
Small Populations in the American Community Survey Working Group Report

August 2014

Prepared for:
US Census Bureau

Prepared by:
National Advisory Committee on Racial, Ethnic and Other Populations (NAC)
Working Group on Small Populations in the American Community Survey (ACS)

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The National Advisory Committee on Race, Ethnic, and Other Populations (NAC) Working Group on Small Populations in the American Community Survey is pleased to submit this final report. The collection of data from households of relatively small populations is a challenge and the working group was formed to make recommendations to the Census Bureau's ACS Office. The Census Bureau's leadership and commitment to achieving accurate and reliable estimates for small and emerging populations is greatly appreciated.

Throughout this process the ACS Office staff has been very generous with their time and expertise. We would like to thank Jim Treat for his leadership and support. Together with his capable staff—Tasha Boone, Cheryl Chambers and Shelley Walker—they offered their guidance and assistance with accessing materials on the ACS and arranging meetings with Subject Matter Experts (SMEs) on substantive issues pertaining to the ACS. The Office of External Engagement (OEE) also played an extremely important role with communication and coordination of Working Group activities. We would not have accomplished our mission without the leadership and support of Jeri Green and her staff—Kimberly Collier and Tom Loo at the OEE. They too were generous with their time and helped to coordinate various meetings and preparations for the NAC meetings.

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Sela V. Panapasa, *Convener*
Working Group on Small Populations
in the American Community Survey

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1. BACKGROUND

The Census Bureau is interested in developing research and effective outreach strategies to address the challenges and problems with producing reliable estimates for small populations as part of the American Community Survey (ACS). The primary concern surrounding Small Population (SP) data in the ACS is the demand for quality data balanced against the high cost of collecting robust data for ACS SP respondents compared to large population respondents. It is well established that a failure to collect accurate and representative data about SPs negatively impacts ACS estimates. Data users, researchers, policy makers and local stakeholders with an interest in SPs depend on accurate data on the characteristics of these understudied and often overlooked groups within the total US population. We fully concur with the conclusion of the 2012 National Academies of Sciences report (p. 3), which stated, “Anything less does not do justice to the spirit in which the ACS was created to produce accurate and reliable estimates of the characteristics of the entire US population (SP included), including small areas.”

From Working Group Charter (12/31/2012)

The American Community Survey (ACS) is a relatively new survey conducted by the U.S. Census Bureau. It collects data monthly and produces annual five-year period estimates for small geographic areas (census tracts and block groups) and small population groups. Prior to the 2010 Decennial Census, these data were provided through the decennial census long-form sample. The ACS small area and small population estimates span a five year period, the first five-year estimates, covering 2007-2011 were released in December 2012.

Important characteristics of the ACS Small Populations:

- The ACS is a nationwide monthly survey designed to provide communities with reliable and timely demographic, housing, social, and economic data every year. For SP such information is made available over 5-year intervals;
- The ACS is mandatory and replaced the 2010 Census long form by collecting and reporting detailed information throughout the decade;
- The basic design of the ACS involves self-enumeration through 4 modes of data collection—Internet, Mail, Telephone, In-Person Follow-up;
- Survey questionnaires are mails every month to a random sample of approximately FY2011 levels— 3.54 million households per year;
- Responding to the ACS questionnaire is required by law, as is responding to the decennial census;
- For rural areas, urban neighborhoods, census tracts, block groups, and population groups of fewer than 20,000 people it takes 5 years to accumulate enough survey data to achieve robust data estimates with statistical reliability that is similar to that of the 2000 long-form sample survey. The “5-year estimates,” will be published for areas with small populations each year beginning in 2010.

Source: U.S. Census Bureau, American Community Survey (www.census.gov/acs)

2. PROCESS

2.1 Working Group Focus

From Working Group Charter (12/31/2012)

The working group was tasked with reviewing, assessing, and providing feedback on research that can improve the way in which the ACS produces estimates of small populations. The Census Bureau looked to the working group to help develop a working definition of what represents a small population, but beginning with groups with high sampling variability that result in unreliable or highly volatile estimates year after year was a logical starting point for this process. Small populations could include a wide range of groups, such as American Indian and Alaska Natives, Native Hawaiian and Pacific Islanders, Middle Eastern and Northern Africans, as well as non-race based groups, such as same sex couples, rural populations, children with disabilities and many other combinations of people sharing similar characteristics.

Additionally, the working group would provide ideas and related research on ways to improve ACS estimates for small populations, including alternative methodologies, use of modelling, and other innovative ideas. As a noteworthy example, the ACS did perform a sample expansion in 2011, which provided an opportunity to improve ACS estimates for many small geographic areas and some small populations. However, under the current budget environment, further expansions to the ACS sample are very unlikely and options involving an increase in the current ACS sample were not available to the working group.

The three specific primary focus areas of the working group are:

- (1) *Guiding Research*—Assist the Census Bureau with identifying strategies for research, experimentation and testing that increase ACS data quality for small populations.
- (2) *Improving Efficiencies*—Identify strategies that increase the efficiency of ACS data collection for small populations.
- (3) *Educating Data Users/Stakeholders*— Identify strategies to demonstrate to stakeholders that ACS data are reliable and useful. Consider the challenges and needs of users/consumers of ACS data. Highlight current ACS uses and benefits to data users, including federal, state and local governments, non-profit organizations, and other business entities.

2.2 Working Group Process

The working group had numerous meetings occurring at least once a month beginning in February 2013 and concluding in February 2014. The working group convener had weekly briefings with ACS Headquarters. Additional conference calls were conducted with Census Bureau subject matter experts (SME) and external experts. Overall the conference calls were productive and allowed working group members to obtain information related to ACS small populations (ACS SP).

Membership in the Working Group consisted of nine National Advisory Committee (NAC) members (one designated as the Working Group lead), plus when needed, other participants as agreed upon by the NAC members of the working group.

A work plan detailing the Working Group’s activities was first presented for discussion during the December 4-6, 2013 NAC meeting.

Final recommendations were presented and voted upon by the NAC members during the March 19-21 2014 meetings. During the spring NAC meetings, working group members also conducted face-to-face meetings with members of the ACS staff and SME.

2.3 Working Group Members

Working Group Convener			
1.	Panapasa	Sela	Assistant Research Scientist University of Michigan Ann Arbor, MI
Working Group Members			
2.	Hassan	Jaber	Executive Director Arab Community Center for Economic and Social Services (ACCESS) Dearborn, MI
3.	Juarez	Jacinto	Dean Emeritus Laredo Community College Laredo, TX
4.	Loudner	Don	First Commander National American Indian Veterans, Inc. Mitchell, SD
5.	McGee	Leigh Ann	Co-owner OSIYO Consulting and Council House Institute Salisbury, MD
6.	Miller	Bernie	Pastor New Covenant Fellowship Church Chattanooga, TN
7.	Pang	Victor Kaiwi	Executive Director Pacific Islander Health Partnership Orange County, CA
8.	Patterson	Charlotte	Department of Psychology University of Virginia Charlottesville, VA
9.	Snowdon	Shane	Director LGBT Health & Aging Program, Human Rights Campaign Foundation Albany, CA
National Advisory Committee POC			
10.	Green	Jeri	Chief Office of External Engagement
11.	Collier	Kimberly	Assistant Chief Office of External Engagement
12.	Loo	Tom	Coordinator National Advisory Committee on Race, Ethnic, and Other Populations Office of External Engagement

American Community Survey Office POC			
13.	Treat	Jim	Chief American Community Survey Office
14.	Boone	Tasha	Assistant Division Chief Project Coordination, Communication and Data User Support American Community Survey Office
15.	Chambers	Cheryl	Chief Communication Management and Support Branch American Community Survey Office
16.	Walker	Shelly	Survey Statistician American Community Survey Office

3. SOURCES AND MATERIALS

3.1 Reports from Census and Working Group

Title	Author/Date	Source	Summary
A Quality Assessment of Data Collected in the American Community Survey (ACS) from Households with Low English Proficiency	2004	U.S. Census Bureau https://www.census.gov/srd/papers/pdf/ssm2004-01.pdf	Summary of research investigating differences in data quality between English and non-English speaking households in the American Community Survey (ACS). The research addresses key questions about whether existing methods are resulting in the collection of incomplete data in the ACS due to language barriers.
Accuracy of the Data	2006	U.S. Census Bureau ftp://ftp.census.gov/acs2006/Accuracy_Data_2006.pdf	The data contained in these data products are based on the American Community Survey (ACS) and Puerto Rico Community Survey (PRCS) sample interviewed from January 1, 2006 through December 31, 2006. The purpose of this documentation is to provide data users with a basic understanding of the ACS sample design, estimation methodology, and accuracy of the ACS data.
A Compass for Understanding and Using American Community Survey Data: <i>What General Data Users Need to Know</i>	October 2008	U.S. Census Bureau http://www.census.gov/acs/www/Downloads/handbooks/ACSGeneralHandbook.pdf	The ACS covers a wide range of topics on social, economic, demographic, and housing characteristics and replaced the decennial long form in 2010. For small subpopulation groups and rare characteristics, single-year estimates will have a significant amount of uncertainty; as such, the 5-year estimates may be

			required. Only geographic areas with 65,000 people or more will have 1-year estimates published; other areas will have multiyear estimates. Researchers also have access to PUMS data files (individual, de-identified records not available through FactFinder), multiple years of which can also be combined to allow for analysis of small populations and sub-groups.
Design and Methodology: <i>American Community Survey</i>	April 2009	U.S. Census Bureau http://www.census.gov/acs/www/Downloads/survey_methodology/acs_design_methodology.pdf	The ACS provides detailed information previously available only decennially. Annual results were made available for all areas in 2010, and even the smallest communities have ACS data based on 5-year estimates annually.
A Compass for Understanding and Using American Community Survey Data: What Users of Data for American Indians and Alaska Natives Need to Know	October, 2009	http://www.census.gov/acs/www/Downloads/handbooks/ACSAIANHandbook.pdf	The ACS AIAN category includes people who explicitly indicate their race to be “American Indian” or “Alaska Native,” report the name of an American Indian tribe, or report entries like “Spanish American Indian”. ACS data will be used to manage programs providing services such as education, health care, transportation, and housing to AIANs. Many ACS tables for AIANs do not provide iterations by race; as such, data for those areas should <i>not</i> be interpreted as describing the AIAN population but rather the entire population for that area.
Same-Sex Couple Households: American Community Survey Brief	September, 2011	Daphne Lofquist U.S. Census Bureau http://www.census.gov/prod/2011pubs/acsbr10-03.pdf	There were approximately 594,000 same-sex couple households in the United States in 2010. Households are identified using both the relationship to householder and sex items. Out of the 594,000, 115,000 reported having children.
American Community Survey Program: <i>Strategic Plan</i>	June 18, 2012	Sally Obenski and Amy Squires U.S. Census Bureau http://www.census.gov/acs/www/Downloads/operations_admin/ACS_Strategic_Plan.pdf	The ACS is the only source of small-area statistics on a wide range of important housing, social and economic characteristics for all communities in the country. However, these data are available in 5-year estimates, making them less than ideal for users who

			need more current data. One objective is to provide data users with more current data products (e.g., modeled data; time series) and to educate users about the interpretation of the 5-year estimates.
Evaluating Response in the American Community Survey by Race and Ethnicity: <i>Final Report</i>	November 29, 2012	Deborah H. Griffin U.S. Census Bureau http://www.census.gov/acs/www/Downloads/library/2012/2012_Griffin_04.pdf	While response rates for racial/ethnic groups cannot be calculated because the race and ethnicity of non-respondents is unknown, an alternative measure of how well ACS data represents racial/ethnic groups was performed: “Inclusion rates” compare the demographic characteristics of interviewed ACS households with the expected demographic characteristics of all households. The total population and most groups had high inclusion rates; those with the lowest rates—non-Hispanic Black or African American Alone and non-Hispanic AIAN Alone populations—should be studied to determine if any coverage barriers can be overcome.
American Community Survey Accuracy of the Data (2012)	2012	U.S. Census Bureau http://www.census.gov/acs/www/Downloads/data_documentation/Accuracy/ACS_Accuracy_of_Data_2012.pdf	In 2006, the ACS began collection of data from sampled persons in group quarters (GQs) – for example, military barracks, college dormitories, nursing homes, and correctional facilities. Persons in group quarters are included with persons in housing units (HUs) in all 2012 ACS estimates that are based on the total population. There are two strata for the Group Quarters (GQ) sampling—the small GQs, which are eligible for selection only once every five years, and the large GQs, which are eligible for selection every year.

2010 Census Integrated Communications Program Partnership Assessment Report	August, 2012	U.S. Census Bureau http://www.census.gov/2010census/pdf/2010_Census_ICP_NP_Assessment.pdf	Summary of results and recommendations from an assessment of various efforts that the 2010 Census Integrated Communications Program (ICP) engaged in during the 2010 Census. Specifically, the study identified, described, and measured the participation of national organizations, businesses, and staff, in assisting the National Partnership (NP) program, which was a component of the ICP.
2010 Census Integrated Communications Program Regional Partnership Assessment Report	July 23, 2012	U.S. Census Bureau http://www.census.gov/2010census/pdf/2010_Census_ICP_Regional_Partnership_Assessment.pdf	The Regional Partnership Program worked as a component of the 2010 Census Integrated Communications Program (ICP), implementing strategic outreach initiatives in Hard-to-Count (HTC) areas. This assessment will record from the regional partnership perspective, the 2010 Census education and outreach and impressions of paid advertising and promotional materials produced within the ICP. The aim of this assessment is to describe the various efforts that the ICP engaged in during the 2010 Census and the outputs that resulted from this work. Analyzing, interpreting, and synthesizing the effectiveness of the ICP is beyond the scope of this study.
The Foreign-Born Population in the United States: 2010 <i>American Community Survey Reports</i>	May 2012	U.S. Census Bureau http://www.census.gov/prod/2012pubs/acs-19.pdf	This report presents a portrait of the foreign-born population in the United States. The U.S. Census Bureau uses the term foreign born to refer to anyone who is not a U.S. citizen at birth. This includes naturalized citizens, lawful permanent residents, temporary migrants (such as foreign students), humanitarian migrants (such as refugees), and undocumented migrants.
American Community Survey Multiyear Accuracy of the Data (3-year 2010-2012 and 5-year 2008-2012)	October 28, 2013	U.S. Census Bureau http://www.census.gov/acs/www/Downloads/data_documentation/Accuracy/MultiyearACSAccuracyofData2012.pdf	This text discusses the ACS sample design, estimation methodology, and accuracy.

American Community Survey Program Review Final Report	May, 2013	U.S. Census Bureau http://www.census.gov/acs/www/Downloads/operations_admin/2012_program_review/ACS_Program_Review_Report.pdf	The ACS program implemented a variety of activities to improve small area estimates, including implementing recommendations from the 2010 National Academy of Sciences Technical Panel on Group Quarters to increase GQ reliability estimates; working with the Census Bureau's National Advisory Committee on Racial, Ethnic, and Other Populations to improve outreach to and reliability of small populations; commissioning an independent report of ACS methods to be produced in fiscal year 2014; and beginning to work with the National Academy of Sciences Technical Panel to assess the reliability of estimates for small populations.
Arab Households in the United States: 2006-2010 <i>American Community Survey Brief</i>	May 2013	U.S. Census Bureau http://www.census.gov/prod/2013pubs/acsbr10-20.pdf	This brief provides a portrait of households in the United States with a particular focus on Arab households; people of Arab ancestry.
DDS Stakeholder Engagement Plan <i>American Community Survey</i>	July 30, 2013	U.S. Census Bureau	Discusses a stakeholder engagement plan that provides a strategy and approach for the American Community Survey Office (ACSO) to more effectively engage with the Data Dissemination (DD) staff in Field Division (FLD) working throughout the country and based out of the six Census Bureau regional offices. This document is a collaborative effort between the ACSO and FLD to meet identified communications goals and activities.
American Community Survey <i>ACS Hill Briefing</i>	May 30, 2012	U.S. Census Bureau	Comprehensive summary of the American Community Survey for presentation to leaders on Capitol Hill.
Interagency Council on Statistical Policy Subcommittee on the American Community Survey Reports	July 8, 2013	U.S. Census Bureau	Comprehensive discussion on ACS data collection, housing vacancy rates, basic weighting procedures, new content policy and protocols.
Integrated Communications Plan Baseline <i>American Community Survey Program</i>	October 24, 2013	U.S. Census Bureau	This plan addresses the ACS Program communications goal, strategies and objectives, describes the program capacity needed to support the plan and it

			operations, branding, ACS messages, timelines, communications tactics, priorities, and feedback mechanisms. The plan also establishes a structured and systematic approach to supporting and improving communication with customers.
American Community Survey Integrated Communications Charter (Draft)	October 2013	U.S. Census Bureau	This charter outlines the goals and functions of the American Community Survey (ACS) Integrated Communications Steering Committee (ICSC), Working Group (ICWG), and Sub-Teams, which will focus on developing an ongoing Integrated Communications Plan (to include internal and external communications) and campaign (ACSICC).
ACS Data Users Group		U.S. Census Bureau	Power Point slide presentation introducing the ACS Data Users Group activities and opportunities to improve understanding of the value and utility of ACS data, as well as to promote information sharing among data users about key ACS data issues and applications
The 2008-2012 ACS 5-Year Summary File Technical Documentation	Version 2, February 12, 2014	U.S. Census Bureau http://www2.census.gov/acs2012_5yr/summaryfile/ACS_2008-2012_SF_Tech_Doc.pdf	The American Community Survey Summary File (ACSSF) is a unique data product that includes all the estimates and margins of error from the Detailed Tables and geographies that are published for the ACS. The files are divided into three types: Geographies, Estimates, and Margins of Error. This document details additional information on using the summary files.
American Community Survey Design and Methodology	January 2014	U.S. Census Bureau http://www.census.gov/acs/www/Downloads/survey_methodology/acs_design_methodology_report_2014.pdf	This document describes the basic ACS design and methodology as of the 2013 data collection year. The purpose of this document is to provide data users and other interested individuals with documentation of the methods used in the ACS. Future updates of this report are planned to reflect additional design and methodology changes. This document is organized into 16 chapters. Each

		chapter includes an overview, followed by detailed documentation and a list of references.
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3.2 Communications with Census Bureau Subject Matter Experts

Call/Meeting	Attendees / Background	Summary
ACS sampling design	WG: S. Panapasa, K. Pang, H. Jaber CB: J. Treat, S. Hefter	Discussed the ACS methodology, household sampling and follow-up.
ACS data suppression of small populations	WG: S. Panapasa, B. Miller CB: Mark Asiala, Michael Starsinic	Description of the data suppression process to avoid disclosure of respondent's identity and fully comply with confidentiality laws.
ACS communication outreach around small populations	WG: S. Panapasa, L. McGee, H. Jaber CB: T. Boone, C. Chambers, S. Walker	Discussed findings from the ACS Integrated Communications Plan, ACS communication activities and website content related to small populations.

3.3 Communications with External Experts

Call/Meeting	Attendees / Background	Summary
Dr. Kamana'opono Crabbe Office of Hawaiian Affairs	WG: S. Panapasa, VK. Pang, H. Jaber OHA: Dr. Kamana'opono Crabbe, CEO Dr. Lisa Watkins-Victorino, Research Director Mr. Mark Eshima, Demography Program Manager	Emphasized the importance of collecting and reporting complete and accurate information on the Native Hawaiian and Pacific Islander population. Expressed concern over the lack of comparable state-level data and detail information on the diverse NHPI population groups.
Dr. Matthew Snipp Stanford University	WG: S. Panapasa, L. McGee, D. Loudner, H. Jaber	Challenges associated with allocation of funding related to decennial census activities, including the ACS.
Dr. Kristine Ajrouch Eastern Michigan University	WG: S. Panapasa	Emphasized the important role of small population community partnerships in outreach and community engagement to increase public awareness to the ACS and to work with local stakeholders who are "trusted voices" in community to educate, promote, utilize and leverage support for the ACS.
Dr. Gary Gates The Williams Institute, UCLA	Cancelled due to government shut-down and schedule conflict	None
Mr. John Zogby Zogby Analytics	Cancelled due to government shut-down and schedule conflict	None
Dr. Lionel Bordeaux Sinte Gleska University	Cancelled due to schedule conflict	None

National Academy of Science Panel	WG: S. Panapasa, H. Jaber, VK Pang NAS: Dr. Linda Jacobsen Population Reference Bureau, Dr. Jennifer H. Madden, National Center for Health Statistics, Dr. James House U of Michigan, Ann Arbor, Dr. Jeffrey Hardcastle U of Nevada, Reno	Discussed Working Group recommendations.
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3.4 Other Reference and Resource Materials

American Community Survey	Sources	Author/Date	Summary
Assessing the Quality of Data Collected on the Foreign Born Population	http://paa2006.pincetn.edu/papers/61333	Steven A. Camarota Center for Immigration Studies August 2003	This study is based on a review of ACS data collection procedures and assessments of the quality of ACS foreign-born data collected in a sampling area with a high concentration of foreign born in the nationally representative ACS sample.
The American Community Survey	Population Bulletin http://mcdr.misouri.edu/data/acs/prb/The_American_Community.pdf	Mather, M., Rivers, KL., Jacobsen, LA. 2005; 60(3):1-24	This Population Bulletin presents an overview of the ACS and the new opportunities and challenges it offers.
The American Community Survey in counties with “seasonal” populations	Population Research and Policy Review http://www.jstor.org/stable/40230949	Auken, P. et al. 25(3), 275-292 June 2006	This article identified some sampling problems in the ACS, as well as problems arising regarding the minor civil divisions (MCDs), which tend to have very small populations. Along with the large estimated standard errors at the census tract level in these counties, this raises concerns regarding the statistical quality of ACS estimates for small MCDs.
Same-Sex Couples and the Gay, Lesbian, Bisexual Population: New Estimates from the American Community Survey	The Williams Institute, UCLA http://escholars.hip.org/uc/item/8h08t0zf	Gates, G. 2006	This report provides descriptive statistics on same-sex couples and the gay, lesbian and bisexual persons in the U.S. using the ACS 2005 data.
Using the American Community Survey: Benefits and Challenges	The National Academies Press http://www.nap.edu/openbook.php?record_id=11901&page=R6	The National Academies of Sciences, Panel on Functionality and Usability of Data from the American Community Survey 2007	This report discusses a variety of benefits and challenges in working with ACS data and specifically with small geographic areas; for example, oversampling of housing units for very small areas will help with the 5-year estimates. The precision of 5-year estimates can also be improved by aggregating small areas into larger units.
<u>Survey Methodology</u>	Book published by John Wiley & Sons, Inc., Hoboken, New Jersey	Groves, RM., Fowler, FJ., Couper, M., Lepkowski, JM., Singer, E., Tourangeau, R. 2009	Excellent resource on the principles of “survey methodology” for collecting information about the social and economic world. This book describes the excitement of designing, conducting, analyzing, and evaluating sample surveys.

<p>Disability statistics from the 2008 American community survey (ACS).</p>	<p>Cornell University Rehabilitation Research and Training Center on Disability Demographics and Statistics (StatsRRTC). Ithaca, NY http://digitalcommons.ilr.cornell.edu/edicollect/1285/</p>	<p>Erickson, W., Lee, C., & von Schrader, S. 2010.</p>	<p>This Annual Disability Status Reports provides policy makers, disability advocates, reporters, and the public with a summary of the most recent demographic and economic statistics on the working-age (ages 21-64) population with disabilities.</p>
<p>Proposal for American Community Survey Selected Population Tables and American Indian and Alaska Native Tables</p>		<p>February 23, 2011</p>	<p>This document presents the proposal for two sets of new American Community Survey (ACS) data products: 1) Selected Population Tables and 2) American Indian and Alaska Native (AIAN) Tables. These tables provide social, economic, and housing characteristics for various geographic areas, with census tract and tribal census tract being the lowest level. Population thresholds will be set to determine eligible racial and other population groups. These tables will be produced every 5 years and accessible via American FactFinder.</p>
<p>Small Populations, Large Effects: Improving the Measurement of the Group Quarters Population in the American Community Survey</p>	<p>The National Academies Press http://www.nap.edu/catalog.php?record_id=13387</p>	<p>National Academies of Sciences Report 2012</p>	<p>The ACS includes a group quarters (GQ) component (for correctional facilities, student housing, etc.), which allows for more comprehensive data collection on the U.S. population (not just those living in households). However, with this approach comes a variety of sampling, weighting, and estimation complications, which are magnified in small areas. This text discusses the statistical methodology for addressing these concerns.</p>
<p>Measuring Ethnicity with U.S. Census Data: Implications for Mexicans and Arabs</p>	<p>Population Research and Policy Review</p>	<p>Jen'nan Ghazal Read. 2013; 32:611–631</p>	<p>Racial and ethnic populations can be defined in a variety of different ways. Using alternative methods for classifying Hispanics (e.g. place of birth) and Arabs (e.g. language spoken at home), the article concludes that researchers and policy-makers should play close attention to different enumeration strategies to avoid under-counting disadvantaged groups (as with Arab group) or over-counting (as with Hispanic group).</p>

How the ACS gets it wrong: The story of the American Community Survey and a small, inner city neighborhood	Applied Geography http://www.sciencedirect.com/science/article/pii/S0143622813002051	Bazuin, JT & Fraser, JC. (45): 292-302 December 2013	Results from a single inner city census tract community survey (in Nashville, TN), suggest that the ACS has grossly underestimated the total population of the number of people living in poverty among other variables. Through an examination of the number of census tracts with very small sample sizes and a comparison of recent ACS results with the 2010 Decennial Census, the authors show that the problems identified in this single tract occur throughout the country.
A Survey of LGBT Americans Attitudes, Experiences and Values in Changing Times	http://www.pewsocialtrends.org/files/2013/06/SDT_LGBT-Americans_06-2013.pdf	Pew Research Center:1-160 June 2013	This report is part of a series, LGBT in Changing Times, which explores attitudes about sexual orientation and identity. The series is based on several new Pew Research surveys – one of lesbian, gay, bisexual and transgender (LGBT) adults in the U.S.; another of the American public as a whole; and another of publics in 39 countries. It will also include a new analysis of media coverage and the social media conversation about the same-sex marriage issue.
Demographics	http://b.3cdn.net/aai/44b17815d8b386bf16_v0m6iv4b5.pdf	The Arab American Institute Foundation	The population who identified as having Arabic-speaking ancestry in the U.S. Census grew by more than 72% between 2000 and 2010. However, research by AAI and Zogby International suggest that the Census Bureau estimate is likely significantly lower than the actual number of Arab Americans in the country.
Benefits, Burdens, and Prospects of the American Community Survey: Summary of a Workshop	National Research Council. Washington, DC http://www.nap.edu/catalog.php?record_id=18259	The National Academies Press, 2013	In June 2012, the Committee on National Statistics (sponsored by the U.S. Census Bureau) convened a Workshop on the Benefits (and Burdens) of the American Community Survey (ACS)---the detailed demographic and economic survey that began full-scale data collection in 2005 and that replaced the traditional "long form" in the 2010 census.
Patterns and causes of uncertainty in the American Community Survey	Applied Geography http://www.sciencedirect.com/science/article/pii/S0143622813002518	Spielman, SE; Folch, D; and Nagle, N 46, 147-157 January 2014	The margins of error on ACS census tract-level data are on average 75 percent larger than those of the corresponding 2000 long-form estimate. The practical implications of this increase are that data are sometimes so imprecise that they are difficult to use. This paper explains why the ACS tract and block group estimates have large margins of error.

4. RECOMMENDATIONS

4.1 Definition of a Small Population

Prior to addressing the goals of the working group charter the ACS SP working group compiled a list of examples of small populations in the ACS and developed a definition for small population.

Examples of small populations in the ACS provided by the ACS SP working groups are: American Indian, Alaska Natives, Native Hawaiian and Pacific Islanders, Middle Eastern, North African, Residents of the Colonias along the Mexico/US Border, Homeless, Disabled, Lesbian, Gay, Bisexual, and Transgender (LGBT), Refugee, Disabled, Immigrant subgroups, Migrants from the U.S. Jurisdictions, and Rural population.

The definition for an ACS SP is represented by:

“Any defined group of people including but not limited to tribal/indigenous, racial/ethnic, economic, cultural, health, gender, age, language and residential unit that acquires high sampling variability, resulting in unreliable or highly volatile estimates year after year.”

4.2 Summary of Concerns

4.2.1 ACS Data Quality for Small Populations

- Under-representation or under-coverage of SP and sub-groups by survey sampling;
- Over-representation of major racial groups due to ease of identifying households within heterogeneous Primary Sampling Units (PSU's);
- Issues with capturing ancestry for SP as a control for self-reported race;
- Issues with capturing race/nationality/ethnicity for SP;
- Issues with capturing Native American populations using current survey sampling methods;
- Issues with capturing SP clusters by survey sampling using a heterogeneous sampling design;

- Issues of high mobility among small populations and the 5 year interval for repeat use of address in the ACS sampling frame;
- Data suppression of SP elements due to confidentiality concerns arising from small sample sizes;
- Information on emerging populations is inadequate (example, sexual orientation/identity).

4.2.2 ACS Data Collection for Small Populations

- Difficulty finding SP households using standard sampling PSU designs;
- Some SP groups are distrustful of government;
- ACS questionnaire is long and questions can be seen as confusing and personally intrusive; this is at least partially due to the lack of understanding of the value and importance of the data;
- Issues with SP households with Low English Proficiency required to complete ACS questionnaire in English;
- Issues with enumerators acquiring the cultural competencies and mannerisms when interacting with SP;
- ACS outreach activities and materials are too generic and do not address the special needs of SP;
- Lack of identifier characteristic of emerging SP groups (Example, sexual identity).

4.2.3 Educational Strategies Demonstrating to Stakeholders that ACS Data on Small Populations are Reliable and Useful

- ACS website lacks materials and activities that addresses SP;
- ACS web and printed products do not address SP;
- ACS education/outreach videos do not address SP;
- ACS announcements do not address SP;
- ACS data products also fail to address SP;

- ACS partner, stakeholder, media and public outreach activities do not address SP;
- Census Bureau approach to issues relevant to ACS SP is inadequate;
- Lack of awareness about ACS among SP;
- Lack of detailed information due to data suppression.

4.3 General Recommendations or Statements of Agreement

4.3.1 Continue to collect, produce, and report robust and timely demographic, social, economic, geographic and housing data on ACS small populations

- The ACS represents an extremely important data source on demographic, social, economic and housing information on the total US population, including SP;
- We strongly support the mandatory status of the ACS because SP would be adversely affected by declining response rates if the ACS were made voluntary.

4.3.2 Conduct small population-based studies to optimize sampling, calculation of weights, data collection, processing and outreach for ACS small populations

- We strongly encourage the ACS to conduct a quality assessment of ACS SP data accumulated over the five-year intervals where ACS SP data is available.

4.3.3 Increase the effectiveness of the ACS housing sampling frame and sample allocation for small populations

- We strongly encourage the ACS to combine housing units on Indian Country and Native Hawaiian Homelands with the ACS housing sampling frame;
- We strongly encourage the ACS to test the use of homogenous PSU when seeking SP households as SP often reside in small and largely exclusive residential clusters;
- We strongly encourage the ACS to consider using other data sources (example, administrative records) to improve coverage and representation for SP in the ACS housing sampling frame.

4.3.4 Continue full implementation and enforcement of Executive Order 13175 on ACS related functions to achieve accurate and reliable estimates on American

Indians and Alaska Natives enrolled in federally recognized tribes as well as non-federally recognized tribes

- We strongly encourage regular and meaningful consultation and collaboration with Indian tribes and Alaska Natives to improve the sampling frame, development and implementation of education and outreach activities for Native Americans.

4.3.5 Improve data collection on race and origin for ACS small populations

- We strongly encourage the Census Bureau efforts to update its coding for race, nationality, and ethnicity for an accurate enumeration of ACS SP;
- We strongly encourage the Census Bureau to update its ancestry coding for and accurate enumeration of ACS SP by ancestry group;
- We strongly encourage the Census Bureau to include a question on sexual identity to the ACS.

4.3.6 Collect and produce demographic, social, economic and housing data on emerging population groups

- We strongly encourage the Census Bureau and ACS to conduct research and collect data on sexual identity;
- We strongly encourage the ACS to conduct research on the Middle Eastern and North African (MENA) populations for the ACS;
- We strongly encourage the ACS to produce briefs on ACS SP.

4.3.7. Increase staffing, cultural training and awareness on ACS small populations for the Census Bureau headquarters and Regional Office staff

- We strongly encourage the Census Bureau and ACS to include members of SP on its administrative and field operation activities to increase effectiveness and quality for ACS SP data.

4.3.8 Increase and sustain Census Bureau partnerships targeting ACS small population non-governmental, community-based organizations and Tribal leaders' advisory groups

- We strongly encourage Census Bureau and ACS to partner with SP community-based and faith-based organizations, researchers and leaders in the development;

- We strongly encourage the ACS to develop and maintain regular communications with SP partnership organizations.

4.3.9 Increase the ACS communication and outreach activities for ACS small populations

- We strongly encourage the Census Bureau and ACS to develop bi-lingual, bi-cultural outreach activities and information relevant for ACS SP;
- We strongly encourage the Census Bureau and ACS to update the ACS website design features to provide relevant information and products for ACS SP;
- We strongly encourage the Census Bureau and ACS to conduct webinars on ACS SP activities and products;
- We strongly encourage the Census Bureau and ACS to support ACS Data User conferences' and include sessions on ACS SP issues and findings;
- We strongly encourage the Census Bureau and ACS to develop educational and outreach materials relevant for ACS SP;
- We strongly encourage the Census Bureau and ACS to support outreach and dissemination of ACS materials/products for ACS SP.

4.3.10 Explore new and emerging communication channels and technological innovations to improve data collection and expand coverage and outreach for ACS small populations

- We strongly encourage the ACS to consider using a variety of ARTPD and Tribal registries to combine with the ACS housing sample frame.

4.4 Specific Policy Recommendations. A list of questions or criteria for data sets

4.4.1 We strongly support the ACS data for small populations and request continued funding from Congress.

4.4.2 We strongly encourage the Census and ACS to keep the ACS mandatory and not voluntary to avoid potential reductions to the sample for small populations.

4.5 Future suggestions for follow on work

4.5.1 We strongly encourage the Census Bureau to conduct an in-depth review of the ACS small population based data, sampling, data collection and processing, as well as weighting procedures to ensure high quality and reliability of estimates.

- 4.5.2 We strongly encourage the Census Bureau and ACS to develop a better understanding of the issues and concerns of ACS SP by utilizing the expertise of Census Bureau advisory committees, stakeholder partnership program, and regional office networks.
- 4.5.3 We strongly encourage the Census Bureau and ACS to develop survey reports for ACS SP using the 5-year ACS data.
- 4.5.4 We strongly encourage the Census Bureau and ACS to develop customized outreach products for small population groups and Communities.

5. MOVING FORWARD - FUTURE WORK SUGGESTED

- 5.1 We strongly encourage the Census Bureau and ACS convene a National Academy of Science panel to investigate the quality of ACS SP data and cost efficient strategies to improve the quality, reliability and communication of estimates.
- 5.2 We strongly encourage the Census Bureau and ACS to increase outreach and public engagement to stakeholders, data users and policy makers interested in SP demographic, social, economic and housing data.