

FINDINGS BRIEF

Accommodation and Acceptability of Health Care by Non-Metropolitan/Metropolitan and Race/Ethnicity Status

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- Similar proportions of non-metropolitan (80.6%) and metropolitan (80.2%) respondents reported no non-financial barriers to care though this varied by race/ethnicity in non-metropolitan groups ranging from 66.9% of American Indian/Alaska Natives to 83.3% of non-Hispanic white respondents.
- A higher percentage of non-metropolitan respondents (4.9%) reported lack of transportation as the biggest reason for delaying care compared to metropolitan respondents (4.2%).
- Among non-metropolitan respondents, non-Hispanic Black (9.5%), American Indian/Alaska Native (11.0%), and Hispanic (8.2%) respondents reported lack of transportation as a barrier over twice as frequently as their white counterparts (3.4%).
- Compared to their non-metropolitan, non-Hispanic white peers American Indian/Alaska Native respondents reported greater frequency of not being able to get an appointment soon enough and having to wait too long to see a doctor once they got their appointment.
- A higher proportion of non-metropolitan respondents reported being only somewhat satisfied or not at all satisfied with their care.
- Among non-metropolitan respondents, a higher percent of American Indian/Alaska Native respondents reported being only somewhat satisfied or not at all satisfied with their care than other racial/ethnic groups.

INTRODUCTION

Access to and quality of health care services are key elements of the social determinants of health that facilitate mental and physical well-being.¹ Rural residents— have less access to health care services than their urban counterparts in terms of availability (e.g., provider-population ratios) and accessibility (e.g., distance to care) as described by Penchansky's and Thomas's "5 As of Access".² Rural areas have fewer primary care providers and specialists per capita than their urban peers (i.e., less availability).³⁻⁵ Studies also show that rural populations live further from hospital-based care and specialists than urban populations (i.e., less accessibility).^{6,7} These rural-urban access to care inequities are even greater in magnitude when race/ethnicity are considered as rural minoritized populations, such as Black and American Indian/Alaska Natives populations, often have less access than their white rural peers.⁷

A comprehensive understanding of access to care inequities requires the investigation of all 5 A's of access--availability, accessibility, affordability, accommodation, and acceptability-- in order to develop necessary interventions tailored to each access domain specifically. Availability is whether a

certain type of facility or provider is within an area of interest (e.g., a hospital in a county or a physician to population ratio). Accessibility refers to the distance to travel time to a facility or provider (e.g., miles to the nearest hospital). Affordability refers to the cost of care (e.g., whether someone has insurance coverage, out of pocket expenses). These three components have been assessed more comprehensively than accommodation and acceptability, which are also important.

Related to health care, accommodation considers that a provider has organized their practice in such a way that patients can access services. Thus, barriers to accommodation that may impact access to receipt of care or may contribute to delays in accessing care include how appointments are scheduled and how other patient preferences and needs are met (e.g., transportation services). Previous studies show that for some elements of accommodation (e.g., provider attentiveness), rural populations report more favorably on their accommodation experiences.⁸ However, accommodation is a multi-faceted concept. Given the persistent barriers facing rural and racial minority populations who were more likely to delay health care it is important to explore additional facets and examine how accommodation varies by race/ethnicity. Acceptability indicates that the services provided were to the satisfaction of the patient. Findings on rural-urban differences in acceptability have been mixed and have largely been performed solely among Medicare beneficiaries and other cohorts of older adults,⁹⁻¹¹ limiting our understanding on such differences among nearly 280 million people who are not eligible for Medicare.

Therefore, our objective was to examine rural-urban (i.e., non-metropolitan/metropolitan) differences in accommodation and acceptability by operationalizing two survey questions from the health care access optional module of the Behavioral Risk Factor Surveillance System (BRFSS) survey, a population-based survey assessing health and health care behaviors among non-institutionalized adults. Accommodation will be assessed using a BRFSS question addressing the primary non-financial barrier that led patients to delay care; these barriers include issues related to transportation, timeliness of scheduling an appointment, and waiting time to receive care. Acceptability will be assessed using a BRFSS question focused on patient satisfaction with care received. Eight states (Georgia, Louisiana, Mississippi, Nebraska, New Hampshire, New Mexico, Oregon, and Tennessee) including at least one state from each U.S. Census Region administered this module in 2018. As such, our findings will represent the health care landscape at this time point (i.e., they will not represent the impact of COVID-19 pandemic). More information on this methodology is in the appendix.

FINDINGS

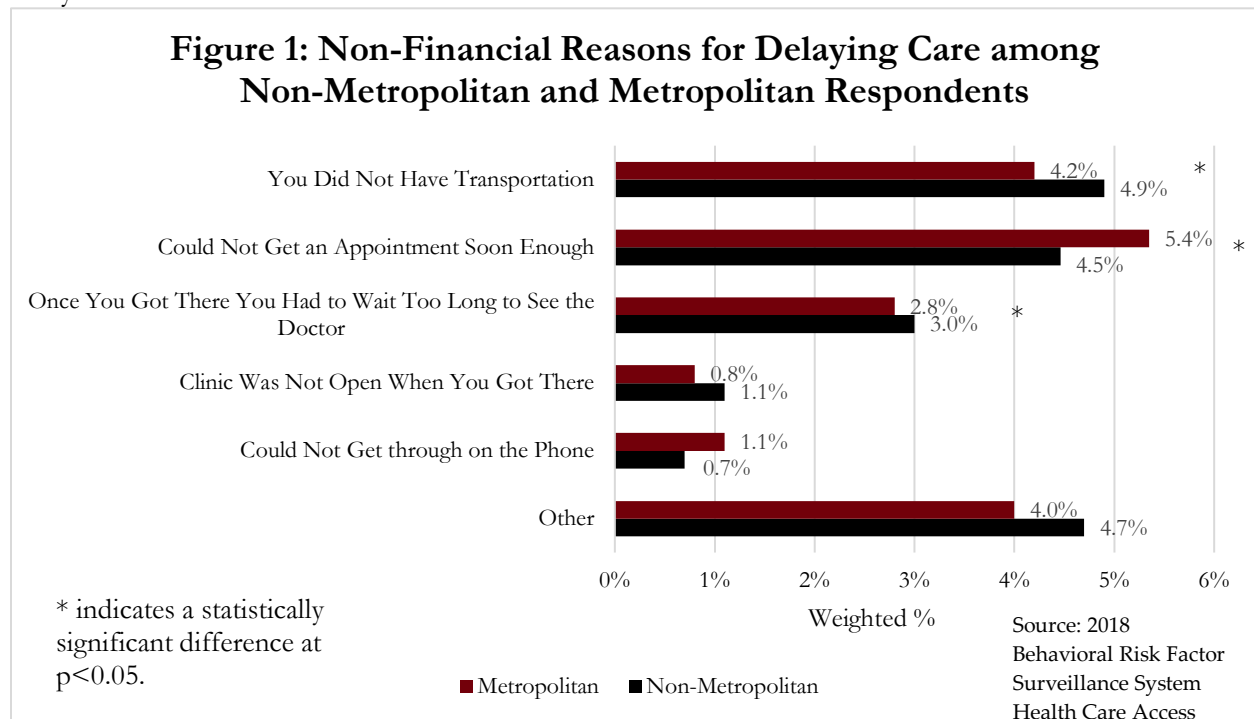
Survey Respondent Characteristics

One in four (25.2%) respondents lived in a non-metropolitan area (**Appendix Table A-1**). There were differences in racial/ethnic composition among the study population. For non-metropolitan adults 16.5% were non-Hispanic Black compared to 21.0% of the metropolitan population. There were fewer non-metropolitan Hispanic residents (7.7%) than metropolitan Hispanic residents (9.1%) ($p < 0.001$). Non-metropolitan respondents were older than their metropolitan counterparts (24.3% non-metropolitan residents were age 65 or older compared to 19.5% of metropolitan respondents aged 65 or older) ($p < 0.001$). Marital status, the language used to complete the survey, educational attainment, and employment status also varied between metropolitan and non-metropolitan individuals ($p < 0.001$ for all). A higher proportion of non-metropolitan respondents were divorced or widowed (12.8% vs. 11.1% and 8.8% vs. 6.4%,

respectively). Most respondents completed the survey in English, 3.4% of metropolitan vs. 2.5% of non-metropolitan respondents completed the survey in Spanish. More than a quarter (27.7%) of metropolitan respondents had at least a college or technical school degree compared to 17.3% of non-metropolitan respondents. Non-metropolitan/metropolitan differences in employment status included higher proportions of non-metropolitan retirees (20.8% vs. 17.4%) and those who were unable to work (12.5% vs. 8.7%) compared to metropolitan respondents.

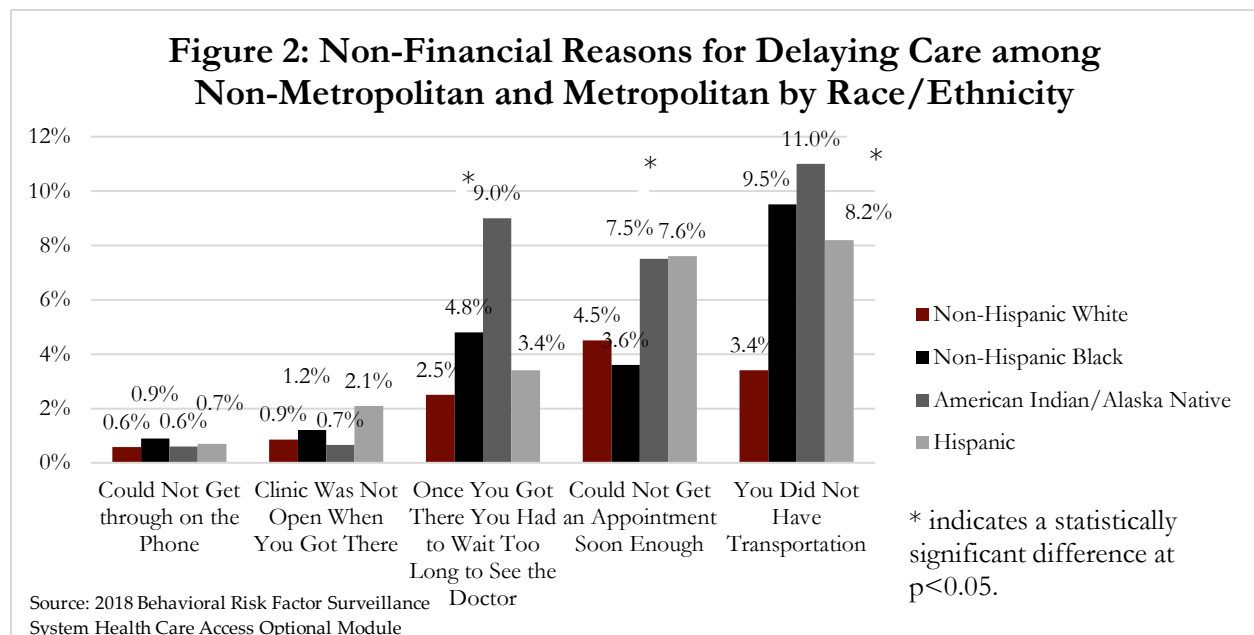
Accommodation

Accommodation, as a component of health care, considers that a provider has organized their practice in such a way that patients can access services. The BRFSS survey assesses barriers in accommodation. Respondents were asked what, if any, was the most important non-cost reason for delayed care. Among respondents, 80.9% of non-metropolitan respondents and 80.6% of metropolitan respondents reported no delays in care related to non-financial barriers.¹ However, pairwise comparisons of the reported “most important reason” for delay showed significantly higher proportion of non-metropolitan respondents reported lack of transportation as a reason for delays in received care (4.9% vs. 4.2%; Figure 1). Having to wait too long to see a doctor upon arrival for appointments differed between non-metropolitan and metropolitan respondents (3.0% vs. 2.8%). A higher percentage of metropolitan participants reported being unable to get an appointment soon enough (5.4% vs. 4.5%). There were no statistically significant differences in other reasons for delays.



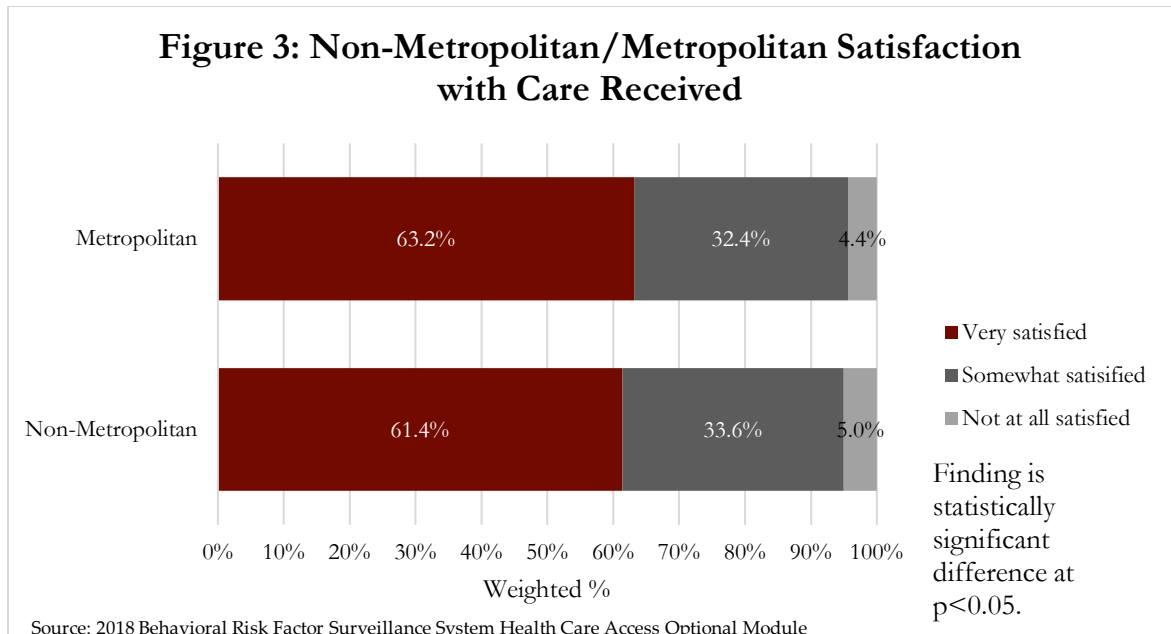
¹ For this question, 4.2% of non-metropolitan and 8.6% of metropolitan respondents either said they didn't know, refused to answer, or otherwise did not respond.

Among non-metropolitan respondents who provided an answer to this question, 83.3% of non-Hispanic White, 76.0% of non-Hispanic Black, 66.9% of American Indian/Alaska Native, and 73.9% of Hispanic respondents reported no non-financial barriers to care (data not shown). There were significant racial-ethnic differences for most reasons for delayed care (Figure 2). A higher proportion of non-metropolitan American Indian/Alaska Native (7.5%) and Hispanic (7.6%) respondents reported not being able to get an appointment soon enough compared to non-Hispanic White (4.5%) and non-Hispanic Black participants (3.6%). Similarly, a higher percentage of American Indian/Alaska Native respondents (9.0%) reported having to wait too long to see a doctor once they got to their appointment compared to 4.8% of other non-metropolitan racial/ethnic groups. Access to transportation among non-metropolitan respondents also varied by racial/ethnic group with 8.2% of Hispanic, 9.5% of non-Hispanic Black, and 11.0% of American Indian/Alaska Native respondents reporting lack of transportation compared to 3.4% of non-metropolitan non-Hispanic White respondents.



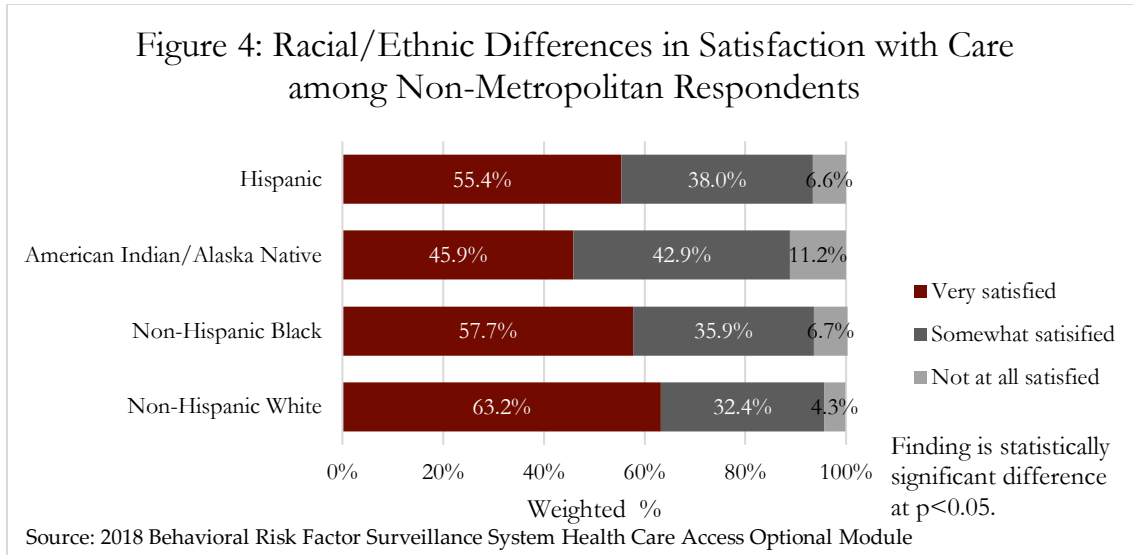
Acceptability

Acceptability indicates that the services provided were done so to the satisfaction of the patient. Respondents were asked the extent to which they were satisfied with their care. For this question, 3.9% of non-metropolitan and 7.8% of metropolitan respondents either said they didn't know, refused to answer, or otherwise did not respond. The percentage of non-metropolitan respondents reporting being very satisfied with their care was lower than among metropolitan respondents (61.4% and 63.2%, respectively, Figure 3).²



² For this question, 3.9% of non-metropolitan and 7.8% of metropolitan respondents either said they didn't know, refused to answer, or otherwise did not respond.

When examining racial/ethnic differences among non-metropolitan respondents, American Indian/Alaska Native populations reported the lowest percentage of respondents who were very satisfied with their care (45.9%) compared to 55.4% of Hispanic, 63.2% of non-Hispanic white, and 57.7% of non-Hispanic Black respondents. American Indian/Alaska Native respondents also reported the highest percentage of respondents (11.2%) who were not at all satisfied with their care.



CONCLUSIONS

We examined accommodation, operationalized as non-financial barriers to accessing care, and acceptability, assessed using a patient-reported satisfaction with care received, as components of health care access among the eight states who incorporated the health care access module in their 2018 BRFSS. Non-metropolitan respondents more frequently reported lack of transportation, whereas metropolitan respondents were more likely to report not getting the appointments scheduled soon enough (both examples of accommodation barriers). Among the non-metropolitan respondents, lack of transportation was most common among Hispanic, non-Hispanic Black, and American Indian/Alaska Native respondents compared to non-Hispanic White counterparts.

Our accommodation findings suggest non-metropolitan respondents, particularly Black, Hispanic, and American Indian/Alaska Native respondents, are more likely to report lack of transportation delaying their health care. Lack of transportation is concerning especially as rural people travel more than twice as far on average for medical or dental care. Rural Black and Hispanic persons travel further than their urban counterparts.¹² Lack of transportation can contribute to a myriad of health care challenges including delayed or missed appointments, disruptions in ongoing treatment, higher costs, and poorer health outcomes.¹³ The Rural Transportation Toolkit, located on the Rural Health Information Hub, may provide potential resources to communities to address the implementation of rural transportation programs.¹⁴



Our acceptability findings suggest non-metropolitan American Indian/Alaska Native and Hispanic respondents reported not being able to get care soon enough at higher levels than other groups living in non-metropolitan areas. Satisfaction with care was marginally but statistically significantly different between non-metropolitan and metropolitan respondents. Among non-

metropolitan respondents, a higher percentage of American Indian/Alaska Native respondents reported not being at all satisfied with their care.

We found that non-metropolitan American Indian/Alaska Native and Hispanic respondents reported higher levels of not being able to get an appointment soon enough. A higher percentage of non-metropolitan American Indian/Alaska Natives also reported having to wait too long once getting to the appointment and dissatisfaction with care compared to their non-metropolitan counterparts. This corroborates previous studies indicating that American Indian/Alaska Native Medicare beneficiaries reported worse experiences with getting needed care, getting care quickly, doctor communication, and care coordination compared to their peers.¹⁵ Further, other studies show greater time barriers for Hispanic patients regardless of rurality.¹⁶ Sample sizes were too small to examine language preference in the current analyses, but these barriers among Hispanics may be in part due to language barriers and lack of interpreters.

While we did not determine whether American Indian/Alaska Native respondents received most of their care from the Indian Health Service (IHS), it is important to consider that the IHS is a likely key source of care for these populations. In 2019, the IHS reported that they have implemented electronic dashboards to monitor patient wait times. Future studies should continue to assess patient accommodation among AI/AN patients at IHS facilities to determine whether wait times have improved.¹⁷

Our findings from an analysis of BRFSS data from eight states suggest that non-metropolitan respondents report greater transportation barriers than their metropolitan peers. Further, a higher percentage of all non-White non-metropolitan respondents report lack of transportation as a barrier compared to their White peers. As non-metropolitan populations have greater travel burdens, lack of transportation is of particular concern. Additionally, improvements to Indian Health Service care processes and surveillance may help reduce accommodation and acceptability of care concerns for American Indian/Alaska Native populations.

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APPENDIX

Methodology

Data Source

We utilized publicly available data from the 2018 Behavioral Risk Factor Surveillance System (BRFSS). This annual telephonic survey (landline, cellphone, mail) collects information on health-related risk-behaviors, chronic health conditions, and the utilization of preventive services. Jointly administered by the CDC's division of behavioral surveillance, Office of Surveillance, Epidemiology and Laboratory services, the survey targets non-institutionalized U.S. adults who are aged 18 or older at the time of interview. In addition to a core set of questions, states have the opportunity to include optional modules on topics of interest such as a health care access module which eight states (Georgia, Louisiana, Mississippi, Nebraska, New Hampshire, New Mexico, Oregon, and Tennessee) opted to include in 2018.

Measures

Accommodation. The health care access module included questions about accommodation such as non-cost barriers that led to delays in care. In particular, each respondent was asked, "other than cost, there are many other reasons people delay getting needed medical care. Have you delayed getting needed medical care for any of the following reasons in the past 12 months?" Respondents were then provided with the following reasons and asked to select the most important reason: 1) you couldn't get through on the telephone; 2) you couldn't get an appointment soon enough; 3) once you got there, you had to wait too long to see the doctor; 4) the (clinic/doctor's) office wasn't open when you got there; or 5) you didn't have transportation.

Acceptability. The health care access module also includes the following question, "In general, how satisfied are you with the health care you received? Would you say very satisfied, somewhat satisfied, or not at all satisfied?" Each respondent would reply with the Likert's scale satisfaction they received.

Residence Rurality. Rurality was determined by the National Center for Health Statistics' Urban-Rural Classification for Counties and dichotomized as metropolitan and non-metropolitan. *Race/ethnicity* was self-reported by the survey adults and classified as non-Hispanic White, non-Hispanic Black, Hispanic, American Indian/Alaska Native, Asian/ Pacific Islander, and Other which includes multi-racial and non-specified race. Race/ethnicity is a social construct that indicates potential for exposure to interpersonal and structural disadvantage. Other sociodemographic measures include: gender, marital status, language used to complete the survey, education level, and employment status. Imputed versions of race/ethnicity and age available in the BRFSS dataset were used to reduce missingness.

Analysis

We performed descriptive statistics to present the sociodemographic characteristics of survey adults. We assessed differences in accommodation barriers across rurality (non-metropolitan vs. metropolitan) and race/ethnicity using Wald chi-square analysis. We also performed stratified analyses among those aged 18-64 who are not yet age-eligible for Medicare. We accounted for the complex survey design in our analyses all of which were performed in SAS.

Table A.1 Sociodemographic Characteristics of Survey Adults

	Non-Metropolitan N (Weighted %)	Metropolitan N (Weighted %)	P-Value
<i>Total</i>	24, 352 (25.2%)	34,111 (74.8%)	N/A
Race/Ethnicity (Imputed)			
Non-Hispanic White	18,942 (71.8%)	24,506 (74.8%)	<0.001
Non-Hispanic Black	2,560 (16.5%)	4,288 (21.0%)	
American Indian/Alaska Native	606 (1.9%)	633 (1.2%)	
Asian/Pacific Islander	79 (0.5%)	537 (2.3%)	
Hispanic	1,740 (7.7%)	3,245 (9.1%)	
Non-Hispanic/Other	425 (1.7%)	902 (2.3%)	
Age			
18-64	15,124 (75.7%)	23, 527 (80.5%)	<0.001
65 and older	9,228 (24.3%)	10, 584 (19.5%)	
Gender			
Male	10,575 (48.3%)	15,383 (48.2%)	0.94
Female	13,737 (51.5%)	18,661 (51.6%)	
Don't know/refused/missing	67 (0.2%)	40 (0.2%)	
Marital status			
Married	12,941 (50.3%)	17,159 (49.3%)	<0.001
Divorced	3,425 (12.8%)	4,915 (11.1%)	
Widowed	3,317 (8.8%)	3,441 (6.4%)	
Separated	581 (2.7%)	865 (2.7%)	
Never married	3,368 (21.1%)	6,219 (25.4%)	
A member of an unmarried couple	608 (3.7%)	1,243 (4.4%)	
Don't know/refused/missing	112 (0.6%)	269 (0.8%)	
Language used to complete the survey			
English	23,825 (97.5%)	32,933 (96.7%)	<0.001
Spanish	527 (2.5%)	1,178 (3.4%)	
Education Level			
Less than high school	2,384 (17.5%)	2,791 (12.4%)	<0.001
High school graduate	7,949 (34.4%)	8,855 (27.9%)	
Attended college/technical school	7,027 (30.4%)	9,236 (31.5%)	
College/technical school graduate	6,918 (17.3%)	13,102 (27.7%)	
Don't know/refused/missing	74 (0.4%)	127 (0.4%)	
Employment Status			
Employed for wages	9,097 (41.0%)	14,790 (47.4%)	<0.001
Self-employed	2,655 (9.1%)	3,026 (9.3%)	
Out of work for 1 year or more	398 (2.6%)	693 (2.4%)	
Out of work for less than 1 year	409 (2.5%)	711 (2.7%)	
Homemaker	1,291 (6.0%)	1,630 (5.0%)	
Student	457 (4.3%)	1,082 (5.3%)	
Retired	7,406 (20.8%)	8,988 (17.4%)	
Unable to work	2,396 (12.5%)	2,705 (8.7%)	
Don't Know/refused/missing	243 (1.3%)	486 (1.9%)	