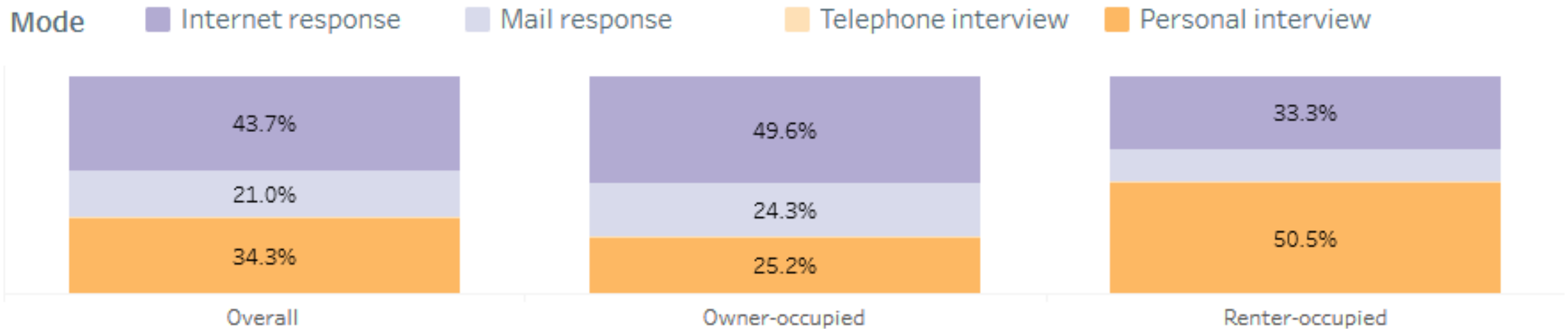
- Hovering over a bar provides more information
 - Margin of error
 - Universe

How Does Tenure Vary by Response Mode?



Distribution of Response Mode by Individual Characteristics

What Response Mode Is Used by Each of the Tenure Categories?

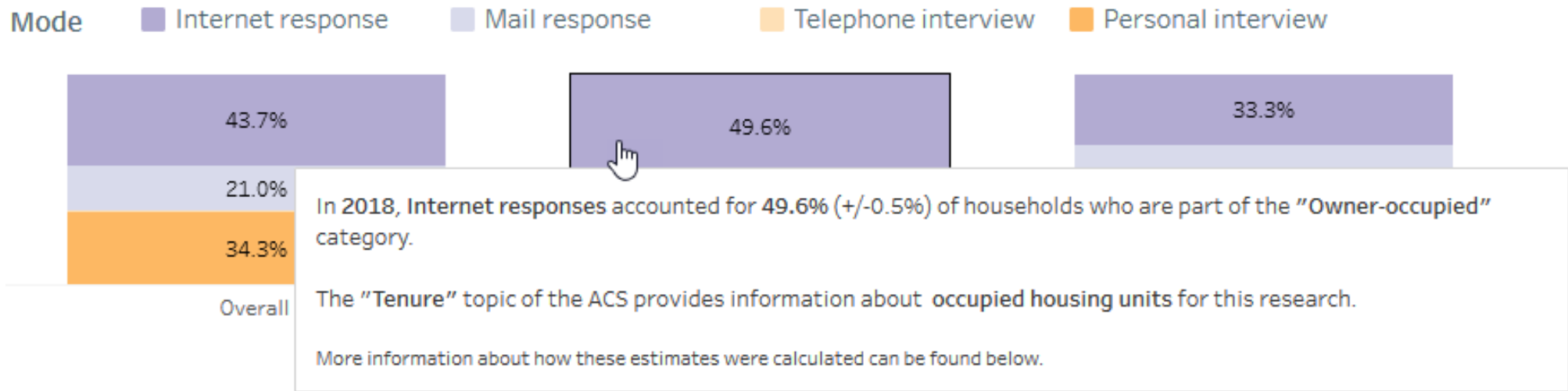


Source: 2018 ACS 1-Year Estimates

Distribution of Characteristics by Individual Characteristics (Hover Information)

- Hovering over a bar provides more information
 - Margin of error
 - Universe

What Response Mode Is Used by Each of the Tenure Categories?

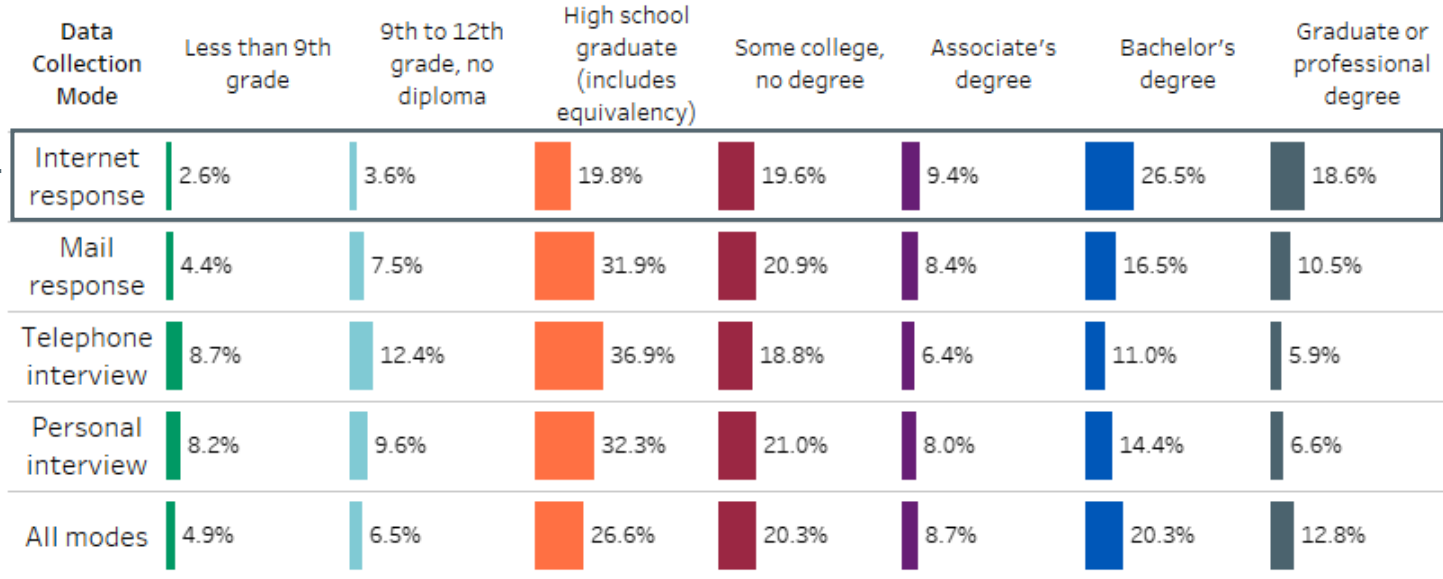


Educational Attainment

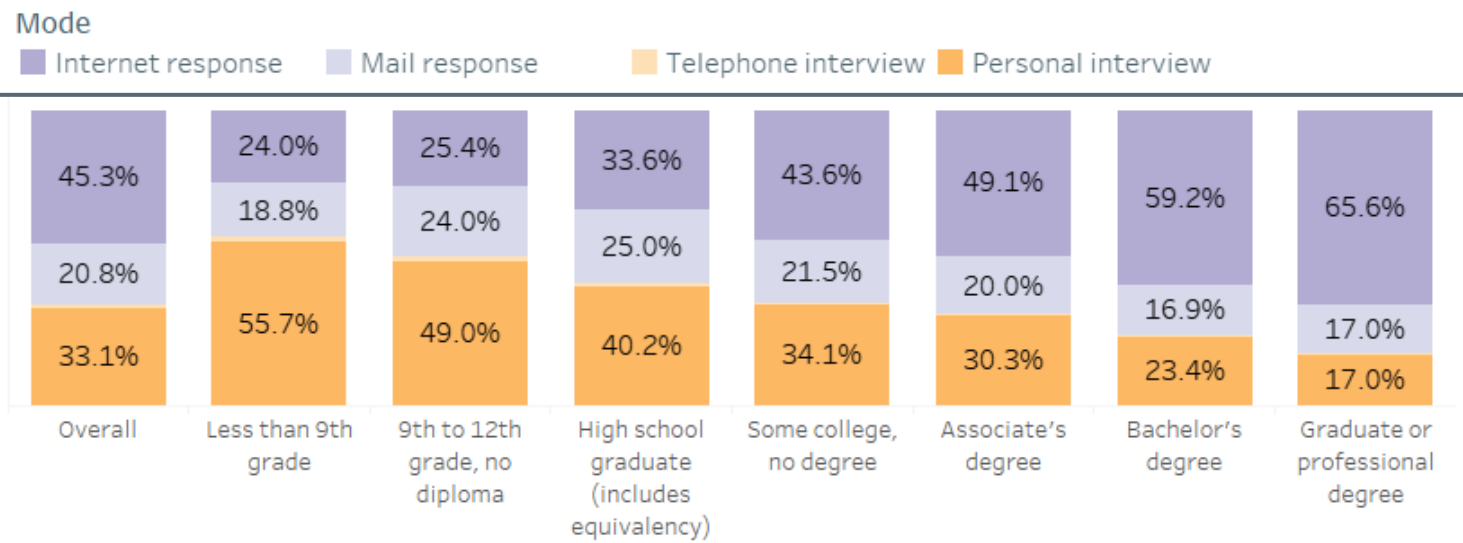
Key Findings

- Higher educational attainment more likely to be represented in Internet response
- Lower educational attainment more likely to be represented in CAPI interviews

How Does Educational Attainment Vary by Response Mode?



What Response Mode Is Used by Each of the Educational Attainment Categories?

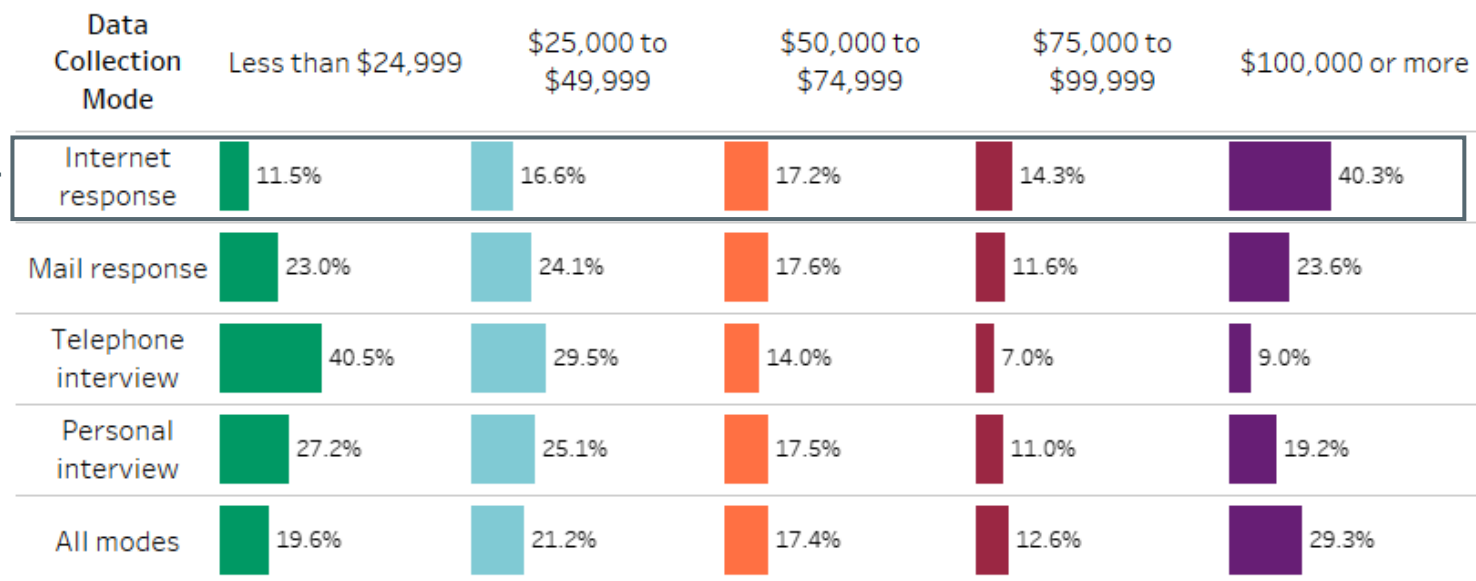


Household Income

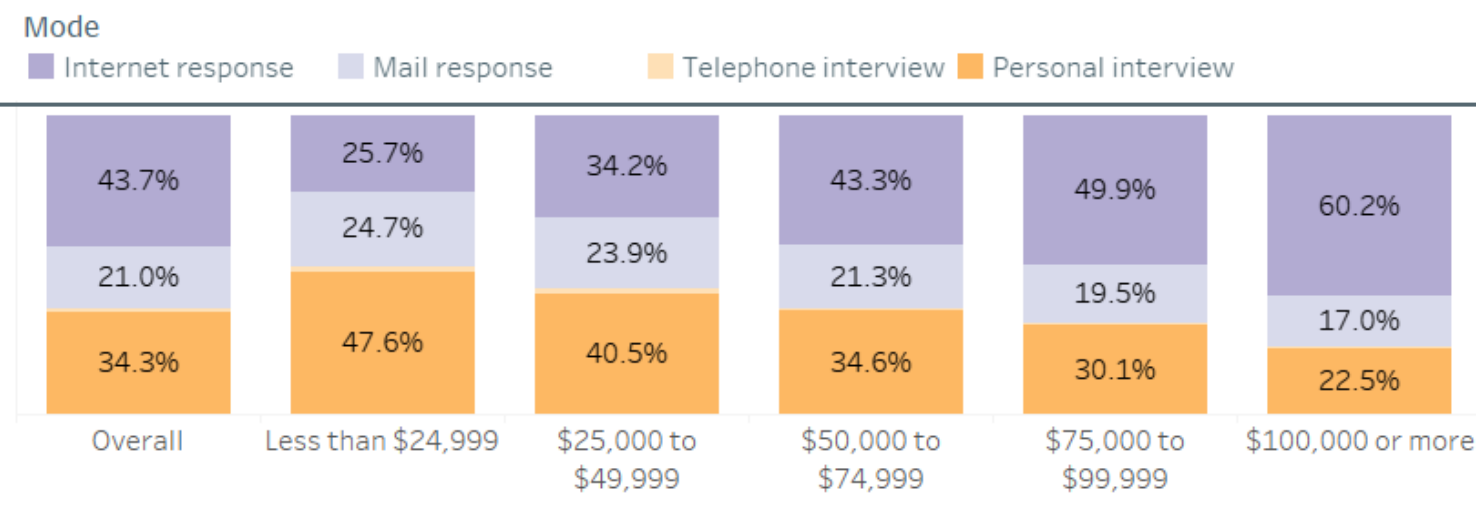
Key Findings

- Higher income more likely to use Internet
- Lower income more likely to go to computer assisted interview

How Does Household Income in the Past 12 Months Vary by Response Mode?



What Response Mode Is Used by Each of the Household Income in the Past 12 Months Categories?

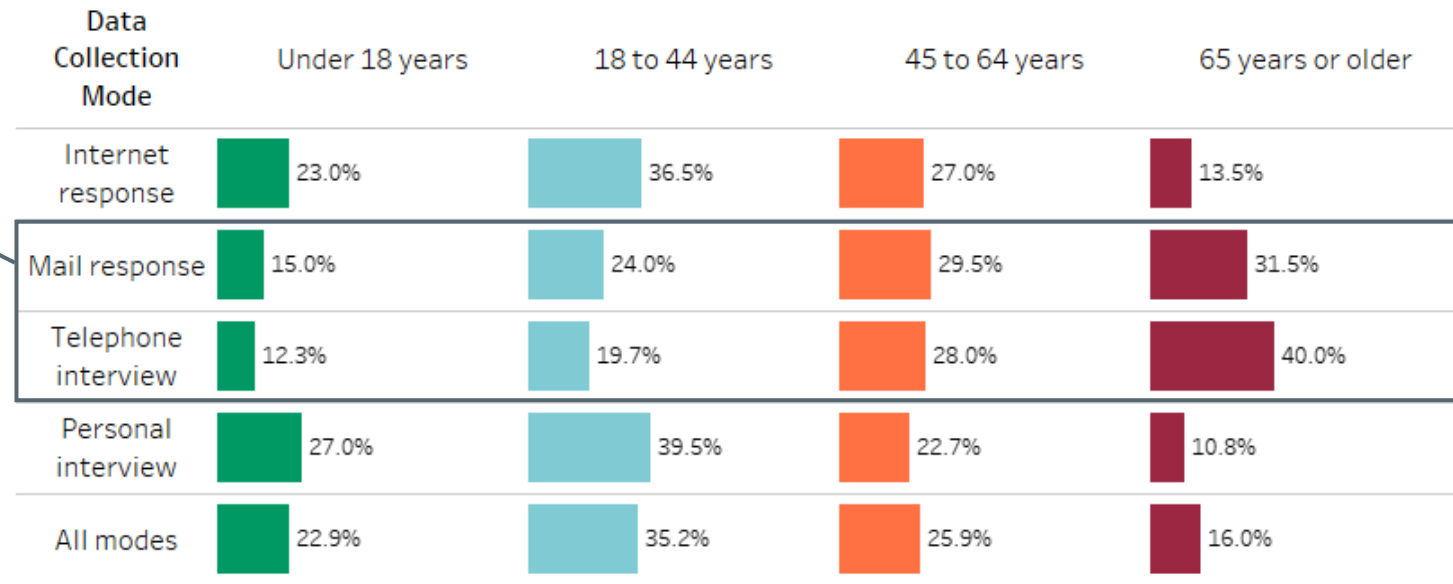


Age

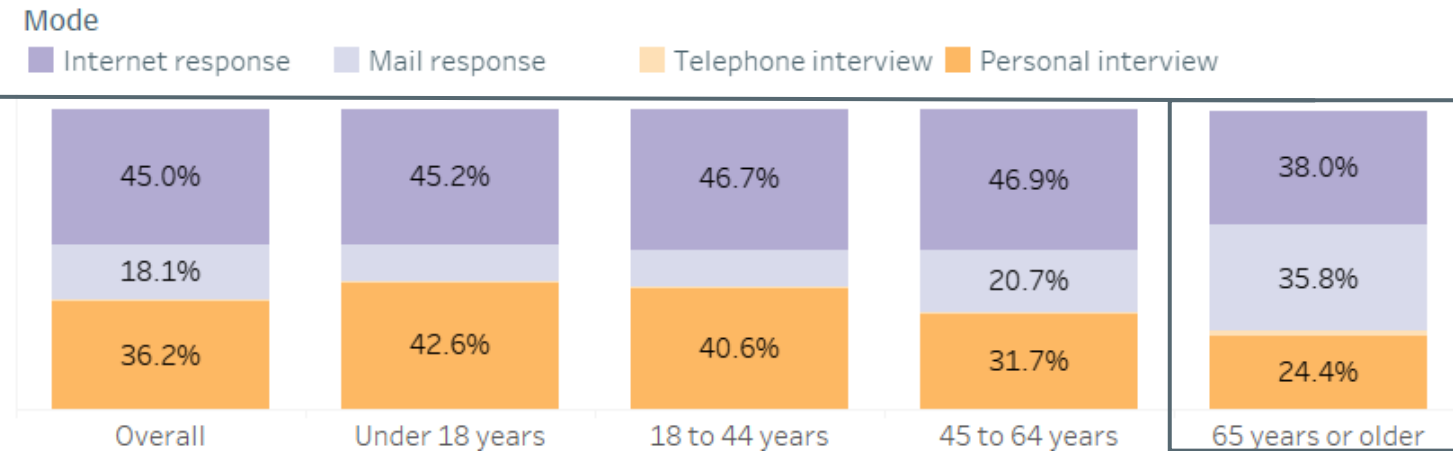
Key Findings

- Mail and CATI gathers information on older individuals
- Even in this instance CATI is small portion of response

How Does Age Vary by Response Mode?



What Response Mode Is Used by Each of the Age Categories?



Race

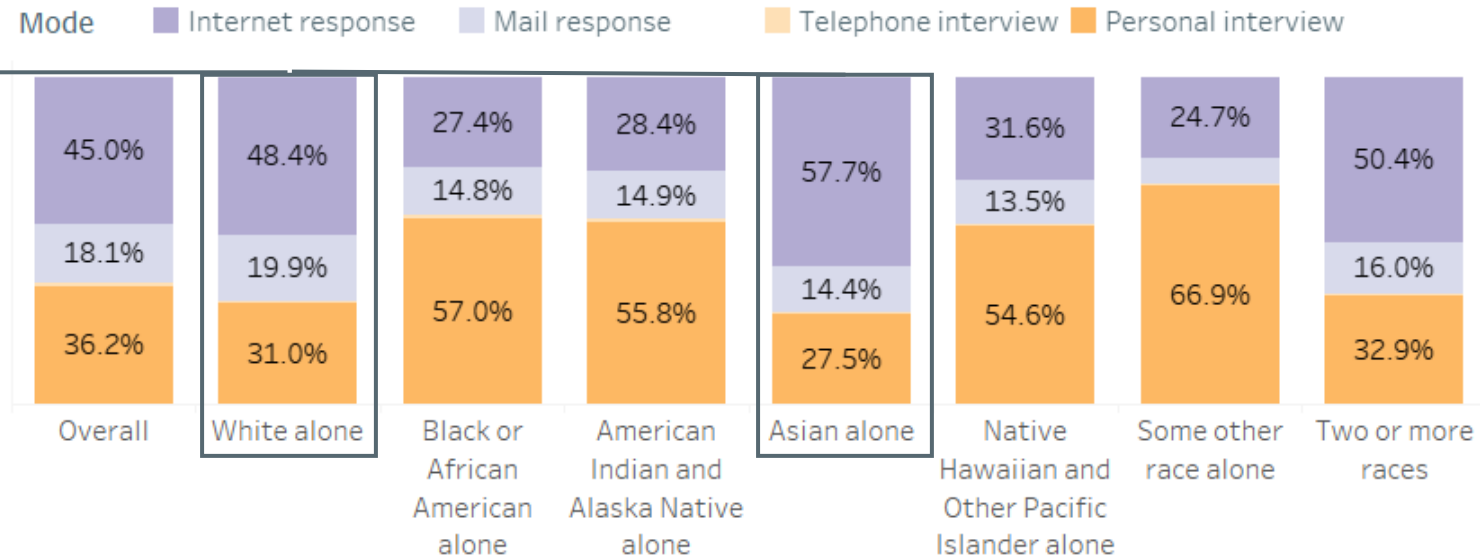
Key Findings

- White alone and Asian alone tend to be represented in Internet at an above average rate

How Does the Race Distribution Vary by Response Mode?

Data Collection Mode	White alone	Black or African American alone	American Indian and Alaska Native alone	Asian alone	Native Hawaiian and Other Pacific Islander alone	Some other race alone	Two or more races
Internet response	77.9%	7.6%	0.5%	7.2%	0.1%	2.7%	3.9%
Mail response	79.3%	10.2%	0.7%	4.5%	0.1%	2.2%	3.0%
Telephone interview	72.6%	15.4%	1.1%	3.3%	0.1%	4.1%	3.5%
Personal interview	62.0%	19.7%	1.3%	4.3%	0.3%	9.3%	3.1%
All modes	72.4%	12.5%	0.8%	5.7%	0.2%	5.0%	3.4%

What Response Mode Is Used by Each of the Race Categories?

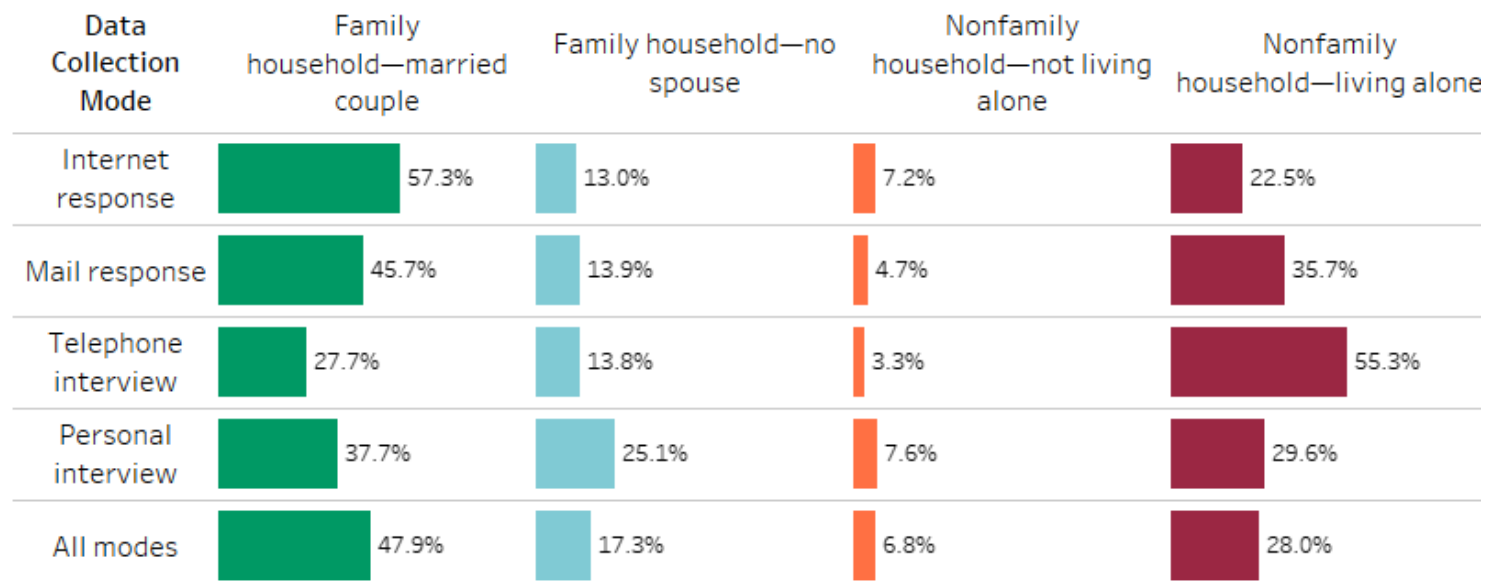


Household Type

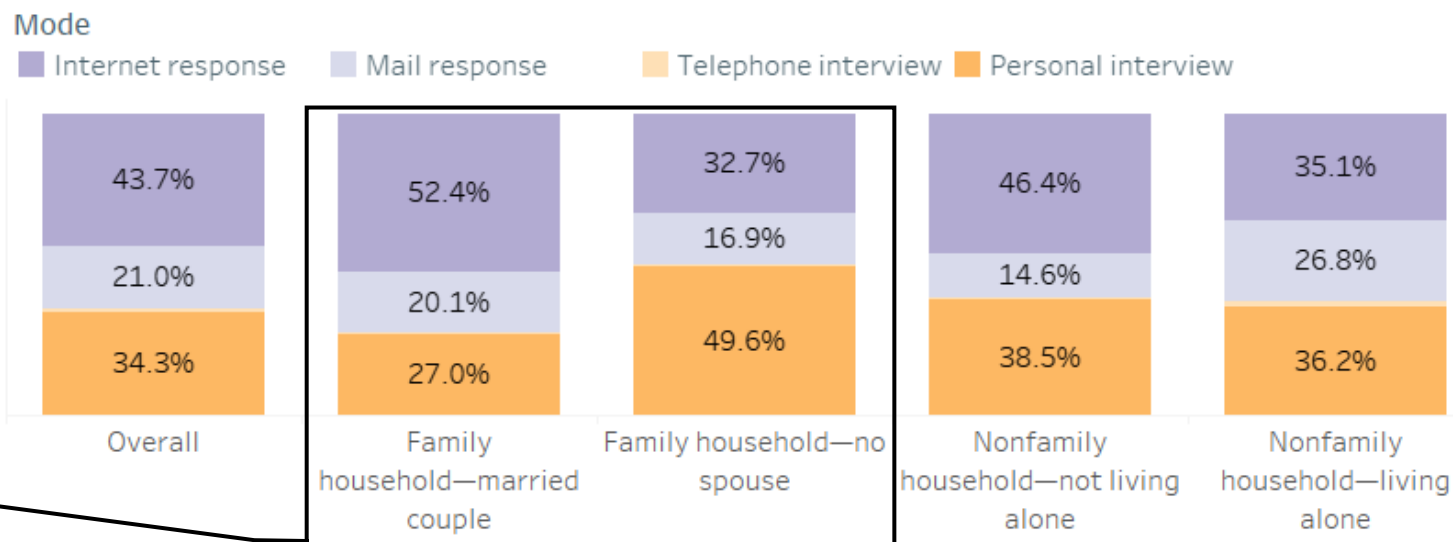
Key Findings

- “Family households-married couples” represented in internet more often
- “Family households-without spouse” represented more often in CAPI

How Does Household Type Vary by Response Mode?



What Response Mode Is Used by Each of the Household Type Categories?

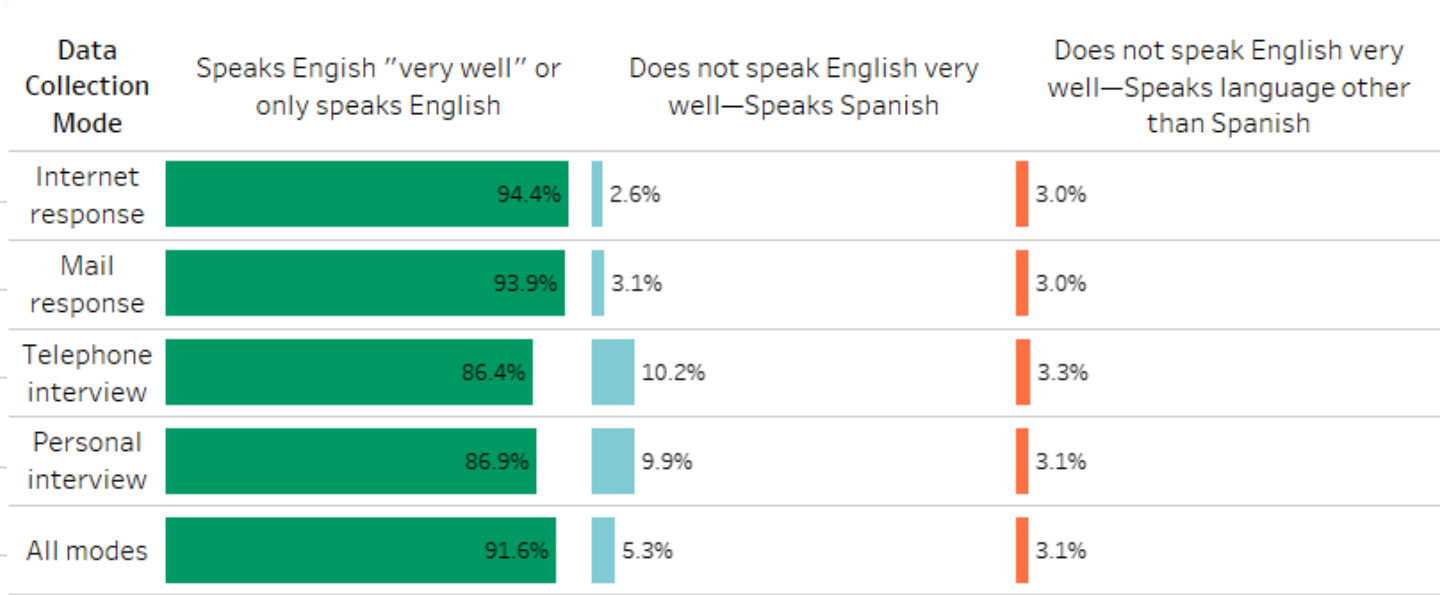


Language spoken at home

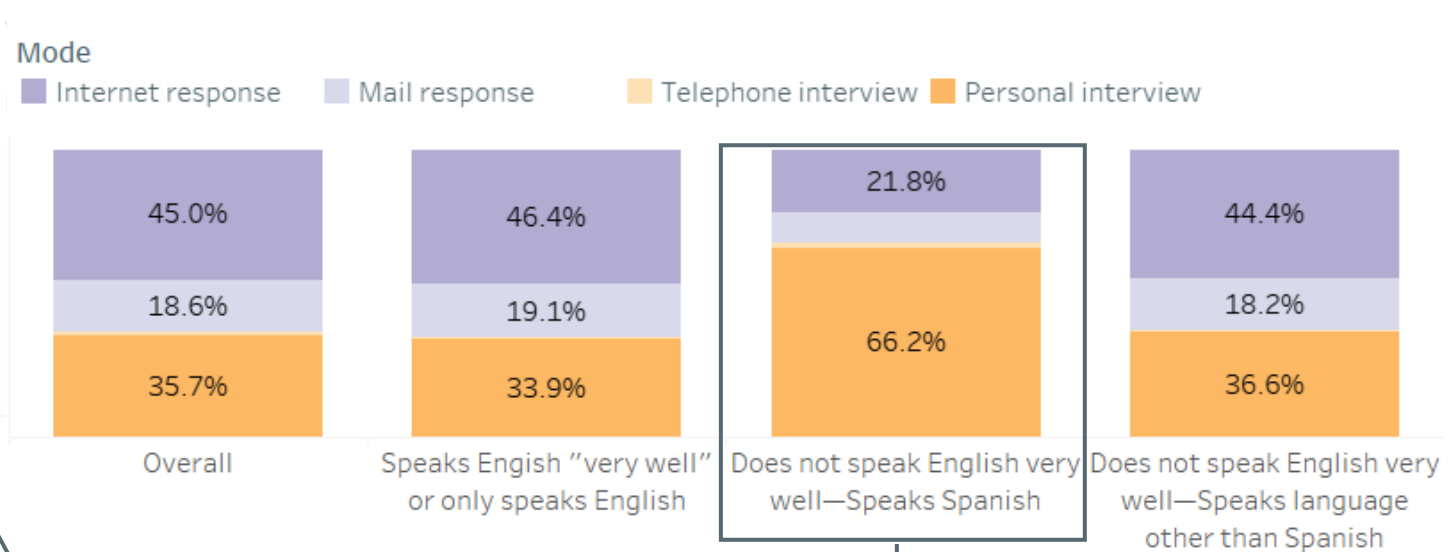
Key Findings

- Speaks English
 - Close to overall
- Speaks Spanish
 - Represented more often in CAPI
- Speaks other language
 - Close to overall

How Does the Language Spoken at Home Vary by Response Mode?



What Response Mode Is Used by Each of the Language Spoken at Home Categories?



What happens now?

- American Community Survey program
 - Understand response patterns for each mode
 - Guides future research
 - Make decisions based on guiding principles
- Survey Methodologists
 - Create surveys that recognize these trends
- Researchers
 - Research methodology of data collection

Thank You!

R. Chase Sawyer

US Census Bureau

Social, Economic, and Housing Statistics Division

Robert.C.Sawyer@census.gov

301-763-8688