American Community Survey Program Updates
New York SDC Affiliate Meeting

October 30, 2024

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American Community Survey Office

United States® Census Bureau

The American Community Survey
Outline

- ACS Overview
- Changes for the 2024 ACS
- Potential Changes for the 2025 ACS and Beyond
- Margins of Error and Statistical Testing
- New Data User Resources
- Questions

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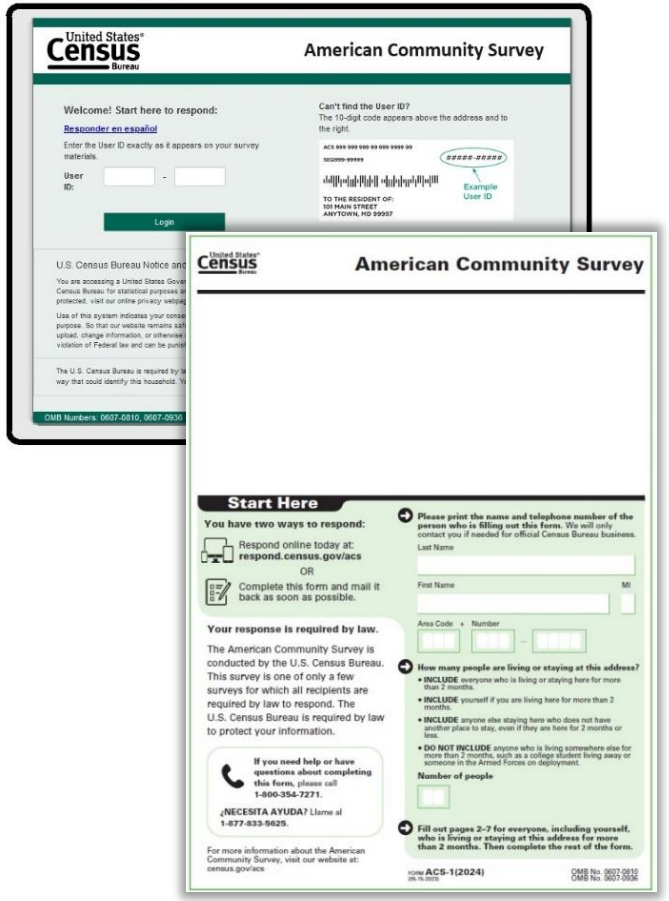
The American Community Survey

The Foundation

- The American Community Survey (ACS) is the premier source of detailed information about the nation's people and housing.
- Surveys **3.5 million** addresses to produce annual social, economic, housing, and demographic estimates for communities throughout the U.S. and Puerto Rico
- Covers **40+ topics** — Collects detailed information previously collected by the decennial census each decade
- Helps inform how trillions of dollars in federal funds are distributed each year, supports over **300** evidence-based federal government uses
- Data released the year after collection as 1-year and 5-year estimates
- Officially started in 2005 (1-year estimates = 2005; 5-year 2005-2009)



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2023 ACS Data Release Schedule

2023 ACS 1-Year Release	
Data Products	**Release**
1-Year Estimates Public Release	September 12, 2024
1-Year Public Use Microdata Sample (PUMS)	October 17, 2024
1-Year Supplemental Estimates	October 17, 2024
119th Congressional Districts (Data Profiles)	January 7, 2025
2019-2023 ACS 5-Year Release	
Data Products	**Release**
5-Year Estimates Public Release	December 12, 2024
5-Year Public Use Microdata Sample (PUMS)	January 23, 2025
5-Year Variance Replicate Estimates	January 23, 2025

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census.gov/programs-surveys/acs/news/data-releases/2023/release-schedule

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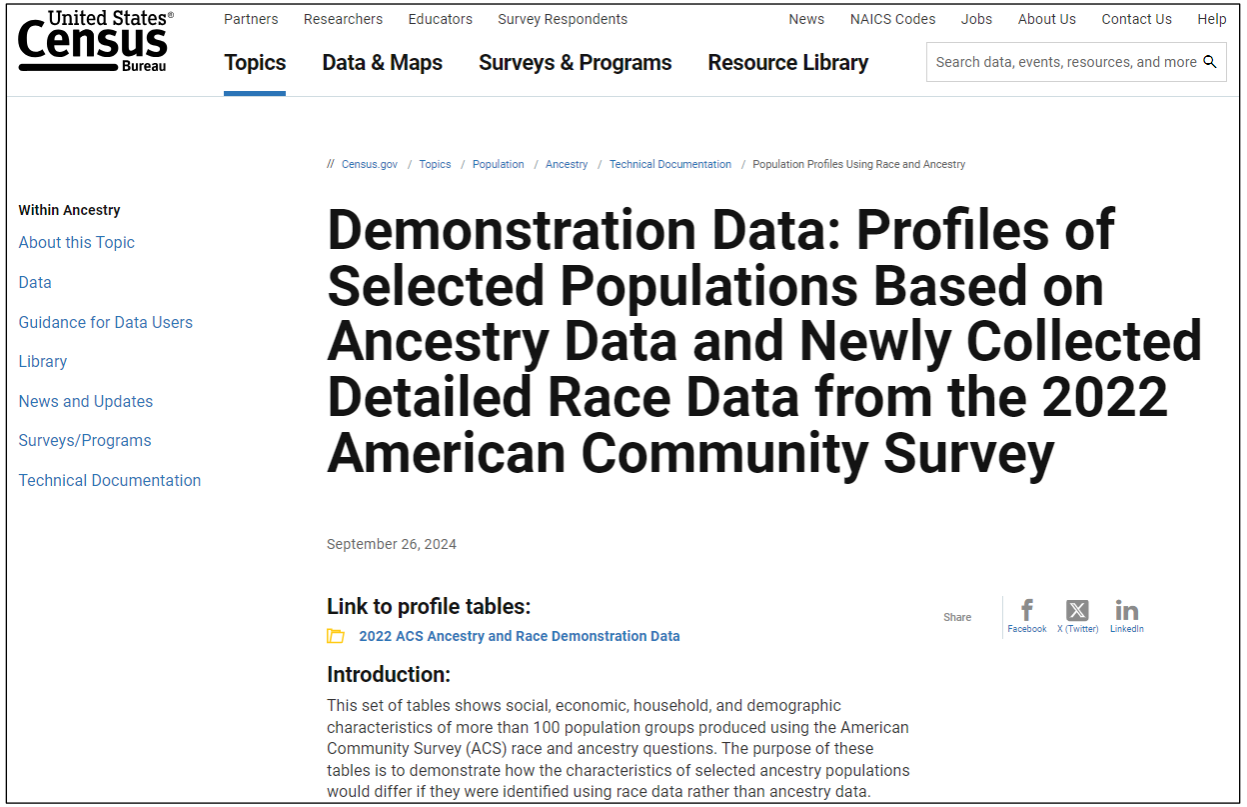
Ancestry and Race Demonstration Data Tables

- **Purpose:** Demonstrate how characteristics of ancestry populations would differ if identified using race data rather than ancestry data
- **Geographic Levels:** Nation, 50 states, District of Columbia, and Puerto Rico (53 Tables)
- **Groups Included:** 111 ancestry groups in each table
- **Product Layout:** Selected Population Profiles (S0201) with populations identified by the race and ancestry data side-by-side
- **Data Source:** 2022 ACS 1-year Microdata



census.gov/topics/population/ancestry/technical-documentation/research/demonstration-data

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Content Changes for the 2024 ACS

Updated wording for 4 questions:

- **Condo Fees** — Now includes homeowners association (HOA) fees
- **Home Heating Fuel** — Updated wording for natural gas and bottled gas categories
- **Journey-to-Work** — Updated Taxi category to include ride-sharing as a mode of transportation
- **Veterans Period of Service** — Adjusted date ranges and names for several periods of service

census.gov/programs-surveys/acs/about/forms-and-instructions.html

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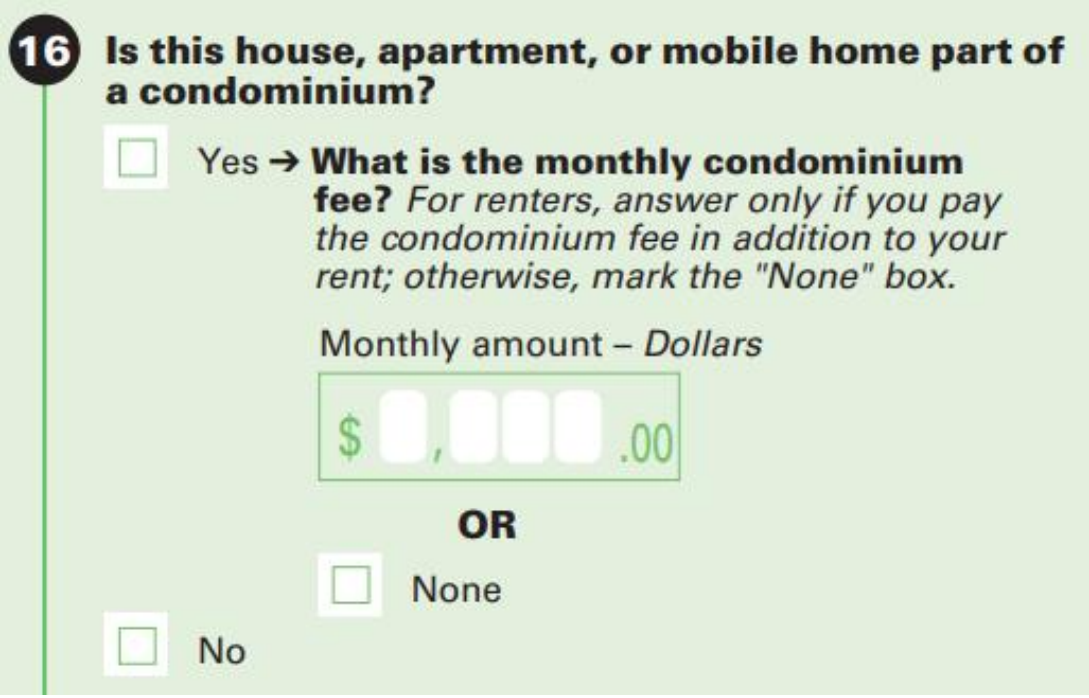
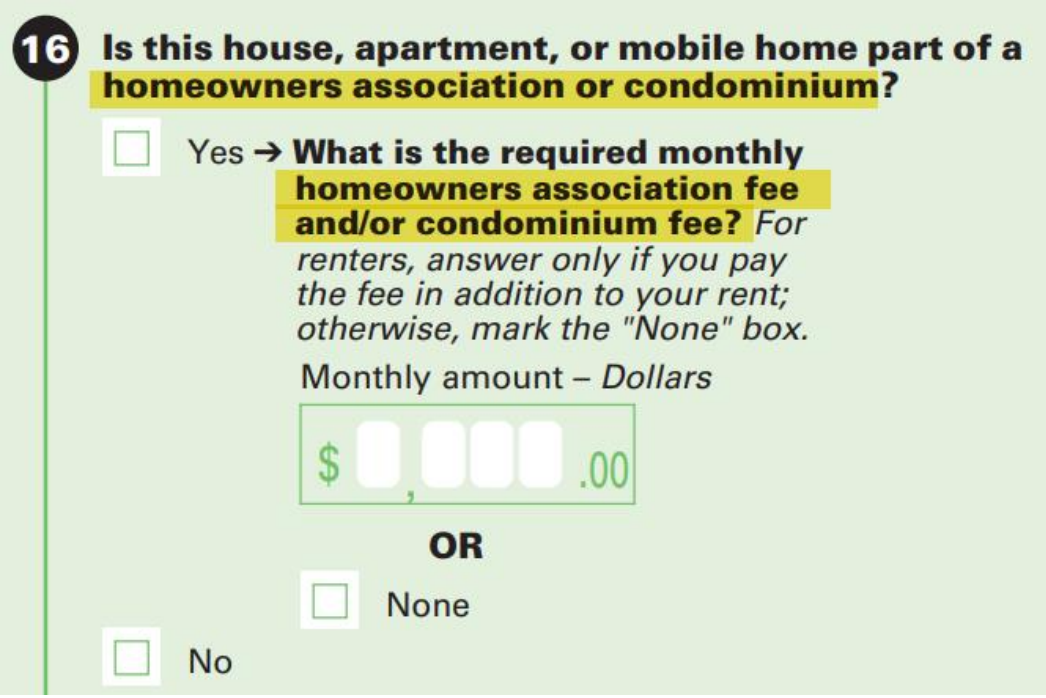
Changes to the Condominium Fees Question

2023 Question



2024 Question



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Changes to the Home Heating Fuel Question

2023 Question

13 Which FUEL is used MOST for heating this house, apartment, or mobile home?

- ☐ Gas: from underground pipes serving the neighborhood
- ☐ Gas: bottled, tank, or LP
- ☐ Electricity
- ☐ Fuel oil, kerosene, etc.
- ☐ Coal or coke
- ☐ Wood
- ☐ Solar energy
- ☐ Other fuel
- ☐ No fuel used

2024 Question

13 Which FUEL is used MOST for heating this house, apartment, or mobile home?
Mark (X) one box for the fuel used most.

- ☐ Gas: Natural gas from underground pipes serving the neighborhood
- ☐ Gas: Bottled or tank (propane, butane, etc.)
- ☐ Electricity
- ☐ Fuel oil, kerosene, etc.
- ☐ Coal or coke
- ☐ Wood
- ☐ Solar energy
- ☐ Other fuel
- ☐ No fuel used

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Changes to the Journey-to-Work Question

2023 Question

32 **How did this person usually get to work LAST WEEK?** *Mark (X) ONE box for the method of transportation used for most of the distance.*

- ☐ Car, truck, or van
- ☐ Bus
- ☐ Subway or elevated rail
- ☐ Long-distance train or commuter rail
- ☐ Light rail, streetcar, or trolley
- ☐ Ferryboat
- ☐ Taxicab
- ☐ Motorcycle
- ☐ Bicycle
- ☐ Walked
- ☐ Worked from home → *SKIP to question 40a*
- ☐ Other method

2024 Question

32 **How did this person usually get to work LAST WEEK?** *Mark (X) ONE box for the method of transportation used for most of the distance.*

- ☐ Car, truck, or van
- ☐ Bus
- ☐ Subway or elevated rail
- ☐ Long-distance train or commuter rail
- ☐ Light rail, streetcar, or trolley
- ☐ Ferryboat
- ☐ Taxi or ride-hailing services
- ☐ Motorcycle
- ☐ Bicycle
- ☐ Walked
- ☐ Worked from home → *SKIP to question 40a*
- ☐ Other method

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Changes to the Veterans Period of Service Question

2023 Question

28 **When did this person serve on active duty in the U.S. Armed Forces?** *Mark (X) a box for EACH period in which this person served, even if just for part of the period.*

- ☐ September 2001 or later
- ☐ August 1990 to August 2001 (including Persian Gulf War)
- ☐ May 1975 to July 1990
- ☐ Vietnam era (August 1964 to April 1975)
- ☐ February 1955 to July 1964
- ☐ Korean War (July 1950 to January 1955)
- ☐ January 1947 to June 1950
- ☐ World War II (December 1941 to December 1946)
- ☐ November 1941 or earlier

2024 Question

28 **When did this person serve on active duty in the U.S. Armed Forces?** *Mark (X) a box for EACH period in which this person served, even if just for part of the period.*

- ☐ September 2001 or later (Post 9/11)
- ☐ August 1990 through August 2001 (including the Persian Gulf War)
- ☐ June 1975 through July 1990
- ☐ August 1964 through May 1975 (including the Vietnam War)
- ☐ February 1955 through July 1964
- ☐ June 1950 through January 1955 (including the Korean War)
- ☐ January 1947 through May 1950
- ☐ December 1941 through December 1946 (including World War II)
- ☐ November 1941 or earlier

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Data Collection Changes for the 2024 ACS

- **Internet data collection instrument available for select non-institutional group quarters**
  - e.g., college/university student housing, group homes, military barracks, etc.

- **Using administrative records for the acreage question**
  - Question still appears on the paper questionnaire
  - Question is skipped in Internet and nonresponse follow-up data collection instruments if we have an administrative record

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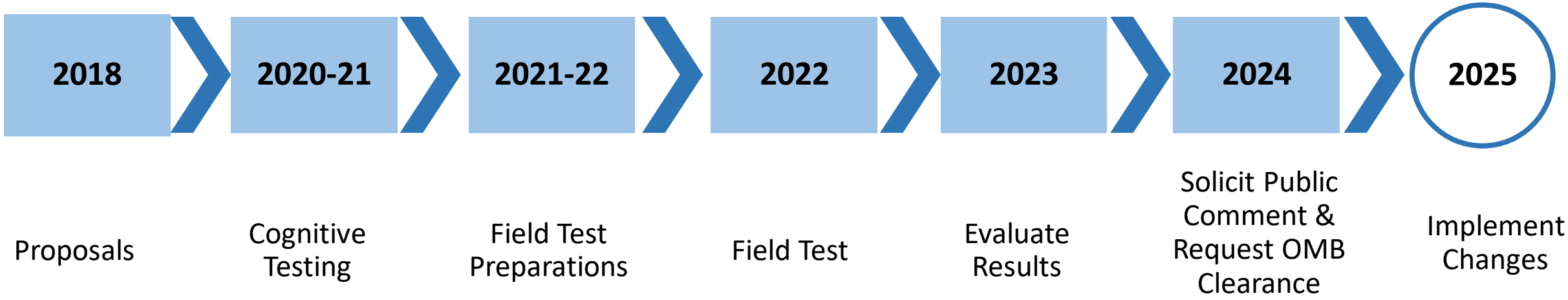
Potential Question Changes — 2022 ACS Content Test

Content Tests are conducted approximately every five years to improve quality of existing questions or test the addition of new questions.



Person Level Topics

- Household Roster
- Educational Attainment
- Health Insurance Coverage
- Disability**
- Journey to Work*
- Income/Labor Force/SNAP

Housing Topics

- **Sewer**
- **Electric Vehicles**
- **Solar Panels**

} **New Topics**

- Condo Fees*
- Home Heating Fuel*

*Not included in the field test

**Tested but not a proposed change for 2025

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Potential Question Changes — Sexual Orientation and Gender Identity (SOGI) Research

The ACS received an FY23 appropriation of $10 million to research adding questions about sexual orientation and gender identity (SOGI) to the survey

The ACS is testing:

- The feasibility of collecting SOGI information when someone provides data for someone else (i.e., proxy reporting)
- Alternative wording for the questions, placement of the questions on the survey, and response categories

The ACS SOGI test has two components:

- A self-response test of questions in the field and cognitive testing of Spanish translations of the SOGI questions
- Cognitive testing of questions began this year and reports are due by the end of 2024
- The field test began this summer and is expected to end in late 2024

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Changes to the Race Standards

- On March 28, 2024, the U.S. Office of Management and Budget (OMB) published the results of its review of Statistical Policy Directive No. 15 (SPD 15) and issued updated standards for maintaining, collecting and presenting race/ethnicity data across federal agencies

- The revisions, the first since 1997, will improve the way race and ethnicity data are collected

- The updates:
  - Use one combined question for race and ethnicity, encouraging respondents to select as many options as applicable
  - Add Middle Eastern or North African as a new minimum category, separate and distinct from the White category
  - Require the collection of detailed data on race and ethnicity beyond the minimum race and ethnicity categories, unless an agency requests an exemption
  - Updated definitions, terminology, and guidance to agencies on the collection and presentation of data

- The Census Bureau is reviewing the updated SPD 15 and discussing them within our program areas. We will keep the public informed as we develop plans to implement the changes in our censuses and surveys

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Comparing ACS Data Over Time

Things to keep in mind when comparing ACS data over time

- Changes in:
  - Geographic boundaries
  - ACS Tables
  - ACS Questions

- Compare similar period lengths (i.e., 1-year to 1-year and 5-year to 5-year)
  - Do not compare estimates from different period lengths (i.e., 1-year to 5-year)
  - Compare non-overlapping 5-year periods (e.g., 2013-2017 ACS 5-year vs 2018-2022 ACS 5-year)

- Use the margins of error and conduct statistical testing when making comparisons between estimates

census.gov/programs-surveys/acs/guidance/comparing-acs-data.html

census.gov/programs-surveys/acs/news/data-releases.html

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What is the Margin of Error (MOE)?

Definition: An MOE is a measure of the possible variation of the estimate around the population value

- At a given confidence level, the estimate and actual population value will differ by no more than the MOE
- 90% confidence level is the Census standard and ACS MOEs are provided in the same unit as the estimate
- Example:
  - Estimate of one-person households: 564,757 with an MOE of 10,127
  - Lower bound: 564,757 - 10,127 = 554,630
  - Upper bound: 564,757 + 10,127 = 574,884
- We can be 90 percent confident that the true number of one-person households falls somewhere between 554,630 and 574,884

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Statistical Testing Tool

Algebraically, the significance test can be expressed as follows:

If $\left| \frac{\hat{X}_1 - \hat{X}_2}{\sqrt{SE_1^2 + SE_2^2}} \right| > Z_{CL}$, then the difference between estimates $\hat{X}_1$ and $\hat{X}_2$ is statistically significant at the specified confidence level, CL

where $\hat{X}_i$ is estimate i (=1,2)

SE_i is the SE for the estimate i (=1,2)

Z_{CL} is the critical value for the desired confidence level (=1.645 for 90 percent, 1.960 for 95 percent, 2.576 for 99 percent).

Within Guidance for Data Users

Comparing ACS Data

Handbooks

Recorded Webinars

Subjects Included in the Survey

Statistical Testing Tool

Using ACS Data with Open-Source Software

When to Use 1-year or 5-year Estimates

Which Data Table or Tool Should I Use?

Join the ACS Data Users Group

Statistical Testing Tool

Share

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Comparing American Community Survey (ACS) estimates involves more than determining which statistic is higher or lower. Users should also conduct statistical testing to make sure differences are statistically significant and are unlikely to have occurred by chance. This testing takes into account the margin of error (MOE) associated with survey estimates, which are based on responses from a sample of the full population.

Looking for an easy way to conduct statistical testing? Try the Census Bureau's Statistical Testing Tool. Simply copy or download ACS estimates and their MOEs into the spreadsheet to get instant results of statistical tests.

Download Statistical Testing Tool [2.4 MB]

Related Information

VIDEO

Population Reference Bureau: Assessing ACS Reliability

RANDOM SAMPLINGS BLOG

Using Census Bureau Data Made Easier: New Statistical Testing Tool

Tool Features:

- Compares up to 3,230 pairs of estimates at once
- Compares multiple estimates simultaneously (up to 150 estimates)
- Displays statistical testing results ("Yes", "No") automatically
- Handles special formatting and characters, such as the '±' in front of the MOE, without additional editing by the data user
- Uses the Census Bureau's standard 90% confidence level, but can also process statistical testing at 95% or 99% confidence levels
- May be used to conduct statistical testing for other Census Bureau surveys

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census.gov/programs-surveys/acs/guidance/statistical-testing-tool.html

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ACS Products and Tools That Aid With Comparisons

Comparison Profiles (CPs)

- Show ACS data side-by-side from different data releases, indicating where there is a statistically significant difference between estimates
- Include social, economic, housing and demographic characteristics
- 1-year CPs show data side-by-side for 5 years
  - Indicate statistically significant differences between the most current year compared to 4 prior years of data
  - Available for populations of 65,000 or more for most available geographic areas
- 5-year CPs show data side-by-side from two consecutive non-overlapping 5-year periods
  - Indicate statistically significant differences between the 2 periods
  - Available for the nation, states, counties, places, and metropolitan/micropolitan statistical areas with populations of 5,000 or more
- Available in data.census.gov and the API (CP02, CP03, CP04, CP05)

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census.gov/programs-surveys/acs/data/data-tables.html

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ACS 1-Year Comparison Profile

CP02 | Comparative Social Characteristics in the United States

American Community Survey | 2023: ACS 1-Year Estimates Comparison Profiles

Notes | Geos | Topics | Codes | Dataset | Year | Columns | Transpose | Restore | Excel | CSV | ZIP | Cite | More Tools

Please note that American Community Survey 1-Year estimates are published for geographies with a population of 65,000 or more. For more information, see the guidance for when to use 1-year or 5-year estima

Label	Cayuga County, New York				
	2023 Estimate	2022 Estimate	2023 - 2022 Statistical S...	2021 Estimate	2023 - 2021 Statistical S...
EDUCATIONAL ATTAINMENT					
Population 25 years and over	55,059	55,029		56,124	*
9th to 12th grade, no diploma	6.1%	8.6%		8.8%	*
High school graduate (includes equivalency)	32.4%	30.0%		30.0%	
Some college, no degree	16.8%	16.3%		18.3%	
Associate's degree	15.2%	14.9%		15.2%	
Bachelor's degree	13.4%	14.9%		13.0%	
Graduate or professional degree	12.2%	11.7%		10.5%	
High school graduate or higher	90.1%	87.8%		86.9%	*
Bachelor's degree or higher	25.6%	26.7%		23.5%	
VETERAN STATUS					
Civilian population 18 years and over	60,363	60,921	*	61,598	*

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data.census.gov/all?d=ACS%201-Year%20Estimates%20Comparison%20Profiles

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ACS 5-Year Comparison Profile

All | **Tables** | Maps | Profiles | Pages

CP02 | Comparative Social Characteristics in the United States

American Community Survey | 2022: ACS 5-Year Estimates Comparison Profiles

Notes | Geos | Topics | Codes | Dataset | Year | Columns | Transp

Label	Albany County, New York		
	2018-2022 Estimates	2013-2017 Estimates	Statistical Significance
MARITAL STATUS			
Males 15 years and over	129,318	125,140	*
Never married	44.4%	45.5%	*
Now married, except separated	43.7%	42.7%	
Separated	1.1%	1.6%	*
Widowed	2.8%	2.5%	
Divorced	7.9%	7.8%	
Females 15 years and over	138,752	136,048	*
Never married	39.2%	39.3%	
Now married, except separated	40.4%	39.6%	
Separated	1.3%	1.9%	*
Widowed	8.2%	9.1%	*
Divorced	10.8%	10.1%	

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data.census.gov/all?d=ACS%205-Year%20Estimates%20Comparison%20Profiles

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ACS Products and Tools That Aid With Comparisons (Cont'd)

Ranking Tables

- Provide state-level rankings on approximately 90 key ACS variables
- Include social, economic, housing and demographic characteristics
- Available for the Nation, states, District of Columbia, and Puerto Rico
- Available on the ACS website for ACS 1-year releases only

Geographic Comparison Tables

- Allow users to compare ACS data across geographic areas in the same table (e.g., all counties in a state)
- Available for states, metropolitan/micropolitan statistical areas, cities, counties, congressional districts, and several other geographic areas
- No statistical testing included
- Available on the ACS website

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census.gov/programs-surveys/acs/data/data-tables.html

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ACS Ranking Table

Table ID:	R1502			
Table Name:	PERCENT OF PEOPLE 25 YEARS AND OVER WHO HAVE COMPLETED A BACHELOR'S DEGREE			
Select a Geography:	New York	<--- SELECT YOUR GEOGRAPHY		
Estimate:	40.6	The Estimate and MOE are automatically		
Margin of Error:	+/-0.3	filled in once Geography is selected.		

RANK	GEOGRAPHY	ESTIMATE	MARGIN_OF_ERROR	STATISTICAL_SIGNIFICANCE
	United States	36.2	+/-0.1	Significantly Different
1	District of Columbia	65.9	+/-1.4	Significantly Different
2	Massachusetts	47.8	+/-0.4	Significantly Different
3	Colorado	46.4	+/-0.5	Significantly Different
4	New Jersey	43.8	+/-0.3	Significantly Different
5	Maryland	43.7	+/-0.5	Significantly Different
5	Vermont	43.7	+/-1.2	Significantly Different
7	Connecticut	42.9	+/-0.6	Significantly Different
8	Virginia	42.4	+/-0.4	Significantly Different
9	New Hampshire	40.7	+/-1.0	Not Significantly Different
10	New York	40.6	+/-0.3	Geography Selected
11	Washington	40.5	+/-0.4	Not Significantly Different
12	Minnesota	40.0	+/-0.4	Significantly Different
13	Rhode Island	39.0	+/-1.2	Significantly Different
14	Utah	38.4	+/-0.6	Significantly Different

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.census.gov/programs-surveys/acs/data/data-tables.html

The American Community Survey

New Data User Resources

ACS webinars

- January 17 – Best Practices When Using ACS Data
- February 28 – Comparing the ACS to the Household Pulse Survey
- March 13 – Comparing Health Insurance Data from the ACS and the SAHIE Program
- May 8 – Comparing Race and Ethnicity Data from the ACS and 2020 Census
- May 22 – Native Hawaiian and Other Pacific Islander Data and the ACS
- June 20 – Using Public Data to Make Decisions
- July 25 – Services in the U.S.
- August 28 – Introduction to the ACS

ACS course – Discovering the American Community Survey

- Module 1 – Introduction to the ACS
- Module 2 – Geography and the ACS
- Module 3 – Mastering the Variety of ACS Data Products; Navigating Releases, Tables, and Profiles
- Module 4 – Guidance for ACS Data Users
- Module 5 – Unlocking the ACS Summary File and Public Use Microdata Sample Files

census.gov/programs-surveys/acs/news/events.html

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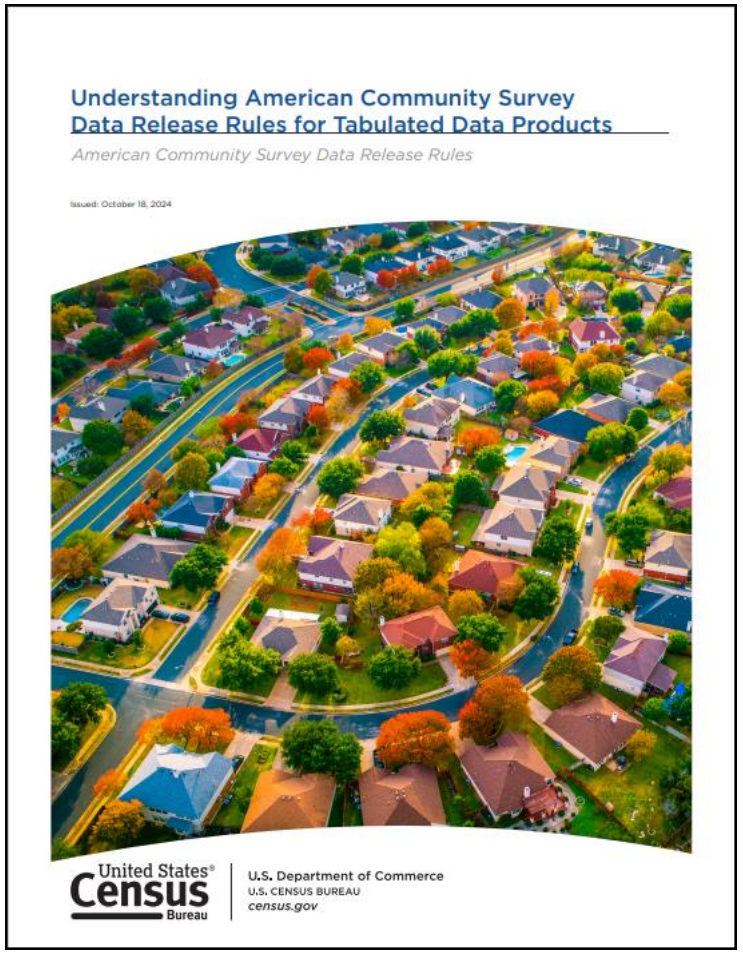
New Data User Resources (Cont'd)

ACS Data Release Rules report

- Developed in response to data user feedback
- Replaces previous data suppression document
- Provides data users with suggested strategies when they cannot find data of interest



census.gov/programs-surveys/acs/technical-documentation/data-suppression.html

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Share Your ACS Data Story

census.gov/acs-data-stories

JOIN THE
ACS DATA USERS GROUP

acsdatacommunity.prb.org

Sign Up for Email Updates

public.govdelivery.com/accounts/USCENSUS/signup/12426

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Thank you!

ACSO Customer Support:
acso.users.support@census.gov

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