Use of Demographic Data by Congress

How relevant are demographic data to the work conducted by GAO for the US Congress?

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Outline

- What is the GAO and ARM
 - Collaboration between GAO and PAA
- Demographic data that are the focus of this presentation: CPS and ACS
- Summary of GAO reports relying on CPS and ACS over the past 5 years
- Examples of GAO studies
 - Overview of findings
 - Use of GAO findings by demographers
- Conclusion

GAO: Congressional Watchdog

• The U.S. Government Accountability Office (GAO) is an independent, nonpartisan agency that works for Congress. GAO investigates how the federal government spends taxpayer dollars and provides Congress timely information that is objective, fact-based, nonpartisan, nonideological, fair, and balanced. We advise Congress and the heads of executive agencies about ways to make government more efficient, effective, ethical, equitable and responsive.





We support congressional oversight by

- -- auditing agency operations to assess whether federal funds are being spent efficiently & effectively;
- -- reporting on how well programs and policies meet their objectives;
- -- performing policy analyses and outlining options for congressional consideration;

Our work leads to laws and acts that improve government operations, saving billions in tax dollars.

ARM: Methodological Consultants

- The Applied Research and Methods (ARM) Group is made up of professionals with expertise in designing and executing appropriate methodologies that help GAO reports and other documents improve government operations. ARM staff provide timely and objective support to GAO teams and sometimes write their own GAO reports.
- ARM consists of
 - Center for Design Methods, and Analysis
 - Center for Economics
 - Center for Enhanced Analytics
 - Center for Evaluation Methods and Issues
 - Center for Science, Technology, and Engineering.
- The Centers offer expertise in areas including cost analysis, research design, economics, data analysis, evaluation, science, statistics, surveys, technology, engineering, IT security, actuarial science, and accounting.



ARM and PAA

- Collaboration to bring in speakers to talk about research relevant to the work GAO does
- This helps keep the knowledge of ARM staff and analysts current which improves the quality of GAO reports
- Opportunity for one-on-one meetings





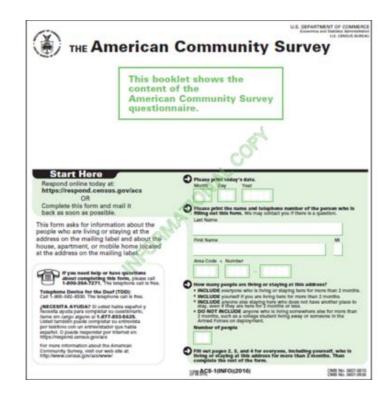
Key Demographic Data Sets: CPS

- The Current Population Survey (CPS) is the primary source of monthly labor force statistics for the population of the United States and is used to collect data for a variety of other studies on economic and social well-being
- CPS is sponsored jointly by the U.S. Census Bureau and the U.S. Bureau of Labor Statistics (BLS). The Census Bureau administers the CPS monthly to approximately 60,000 households and the BLS is responsible for analyzing and publishing the CPS labor force data.
- CPS includes supplemental questions on subjects of interest to labor market analysts such as annual work activity and income, veteran status, school enrollment, contingent employment, and job tenure.



Key Demographic Data Sets: ACS

- The American Community Survey is a nationwide survey designed to collect reliable and timely demographic, housing, social, and economic data every year.
- In 2013, the ACS sample consisted of about 3.54 M housing unit addresses.
- The questions asked in the census and ACS are determined by statistics needed to implement various different federal programs.
- Conducting the ACS is covered by the constitution. After the 2000 Census, the ACS replaced the Census long form. It includes the basic short-form questions and detailed questions about population and housing characteristics.
- Many federal agencies use ACS estimates to inform public policymakers, distribute funds, and assess programs.



GAO Reports Using CPS Data

- 206 publications since 2005
 - 153 Reports
 - 24 Testimonies
 - 24 Comptroller General Presentations
 - 5 Other

GAO Reports Using CPS Data: Topics

- Auditing and Financial Management (4)
- Budget and Spending (6)
- Business Regulation and Consumer Protection (3)
- Financial Markets and Institutions (2)
- Government Operations (9)
- Tax Policy and Administration (6)

GAO Reports Using CPS Data: Topics

- Health Care (38)
- Employment (34)
- Retirement Security (26)
- Worker and Family Assistance (19)
- Education (9)
- Housing (2)
- Disclaimer: These report don't all directly analyze CPS data but may refer the readers to studies or reports that rely on CPS data

GAO Reports Using ACS Data

- 158 publications since 2005
 - 125 Reports
 - 27 Testimonies
 - 6 Other

GAO Reports Using ACS Data: Topics

- Health Care (24) (19 involve GAO analyzing ACS data)
- Employment (7)
- Worker and Family Assistance (10)
- Economic development (13)
- Education (11)
- Housing (11)
- Justice and Law Enforcement (9)
- Disclaimer: These report don't all directly analyze ACS data but may refer the readers to studies or reports that rely on CPS data

Examples of Reports

- Medicaid: Key Issues Facing the Program. GAO-15-677: Publicly Released: Jul 30, 2015.
- Medicaid: Alternative Measures Could Be Used to Allocate Funding More Equitably. GAO-13-434: Published: May 10, 2013
- Medicaid Third-Party Liability: Federal Guidance Needed to Help States Address Continuing Problems GAO-06-862: Publicly Released: Oct 17, 2006.
- Indian Health Service: Most American Indians and Alaska Natives Potentially Eligible for Expanded Health Coverage, but Action Needed to Increase Enrollment. GAO-13-553: Publicly Released: Sep 5, 2013
- Medicaid: Additional Federal Action Needed to Further Improve Third-Party Liability Efforts. GAO-15-208: Publicly Released: Feb 10, 2015
- Unemployment Insurance: Economic Circumstances of Individuals Who Exhausted Benefits GAO-12-408: Publicly Released: Feb 17, 2012
- Contingent Workforce: Size, Characteristics, Earnings, and Benefits GAO-15-168R: Publicly Released: May 20, 2015.
- Federal Low-Income Programs: Multiple Programs Target Diverse Populations and Needs GAO-15-516: Publicly Released: Aug 31, 2015.
- U.S. Labor Force Statistics: Illustrative Simulations of the Likely Effects of Underrepresenting Unauthorized Residents. GAO-10-99: Publicly Released: Dec 7, 2009.
- Retirement Security: Trends in Marriage and Work Patterns May Increase Economic Vulnerability for Some Retirees. GAO-14-33: Released: Feb 26, 2014

Summary of Studies Using CPS or ACS Data

- CPS and ACS data can be used to estimate number of persons with Medicaid coverage who also have private health coverage.
- 2. ACS-IPUMS data can be used to estimate number of American Indian/Alaskan Natives eligible for heath care under Obamacare
- 3. Better demographic data needed to show LM trends since the defunding of Contingent Work Supplement of the CPS in 2005
- 4. CPS data can be used to study effects of federal programs on poverty
- 5. CPS data can be used to study the impact of underrepresented foreign born persons on labor statistics such as the unemployment rate
- CPS and SIPP data can be used to demonstrate Increased vulnerability of Dual-Income HHs in terms of receipt of survivor benefits

1. Health Care:

GAO Analyzes CPS data to illustrate program challenges. 2006 and follow-up study in 2015

 Congress intended Medicaid to be the payer of last resort: if Medicaid beneficiaries have another source of health care coverage--such as private health insurance --that source should pay before Medicaid does.

Sources:

Medicaid Third-Party Liability: Federal Guidance Needed to Help States Address

Continuing Problems GAO-06-862: Publicly Released: Oct 17, 2006.

Medicaid: Additional Federal Action Needed to Further Improve Third-Party

Liability Efforts. GAO-15-208: Publicly Released: Feb 10, 2015

Findings

- 2006 Findings: Based on self-reported health coverage information from CPS, 2002 2004, 13% of respondents who reported having Medicaid coverage for the entire year also reported having private health coverage at some time during the same year. This coverage most often was obtained through employment rather than purchased directly from an insurer: employment-based coverage averaged 11% nationwide, while individual coverage averaged 2%.
- 2015 Findings: Based on responses to the 2012 U.S. Census Bureau's American Community Survey (ACS), GAO estimates that 7.6 million Medicaid enrollees (13.4 percent) had private health insurance in 2012.

Results: 10 Years Later and Things Still Look the Same

Estimated Prevalence of Private Health Insurance among Medicaid Enrollees by Eligibility Category, 2012

Percentage 40 34.6 35 30 25 20 15 13.4 13.2 12.4 10 8.4 5 Children Adults Disabled Aaed ΑII enrollees

Note: This follow-up study relied on ACS instead of CPS data. However, to assess the reliability of the ACS PUMS data, GAO compared the results to estimates based on data from the Current Population Survey.

Medicaid eligibility category

Source: GAO analysis of 2012 U.S. Census Bureau data. | GAO-15-208

2. Health Care:

GAO Analyzes ACS-IPUMS data to illustrate program challenges

- GAO examined data to estimate the number of American Indians and Alaska Natives (AIAN) potentially eligible for expanded Medicaid and new coverage options made available in 2014.
- Used an augmented version of the American Community Survey 2009-2011 data, the Integrated Public Use Microdata Series.
- GAO estimated:
 - Total number of AIAN potentially eligible under provisions of PPACA applicable in 2014;
 - Number of AIAN who reported being currently enrolled;
 - Potential new enrollment, calculated by determining the number of individuals who will be newly eligible for expanded Medicaid and some who may be eligible now, but did not report to ACS as being currently enrolled

Source: Indian Health Service: Most American Indians and Alaska Natives Potentially Eligible for Expanded Health Coverage, but Action Needed to Increase Enrollment. GAO-13-553: Publicly Released: Sep 5, 2013.

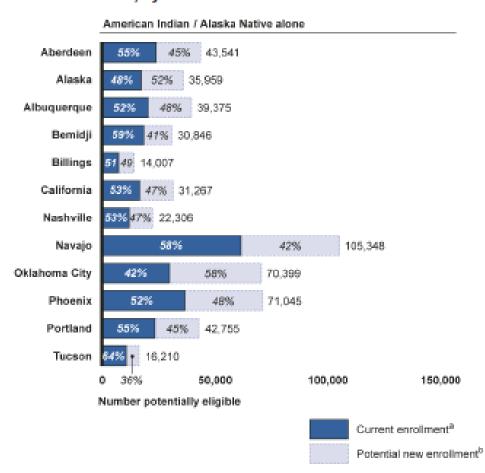
Conclusions, 2013 Study

- GAO estimated that most American Indians and Alaska Natives would be potentially eligible for either expanded or new coverage options created by the Patient Protection and Affordable Care Act (PPACA).
- GAO estimated that potential new enrollment could include about a quarter of the AIAN population so decisions by states to expand Medicaid would affect a large proportion of AIAN.
- For the Exchanges, GAO found that more than one-third of American Indians and Alaska Natives are potentially eligible for premium tax credits in the Exchanges—which help offset the cost of premiums for low-income individuals

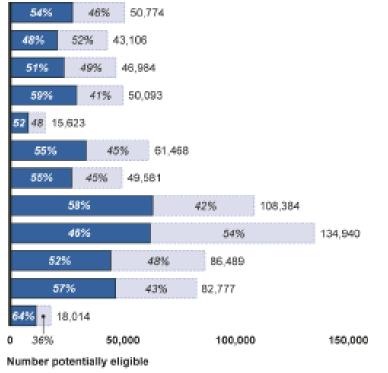
Example of Results

Figure 3: Estimates of the Number and Percentage of American Indians and Alaska Natives Potentially Eligible for Expanded Medicaid in 2014, by IHS Service Area

Source: GAO analysis of U.S. Census Bure



American Indian / Alaska Native alone or in combination with another race.



Notes: Data are from 2009-2011 American Community Survey (ACS) 3-year estimates.

Our estimates are based on the assumption of all states opting to expand Medicaid. While some states have indicated they do not intend to participate, they may opt to do so at a later date. We did not predict the number of people who will participate in this program, commonly referred to as the take-up rate.

Because the number of IHS-eligible individuals is likely to be between the number of individuals who self-identify as American Indians and Alaska Natives alone and American Indians and Alaska Natives alone or in combination, we presented results for both groups as the range. We excluded foreign-born American Indians and Alaska Natives from our analysis.

The estimates we present have relative standard errors of less than 15 percent.

"We use the term "current enrollment" to refer to estimated enrollment based on responses to the 2009-2011 ACS.

e.g., tens of thousands of AIAN would be affected by the state of OK's decision not to expand its Medicaid program.

3. Employment: Better demographic data needed to show LM trends

- More workers are contingent workers with potentially limited access to work-provided health insurance and retirement benefits and coverage under key workforce protection laws.
- The only comprehensive source of information about contingent workers, the **Contingent Work Supplement (CWS) of the CPS**, has not been administered in 10 years (since 2005).
- BLS receives many requests for data on contingent workers. BLS requested funding each year from 2012-2016 to conduct the CWS but has not received funding. In its FY2016 budget request, BLS asked for funding to conduct the CWS every 2 years.

Source: Contingent Workforce: Size, Characteristics, Earnings, and Benefits GAO-15-168R: Publicly Released: May 20, 2015.

Data Sources to Analyze Trends in Contingent Workers

There are other surveys, but they collect less detailed information or may be less statistically robust. These limitations could make identifying emerging trends difficult.

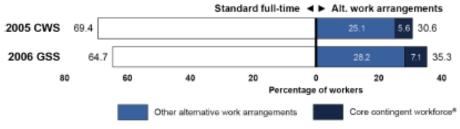
- CPS basic household survey, various months and years
- CPS Contingent Work Supplement, 1995, 1999, 2005
- CPS Disability Supplement, 2012
- CPS Annual Social and Economic Supplement, 2012
- Current Employment Statistics (CES), various years
- Occupational Employment Statistics (OES), various years
- General Social Survey (GSS) by NORC at the University of Chicago, 2006 and 2010
- Survey of Income and Program Participation (SIPP), 2004 and 2008

Employment: Results of Study of Contingent Workers

Summary Comparison of Alternative Work in the CWS and GSS

As roughly comparable surveys (see sidebar), the 2005 CWS and 2006 GSS each categorized about one third of employed respondents in alternative arrangements—30.6 percent and 35.3 percent, respectively (see fig. 1). The types of work that we label core contingent also represented similar proportions—5.6 percent of employed respondents in the 2005 CWS and 7.1 percent of those in the 2006 GSS (see fig. 1).

Figure 1: Alternative Work Arrangements in the 2005 Contingent Work Supplement (CWS) and 2006 General Social Survey (GSS)



Source: GAO analysis of data from the 2005 Contingent Work Supplement to the Current Population Survey and from the 2005 General Social Survey. | GAO-15-168R

Note: Proportions may not add up to 100 percent due to rounding. Each estimate has a 95 percent confidence interval of within +/- 3.0 percentage points.

Other Measures: CES

Despite minimal coverage of alternative work arrangements and lack of comparability with the CWS, the monthly CES data enable analysis of trends over time and show how temporary help employment fluctuates with conditions in the overall economy (see sidebar). While the number of temporary help jobs has varied over the past two decades, the industry has remained a relatively consistent proportion of the employed labor force (nonfarm)—roughly 1.5 to 2.0 percent of jobs (see fig. 2).

Figure 2: Temporary Help Services Industry as a Percentage of Total Nonfarm Employment

Source: GAO analysis of data from the Current Employment Statistics. | GAO-15-168R

Note: Each estimate has a 95 percent confidence interval of within +i-0.2 percentage points. This confidence interval is based on the largest standard error reported from 2003-2014 because comparable pre-2003 standard errors were not available.

CES data also show that employment swings in temporary help are cyclical; job numbers decrease during recessions at a higher rate than overall employment, and grow faster in recoveries (see enclosure II).

^{*} Core contingent includes agency temps, direct-hire temps, contract company workers, on-call workers, and day laborers.

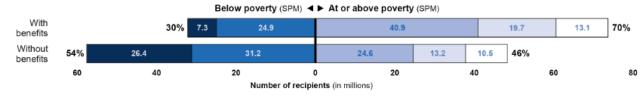
4. Family Assistance: CPS data to study effects of federal programs on poverty

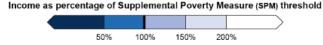
- GAO estimated that 1/3 of the U.S. population (106M) received benefits from at least one of the 8 federal low-income programs: Additional Child Tax Credit, EITC, SNAP, SSI, and 4 others.
- Without these programs' benefits, GAO estimated that 25M of these recipients would have been below SPM poverty threshold.
- EITC and SNAP moved the most people out of poverty.
- The majority of recipients were estimated to have incomes above the SPM threshold after receipt of benefits.

Federal Low-Income Programs: Multiple Programs Target Diverse Populations and Needs GAO-15-516: Publicly Released: Aug 31, 2015.

Results of GAO Study of the Effects of Federal Programs on Poverty

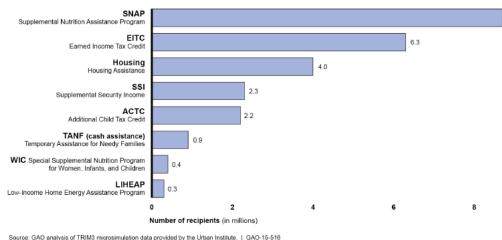
Figure 10: Estimated Effect of Combined Benefits of Eight Selected Federal Low-Income Programs on Income Groups of Individual Participants, According to the Supplemental Poverty Measure (SPM), 2012





Source: GAO analysis of TRIM3 microsimulation data provided by the Urban Institute. | GAO-15-518

Figure 12: Estimated Millions of People Who Moved above the Supplemental Poverty Measure Threshold Due to Benefits from Each of Eight Selected Federal Programs, 2012



Note: Programs included in this analysis are the Additional Child Tax Credit, Earned Income Tax Credit, housing assistance (which could be from federal, state, or local programs), Low-Income Home Energy Assistance Program, Supplemental Nutrition Assistance Program, Supplemental Security Income, Temporary Assistance for Needy Families cash assistance, and Special Supplemental Nutrition Program for Women, Infants, and Children.

Receipt of assistance is assigned based on TRIM3 modeling, which adjusts the Census Bureau's Current Population Survey data for underreporting of program benefit receipt using program eligibility rules. This figure counts individual program recipients, categorized according to their household's income relative to its SPM threshold. SPM households include related and certain unrelated individuals who live together, including cohabiting partners and foster children, and may consist of a single person. SPM income includes a household's earned and unearned cash, Social Security, other retirement income, disability and unemployment insurance, state and local general assistance, plus the value of noncash benefits from the low-income programs listed in the figure as well as others (e.g., the National School Lunch Program), minus necessary expenses (e.g., medical, taxes and work-related). The SPM poverty threshold is based on current expenditures on food, clothing, geographically-adjusted housing, and utilities. To simulate the effects of program benefits on recipient income levels, we subtracted the benefits that all household members received from these eight programs combined, then recalculated the household's income relative to its SPM threshold. Each estimate in this figure has a 95 percent confidence interval of within +/- 5 percent of the estimate

GAO Report Informs Outside Research

The report uses the same data source as, and methods similar to, a Government Accountability Office (GAO) report released in 2015 (U.S. Government Accountability Office, Federal Low-Income Programs, Multiple Programs Target Diverse Populations and Needs, GAO 15-516, July 2015)....This report complements the information in the GAO report, providing further analysis of benefit receipt from specific need-tested programs.

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Federal Publications	Key Workplace Docume
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	: Estimated Eligibility and milies and Individuals
Gene Falk Congressional Research Service	
Alison Mitchell Congressional Research Service	
Karen E. Lynch Congressional Research Service	
Maggie McCarty Congressional Research Service	
William R. Morton	
Congressional Research Service	
See next page for additional authors	

Falk, G., Mitchell, A., Lynch, K. E., McCarty, M., Morton, W. R., & Crandall-Hollick, M. L. (2015). *Need-tested benefits: Estimated eligibility and benefit receipt by families and individuals* (CRS Report R44327). Washington, DC: Congressional Research Service.

5. Employment:

CPS data to study the impact of under-represented foreign born persons on labor statistics

- Policymakers rely on labor force statistics, such as the unemployment rate, to provide information on the current state of the economy. These statistics include key figures that are based on data obtained from the Current Population Survey (CPS).
- The CPS is designed to represent the entire United States civilian non-institutional population.
- Foreign-born persons who are not authorized to live here may not be represented in CPS data to the same extent as the general population.
- The GAO study looked at whether the potential underrepresentation of the unauthorized population affects labor statistics.

Source: U.S. Labor Force Statistics: Illustrative Simulations of the Likely Effects of Underrepresenting Unauthorized Residents. GAO-10-99: Publicly Released: Dec 7, 2009.

Data and Methods

GAO conducted two sets of simulations for March 2008:

- 1st set of simulations: Underrepresentation varied from 10 to 15 percent and unemployment rates for the unauthorized residents not represented in the data varied from 6.5 to 8.5 percent.
- Result: Simulated unemployment rates fell within the margin of error of BLS's reported rate (5.24 percent, +/-0.17 percent)
- 2nd set of simulations: Underrepresentation ranged from 0 to 50 percent and unemployment rates varied from 0 to 50 percent to test the robustness of the initial results.
- Result: Only assumptions considerably more extreme than the ranges suggested by experts produced simulated unemployment rates that fell outside BLS's margin of error.

Results

- GAO's simulations showed that adding unauthorized residents not represented in CPS data would likely have a minimal effect on the overall U.S. unemployment rate.
- It is possible that adding such residents would increase the estimated size of the national labor force and the estimated number of persons employed nationally.
- Updated simulations using national labor force statistics for June 2009 revealed similar effects.

Finding 3: Possible Effects (March 2008) Figure 1: Simulated U.S. Unemployment Rates after Including Unauthorized Residents Assumed Not Represented in CPS Data, March 2008 Simulated U.S. unemployment rate (percent) 7.50 UUR: 50% Assumptions notably more extreme than ranges suggested by experts UUR: 40% 6.75 produced simulated URs outside BLS's UUR: 30% margin of error. 6.00 UUR: 20% UUR: 15% 5.41 UUR: 6.5% Assumed underrepresentation of unauthorized residents (percent) Simulations resulting from assumed underrepresentation and unemployment rates among the unauthorized that are within the range provided by experts (first set of simulations) Simulations resulting from assumptions more extreme than experts suggested (second set of simulations) The shaded area is the 90% confidence interval around the BLS unemployment rate of 5.24% Assumed unemployment rate among unauthorized residents Source: GAO simulations based on reported BLS statistics and expert assumptions 21

GAO recalculated US UR using various assumptions about

- (1) the underrepresentation of unauthorized residents
- (2) unemployment rate of those who were not represented.

Implications

- Although the overall unemployment rate appears not to be sensitive to possible underrepresentation of unauthorized residents, other labor force statistics (such as the size of the labor force) could be.
- Fuller representation of unauthorized residents in the CPS and other surveys would improve the accuracy of some labor force statistics.
- Fuller representation might be especially important in states with high concentrations of unauthorized residents, where underrepresentation may produce pronounced effects on labor force statistics.

GAO Study on CPS Underrepresentation of Unauthorized Residents Cited by Demographers

- Parrado, Emilio A. "How high is Hispanic/Mexican fertility in the United States? Immigration and tempo considerations." *Demography* 48.3 (2011): 1059-1080.
- Woodrow-Lafield, Karen A. "A Sociology of Official Unauthorized Statistics: Estimation or Guesstimation?." Opportunities and Challenges for Applied Demography in the 21st Century. Springer Netherlands, 2012. 49-80.

6. Retirement Security:

CPS to Study Relationship between Trends in Marital Status and Vulnerability at Retirement

- Marriage has historically helped protect the financial health of couples and surviving spouses in old age. Spouses may receive retirement and survivor income through Social Security and some employer-sponsored pension plans.
- GAO analyzed nationally representative survey data including the Survey of Consumer Finances, the Survey of Income and Program Participation (SIPP), and the Current Population Survey (CPS);
- Recent Trends:
 - Decline in the receipt of spousal and survivor benefits
 - Married women contribute more to household retirement savings
 - Marriage has become less common and
 - More households have two earners rather than one

Source: Retirement Security: Trends in Marriage and Work Patterns May Increase Economic Vulnerability for Some Retirees. GAO-14-33: Publicly Released: Feb 26, 2014

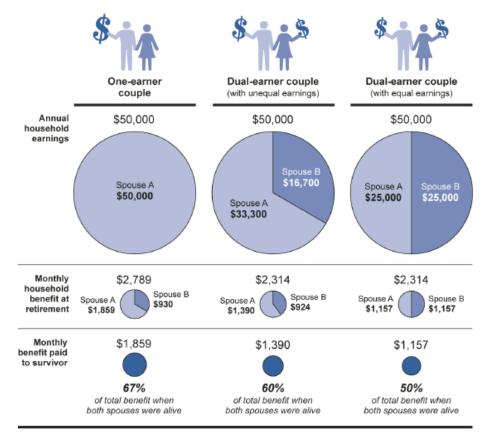
Data Sources

Objective	Data sources
Objective 1: Trends in marriage and labor force participation	Census Bureau and Bureau of Labor Statistics reports
	 Integrated Public Use Microdata Series (consisting of decennial Census data and American Community Survey data)
	 Survey of Income and Program Participation public-use data
Objective 2: Receipt of spousal benefits and household retirement savings behavior	 Survey of Income and Program Participation public-use and restricted-use Gold Standard data
	Survey of Consumer Finances
Objective 3: Implications of these trends for future retirement security	Modeling Income in the Near Term model
	SSA actuarial estimates

Source: GAO.

Implications of Trends in Dual Earner Households for Retirement and Survivor Income, GAO Calculations





Source: Social Security Administration data and GAO calculations.

Notes: Estimates assume that (1) the monthly equivalent of these annual earnings equals the individual's average indexed monthly earnings used to calculate Social Security benefits; (2) all individuals retire at age 66 in 2013; and (3) there are no cost of living adjustments reflected after the initial benefit is taken at retirement.

Increased vulnerability of Dual-Income HHs:

The more similar two spouses' earnings, the less likely the survivor is to receive a widow(er) benefit. Three hypothetical couples with the same level of preretirement income, but different earnings ratios, will have very different levels of survivor benefits.

- One-earner couple: Survivor receives \$1,859 per month—or two-thirds of the previous household benefit at retirement.
- <u>Dual-earner couple with unequal</u> earnings: Survivor receives 60 %
- <u>Dual-earner couple with equal earnings</u>: Survivor receives just 50%— much less than some measures of what a single person needs to live on.

Cites: Retirement Security: Trends in Marriage and Work Patterns May Increase Economic Vulnerability for Some Retirees. GAO-14-33: Publicly Released: Feb 26, 2014

Tamborini, Christopher R., and Patrick Purcell.
"Women's Household Preparation for
Retirement at Young and Mid-Adulthood:
Differences by Children and Marital Status."

Journal of Family and Economic Issues (2015):
1-16.

Conclusion

- Demographic data are of critical importance to the work GAO does
- GAO has made recommendations on how federal agencies should use demographic data to improve their operations. For example: Medicaid: Key Issues Facing the Program. GAO-15-677: Publicly Released: Jul 30, 2015.
- GAO also analyzes demographic data to make estimates about how efficiently programs are being operated