

Dynamics of Economic Well-Being: Poverty, 2013–2016

Current Population Reports

Abinash Mohanty

P70BR-172

August 2021

INTRODUCTION

This report presents data on poverty based on information collected in the Survey of Income and Program Participation (SIPP). The report describes patterns of poverty using measures with different time horizons and provides a dynamic view of the duration of poverty spells and the frequency of transitions into and out of poverty. It further examines how poverty dynamics vary across demographic groups. The report focuses on data collected in the 2014 Panel of the SIPP covering January 2013 through December 2016.¹

The SIPP allows policymakers, academic researchers, and the general public to observe a more detailed portrait of poverty than the one provided by the official annual poverty estimate. The official annual poverty rate, based on the Current Population Survey Annual Social and Economic Supplement (CPS ASEC), captures a snapshot of well-being at a single point in time. Once a year, the CPS ASEC measures the percentage of people whose annual money incomes fall below their official poverty threshold, but the CPS ASEC does not address how poverty varies across shorter or longer time periods, or how an individual's poverty status may change over time. Longitudinal research finds poverty rates vary by the period examined—a smaller fraction of people are in poverty for more than 1 year, while a

¹ All comparative statements in this report have undergone statistical testing, and, unless otherwise noted, all comparisons are statistically significant at the 10 percent significance level. The U.S. Census Bureau reviewed this data product for unauthorized disclosure of confidential information and has approved the disclosure avoidance practices applied to this release. CBDRB-FY21-SEHSD009-0003.

larger percentage of people experience poverty for shorter times.²

HIGHLIGHTS

- From January 2013 through December 2016:
 - The average monthly poverty rate across the 48-month period was 15.2 percent (Table 1).
 - Approximately 34.0 percent of the U.S. population was in poverty for at least 2 months (Figure 3 and Appendix Table 1).
 - The percentage of people in poverty all 48 months was 2.8 percent (Figure 3 and Appendix Table 2).
 - Of all poverty spells, 35.4 percent ended within 6 months (Appendix Table 6).
 - The median length of a given poverty spell was 11.1 months (Table 3).
 - It is estimated that 24.3 percent of poverty spells experienced by Blacks lasted at least 24 consecutive months. In contrast, 16.1 percent of poverty spells experienced by non-Hispanic Whites lasted 24 consecutive months or longer³ (Figure 9 and Appendix Table 8).

² Examples of previous longitudinal studies are available in the "Other Longitudinal Studies" section at the end of this report.

³ Federal surveys, including the SIPP, give respondents the option of reporting more than one race. These data can be shown in two ways: (1) as mutually exclusive from other race groups, which may be denoted by "alone," or (2) not mutually exclusive with other race groups, denoted by "alone or in combination with other race groups." The figures, tables, and text in this report show race using the first method. Additionally, Hispanics may be any race; data in this report for Hispanics overlap data for racial groups. Data users should exercise caution when interpreting aggregate results for these groups because they consist of many distinct subgroups that differ in socioeconomic characteristics, culture, and recency of immigration.

- Among individuals in annual poverty in 2013, 27.5 percent were still in poverty in 2016 (Table 2).
- In 2013, 21.9 million people had annual income below 50 percent of their annual poverty threshold. In 2016, 25.9 percent of these individuals still had incomes below 50 percent of their annual poverty threshold, while 27.3 percent of these individuals had incomes above 200 percent of their annual poverty threshold (Figure 6 and Appendix Table 5).

MEASURING POVERTY USING THE SIPP

The SIPP collects information on the short-term dynamics of employment, income, household composition, and eligibility and participation in government assistance programs.

It is a leading source of information on specific topics related to economic well-being, family dynamics, education, wealth and assets, health insurance, child care, and food security. The population represented in the SIPP is the civilian noninstitutionalized population of the United States.

Poverty statistics presented in this report adhere to the standards specified by the Office of Management and Budget's Statistical Policy Directive 14. The Census Bureau uses a set of money income thresholds that vary by family size and composition to determine who is in poverty. If a family's total income is less than that family's threshold, then that family and every individual in it are considered to be in poverty. The poverty thresholds do not vary geographically. They are updated annually to reflect changes

SIPP DATA AVAILABILITY

The Survey of Income and Program Participation (SIPP) is designed as a series of longitudinal panels. Data from the SIPP can be used cross-sectionally by looking at individual reference months within a single wave, or longitudinally by following individuals as they are interviewed in successive waves across the panel.

This report uses data from the 2014 SIPP Panel. The 2014 SIPP Panel collected data over the course of four 12-month waves, covering 48 reference months from January 2013 through December 2016. At the end of each wave respondents were asked to provide monthly data covering the previous year highlighting changes in household and family composition and economic circumstances over time. The data in this report include all 48 months of data collected from Waves 1 through 4 of the 2014 Panel covering calendar years 2013–2016.

in the cost of living using the Consumer Price Index for All Urban Consumers (CPI-U).⁴

Since SIPP respondents are asked about their income over the previous year, each month's poverty status is determined by comparing monthly income to the appropriate monthly poverty threshold. Monthly thresholds are calculated by multiplying the base-year annual poverty thresholds by an inflation factor relevant to the reference month, and then dividing the calculated annual threshold by 12.

This report discusses poverty rate estimates for different periods, measures the length of time people remain poor, and follows the movement of people into and out of poverty. Estimates are compared across various demographic groups such as sex, race, Hispanic origin, age, family status,

and educational attainment.⁵

The poverty measures discussed include monthly, annual, episodic, and chronic poverty rates. To capture changes in poverty status over time, the report examines the persistence of annual poverty, the movement of people across income-to-poverty ratio groupings, the duration of poverty spells, and the poverty survival rate. Refer to the "Poverty Measures Used in This Report" text box for a detailed description of each measure.

RESULTS

Monthly Poverty Rates

Figure 1 presents overall monthly poverty rates for the 2013–2016 period. Monthly poverty rates serve as a valuable supplement

⁴ Additional information on how the Census Bureau measures poverty is available at <www.census.gov/topics/income-poverty/poverty/guidance/poverty-measures.html>.

⁵ In order to maintain consistency with earlier Census Bureau reports examining poverty dynamics, this report uses demographic data from January at the start of the reference period (for nonmonthly estimates). Future reports examining poverty dynamics may choose to use demographic data from December, given that annual weights from the 2014 Panel use December as a reference month and December is closer to the interview date.

POVERTY MEASURES USED IN THIS REPORT

| | |
|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Monthly Poverty Rate | Percentage of people in poverty in a given month using monthly income and a monthly threshold. |
| Episodic Poverty Rate | Percentage of people in poverty for 2 or more consecutive months. |
| Average Monthly Poverty Rate | Average percentage of people in poverty using monthly income and a monthly threshold over a given reference period—in this case, it is calculated by dividing the average number individuals with monthly income below their monthly poverty thresholds across all 48 months of the 4-year panel by the average monthly population across the 4-year panel. |
| Chronic Poverty Rate | Percentage of individuals in poverty every month of a given reference period. Chronic poverty over an annual period includes individuals who have been in poverty for all 12 months, while chronic poverty over the panel refers to individuals in poverty all 48 months of the 4-year period. |
| Annual Poverty Rate | Percentage of individuals in poverty in a calendar year. Each individual's annual poverty status is calculated by comparing the sum of monthly family income over the year to the sum of monthly poverty thresholds for the year. ¹ |
| Income-to-Poverty Ratio | An individual's family income divided by the family's assigned poverty threshold. Individuals with an income-to-poverty ratio below 1 are officially considered to be in poverty. Additionally, individuals with an income-to-poverty ratio of 1.0 to 1.5 are sometimes referred to as near-poor and individuals with an income-to-poverty ratio of 0.0-0.5 are sometimes referred to as being in deep poverty. |
| Length of Poverty Spell | Number of months in poverty. The minimum spell length is 2 months and spells are separated by 2 or more months of not being in poverty. Individuals can have more than one spell of poverty over the reference period. Spells underway in the first interview month of the panel are excluded. |
| Poverty Survival Rate | Percentage of poverty spells continuing to persist (survive) a length of time. The survival curve represents the percentage of individuals who stay consistently in poverty across months. |

¹ As annual poverty thresholds in SIPP are a sum of an individual's monthly thresholds across the year, annual thresholds in SIPP uniquely reflect an individual's changing family composition throughout the year. This methodology used to calculate annual poverty using the SIPP differs from the methods used for cross-sectional surveys such as the American Community Survey (ACS) and Current Population Survey Annual Social and Economic Supplement (CPS ASEC). As a result of this and other differences across surveys, annual poverty rate estimates in the SIPP differ from official poverty estimates based on the CPS ASEC. Additional discussion on how calculating annual poverty using the SIPP can be different from other surveys can be found in Abinash Mohanty, "Poverty Dynamics: An Overview of Longitudinal Poverty Estimates Produced by the United States Census Bureau," SEHSD Working Paper 2019-38, U.S. Census Bureau, Washington, DC, 2019.

to estimates of annual poverty rates. While annual poverty rates reflect longer-term income deficits, monthly poverty rates reflect more frequent short-term income deficits. Across 2013–2016, the monthly poverty rate (adjusted to remove the short-month effect) declined from 17.7 percent in

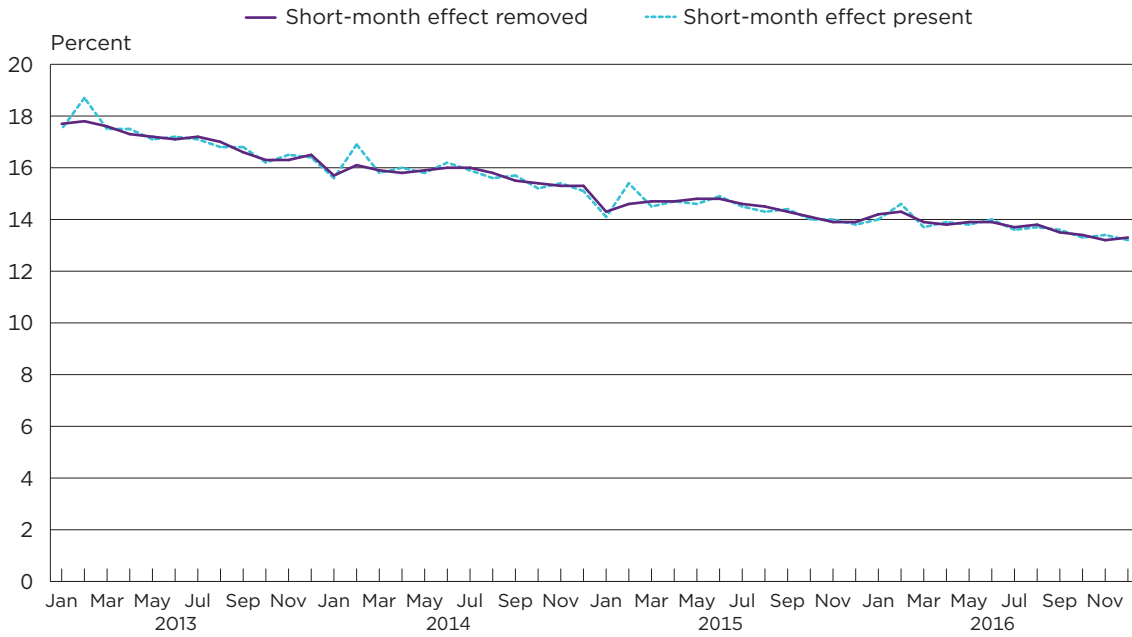
January 2013 to 13.3 percent in December 2016.⁶

Figure 2 presents monthly poverty rates from January 2013

⁶ The "short-month effect removed" monthly poverty rates were produced using weights that have not been adjusted for short-month effect. Beginning with the 2018 SIPP Panel, these weights have been adjusted. For additional information about the short-month effect please reference the "The Short-Month Effect" text box.

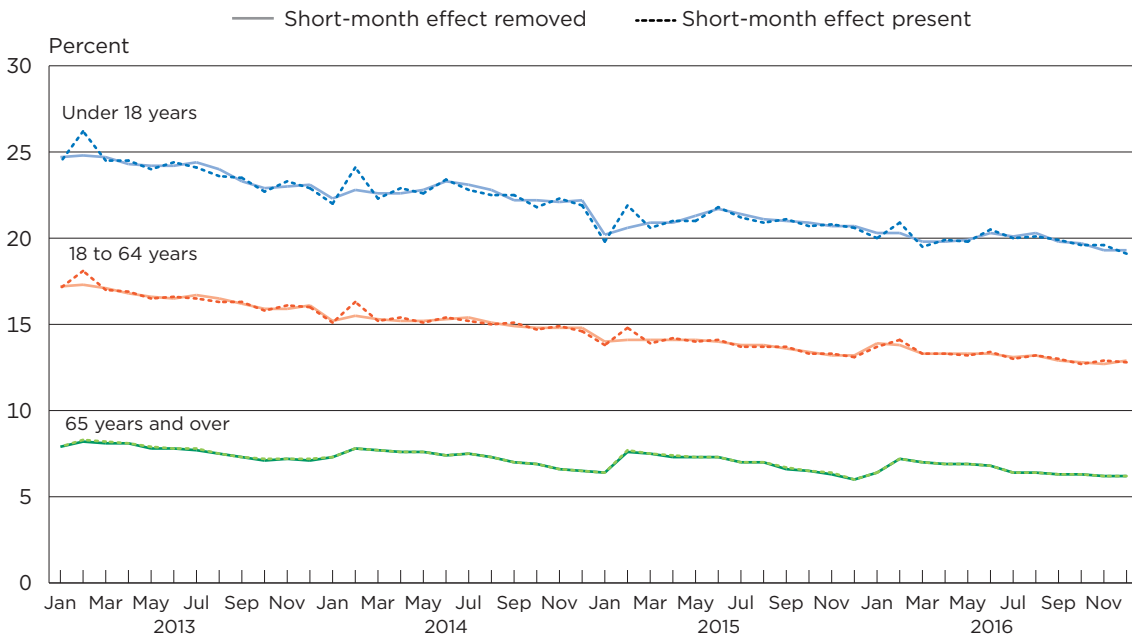
through December 2016 across age groups. Considering only the poverty rates adjusted to remove the short-month effect, children under the age of 18 had higher monthly poverty rates than adults aged 18 to 64 for every month across the 4 years, while adults aged 65 and older consistently had lower monthly poverty rates

Figure 1.
Overall Monthly Poverty Rate: 2013–2016



Note: Weights in 2014 SIPP Panel have not been adjusted for short-month effect. Beginning with the 2018 SIPP Panel, weights are adjusted.
 Source: U.S. Census Bureau, Survey of Income and Program Participation, 2014 Panel.

Figure 2.
Monthly Poverty Rates by Age: 2013–2016



Note: Weights in 2014 SIPP Panel haven't been adjusted for short-month effect. Beginning with the 2018 SIPP Panel, weights are adjusted.
 Source: U.S. Census Bureau, Survey of Income and Program Participation, 2014 Panel.

than the other major age categories. Across 2013–2016, monthly poverty rates for adults aged 18 to 64 declined from 17.2 percent in January 2013 to 12.9 percent in December 2016, while the monthly poverty rate for adults aged 65 and older declined from 7.9 percent in January 2013 to 6.2 percent in December 2016. Monthly poverty rates for individuals under age 18 declined from 24.7 percent in January 2013 to 19.3 percent in December 2016.

Average Monthly Poverty Rates

While monthly poverty rates are calculated individually each month, average monthly poverty rates provide a summary measure of the number and percentage of people who experienced poverty during a given period. The poverty average rates are calculated by dividing the average of the number of individuals in monthly poverty over a period by the average of the monthly population of individuals over that period.

As shown in Table 1, the average monthly poverty rate over the 2013–2016 period was 15.2 percent. Non-Hispanic Whites had a lower average monthly poverty rate (11.4 percent) than Blacks and Hispanics, while the difference between the average monthly poverty rates for Blacks (23.3 percent) and Hispanics (23.2 percent) were not statistically significant.

The average monthly poverty rate for females (16.4 percent) was 2.4 percentage points higher than the average monthly poverty rate for males (14.0 percent).

From January 2013 through December 2016, the average monthly poverty rate for individuals in married-couple families (7.1

THE SHORT-MONTH EFFECT

In the 2014 SIPP Panel (covering 2013–2016), poverty rates are sensitive to the number of days in a month. Monthly poverty rates in February, a month with 28 or 29 days, are the highest in every year across the 2014 SIPP Panel (Figure 1). This phenomenon, referred to as the “short-month effect,” stems from the fact that poverty thresholds and nonearnings income are calculated not regarding the number of days in a month, while monthly earnings vary based on month duration. The 2018 SIPP Panel ended the short-month effect by creating a new earnings measure. This new measure is days-in-month invariant in an attempt to better capture fluctuating economic conditions without the influence of the number of days in a month. This is similar to how monthly poverty was calculated in SIPP panels prior to 2014.

The monthly poverty figures in this report (Figures 1 and 2) include both the original monthly poverty rate, labeled as “short-month effect present,” and monthly poverty rates adjusted to remove the effect of month-length, labeled as “short-month effect removed.” When discussing monthly poverty rates this report will focus on the “short-month effect removed” time series, as this measure better represents genuine economic fluctuations.¹

The other figures and tables shown in this report are not adjusted to have the short-month effect removed.

¹ Previous reports released by the U.S. Census Bureau providing monthly poverty rates in the 2014 SIPP Panel (e.g., “Monthly and Average Monthly Poverty Rates by Selected Demographic Characteristics: 2013,” “Monthly and Average Monthly Poverty Rates by Selected Demographic Characteristics: 2014,” and “Monthly and Average Monthly Poverty Rates by Selected Demographic Characteristics: 2015”) do not include poverty rates adjusted to remove the short-month effect.

percent) was the lowest average poverty rate among family types. In contrast, individuals in female-householder families had the highest average poverty rate (32.8 percent).⁷

Among major age groups, children under the age of 18 had the highest average monthly poverty rate (21.9 percent) over the 2013–2016 period. Those aged 65

and above had the lowest poverty rate (7.1 percent).

Average monthly poverty rates decline with education.⁸ Individuals without a high school diploma had the highest average monthly poverty rate (26.0 percent) among educational attainment groups. In comparison, the average monthly poverty rate for individuals with a bachelor’s degree or higher was 5.7 percent.

⁷ “Female householders” refer to female householders, who have no spouse present; “male householders” refer to male householders, who have no spouse present.

⁸ Statistics referencing educational status in this report are restricted to individuals aged 25 and older.

Table 1.

Average Monthly Poverty by Selected Characteristics: 2013–2016

(Numbers in thousands)

| Characteristic | Total | In poverty | | | |
|-------------------------------------------------------------------|----------------|---------------|----------------------------------|-------------|----------------------------------|
| | | Number | 90 percent C.I. ¹ (±) | Percent | 90 percent C.I. ¹ (±) |
| All people | 313,637 | 47,813 | 1,012 | 15.2 | 0.4 |
| Sex | | | | | |
| Male | 153,275 | 21,504 | 537 | 14.0 | 0.4 |
| Female | 160,362 | 26,309 | 613 | 16.4 | 0.4 |
| Race and Hispanic Origin^{2,3} | | | | | |
| White | 242,908 | 33,617 | 879 | 13.8 | 0.4 |
| White, non-Hispanic | 192,953 | 21,994 | 666 | 11.4 | 0.4 |
| Black | 40,741 | 9,508 | 422 | 23.3 | 1.1 |
| Hispanic | 55,002 | 12,770 | 591 | 23.2 | 1.1 |
| Non-Hispanic | 258,635 | 35,043 | 746 | 13.5 | 0.4 |
| Age | | | | | |
| Under 18 years | 72,657 | 15,890 | 540 | 21.9 | 0.8 |
| 18 to 64 years | 195,265 | 28,680 | 564 | 14.7 | 0.3 |
| 65 years and over | 45,715 | 3,243 | 152 | 7.1 | 0.3 |
| Family Status | | | | | |
| In married-couple families | 189,154 | 13,453 | 717 | 7.1 | 0.4 |
| In families with a male householder, no spouse present | 9,749 | 1,678 | 163 | 17.2 | 1.6 |
| In families with a female householder, no spouse present | 53,190 | 17,441 | 615 | 32.8 | 1.0 |
| Unrelated individuals | 61,544 | 15,241 | 373 | 24.8 | 0.5 |
| Educational Attainment | | | | | |
| Total, aged 25 and older | 210,850 | 24,856 | 516 | 11.8 | 0.3 |
| No high school diploma | 24,243 | 6,314 | 268 | 26.0 | 0.9 |
| High school, no college | 59,216 | 8,320 | 273 | 14.1 | 0.4 |
| Some college, no degree | 57,446 | 6,207 | 254 | 10.8 | 0.4 |
| Bachelor's degree or higher | 69,946 | 4,015 | 179 | 5.7 | 0.3 |

¹ A 90 percent confidence interval (C.I.) is a measure of an estimate's variability. The larger the confidence interval in relation to the size of the estimate, the less reliable the estimate.

² Federal surveys, including the SIPP 2014 Panel, give respondents the option of reporting more than one race. These data can be shown in two ways: (1) as mutually exclusive from other race groups, which may be denoted by "alone" or (2) not mutually exclusive with other race groups, denoted by "alone or in combination with other race groups." The figures, tables, and text in this report show race using the first method.

³ Hispanics may be any race; data in this report for Hispanics overlap data for racial groups. Data users should exercise caution when interpreting aggregate results for these groups because they consist of many distinct subgroups that differ in socioeconomic characteristics, culture, and recency of immigration.

Note: More information on confidentiality protection and sampling and nonsampling error is available at www.census.gov/programs-surveys/sipp.html.

Source: U.S. Census Bureau, Survey of Income and Program Participation, 2014 Panel.

Episodic Poverty

Episodic poverty rates by demographic characteristics are shown in Appendix Table 1 and Figure 3. Over the 48-month period from January 2013 through December 2016, 34.0 percent of individuals experienced episodic poverty, defined as a poverty spell lasting 2 or more consecutive months.

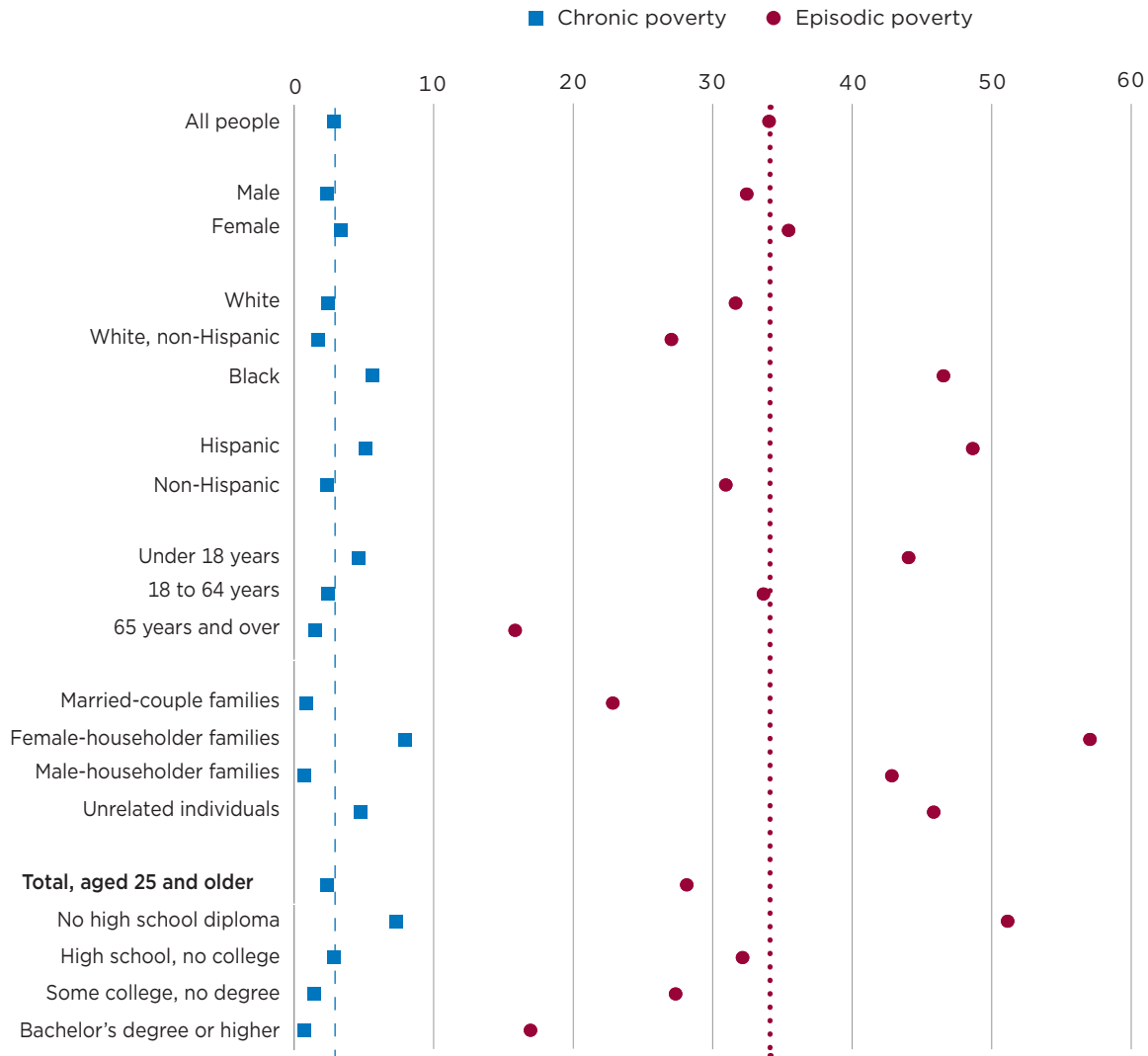
Non-Hispanic Whites had a lower episodic poverty rate (27.0 percent) than Blacks and Hispanics, while the episodic poverty rate for Blacks (46.5 percent) was not significantly different from the Hispanic episodic poverty rate (48.6 percent).

Similar to what was seen in other poverty statistics, the episodic poverty rate for females (35.4

percent) was higher than the episodic poverty rate for males (32.4 percent).

Episodic poverty rates decrease with age; children under 18 years old had an episodic poverty rate of 44.0 percent, while adults 65 years and over had an episodic poverty rate of 15.8 percent.

Figure 3.
Chronic and Episodic Poverty Across 4 Years: 2013–2016
 (Percent)



Note: The blue dashed line represents the overall chronic poverty rate for all people. The red dotted line represents the overall episodic poverty rate for all people.
 Source: U.S. Census Bureau, Survey of Income and Program Participation, 2014 Panel.

Similar to what is seen in many other poverty estimates, the episodic poverty rate for people in female-householder families (57.0 percent) exceeded the episodic poverty rates for people in other family types. In comparison, married-couple families had the lowest episodic poverty rate (22.8 percent) across all family types.

Following a pattern seen with other poverty rates, episodic poverty rates decline with additional education. For example, individuals without a high school diploma had a substantially higher poverty rate (51.1 percent) than individuals with a high school diploma who did not attend college (32.1 percent).

Chronic Poverty

Chronic poverty rates, the percentage of people in poverty every month over the 48-month period spanning January 2013 through December 2016, are shown in Figure 3 and Appendix Table 2. Over the 48-month period spanning 2013 through 2016, 2.8

percent of individuals were considered chronically poor.

Non-Hispanic Whites had a lower chronic poverty rate (1.7 percent) than Hispanics and Blacks (5.1 percent and 5.6 percent, respectively).⁹

Similar to what was seen in episodic poverty, the chronic poverty rate of females (3.3 percent) was higher than the chronic poverty rate for males (2.3 percent).

As with episodic poverty rates, children had the highest chronic poverty rate among age groups (4.6 percent), while adults aged 65 and over (1.5 percent) had the lowest.

Similar to episodic poverty, the chronic poverty rate for people in female-householder families (7.9 percent) was higher than rates for people in other family types.

Following the trend seen across many poverty estimates, chronic poverty rates declined with additional education. The chronic poverty rate for individuals with a bachelor's degree or higher (0.7 percent) was the lowest across educational attainment groups.

Proportion of Episodically Poor Who Were Chronically Poor

Individuals in chronic poverty are a subset of those in episodic poverty, as persons in episodic poverty have a poverty spell

⁹ There was not a statistically significant difference between chronic poverty rates for Hispanics and Blacks over the 2013–2016 period.

lasting 2 or more consecutive months, while persons in chronic poverty are poor all months of an observed period. Appendix Table 3 and Figure 4 show the proportion of the episodically poor who are also categorized as in chronic poverty over the 2013–2016 period. This proportion is a useful metric to compare the relative chances of exiting poverty.

Overall, 8.2 percent of episodically poor individuals were also chronically poor over the 2013–2016 period. Individuals 25 and older without a high school diploma, Blacks, and individuals in female-householder families were among the groups with the highest proportion of episodically poor who were also chronically poor (14.2 percent, 12.1 percent, and 13.8 percent, respectively).¹⁰ The demographic group with the smallest proportion of episodically poor who were also chronically poor was individuals in families with a male householder (1.7 percent).

While individuals 65 years and over had chronic and episodic poverty rates significantly lower than the other age groups, the proportion of episodically poor who were also chronically poor in this population (9.2 percent) was not significantly different from what was seen for children aged

¹⁰ There was no significant difference in the proportion of episodically poor who were also chronically poor among Blacks, individuals in female-householder families, and individuals 25 and older without a high school diploma.

18 and under (10.3 percent) or adults aged 18 to 64 (7.1 percent).

Annual Poverty Rates

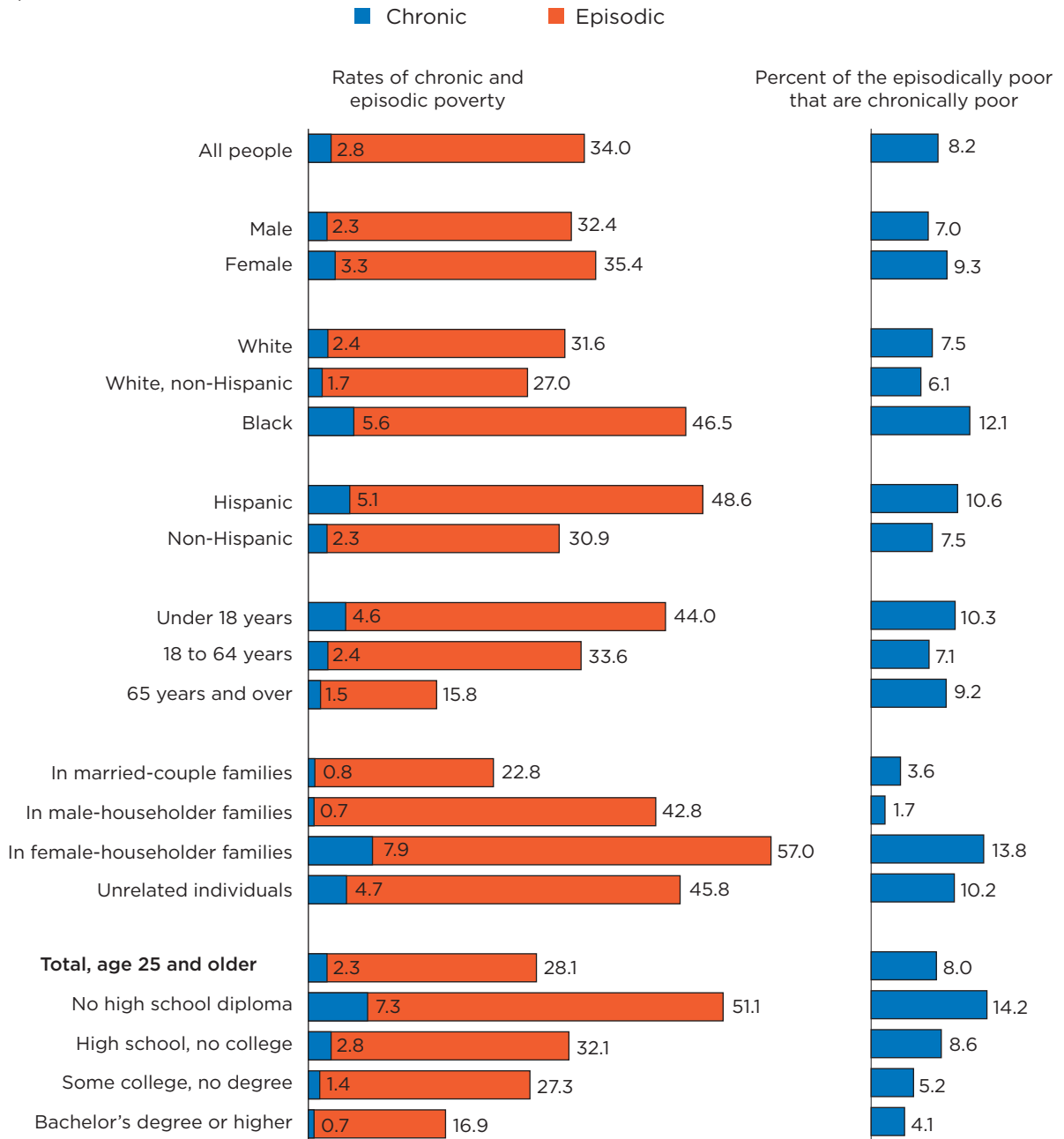
Appendix Table 4 and Figure 5 provide annual poverty rates across the 2013–2016 period.¹¹ Significant differences in the annual poverty rate from the previous year are indicated by asterisks on Appendix Table 4, while significant differences in the annual poverty rate between the 2013 and 2016 years are indicated by carets. Figure 5 also contains ACS and CPS ASEC annual poverty rates for comparison.

Overall, the number of individuals in annual poverty declined 22.8 percent, moving from 50.1 million individuals in 2013 to 38.7 million individuals in 2016.¹² There was a decrease in poverty rates over the 2013 to 2016 period across all demographic groups, except individuals in male householder

¹¹ The methodology used to calculate annual poverty using SIPP data differs from what is used by other Census Bureau surveys such as the CPS ASEC. For example, annual poverty thresholds in SIPP are calculated by summing an individual's monthly poverty thresholds across a year. This results in annual poverty thresholds in SIPP reflecting an individual's changing family dynamics throughout the year. Additional information on how annual poverty is calculated using SIPP data is available in Abinash Mohanty, "Poverty Dynamics: An Overview of Longitudinal Poverty Estimates Produced by the United States Census Bureau," SEHSD Working Paper 2019-38, U.S. Census Bureau, Washington, DC 2019, available at <www.census.gov/content/dam/Census/library/working-papers/2019/demo/SEHSD-WP2019-38.pdf>.

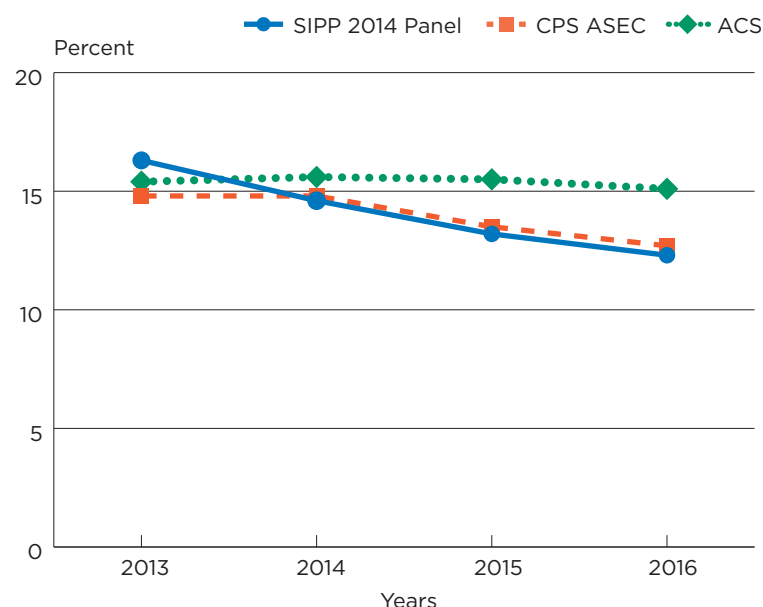
¹² The Wave 1 effect may be influencing the 2013 SIPP poverty rate. Additional information on the Wave 1 effect can be found in the "Limitations" section of this report.

Figure 4.
Chronic and Episodic Poverty Across 4 Years: 2013–2016
 (Percent)



Source: U.S. Census Bureau, Survey of Income and Program Participation, 2014 Panel.

Figure 5.
Annual Poverty Rates: 2013–2016



Note: The Wave 1 effect may be influencing the 2013 SIPP poverty rate. Additional information on the Wave 1 effect can be found in the "Limitations" section of this report. Sources: U.S. Census Bureau, Survey of Income and Program Participation, 2014 Panel; Current Population Survey, 2014, 2015, 2016, and 2017 Annual Social and Economic Supplements (CPS ASEC); and American Community Survey, 2013, 2014, 2015, and 2016 5-year estimates.

families.¹³ Over the 4-year period, the number of Hispanics in poverty declined from 14.1 million individuals to 9.7 million individuals (or 31.1 percent). This decline was significantly larger than what was seen across all other demographic groups, except individuals in married-couple families. The number for that group declined 27.3 percent, moving from 13.8 million individuals in poverty in 2013 to 10.0 million individuals in poverty in 2016.

For 2013, the SIPP annual poverty rate was higher than its CPS ASEC and ACS counterparts. However, this relationship changes over the 2014–2016 period, where SIPP annual poverty rates were not

¹³ The 2013 annual poverty rate for families with a male householder was not significantly different from the 2016 rate.

significantly different from CPS ASEC poverty rates, and ACS poverty rates were above SIPP poverty rates.

Persistence of Annual Poverty

Table 2 provides the percentage of individuals who were categorized as in annual poverty in 2013 and who remained in annual poverty across each subsequent year from 2014 through 2016. Of the 46 million individuals in annual poverty in 2013, approximately 27.5 percent were still in annual poverty in 2016. Among those in poverty in 2013, Blacks, children under 18 years old, individuals 25 and older without a high school diploma, and individuals in female-householder families had the largest percentages persistently in poverty in

2016 (36.2 percent, 34.1 percent, 34.5 percent, and 34.4 percent, respectively).¹⁴

Movement of Individuals Across Income-to-Poverty Ratios

Appendix Table 5 and Figure 6 provide the movement of people across income-to-poverty ratio groups across the 2013 to 2016 period. The income-to-poverty ratio is calculated by dividing an individual's family income by their assigned poverty threshold.¹⁵ Excluding the top and bottom income-to-poverty ratio categories, individuals were more likely to experience upward income-to-poverty ratio mobility than downward mobility from 2013 to 2016. Within the shown income-to-poverty ratio categories, individuals that had an income-to-poverty ratio between 150.0 to 199.9 percent were most likely to move to a lower income-to-poverty ratio group in 2016. Conversely, 89 percent of individuals with an income-to-poverty ratio above 200 percent remained in the same group in 2016.

Duration of Poverty Spells

Appendix Table 6 shows the distribution of poverty spell lengths for the total population over the course of the 2013–2016 period.¹⁶

¹⁴ There was not a statistically significant difference in the percentage of Blacks, individuals in female-householder families, and children under the age of 18 who were still in annual poverty in 2016.

¹⁵ In the case of unrelated individuals (i.e., individuals not residing with family members), the family income is simply their individual income.

¹⁶ Refer to the "Poverty Measures Used in this Report" text box for the definition of poverty spell length. An individual is counted more than once if they had multiple spells. Analysis excludes spells beginning on or before January 2013 (left-censored spells) but includes spells ending on or after December 2016 (right-censored spells). Refer to the limitations in the appendix for a more detailed explanation of censored spells.

Table 2.

Persistence of Annual Poverty: 2013–2016¹

(Numbers in thousands)

| Characteristic | Number in poverty in 2013 | 2014 | | 2015 | | 2016 | |
|-------------------------------------------------------------------|---------------------------|--------------------------|----------------------------------|--------------------------|----------------------------------|--------------------------|----------------------------------|
| | | Percent still in poverty | 90 percent C.I. ² (±) | Percent still in poverty | 90 percent C.I. ² (±) | Percent still in poverty | 90 percent C.I. ² (±) |
| All people | 46,037 | 60.0 | 2.1 | *38.9 | 2.1 | *27.5 | 1.9 |
| Sex | | | | | | | |
| Male | 20,256 | 57.1 | 2.7 | *36.0 | 2.5 | *24.9 | 2.1 |
| Female | 25,781 | 62.3 | 2.1 | *41.2 | 2.3 | *29.5 | 2.2 |
| Race and Hispanic Origin^{3, 4} | | | | | | | |
| White | 31,860 | 57.7 | 2.6 | *37.5 | 2.7 | *25.2 | 2.1 |
| White, non-Hispanic | 19,523 | 54.3 | 3.1 | *35.8 | 3.4 | *24.1 | 2.7 |
| Black | 9,936 | 70.0 | 4.2 | *44.9 | 5.7 | *36.2 | 5.4 |
| Hispanic | 13,176 | 63.9 | 5.1 | *40.6 | 3.9 | *27.4 | 3.2 |
| Non-Hispanic | 32,861 | 58.4 | 2.4 | *38.2 | 2.6 | *27.5 | 2.3 |
| Age | | | | | | | |
| Under 18 years | 15,617 | 67.0 | 3.4 | *46.8 | 3.5 | *34.1 | 3.2 |
| 18 to 64 years | 28,025 | 56.8 | 2.2 | *34.9 | 2.1 | *23.8 | 1.8 |
| 65 years and over | 2,394 | 51.3 | 5.0 | *35.0 | 4.9 | *27.6 | 5.0 |
| Family Status | | | | | | | |
| In married-couple families | 13,055 | 49.3 | 4.6 | *29.1 | 4.7 | *19.8 | 3.8 |
| In families with a male householder, no spouse present | 1,587 | 34.8 | 10.9 | *27.6 | 10.0 | *16.3 | 8.3 |
| In families with a female householder, no spouse present | 17,215 | 70.7 | 4.0 | *47.1 | 3.8 | *34.4 | 3.7 |
| Unrelated individuals | 14,180 | 59.7 | 2.6 | *39.3 | 2.7 | *27.4 | 2.4 |
| Educational Attainment | | | | | | | |
| Total, aged 25 and older | 23,536 | 56.6 | 2.1 | *36.7 | 2.0 | *26.4 | 1.8 |
| No high school diploma | 7,019 | 65.4 | 3.6 | *45.9 | 3.6 | *34.5 | 3.4 |
| High school, no college | 7,475 | 56.4 | 3.6 | *37.7 | 3.6 | *27.2 | 3.1 |
| Some college, no degree | 5,602 | 53.7 | 4.5 | *31.2 | 3.9 | *20.7 | 3.4 |
| Bachelor's degree or higher | 3,440 | 43.7 | 5.9 | *24.8 | 4.4 | *17.1 | 3.8 |

* Indicates a statistically significant difference in percent still in poverty from previous year.

¹ The 2013–2016 estimates require respondents to be in sample all 48 months.

² A 90 percent confidence interval (C.I.) is a measure of an estimate's variability. The larger the confidence interval in relation to the size of the estimate, the less reliable the estimate.

³ Federal surveys, including the SIPP 2014 Panel, give respondents the option of reporting more than one race. These data can be shown in two ways: (1) as mutually exclusive from other race groups, which may be denoted by "alone" or (2) not mutually exclusive with other race groups, denoted by "alone or in combination with other race groups." The figures, tables, and text in this report show race using the first method.

⁴ Hispanics may be any race; data in this report for Hispanics overlap data for racial groups. Data users should exercise caution when interpreting aggregate results for these groups because they consist of many distinct subgroups that differ in socioeconomic characteristics, culture, and recency of immigration.

Note: More information on confidentiality protection and sampling and nonsampling error is available at www.census.gov/programs-surveys/sipp.html.

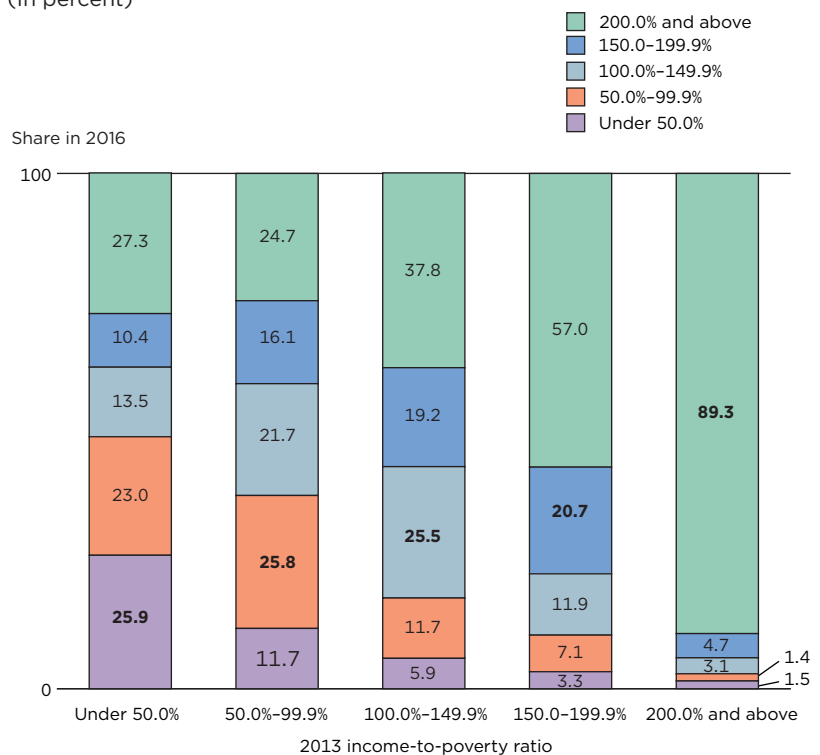
Source: U.S. Census Bureau, Survey of Income and Program Participation, 2014 Panel.

Poverty spell lengths show how many consecutive months an individual is categorized as in monthly poverty. Entering a poverty spell requires 2 consecutive months in poverty and exiting requires 2 consecutive months out

of poverty. Similar to trends in episodic and chronic poverty rates, the distribution of spell lengths indicates that most individuals experience relatively short spells of poverty.

Over the period from January 2013 through December 2016, approximately 35.4 percent of poverty spells lasted between 2 and 6 months, 32.4 percent of spells lasted between 7 and 12 months, 8.1 percent of spells

Figure 6.
Income-to-Poverty Ratio Movement: 2013–2016
(In percent)



| Number in poverty in 2013 (in thousands) | Under 50.0% | 50.0%-99.9% | 100.0%-149.9% | 150.0%-199.9% | 200.0% and above |
|------------------------------------------|-------------|-------------|---------------|---------------|------------------|
| | 21,889 | 24,148 | 27,975 | 26,925 | 192,769 |

Note: The numbers in bold highlight the percentage of individuals, in 2016, that remained in their 2013 income-to-poverty ratio group.
Source: U.S. Census Bureau, Survey of Income and Program Participation, 2014 Panel.

lasted between 13 and 18 months, and 7.1 percent of spells lasted between 19 and 24 months.¹⁷ Cumulatively, 83.0 percent of all spells lasted 2 years or less. Additionally, 12.0 percent of

¹⁷ There was not a statistically significant difference between the percentage of spells that lasted 13 to 18 months and those that lasted 19 to 24 months.

poverty spells lasted longer than 42 months.¹⁸

¹⁸ If spells underway in January 2013 (left-censored spells) are included in the analysis, the distribution shifts to the right: 23.5 (± 1.4) percent of spells lasted 2 to 6 months, 18.1 (± 1.5) percent lasted between 7 and 12 months, 23.4 (± 1.5) percent lasted between 13 and 18 months, 5.8 (± 0.9) percent lasted between 18 and 24 months, 29.3 (± 1.6) percent of spells continued more than 24 months, and 14.5 (± 1.5) percent lasted more than 42 months. There is no significant difference from including left-censored spells in the frequency of spells lasting 19 to 24 months and spells lasting more than 42 months.

Table 3 presents median spell lengths by demographic characteristics measured at the beginning of each spell. Median poverty spell length is the point in the distribution at which half of all spells are shorter and half of all spells are longer.

From 2013–2016, the median length of a poverty spell for the overall population was 11.1 months.¹⁹ Unlike many of the other poverty estimates, in which female estimates were often higher than male estimates, the median spell length for males (11.0 months) was not statistically different from the median spell length for females (11.1 months).

The median spell length for non-Hispanic Whites (10.5 months) was shorter than the median spell lengths for Blacks (12.2 months). However, in contrast with trends shown in episodic and chronic poverty rates, there was no significant difference in spell lengths between non-Hispanic Whites and Hispanics (10.5 months and 11.2 months, respectively).²⁰

Individuals in married-couple households had the shortest median spell length (9.5 months) among family types.

¹⁹ If spells underway in January 2013 (left-censored spells) are included in the analysis, then the median spell length would be 12.5 (± 0.1) months.

²⁰ There was not a statistically significant difference between the median spell length of Blacks and Hispanics.

Table 3.

Median Poverty Spell Length: 2013–2016

| Characteristic | 2013–2016 (excludes spells underway in January 2013) | |
|-------------------------------------------------------------------|------------------------------------------------------------|---------------------------------|
| | Median spell length (months) | 90 percent C.I.(±) ¹ |
| All people | 11.1 | 0.6 |
| Sex | | |
| Male | 11.0 | 0.7 |
| Female | 11.1 | 0.7 |
| Race and Hispanic Origin^{2,3} | | |
| White | 10.8 | 0.9 |
| White, non-Hispanic | 10.5 | 0.9 |
| Black | 12.2 | 0.4 |
| Hispanic | 11.2 | 1.9 |
| Non-Hispanic | 11.0 | 0.7 |
| Age | | |
| Under 18 years | 11.8 | 0.8 |
| 18 to 64 years | 10.1 | 0.6 |
| 65 years and over | 12.4 | 0.1 |
| Family Status | | |
| In married-couple families | 9.5 | 1.0 |
| In families with a male householder, no spouse present | 11.1 | 2.6 |
| In families with a female householder, no spouse present | 12.1 | 0.7 |
| Unrelated individuals | 11.9 | 0.6 |
| Educational Attainment | | |
| Total, aged 25 and older | 11.2 | 0.5 |
| No high school diploma | 12.3 | 0.3 |
| High school, no college | 11.7 | 0.6 |
| Some college, no degree | 10.0 | 0.8 |
| Bachelor's degree or higher | 9.8 | 1.3 |

¹ A 90 percent confidence interval (C.I.) is a measure of an estimate's variability. The larger the confidence interval in relation to the size of the estimate, the less reliable the estimate.

² Federal surveys, including the SIPP 2014 Panel, give respondents the option of reporting more than one race. These data can be shown in two ways: (1) as mutually exclusive from other race groups, which may be denoted by "alone" or (2) not mutually exclusive with other race groups, denoted by "alone or in combination with other race groups." The figures, tables, and text in this report show race using the first method.

³ Hispanics may be any race; data in this report for Hispanics overlap data for racial groups. Data users should exercise caution when interpreting aggregate results for these groups because they consist of many distinct subgroups that differ in socioeconomic characteristics, culture, and recency of immigration.

Note: More information on confidentiality protection and sampling and nonsampling error is available at <www.census.gov/programs-surveys/sipp.html>.

Source: U.S. Census Bureau, Survey of Income and Program Participation, 2014 Panel.

Although adults aged 65 years and over had lower episodic and chronic poverty rates than children under the age of 18 and adults aged 18 to 64, adults aged 65 and over had a longer median poverty spell length (12.4 months) than adults aged 18 to 64 (10.1 months) and a median spell length

that was not statistically different from children under 18 years (11.8 months).²¹

Among educational attainment groups, individuals with no high

²¹ The median spell length of adults aged 18 to 64 (10.1 months) was significantly higher than the median spell length for children under age 18 (11.8 months).

school diploma and individuals with only a high school diploma had the longest median poverty spell lengths (12.3 months and 11.7 months, respectively).²² Individuals with a bachelor's degree or higher and those who have some college education had the shortest median poverty spell lengths (9.8 months and 10.0 months, respectively).²³

Poverty Survival Curve

Figure 7 shows the overall poverty survival curve across the 2013–2016 period.²⁴ The poverty survival curve represents the percentage of individuals who stay in poverty across months. For example, Figure 7 shows approximately 23.2 percent of individuals stayed in poverty for at least 20 months and 12.3 percent of individuals remained in poverty for at least 38 months.²⁵ Entering a spell requires 2 consecutive months at a level of poverty, and exiting

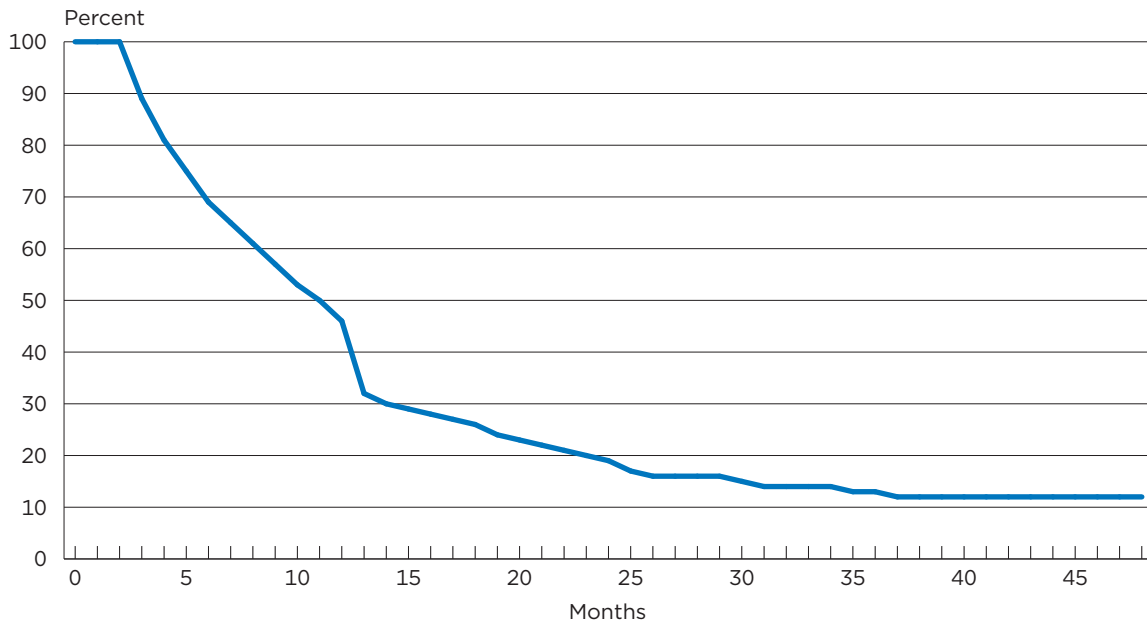
²² Among individuals 25 years and older, there was no statistical difference in median spell length for those with no high school diploma and those with only a high school diploma.

²³ Among individuals 25 years and older, there was no statistical difference in median spell length for those with a bachelor's degree and those who have only some college education.

²⁴ Survival curves using the 2008 SIPP Panel can be found in Ashley Edwards, "Measuring Single-Year Poverty Transitions: Opportunities and Limitations," SEHSD Working Paper FY2015-19, available at <www.census.gov/content/dam/Census/library/working-papers/2015/demo/SEHSD-WP2015-19.pdf>.

²⁵ The large decrease in the poverty survival rate seen at 13 months may be partially influenced by SIPP's 12-month recall period, which may result in a large number of transitions in income being reported at the start of each 12-month wave. Further discussion of this phenomenon, known as the "seam effect," can be found in the limitations section of this report, and in Ashley Edwards and Lewis H. Warren, "Poverty Dynamics in the 2014 Survey of Income and Program Participation," SEHSD Working Paper 2017-52, available at <www.census.gov/content/dam/Census/library/working-papers/2017/demo/SEHSD-WP2017-52.pdf>.

Figure 7.
Poverty Survival Rate: 2013–2016



Source: U.S. Census Bureau, Survey of Income and Program Participation, 2014 Panel.

the spell requires 2 consecutive months out of the level of poverty. As a result, the first 2 months of a poverty survival cure always show 100.0 percent survival.

Poverty Survival Rates by Sex

Figure 8 and Appendix Table 7 compare the survival curves of poverty spells by sex over the 2013–2016 period. Unlike what was seen in chronic and episodic poverty rates, there was no significant difference between the male and female poverty survival curves. Approximately 61 percent of male and female poverty spells lasted 8 months, while approximately 23 percent lasted 20 months. About 12 percent of male and female poverty spells lasted 40 months.

Poverty Survival Rates by Race and Ethnicity

Figure 9 and Appendix Table 8 compare survival curves of

poverty spells across selected racial and ethnic groups over the 2013–2016 period. The survival curves for non-Hispanic Whites and Hispanics were quite similar, with Hispanics having a survival rate higher than non-Hispanic Whites only for spells lasting 24 to 30 months. In contrast, the survival rates for Blacks were significantly higher than the survival rates for non-Hispanic Whites for about half of the poverty spell lengths examined.²⁶ Additionally, the survival rates for Blacks were above the survival rates for Hispanics for several poverty spells lengths under 2 years.²⁷

²⁶ For poverty spells lasting 3 months and 6 to 29 months, the Black survival rate was significantly above the Non-Hispanic White survival rate.

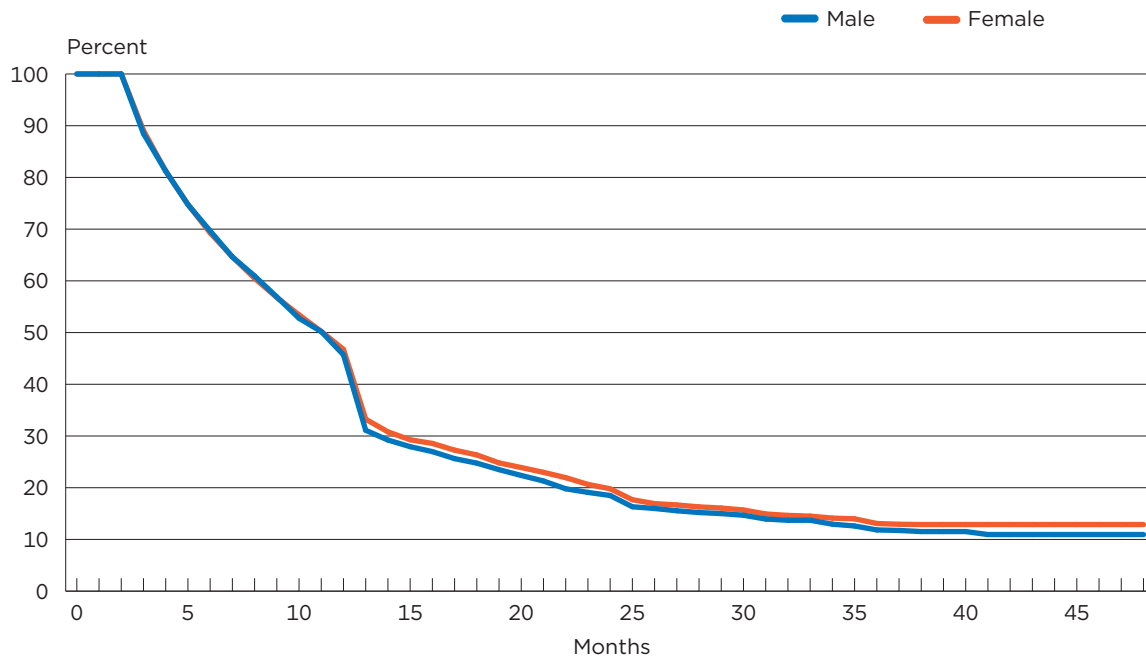
²⁷ For poverty spells lasting 7 to 10 months, 13 to 16 months, and 18 to 19 months, the Black survival rate was significantly above the Hispanic survival rate.

Poverty Survival Rate at Different Levels of Poverty

Figure 10 and Appendix Table 9 compare survival curves of spells at different levels of poverty over the 2013 through 2016 period. Each line in Figure 10 shows the survival curve for a given income-to-poverty ratio group. Over the 2013–2016 period, 52.0 percent of individuals with an income-to-poverty ratio below 50.0 percent stayed at this level of poverty for at least 8 months. In contrast, 62.1 percent of individuals who had an income-to-poverty ratio below 125.0 percent stayed at this level of poverty for at least 8 months. Among those below the official poverty threshold, 60.7 percent had a poverty spell lasting at least 8 months.²⁸

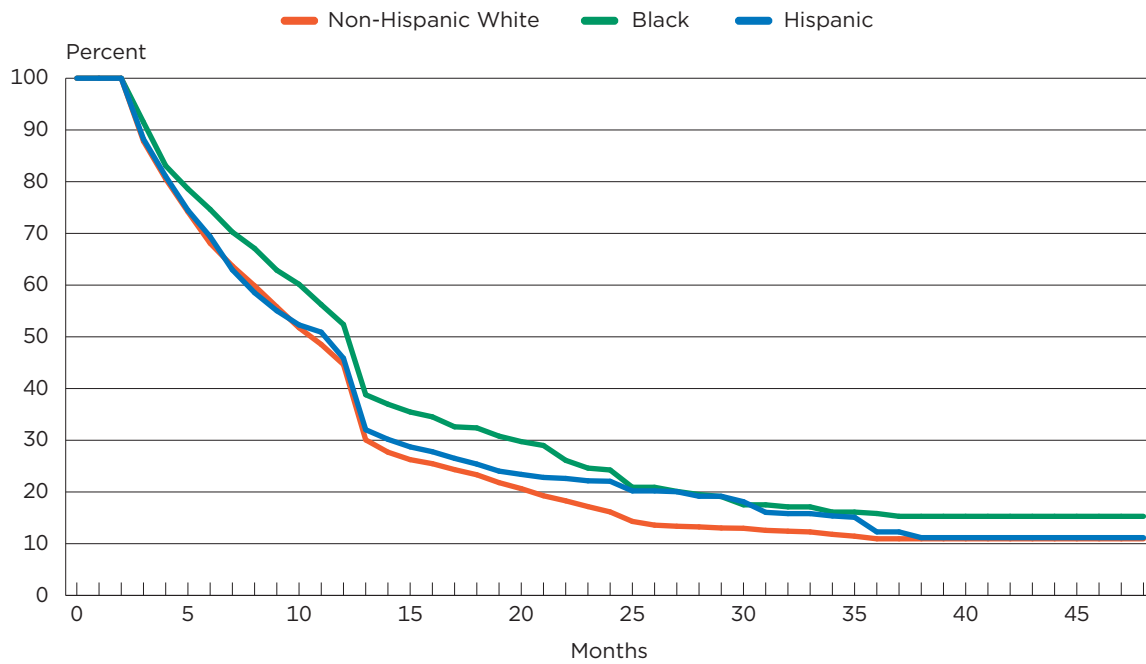
²⁸ The 8-month survival rate of poverty spells determined at 100 percent and 125 percent of poverty thresholds were not statistically different.

Figure 8.
Poverty Survival Rates by Sex: 2013-2016



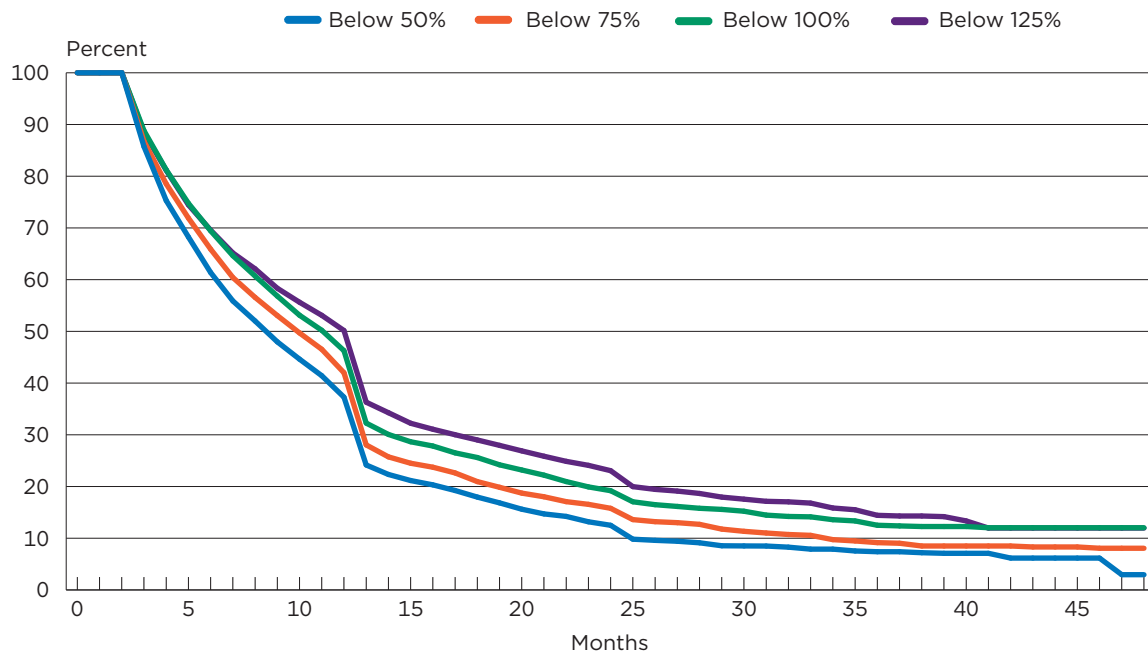
Source: U.S. Census Bureau, Survey of Income and Program Participation, 2014 Panel.

Figure 9.
Poverty Survival Rates by Race and Ethnicity: 2013-2016



Source: U.S. Census Bureau, Survey of Income and Program Participation, 2014 Panel.

Figure 10.
Poverty Survival Rates at Different Levels of Poverty: 2013–2016



Source: U.S. Census Bureau, Survey of Income and Program Participation, 2014 Panel.

Across all levels of poverty, the survival rate of spells lasting at least 20 months was substantially lower than what was seen at 8 months. About 15.6 percent of individuals with an income-to-poverty ratio below 50.0 percent stayed at this level of poverty for at least 20 months. In contrast, the 20-month survival rate for individuals who had income-to-poverty ratio below 125.0 percent was 26.9 percent. Among those below the official poverty threshold, the 20-month survival rate was 23.2 percent.

Across all the levels of poverty examined, less than 16.0 percent of spells survived at least 40 months. Only 7.1 percent of individuals who had an income-poverty-ratio below 50.0 percent stayed at this level of poverty at least 40 months, while the 40-month survival rate for

individuals who had an income-to-poverty ratio below 125.0 percent was 13.4 percent. Among those below the official poverty threshold, the 40-month survival rate was 12.3 percent.²⁹

SUMMARY

Monthly poverty over the 2013–2016 period declined from 17.7 percent in January 2013 to 13.3 percent in December 2016. The average monthly poverty rate over this time was 15.2 percent.

Overall annual poverty declined from 16.3 percent in 2013 to 12.3 percent in 2016. Approximately 27.5 percent of the individuals in annual poverty in 2013 were still in annual poverty in 2016.

²⁹ The 40-month survival rate of poverty spells determined at 100 percent and 125 percent of poverty thresholds were not statistically different.

From 2013 to 2016, among individuals that fell within the income-to-poverty ratio categories below “above 200.0 percent” (under 50.0 percent, 50.0 percent–99.9 percent, 100.0 percent–149.9 percent, and 150.0 percent–199.9 percent), a larger portion of individuals experienced upward income-to-poverty ratio mobility rather than downward mobility. For individuals with an income to poverty ratio above 200.0 percent in 2013, 89 percent remained in the same group in 2016.

A comparison of poverty rates measured at varying intervals provides a complex picture of poverty. For most people who entered poverty, it was a transitory state rather than a longer-term state and most poverty spells were short. During the 48 months from January 2013 through December 2016, 34.0

percent of people experienced at least one poverty spell lasting at least 2 months. However, 35.4 percent of all poverty spells ended within 6 months and only 17.1 percent of poverty spells lasted more than 2 years. Only 2.8 percent of people had a poverty spell that lasted the entire 4-year period.

Analysis of poverty over differing time horizons also highlights differences in poverty between Hispanics and Blacks. For the first 3 years (2013–2015) of the 2014 SIPP Panel, there was no significant difference in annual poverty rates for Hispanics and Blacks. However, over the period from 2013–2016, Hispanics were less likely than Blacks to stay 4 consecutive years in annual poverty.

While the Current Population Survey Annual Social and Economic Supplement (CPS ASEC) annual poverty rates have generally shown a decline in elderly poverty rates since the 1960s, the SIPP data provide a more complex picture of the dynamics of poverty for adults 65 years and over.³⁰ Similar to the findings from the CPS ASEC, adults 65 years and over in the 2014 SIPP Panel were less likely than children or adults aged 18 to 64 to be in poverty when measured using standard monthly, annual, episodic, or chronic measures. However, the 2014 SIPP Panel illustrates that once the elderly enter poverty, they have difficulty exiting, as shown by the proportion of elderly who

were in poverty in 2013 and were still in annual poverty in 2016. Furthermore, the median spell duration of the elderly population, 12.4 months, was higher than the median spell length of working-age adults at 10.1 months. Additionally, the proportion of episodically poor adults 65 years and older who were chronically poor (9.2 percent) was not statistically different from what was seen for adults aged 18 to 64 or children under the age of 18 (7.1 percent and 10.3 percent, respectively).

LIMITATIONS

Longitudinal Editing and Longitudinal Analysis

This report measures monthly, annual, and 4-year poverty rates over the period from January 2013 to December 2016. The analysis includes only respondents with a valid weight who were in the poverty universe for the entirety of a given reference period.³¹ The poverty universe excludes unrelated children 14 years old and younger.

This report has certain sample restrictions and makes certain assumptions about the stability of demographic characteristics within a SIPP panel. Estimates in this report hold demographic characteristics constant to the value reported at the beginning of the relevant period. For longitudinal estimates, such as episodic poverty, this report produces age-based poverty estimates by categorizing individuals' ages at the

start of the 2014 SIPP Panel's reference period, which was January 2013. In the case of annual poverty estimates, this report produces age-based poverty estimates by categorizing individuals' ages in January of the referenced year. This methodology is used for all demographic characteristics, not just age.

Wave 1 Effect

The “Wave 1 effect” references a pattern historically found in certain SIPP panels in which Wave 1 (2013 in this report) poverty rates in a panel are notably higher than poverty rates in subsequent waves. In Appendix Table 4, a possible Wave 1 effect can be seen in the 2013 poverty rate which is substantially higher than the 2014 poverty rate. Many factors may play into the presence of the Wave 1 effect. One possible reason for the Wave 1 effect could be that respondents are underreporting income in the first wave of a panel, due to a lack of previous exposure to income-related questions in the interview. Another reason could be that higher income individuals are more likely to participate in the survey after the first wave. Additionally, weighting methodologies designed to process survey nonresponse differ between Wave 1 and subsequent waves.³²

Censoring and Spell Analysis

Poverty spells may be left- or right-censored. An individual's poverty spell may be in progress

³⁰ The CPS annual poverty rate for adults 65 years and over declined from 28.5 percent in 1966 to 8.9 percent in 2019, available in Jessica Semega, Melissa Kollar, Emily A. Shrider, and John F. Creamer, “Income and Poverty in the United States: 2019,” *Current Population Reports*, Series P60-270, U.S. Census Bureau, Washington, DC, 2020.

³¹ A valid weight has a value above zero. For respondents to be included in a monthly estimate, they must have a valid monthly weight. For respondents to be included in annual estimates, they must have a valid December weight. For respondents to be included in panel-based estimates he or she must have a valid panel weight.

³² Additional discussion of the SIPP Wave 1 Effect can be found at <www.census.gov/library/working-papers/2014/demo/SIPP-WP-269.html>. A brief explanation of the 2014 SIPP's weighting methodology can be found in Section 7.3 of the 2014 SIPP User's Guide at <www.census.gov/content/dam/Census/programs-surveys/sipp/methodology/2014-SIPP-Panel-Users-Guide.pdf>.

before the beginning of the reference period, prior to January 2013 (left-censored), or in progress in December 2016 (right-censored). This analysis used the life table method in the SAS software to include right-censored spells in the estimates of median spell lengths and the duration of poverty spells. The life table method assumes right-censored spells are censored at the midpoint of each interval and the effective sample size of each interval includes only half of the right-censored spells included in the interval. Approximately 35.3 percent of poverty spells were left-censored over the 2013–2016 period. The analysis in this report excludes left-censored spells, since the start time for these spells cannot be determined and few statistical programs and methods have been developed to correct for left-censoring.³³ Excluding left-censored spells may introduce systematic bias into the median spell and duration analyses.³⁴

³³ Paul D Allison, "Survival Analysis Using the SAS System: A Practical Guide," Cary, N.C., SAS Inc, 1995, p. 292.

³⁴ A variety of papers discuss how left-censoring may bias duration analysis and suggest potential corrections: Guang Guo, "Event History Analysis and Left-Truncated Data," in P. Marsden (Ed.), *Sociological Methodology*, Vol. 23, San Francisco: Jossey-Bass, 1993, pp. 217–242; David W. Hosmer and Stanley Lemeshow, "Applied Survival Analysis: Regression Modeling of Time to Event Data," New York: Wiley, 1999; and John Iceland, "The Dynamics of Poverty Spells and Issues of Left Censoring," PCS Research Report Series: No. 97-378, 1997.

The conditional probability of exiting a spell in a month t is calculated as

$$h(t) = \frac{d_t}{T_t}$$

where d_t is the number of poverty spells ending in month t and T_t is the number of spells that were in progress at the beginning of month t minus half of the spells that were right-censored in the month. The survival rate in month t is then calculated as

$$\hat{S}(t) = \prod_{k=1}^{t-1} (1 - h_k)$$

where $\hat{S}(t)$ is equal to the probability of a poverty spell lasting to month t .

The calculation of median poverty spell length, defined as

$$\hat{M} = t + \frac{S(t) - \frac{1}{2}}{S(t) - S(t+1)}$$

such that $S(t)$ is greater than or equal to 50.0 percent and $S(t+1)$ is less than 50.0 percent.

Comparing the 2014 SIPP Panel With the 2008 SIPP Panel

The previous iteration of this report, "Dynamics of Economic Well-Being: Poverty, 2009–2011," compared the 2008 SIPP Panel with the 2004 SIPP Panel. Due to

substantial differences in survey design between the panels, this report deliberately does not have comparisons between the 2014 SIPP Panel and the 2008 SIPP Panel. The 2008 SIPP Panel was a 5-year panel survey with interview rotation groups and an interview reference period of 4 months.³⁵ In contrast, the 2014 SIPP Panel was a 4-year panel survey without rotation groups and an interview reference period of 12 months. The difference in the survey design makes it very difficult to make fair comparisons between the two panels. The so-called "seam effect" in the 2008 Panel appears after every fourth month in the 2008 Panel and after every twelfth month in the 2014 Panel, resulting in very different patterns of transitions between the two panels.

"Seam bias" and "recall bias" may have partially contributed to the 2014 Panel having fewer within-year transitions than the 2008 Panel. Seam bias is the tendency for estimates of change measured across the "seam" between two successive survey administrations to far exceed change estimates measured within a single

³⁵ Refer to the 2008 Panel SIPP Users' Guide for additional information on the structure of the 2008 SIPP Panel available at <<https://www2.census.gov/programs-surveys/sipp/guidance/2008-sipp-users-guide.pdf>>.

interview.³⁶ Additionally, the longer 12-month reference period in the 2014 Panel versus the 4-month reference period in the 2008 Panel may result in a differing “recall bias” between the two panels, which is the tendency of respondents to have better recollection of events occurring closer to the interview date. These two factors make it very difficult to determine whether statistical differences between the 2014 Panel and 2008 Panel are due to survey design or genuine economic circumstances.

OTHER LONGITUDINAL STUDIES

Examples of previous longitudinal studies on poverty include:

Anderson, Robin J., “Dynamics of Economic Well-being: Poverty, 2004–2006,” *Current Population Reports*, Series P70-123, U.S. Census Bureau, Washington DC, 2011.

Bane, Mary Jo and David Ellwood, “Slipping Into and Out of Poverty: The Dynamics of Spells,” *Journal of Human Resources*, 21 1986, 1–23.

Cellini, Stephanie R., Signe-Mary McKernan, and Caroline Ratcliffe, “The Dynamics of Poverty in the United States: A Review of Data, Methods, and Findings,” *Journal of Policy Analysis and Management*, 27 2008, 577–605.

Edwards, Ashley, “Dynamics of Economic Wellbeing: Poverty, 2009–2011,” *Current Population Reports*, Series P70-137, U.S. Census Bureau, Washington, DC, 2014.

Iceland, John, “Dynamics of Economic Well-being: Poverty 1996–1999,” *Current Population Reports*, Series P70-91, U.S. Census Bureau, Washington, DC, 2003.

McKernan, Signe-Mary and Caroline Ratcliffe, “Transition Events in the Dynamics of Poverty,” *Urban Institute Research Report*, 2002, available at <www.urban.org/url.cfm?ID=410575>.

Mohanty, Abinash, “Poverty Dynamics: An Overview of Longitudinal Poverty Estimates Produced by the United States Census Bureau,” *SEHSD Working Paper*, 2019-38, U.S. Census Bureau, Washington, DC, 2019.

Naifeh, Mary, “Dynamics of Economic Well-Being: Poverty, 1993–94: Trap Door? Revolving Door? Or Both?,” *Current Population Reports*, Series P70-63, Washington, DC, 1998.

Stevens, Ann Huff, “Climbing Out of Poverty, Falling Back In: Measuring the Persistence of Poverty Over Multiple Spells,” *Journal of Human Resources*, 34, 3, 1999, 557–88.

Stevens, Ann Huff, “The Dynamics of Poverty Spells: Updating Bane and Ellwood,” *AEA Papers and Proceedings* 84, 2, 1994, 34–37.

ACCURACY OF ESTIMATES

Further information on the source of the data and accuracy of the estimates, including standard errors and confidence intervals, is available at <www.census.gov/programs-surveys/sipp/tech-documentation/source-accuracy-statements.html> or by contacting Mahdi S. Sundukchi by e-mail at <mahdi.s.sundukchi@census.gov> or Brice G. Gnahore at <brice.g.gnahore@census.gov>.

Additional information on the SIPP can be found at <www.census.gov/programs-surveys/sipp.html> (main SIPP Web site) and <www.census.gov/content/dam/Census/programs-surveys/sipp/methodology/2014-SIPP-Panel-Users-Guide.pdf> (SIPP Users’ Guide).

SUGGESTED CITATION

Mohanty, Abinash, “Dynamics of Economic Well-Being: Poverty, 2013–2016,” *Current Population Reports*, P70BR-172, U.S. Census Bureau, Washington, DC, 2021.

³⁶ Additional discussion about the “seam effect” in the 2008 and 2014 SIPP panels can be found in Ashley Edwards and Lewis H. Warren, “Poverty Dynamics in the 2014 Survey of Income and Program Participation,” *SEHSD Working Paper* 2017-52, <www.census.gov/content/dam/Census/library/working-papers/2017/demo/SEHSD-WP2017-52.pdf>.

Appendix Table 1.

Episodic Poverty by Selected Characteristics

(Numbers in thousands)

| Characteristic | 2013–2016 ¹ | | | | |
|-------------------------------------------------------------------|------------------------|------------------------------------|----------------------------------|-------------|----------------------------------|
| | Total | People in poverty 2 or more months | | | |
| | | Number | 90 percent C.I. ² (±) | Percent | 90 percent C.I. ² (±) |
| All people | 295,274 | 100,246 | 2,922 | 34.0 | 1.0 |
| Sex | | | | | |
| Male | 143,255 | 46,380 | 1,656 | 32.4 | 1.1 |
| Female | 152,019 | 53,865 | 1,551 | 35.4 | 1.0 |
| Race and Hispanic Origin^{3,4} | | | | | |
| White | 229,780 | 72,630 | 2,415 | 31.6 | 1.1 |
| White, non-Hispanic | 183,269 | 49,510 | 1,967 | 27.0 | 1.1 |
| Black | 38,284 | 17,818 | 968 | 46.5 | 2.4 |
| Hispanic | 50,673 | 24,636 | 1,289 | 48.6 | 2.5 |
| Non-Hispanic | 244,601 | 75,609 | 2,439 | 30.9 | 1.0 |
| Age | | | | | |
| Under 18 years | 71,599 | 31,508 | 1,349 | 44.0 | 1.9 |
| 18 to 64 years | 187,172 | 62,962 | 1,860 | 33.6 | 1.0 |
| 65 years and over | 36,503 | 5,776 | 407 | 15.8 | 1.1 |
| Family Status | | | | | |
| In married-couple families | 175,631 | 40,129 | 2,551 | 22.8 | 1.4 |
| In families with a male householder, no spouse present | 9,138 | 3,914 | 516 | 42.8 | 4.6 |
| In families with a female householder, no spouse present | 49,631 | 28,297 | 1,802 | 57.0 | 2.7 |
| Unrelated individuals | 60,874 | 27,905 | 1,063 | 45.8 | 1.2 |
| Educational Attainment | | | | | |
| Total, aged 25 and older | 195,915 | 55,022 | 1,536 | 28.1 | 0.8 |
| No high school diploma | 23,912 | 12,212 | 618 | 51.1 | 1.9 |
| High school, no college | 54,111 | 17,352 | 832 | 32.1 | 1.3 |
| Some college, no degree | 52,678 | 14,406 | 787 | 27.3 | 1.3 |
| Bachelor's degree or higher | 65,214 | 11,053 | 664 | 16.9 | 1.0 |

¹The 2013–2016 estimates require respondents to be in sample all 48 months.²A 90 percent confidence interval (C.I.) is a measure of an estimate's variability. The larger the confidence interval in relation to the size of the estimate, the less reliable the estimate.³Federal surveys, including the SIPP 2014 Panel, give respondents the option of reporting more than one race. These data can be shown in two ways: (1) as mutually exclusive from other race groups, which may be denoted by "alone" or (2) not mutually exclusive with other race groups, denoted by "alone or in combination with other race groups." The figures, tables, and text in this report show race using the first method.⁴Hispanics may be any race; data in this report for Hispanics overlap data for racial groups. Data users should exercise caution when interpreting aggregate results for these groups because they consist of many distinct subgroups that differ in socioeconomic characteristics, culture, and recency of immigration.Note: More information on confidentiality protection and sampling and nonsampling error is available at <www.census.gov/programs-surveys/sipp.html>.

Source: U.S. Census Bureau, Survey of Income and Program Participation, 2014 Panel.

Appendix Table 2.

Chronic Poverty by Selected Characteristics

(Numbers in thousands)

| Characteristic | 2013–2016 ¹ | | | | |
|-------------------------------------------------------------------|------------------------|---------------------------------|----------------------------------|------------|----------------------------------|
| | Total | People in poverty all 48 months | | | |
| | | Number | 90 percent C.I. ² (±) | Percent | 90 percent C.I. ² (±) |
| All people | 295,274 | 8,264 | 835 | 2.8 | 0.3 |
| Sex | | | | | |
| Male | 143,255 | 3,266 | 393 | 2.3 | 0.3 |
| Female | 152,019 | 4,998 | 574 | 3.3 | 0.4 |
| Race and Hispanic Origin^{3,4} | | | | | |
| White | 229,780 | 5,473 | 701 | 2.4 | 0.3 |
| White, non-Hispanic | 183,269 | 3,045 | 439 | 1.7 | 0.2 |
| Black | 38,284 | 2,158 | 365 | 5.6 | 1.0 |
| Hispanic | 50,673 | 2,603 | 513 | 5.1 | 1.0 |
| Non-Hispanic | 244,601 | 5,661 | 619 | 2.3 | 0.3 |
| Age | | | | | |
| Under 18 years | 71,599 | 3,258 | 470 | 4.6 | 0.7 |
| 18 to 64 years | 187,172 | 4,474 | 466 | 2.4 | 0.2 |
| 65 years and over | 36,503 | 531 | 132 | 1.5 | 0.4 |
| Family Status | | | | | |
| In married-couple families | 175,631 | 1,458 | 386 | 0.8 | 0.2 |
| In families with a male householder, no spouse present | 9,138 | 67 | 48 | 0.7 | 0.5 |
| In families with a female householder, no spouse present | 49,631 | 3,905 | 660 | 7.9 | 1.3 |
| Unrelated individuals | 60,874 | 2,834 | 326 | 4.7 | 0.5 |
| Educational Attainment | | | | | |
| Total, aged 25 and older | 195,915 | 4,419 | 478 | 2.3 | 0.2 |
| No high school diploma | 23,912 | 1,737 | 270 | 7.3 | 1.1 |
| High school, no college | 54,111 | 1,488 | 262 | 2.8 | 0.5 |
| Some college, no degree | 52,678 | 746 | 172 | 1.4 | 0.3 |
| Bachelor's degree or higher | 65,214 | 448 | 129 | 0.7 | 0.2 |

¹ The 2013–2016 estimates require respondents to be in sample all 48 months.² A 90 percent confidence interval (C.I.) is a measure of an estimate's variability. The larger the confidence interval in relation to the size of the estimate, the less reliable the estimate.³ Federal surveys, including the SIPP 2014 Panel, give respondents the option of reporting more than one race. These data can be shown in two ways: (1) as mutually exclusive from other race groups, which may be denoted by "alone" or (2) not mutually exclusive with other race groups, denoted by "alone or in combination with other race groups." The figures, tables, and text in this report show race using the first method.⁴ Hispanics may be any race; data in this report for Hispanics overlap data for racial groups. Data users should exercise caution when interpreting aggregate results for these groups because they consist of many distinct subgroups that differ in socioeconomic characteristics, culture, and recency of immigration.Note: More information on confidentiality protection and sampling and nonsampling error is available at <www.census.gov/programs-surveys/sipp.html>.

Source: U.S. Census Bureau, Survey of Income and Program Participation, 2014 Panel.

Appendix Table 3.

Chronic and Episodic Poverty and the Proportion of Episodically Poor That Are Also Chronically Poor

(Numbers in thousands)

| Characteristic | 2013-2016 ¹ | | | | | | | | | | |
|----------------------------------------------------------------|------------------------|-----------------------------------------------|----------------------------------|-------------|----------------------------------|-------------------------------------------|----------------------------------|------------|----------------------------------|----------------------------------------------------------------|----------------------------------|
| | Total | People in poverty 2 or more months (episodic) | | | | People in poverty all 48 months (chronic) | | | | Proportion of episodically poor that are also chronically poor | |
| | | Number | 90 percent C.I. ² (±) | Percent | 90 percent C.I. ² (±) | Number | 90 percent C.I. ² (±) | Percent | 90 percent C.I. ² (±) | Percent | 90 percent C.I. ² (±) |
| All people | 295,274 | 100,246 | 2,922 | 34.0 | 1.0 | 8,264 | 835 | 2.8 | 0.3 | 8.2 | 0.9 |
| Sex | | | | | | | | | | | |
| Male | 143,255 | 46,380 | 1,656 | 32.4 | 1.1 | 3,266 | 393 | 2.3 | 0.3 | 7.0 | 0.9 |
| Female | 152,019 | 53,865 | 1,551 | 35.4 | 1.0 | 4,998 | 574 | 3.3 | 0.4 | 9.3 | 1.1 |
| Race and Hispanic Origin^{3,4} | | | | | | | | | | | |
| White | 229,780 | 72,630 | 2,415 | 31.6 | 1.1 | 5,473 | 701 | 2.4 | 0.3 | 7.5 | 1.0 |
| White, non-Hispanic | 183,269 | 49,510 | 1,967 | 27.0 | 1.1 | 3,045 | 439 | 1.7 | 0.2 | 6.1 | 0.9 |
| Black | 38,284 | 17,818 | 968 | 46.5 | 2.4 | 2,158 | 365 | 5.6 | 1.0 | 12.1 | 2.0 |
| Hispanic | 50,673 | 24,636 | 1,289 | 48.6 | 2.5 | 2,603 | 513 | 5.1 | 1.0 | 10.6 | 2.2 |
| Non-Hispanic | 244,601 | 75,609 | 2,439 | 30.9 | 1.0 | 5,661 | 619 | 2.3 | 0.3 | 7.5 | 0.8 |
| Age | | | | | | | | | | | |
| Under 18 years | 71,599 | 31,508 | 1,349 | 44.0 | 1.9 | 3,258 | 470 | 4.6 | 0.7 | 10.3 | 1.5 |
| 18 to 64 years | 187,172 | 62,962 | 1,860 | 33.6 | 1.0 | 4,474 | 466 | 2.4 | 0.2 | 7.1 | 0.8 |
| 65 years and over | 36,503 | 5,776 | 407 | 15.8 | 1.1 | 531 | 132 | 1.5 | 0.4 | 9.2 | 2.1 |
| Family Status | | | | | | | | | | | |
| In married-couple families | 175,631 | 40,129 | 2,551 | 22.8 | 1.4 | 1,458 | 386 | 0.8 | 0.2 | 3.6 | 1.0 |
| In families with a male householder, no spouse present | 9,138 | 3,914 | 516 | 42.8 | 4.6 | 67 | 48 | 0.7 | 0.5 | 1.7 | 1.2 |
| In families with a female householder, no spouse present | 49,631 | 28,297 | 1,802 | 57.0 | 2.7 | 3,905 | 660 | 7.9 | 1.3 | 13.8 | 2.1 |
| Unrelated individuals | 60,874 | 27,905 | 1,063 | 45.8 | 1.2 | 2,834 | 326 | 4.7 | 0.5 | 10.2 | 1.1 |
| Educational Attainment | | | | | | | | | | | |
| Total, aged 25 and older | 195,915 | 55,022 | 1,536 | 28.1 | 0.8 | 4,419 | 478 | 2.3 | 0.2 | 8.0 | 0.9 |
| No high school diploma | 23,912 | 12,212 | 618 | 51.1 | 1.9 | 1,737 | 270 | 7.3 | 1.1 | 14.2 | 2.0 |
| High school, no college | 54,111 | 17,352 | 832 | 32.1 | 1.3 | 1,488 | 262 | 2.8 | 0.5 | 8.6 | 1.4 |
| Some college, no degree | 52,678 | 14,406 | 787 | 27.3 | 1.3 | 746 | 172 | 1.4 | 0.3 | 5.2 | 1.2 |
| Bachelor's degree or higher | 65,214 | 11,053 | 664 | 16.9 | 1.0 | 448 | 129 | 0.7 | 0.2 | 4.1 | 1.2 |

¹ The 2013-2016 estimates require respondents to be in sample all 48 months.

² A 90 percent confidence interval (C.I.) is a measure of an estimate's variability. The larger the confidence interval in relation to the size of the estimate, the less reliable the estimate.

³ Federal surveys, including the SIPP 2014 Panel, give respondents the option of reporting more than one race. These data can be shown in two ways: (1) as mutually exclusive from other race groups, which may be denoted by "alone" or (2) not mutually exclusive with other race groups, denoted by "alone or in combination with other race groups." The figures, tables, and text in this report show race using the first method.

⁴ Hispanics may be any race; data in this report for Hispanics overlap data for racial groups. Data users should exercise caution when interpreting aggregate results for these groups because they consist of many distinct subgroups that differ in socioeconomic characteristics, culture, and recency of immigration.

Note: More information on confidentiality protection and sampling and nonsampling error is available at www.census.gov/programs-surveys/sipp.html.

Source: U.S. Census Bureau, Survey of Income and Program Participation, 2014 Panel.

Appendix Table 4.
Annual Poverty by Selected Characteristics: 2013–2016
(Numbers in thousands)

| Characteristic | 2013 ¹ | | | 2014 ¹ | | | 2015 ¹ | | | 2016 ¹ | | |
|----------------------------------------------------------------------|----------------------------------------------|---------------|-------------------------------|----------------------------------------------|---------------|-------------------------------|----------------------------------------------|---------------|-------------------------------|----------------------------------------------|---------------|-------------------------------|
| | In poverty using annual income and threshold | | | In poverty using annual income and threshold | | | In poverty using annual income and threshold | | | In poverty using annual income and threshold | | |
| | Total | Number | percent C.I. ² (±) | Total | Number | percent C.I. ² (±) | Total | Number | percent C.I. ² (±) | Total | Number | percent C.I. ² (±) |
| All people | 307,671 | 50,106 | 16.3 | 309,613 | 45,241 | 14.6 | 312,067 | 41,180 | 13.2 | 314,807 | 38,687 | 12.3 |
| Sex | | | | | | | | | | | | |
| Male | 150,251 | 22,667 | 15.1 | 151,272 | 20,167 | 13.3 | 152,469 | 18,077 | 11.9 | 153,726 | 17,099 | 11.1 |
| Female | 157,420 | 27,439 | 17.4 | 158,341 | 25,073 | 15.8 | 159,598 | 23,103 | 14.5 | 161,081 | 21,588 | 13.4 |
| Race and Hispanic Origin ^{3,4} | | | | | | | | | | | | |
| White | 239,296 | 34,940 | 14.6 | 240,108 | 31,895 | 13.3 | 241,083 | 29,224 | 12.1 | 242,241 | 25,931 | 10.7 |
| White, non-Hispanic | 191,141 | 22,054 | 11.5 | 190,475 | 20,245 | 10.6 | 190,533 | 18,762 | 9.8 | 192,000 | 17,437 | 9.1 |
| Black | 39,817 | 10,237 | 25.7 | 40,176 | 9,370 | 23.3 | 40,644 | 8,352 | 20.5 | 41,081 | 8,431 | 20.5 |
| Hispanic | 52,909 | 14,130 | 26.7 | 53,909 | 12,642 | 23.5 | 55,298 | 11,315 | 20.5 | 56,500 | 9,731 | 17.2 |
| Non-Hispanic | 254,762 | 35,976 | 14.1 | 255,704 | 32,599 | 12.7 | 256,768 | 29,866 | 11.6 | 258,307 | 28,956 | 11.2 |
| Age | | | | | | | | | | | | |
| Under 18 years | 73,177 | 17,125 | 23.4 | 72,854 | 15,539 | 21.3 | 72,554 | 14,075 | 19.4 | 72,796 | 13,187 | 18.1 |
| 18 to 64 years | 193,289 | 29,925 | 15.5 | 194,126 | 26,877 | 13.8 | 195,052 | 24,336 | 12.5 | 196,495 | 22,872 | 11.6 |
| 65 years and over | 41,205 | 3,056 | 7.4 | 42,633 | 2,824 | 6.6 | 44,461 | 2,769 | 6.2 | 45,517 | 2,628 | 5.8 |
| Family Status | | | | | | | | | | | | |
| In married-couple families .. | 182,274 | 13,781 | 7.6 | 187,395 | 12,750 | 6.8 | 188,718 | 11,288 | 6.0 | 189,551 | 10,022 | 5.3 |
| In families with a male householder, no spouse present | 9,943 | 1,590 | 16.0 | 10,001 | 1,572 | 15.7 | 9,400 | 1,416 | 15.1 | 8,638 | 1,299 | 15.0 |
| In families with a female householder, no spouse present | 51,883 | 18,286 | 35.2 | 53,129 | 17,669 | 33.3 | 53,035 | 15,463 | 29.2 | 52,989 | 14,409 | 27.2 |
| Unrelated individuals | 63,571 | 16,450 | 25.9 | 63,571 | 16,450 | 25.9 | 63,571 | 16,450 | 25.9 | 63,571 | 16,450 | 25.9 |
| Educational Attainment | | | | | | | | | | | | |
| Total, aged 25 and older | 204,314 | 24,963 | 12.2 | 206,425 | 23,053 | 11.2 | 209,802 | 21,369 | 10.2 | 212,307 | 20,474 | 9.6 |
| No high school diploma | 24,610 | 6,860 | 27.9 | 24,162 | 6,257 | 25.9 | 23,417 | 5,759 | 24.6 | 23,358 | 5,230 | 22.4 |
| High school, no college | 59,201 | 8,489 | 14.3 | 58,372 | 7,748 | 13.3 | 57,955 | 7,383 | 12.7 | 57,600 | 6,951 | 12.1 |
| Some college, no degree | 54,682 | 6,035 | 11.0 | 56,100 | 5,866 | 10.5 | 57,134 | 5,246 | 9.2 | 58,919 | 5,056 | 8.6 |
| Bachelor's degree or higher | 65,821 | 3,579 | 5.4 | 67,792 | 3,181 | 4.7 | 71,296 | 2,982 | 4.2 | 72,431 | 3,236 | 4.5 |

* Indicates a statistically significant difference in percent in poverty from previous year.

¹ Indicates a significant difference in percent in poverty between 2013 and 2016.

² Yearly estimates are based on different samples.

³ A 90 percent confidence interval (C.I.) is a measure of an estimate's variability. The larger the confidence interval in relation to the size of the estimate, the less reliable the estimate.

⁴ Federal surveys, including the SIPP 2014 Panel, give respondents the option of reporting more than one race. These data can be shown in two ways: (1) as mutually exclusive from other race groups, which may be denoted by "alone" or (2) not mutually exclusive with other race groups, denoted by "alone or in combination with other race groups." The figures, tables, and text in this report show race using the first method.

⁵ Hispanics may be any race; data in this report for Hispanics overlap data for racial groups. Data users should exercise caution when interpreting aggregate results for these groups because they consist of many distinct subgroups that differ in socioeconomic characteristics, culture, and recency of immigration.

Note: More information on confidentiality protection and sampling and nonsampling error is available at <www.census.gov/programs-surveys/sipp.html>.
Source: U.S. Census Bureau, Survey of Income and Program Participation, 2014 Panel.

Appendix Table 5.

Income-to-Poverty Ratio Movement: 2013-2016

| 2013 income-to-poverty ratio | 2013 number in poverty (in thousands) | 2016 income-to-poverty ratio ¹ | | | | | | | | | |
|------------------------------|---------------------------------------|-------------------------------------------|----------------------------------|-------------|----------------------------------|---------------|----------------------------------|---------------|----------------------------------|----------------|----------------------------------|
| | | Under 50.0% | | 50.0%-99.9% | | 100.0%-149.9% | | 150.0%-199.9% | | 200% and above | |
| | | Percent | 90 percent C.I. (±) ² | Percent | 90 percent C.I. (±) ² | Percent | 90 percent C.I. (±) ² | Percent | 90 percent C.I. (±) ² | Percent | 90 percent C.I. (±) ² |
| Under 50.0% | 21,889 | 25.9 | 2.8 | 23.0 | 2.7 | 13.5 | 2.0 | 10.4 | 2.4 | 27.3 | 2.8 |
| 50.0%-99.9% | 24,148 | 11.7 | 1.9 | 25.8 | 2.6 | 21.7 | 2.7 | 16.1 | 2.4 | 24.7 | 3.2 |
| 100.0%-149.9% | 27,975 | 5.9 | 1.3 | 11.7 | 1.6 | 25.5 | 2.7 | 19.2 | 2.3 | 37.8 | 3.1 |
| 150.0%-199.9% | 26,925 | 3.3 | 1.2 | 7.1 | 1.8 | 11.9 | 2.0 | 20.7 | 2.7 | 57.0 | 3.2 |
| 200% and above. | 192,769 | 1.5 | 0.3 | 1.4 | 0.2 | 3.1 | 0.4 | 4.7 | 0.5 | 89.3 | 0.7 |

¹ Respondents had to be in sample 2013-2016 in order to be included.

² A 90 percent confidence interval (C.I.) is a measure of an estimate's variability. The larger the confidence interval in relation to the size of the estimate, the less reliable the estimate.

Note: More information on confidentiality protection and sampling and nonsampling error is available at <www.census.gov/programs-surveys/sipp.html>.

Source: U.S. Census Bureau, Survey of Income and Program Participation, 2014 Panel.

Appendix Table 6.

Duration of Poverty Spells: 2013-2016

(Percentage of spells in interval)

| Months | 2013-2016 (excludes spells underway in January 2013) | |
|-----------------|---------------------------------------------------------|----------------------------------|
| | Estimate | 90 percent C.I. (±) ¹ |
| 2-6 | 35.4 | 1.9 |
| 7-12 | 32.4 | 2.0 |
| 13-18 | 8.1 | 1.3 |
| 19-24 | 7.1 | 1.4 |
| 25-30 | 2.6 | 1.2 |
| 31-36 | 2.1 | 1.1 |
| 37-42 | 0.4 | 0.6 |
| 43+ | 12.0 | 2.4 |

¹ A 90 percent confidence interval (C.I.) is a measure of an estimate's variability. The larger the confidence interval in relation to the size of the estimate, the less reliable the estimate.

Note: More information on confidentiality protection and sampling and nonsampling error is available at <www.census.gov/programs-surveys/sipp.html>.

Source: U.S. Census Bureau, Survey of Income and Program Participation, 2014 Panel.

Appendix Table 7.

Poverty Survival Rate Across Sex: 2013-2016

(In percent)

| At month | Male | | Female | |
|----------|-----------|----------------------------------|-----------|----------------------------------|
| | Surviving | 90 percent C.I. (±) ¹ | Surviving | 90 percent C.I. (±) ¹ |
| 4 | 81.2 | 1.9 | 81.2 | 1.7 |
| 8 | 60.9 | 2.4 | 60.5 | 2.1 |
| 12 | 45.7 | 2.5 | 46.8 | 2.4 |
| 16 | 27.0 | 2.1 | 28.6 | 2.4 |
| 20 | 22.4 | 2.2 | 23.9 | 2.4 |
| 24 | 18.5 | 2.2 | 19.8 | 2.3 |
| 28 | 15.2 | 2.1 | 16.3 | 2.4 |
| 32 | 13.7 | 2.3 | 14.7 | 2.6 |
| 36 | 11.8 | 2.4 | 13.1 | 2.7 |
| 40 | 11.5 | 2.4 | 12.9 | 2.7 |
| 44 | 11.0 | 2.7 | 12.9 | 2.7 |
| 48 | 11.0 | 2.7 | 12.9 | 2.7 |

¹ A 90 percent confidence interval (C.I.) is a measure of an estimate's variability. The larger the confidence interval in relation to the size of the estimate, the less reliable the estimate.

Note: More information on confidentiality protection and sampling and nonsampling error is available at www.census.gov/programs-surveys/sipp.html.

Source: U.S. Census Bureau, Survey of Income and Program Participation, 2014 Panels.

Appendix Table 8.

Poverty Survival Rate Across Demographic Groups: 2013-2016

(In percent)

| At Month | White Non-Hispanic ¹ | | Black ¹ | | Hispanic ² | |
|----------|---------------------------------|----------------------------------|--------------------|----------------------------------|-----------------------|----------------------------------|
| | Surviving | 90 percent C.I. (±) ³ | Surviving | 90 percent C.I. (±) ³ | Surviving | 90 percent C.I. (±) ³ |
| 4 | 80.5 | 2.3 | 83.1 | 3.7 | 81.0 | 3.6 |
| 8 | 59.9 | 2.8 | 67.1 | 4.8 | 58.5 | 5.4 |
| 12 | 44.7 | 2.9 | 52.4 | 4.7 | 45.9 | 4.9 |
| 16 | 25.5 | 2.7 | 34.5 | 4.8 | 27.8 | 4.5 |
| 20 | 20.6 | 2.7 | 29.7 | 5.0 | 23.4 | 4.3 |
| 24 | 16.1 | 2.5 | 24.3 | 5.1 | 22.1 | 4.3 |
| 28 | 13.3 | 2.4 | 19.5 | 4.9 | 19.2 | 4.6 |
| 32 | 12.4 | 2.4 | 17.1 | 5.0 | 15.8 | 6.6 |
| 36 | 10.9 | 2.7 | 15.8 | 4.8 | 12.3 | 6.2 |
| 40 | 10.9 | 2.7 | 15.3 | 4.9 | 11.2 | 6.5 |
| 44 | 10.9 | 2.7 | 15.3 | 4.9 | 11.2 | 6.5 |
| 48 | 10.9 | 2.7 | 15.3 | 4.9 | 11.2 | 6.5 |

¹ Federal surveys, including the SIPP 2014 Panel, give respondents the option of reporting more than one race. These data can be shown in two ways: (1) as mutually exclusive from other race groups, which may be denoted by "alone" or (2) not mutually exclusive with other race groups, denoted by "alone or in combination with other race groups." The figures, tables, and text in this report show race using the first method.

² Hispanics may be any race, data in this report for Hispanics overlap data for racial groups. Data users should exercise caution when interpreting aggregate results for these groups because they consist of many distinct subgroups that differ in socioeconomic characteristics, culture, and recency of immigration.

³ A 90 percent confidence interval (C.I.) is a measure of an estimate's variability. The larger the confidence interval in relation to the size of the estimate, the less reliable the estimate.

Note: More information on confidentiality protection and sampling and nonsampling error is available at www.census.gov/programs-surveys/sipp.html.

Source: U.S. Census Bureau, Survey of Income and Program Participation, 2014 Panel.

Appendix Table 9.

Poverty Survival Rate at Different Levels of Poverty: 2013–2016

(In percent)

| At month | Below 50 | | Below 75 | | Below 100 | | Below 125 | |
|----------|-----------|----------------------------------|-----------|----------------------------------|-----------|----------------------------------|-----------|----------------------------------|
| | Surviving | 90 percent C.I. (±) ¹ | Surviving | 90 percent C.I. (±) ¹ | Surviving | 90 percent C.I. (±) ¹ | Surviving | 90 percent C.I. (±) ¹ |
| 4 | 75.3 | 2.1 | 78.5 | 1.7 | 81.2 | 1.6 | 81.2 | 1.7 |
| 8 | 52.0 | 2.4 | 56.6 | 2.2 | 60.7 | 2.0 | 62.1 | 2.0 |
| 12 | 37.3 | 2.7 | 42.0 | 2.4 | 46.3 | 2.2 | 50.2 | 2.0 |
| 16 | 20.3 | 2.2 | 23.7 | 2.1 | 27.8 | 2.0 | 31.1 | 1.9 |
| 20 | 15.6 | 2.1 | 18.7 | 1.9 | 23.2 | 2.0 | 26.9 | 1.8 |
| 24 | 12.5 | 2.0 | 15.8 | 1.8 | 19.2 | 2.0 | 23.1 | 1.7 |
| 28 | 9.1 | 1.8 | 12.7 | 1.8 | 15.8 | 1.9 | 18.7 | 1.8 |
| 32 | 8.3 | 1.8 | 10.7 | 2.0 | 14.2 | 2.2 | 17.0 | 1.7 |
| 36 | 7.4 | 1.6 | 9.2 | 1.9 | 12.5 | 2.3 | 14.4 | 2.1 |
| 40 | 7.1 | 1.6 | 8.5 | 2.1 | 12.3 | 2.3 | 13.4 | 2.6 |
| 44 | 6.2 | 2.2 | 8.3 | 2.2 | 12.0 | 2.4 | 12.0 | 3.4 |
| 48 | 3.0 | 3.9 | 8.1 | 2.3 | 12.0 | 2.4 | 12.0 | 3.4 |

¹ A 90 percent confidence interval (C.I.) is a measure of an estimate's variability. The larger the confidence interval in relation to the size of the estimate, the less reliable the estimate.

Note: More information on confidentiality protection and sampling and nonsampling error is available at www.census.gov/programs-surveys/sipp.html.

Source: U.S. Census Bureau, Survey of Income and Program Participation, 2014 Panel.