

Poverty Dynamics: An Overview of Longitudinal Poverty Estimates Produced by the United States Census Bureau

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Longitudinal Poverty Estimates

- Useful in painting a comprehensive picture of economic well-being over a period of time
- Provide information on the dynamics of poverty over the course of a time period, such as:
 - Length of poverty spells
 - Frequency of poverty Spells
 - Probability of individuals' exiting or entering a poverty spell
- Can only be produced using data sources that track individuals' poverty status over time

What is the Survey of Income and Program Participation (SIPP)?

- Nationally representative panel survey administered by the U.S. Census Bureau
- Each SIPP panel follows individuals for several years with respondents surveyed over time in successive interviews referred to as “waves”
- Provides monthly data on short-term dynamics of employment, income, household and family composition, and eligibility and participation in government assistance programs
- Compared to other longitudinal surveys in the US, SIPP is unique its large sample size and ability to follow individuals over multiple consecutive years

Income Sources Collected by SIPP

Over 80 cash-income sources consisting of:

- Earnings
- Investment/property income
- Means-based transfer income
- Social insurance payments
- Other income, including retirement payments, child support payments, and life insurance payments

How Poverty Status is Determined

- US Census Bureau calculates a set of annual income thresholds that vary by family size, family composition, and age of householder
- If a family's total pretax cash income is less than that family's poverty threshold, then that family and every individual in it are considered to be in poverty
- Poverty thresholds are updated annually to allow for changes in the cost of living using the Consumer Price Index (CPI-U).
 - They do not vary geographically

Fluctuating Monthly Thresholds Allow for Longitudinal Poverty Measures

- Longitudinal structure of SIPP allows the capture of family dynamics and income that can fluctuate throughout the year
- Monthly family size and family members' ages are used to assign a poverty threshold which is then divided by 12 and adjusted for inflation to create a monthly poverty threshold
- Individual's varying monthly thresholds are summed to create their annual thresholds

Annual Poverty

- Individual's annual poverty status is calculated by comparing the sum of their monthly family income over the year to the sum of their monthly poverty thresholds for the year
 - Sum of monthly poverty thresholds reflect the changing family composition over the year
 - Universe requires that individuals be in the survey all 12 months of the year
 - Weight from 12th month is used as the annual weight
 - Demographic characteristics are from the first month of the year

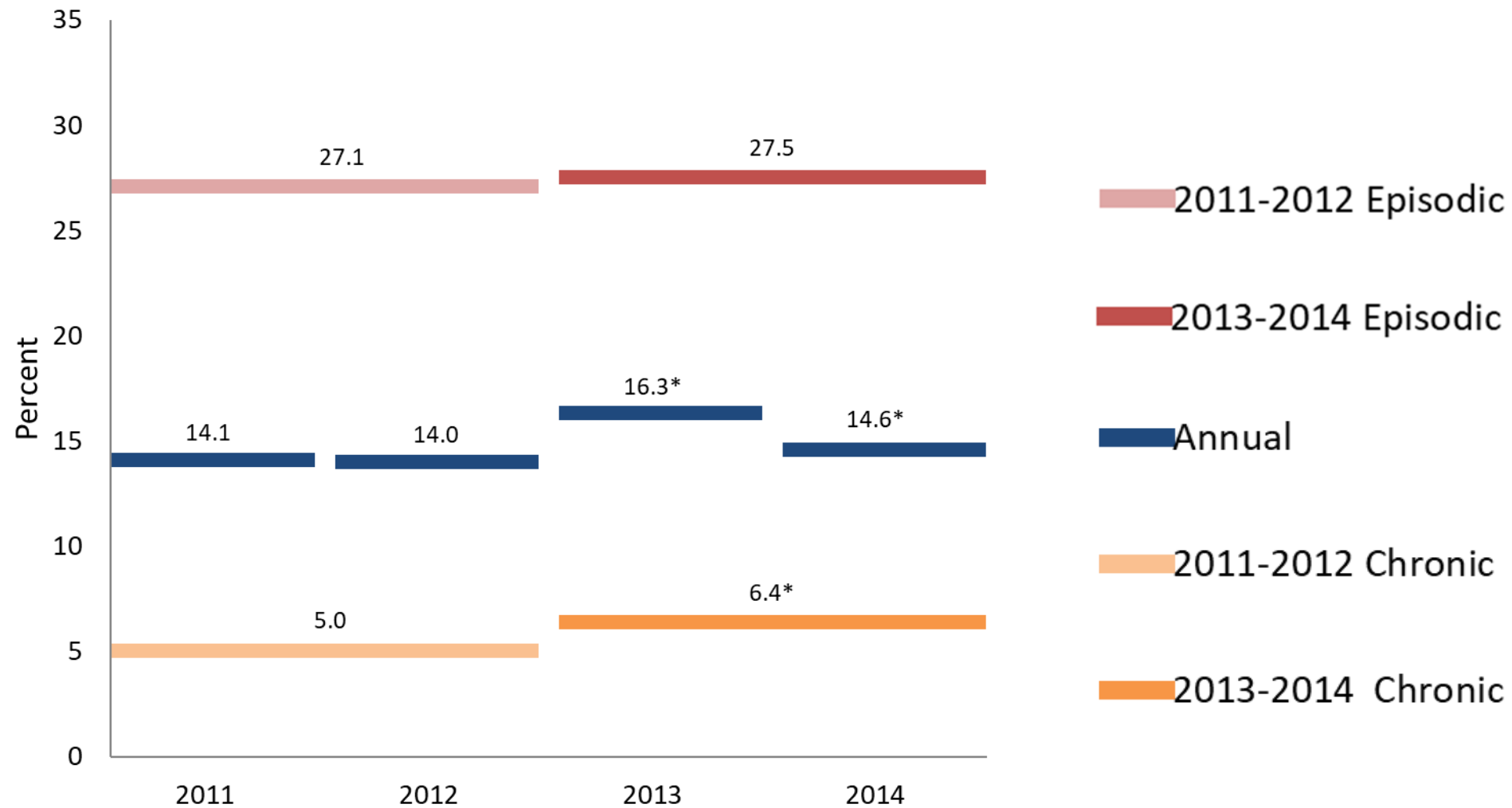
Episodic Poverty

- Once an individual has two consecutive months in poverty in a reference period they are episodically poor
 - Universe requires that individuals be in the survey over the entire reference period
 - Estimates capturing people in poverty at any given time tend to capture individuals in chronic poverty, thus under-representing individuals that have short spells of poverty and over-representing individuals in chronic poverty
 - Demographic characteristics in the first month are kept constant throughout the reference period

Chronic Poverty

- Chronic poverty rate provides the percent in poverty every month of a given reference period
 - Universe requires that individuals be in the survey over the entire reference period
 - Individuals experiencing chronic poverty are a subset of those experiencing episodic poverty
 - The percentage that are chronically poor within the episodically poor can provide insight on a group's ability to exit poverty
 - Demographic characteristics in the first month are kept constant throughout the reference period

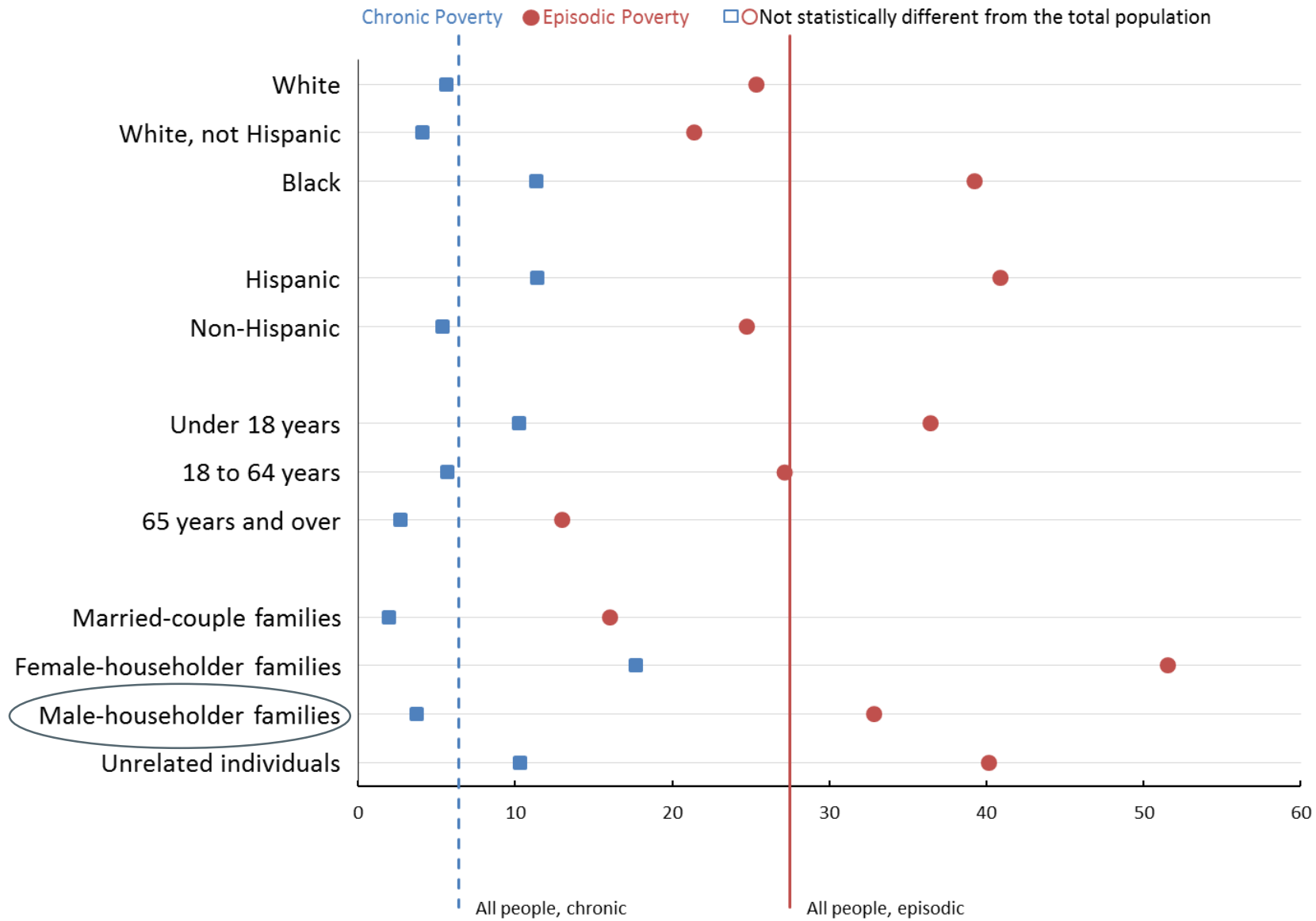
Selected Poverty Rates: 2011 to 2014



Asterisk indicates a significant difference in percent in poverty from previous period

Source: U.S. Census Bureau, Survey of Income and Program Participation, 2008 Panel and 2014 Panel.

Episodic and Chronic Poverty Across 2 Years (2013-2014)

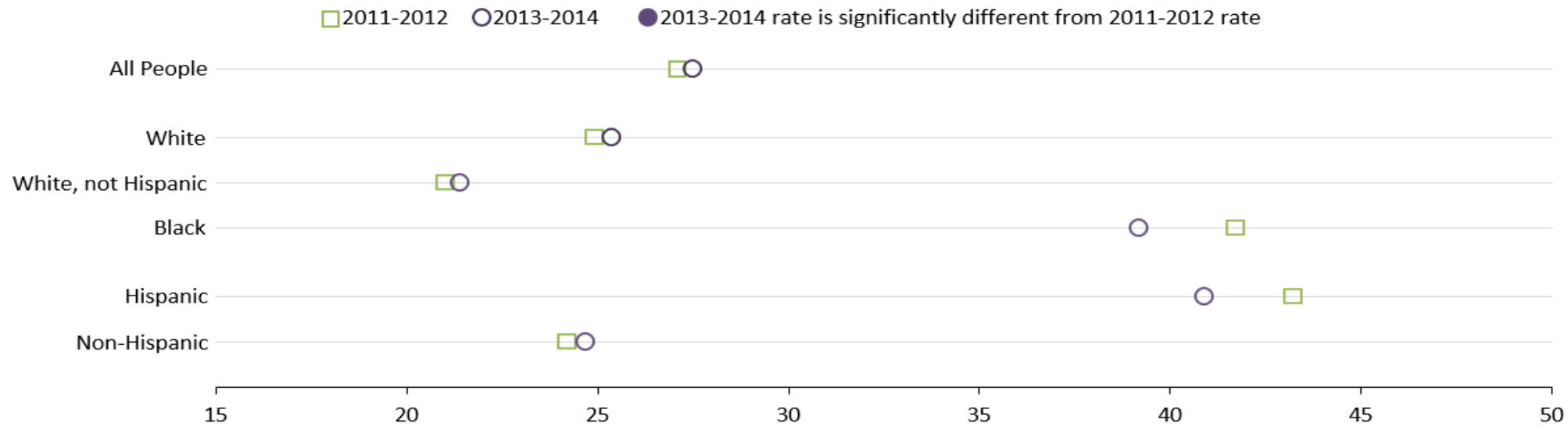


Source: U.S. Census Bureau, Survey of Income and Program Participation, 2014 Panel.

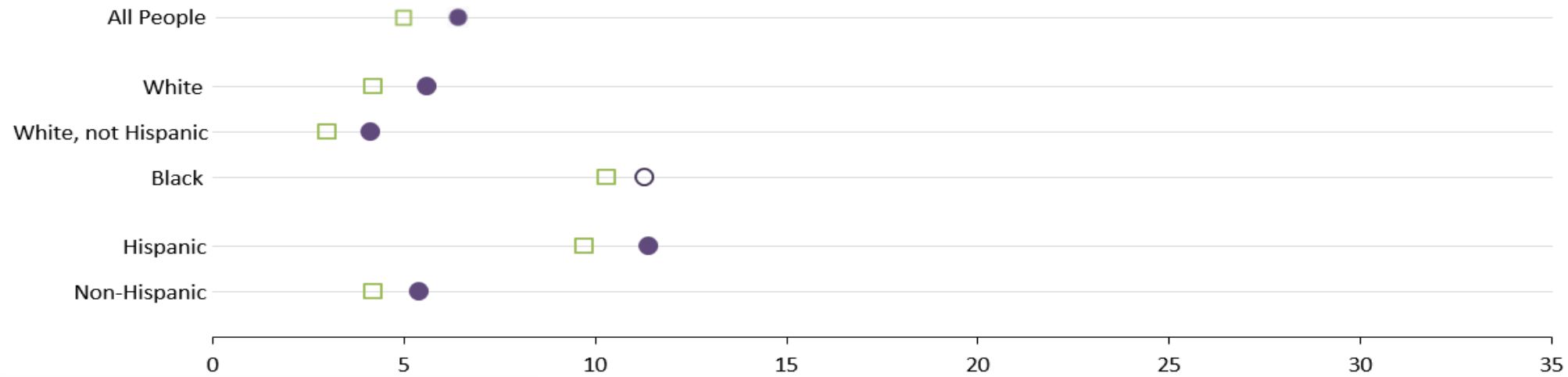
U.S. Department of Commerce
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census.gov



Episodic Poverty 2011-2012 and 2013-2014 Compared



Chronic Poverty 2011-2012 and 2013-2014 Compared

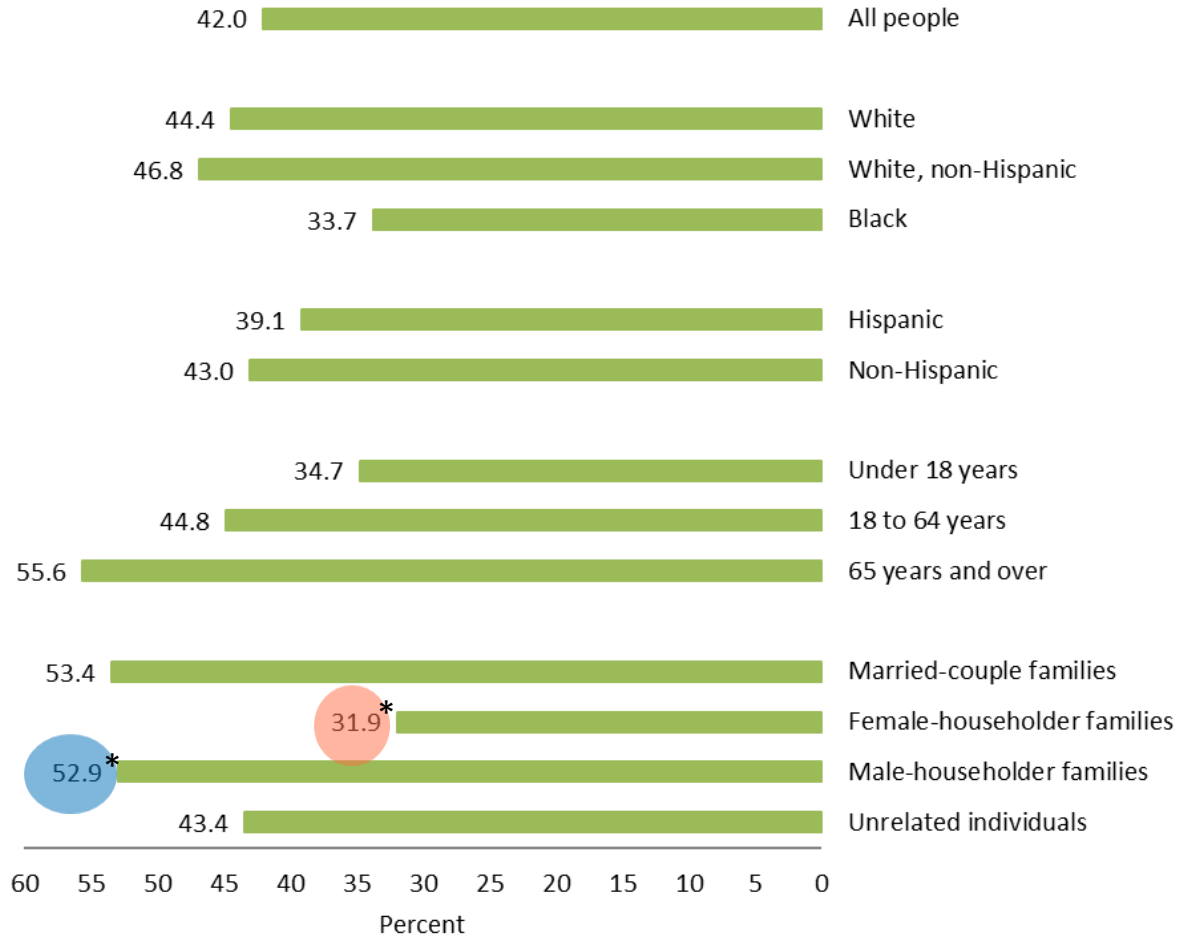


Source: U.S. Census Bureau, Survey of Income and Program Participation, 2014 Panel.

Poverty Entry and Exit

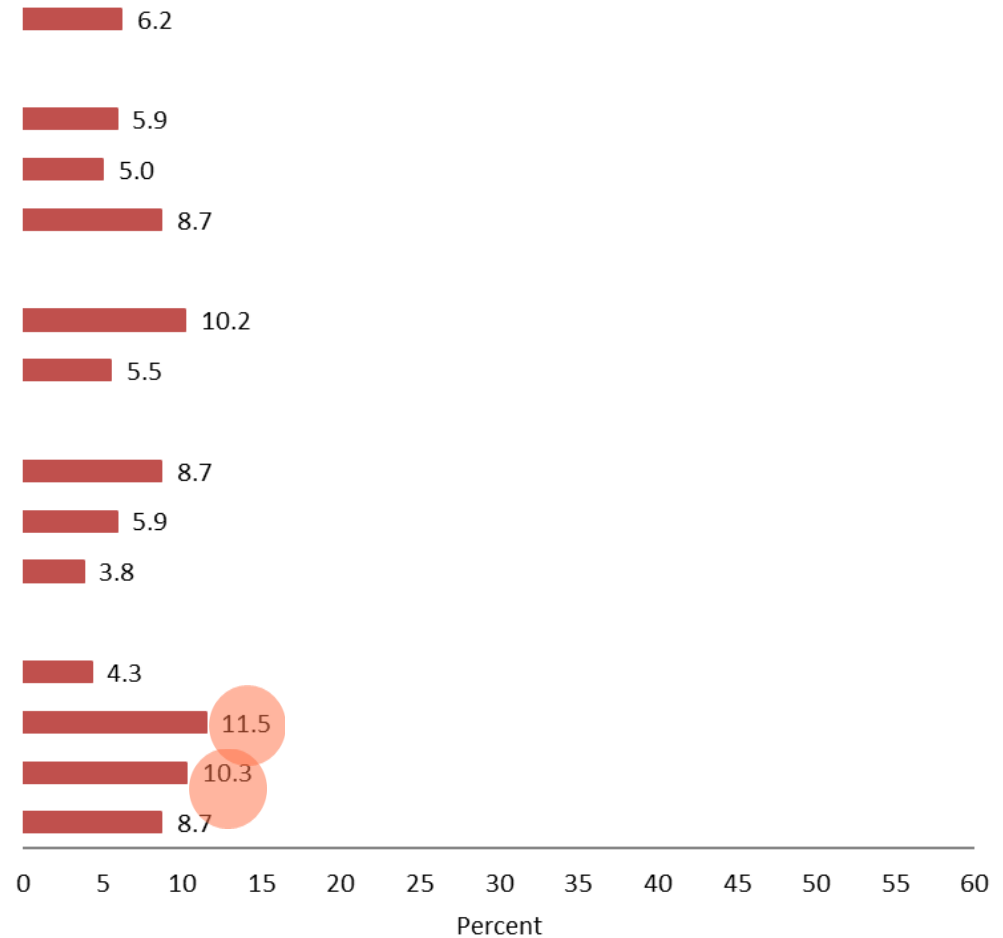
- The poverty entry rate represents the percent of individual who were not in poverty at the start of a reference period but are in poverty at the end of a reference period.
- The poverty exit rate represents the percent of individual who were in poverty at the start of a reference period but are not in poverty at the end of a reference period.
- Universe requires that individuals be in the survey over the entire reference period
- Demographic characteristics at the start of the reference period are kept constant throughout the reference period

Poverty Exit Rates: People in Poverty in 2013 but not in Poverty in 2014 by Selected Characteristics



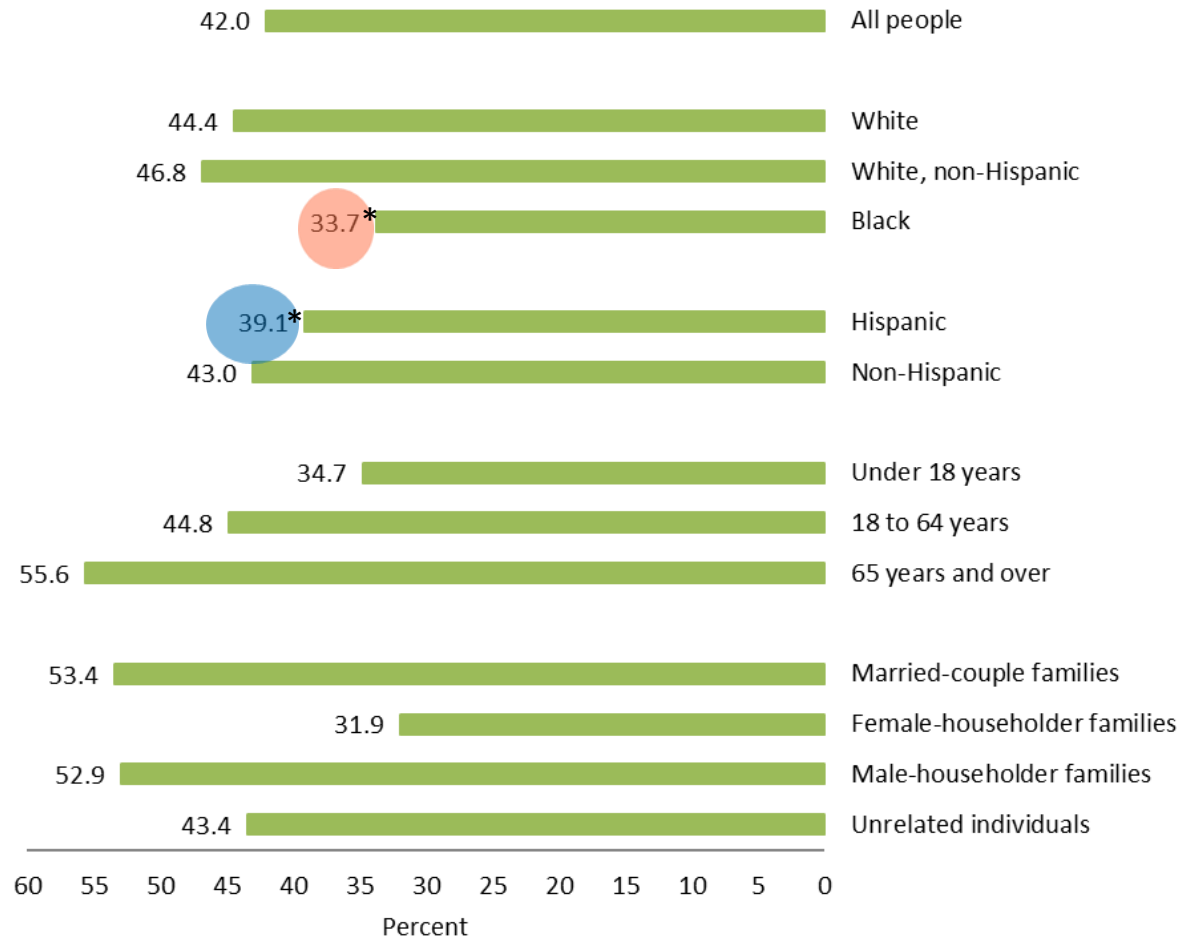
Asterisk indicates a significant difference between characteristics

Poverty Entry Rates: People Not in Poverty in 2013 but in Poverty in 2014 by Selected Characteristics

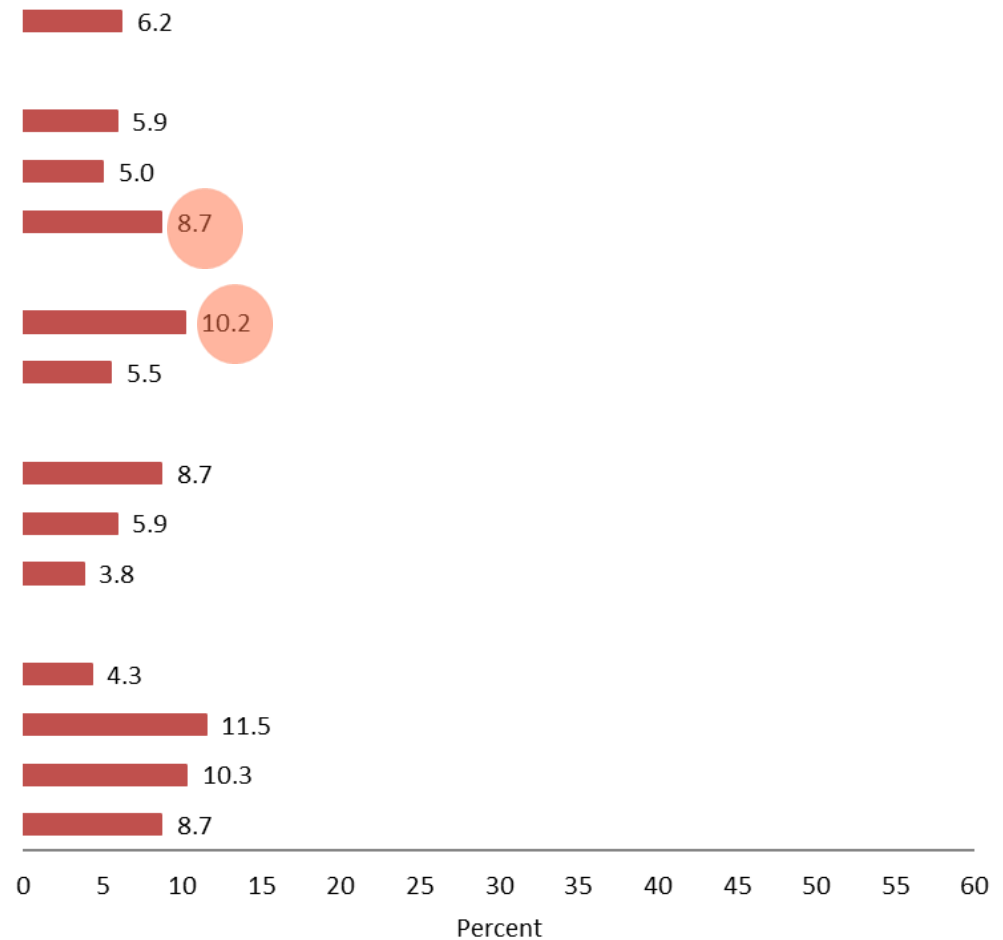


Source: U.S. Census Bureau, Survey of Income and Program Participation, 2008 Panel and 2014 Panel.

Poverty Exit Rates: People in Poverty in 2013 but not in Poverty in 2014 by Selected Characteristics



Poverty Entry Rates: People Not in Poverty in 2013 but in Poverty in 2014 by Selected Characteristics



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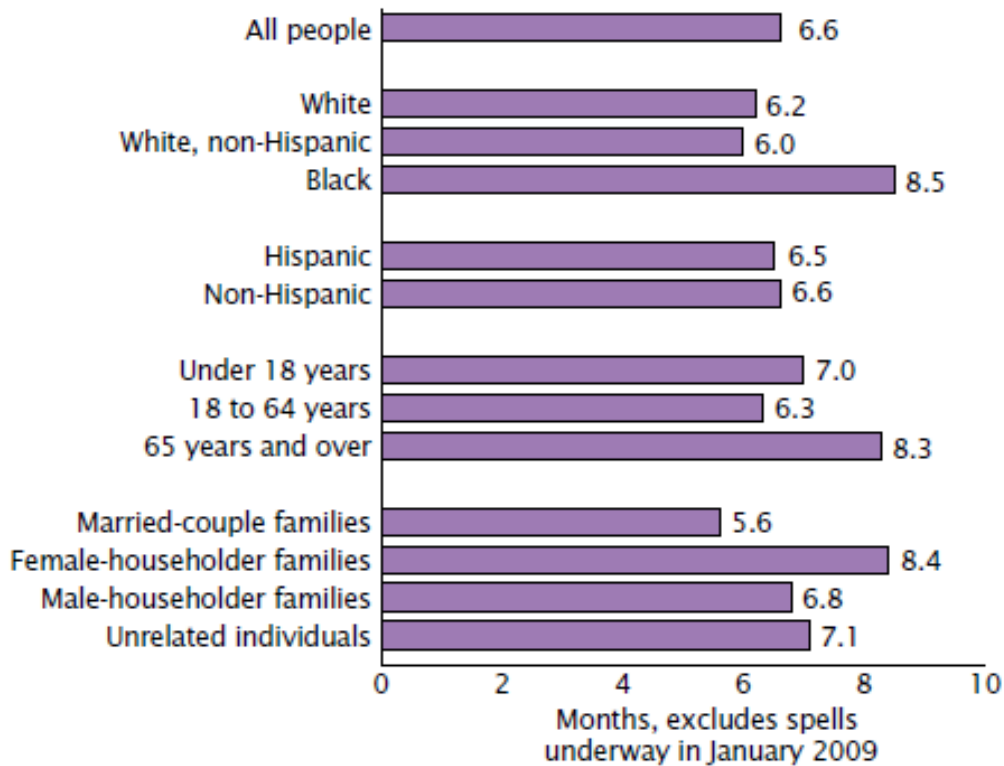
Source: U.S. Census Bureau, Survey of Income and Program Participation, 2008 Panel and 2014 Panel.

Poverty Spells

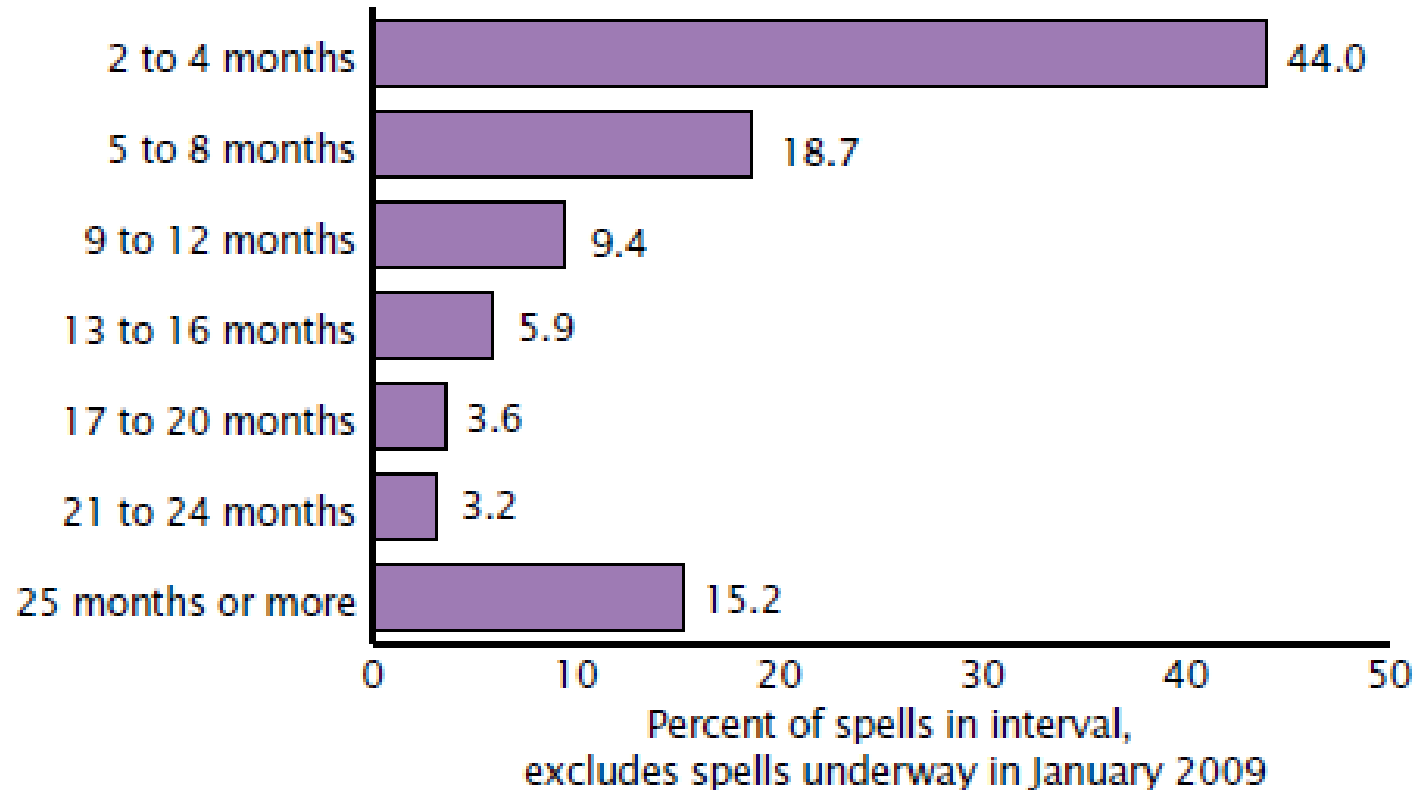
- Survival analysis can be used to analyze spell duration data to produce statistics such as median poverty spell length and poverty spell hazard rates
- Starts when an individual has 2 consecutive months in poverty
- Ends when an individual has 2 consecutive months out of poverty
- A single month out of poverty is not considered to be an exit out of a spell
- Individuals can have multiple poverty spells over a given reference period
- Left censoring and right censoring can be an issue, especially in smaller reference periods

Examples of Poverty Spell Analysis

Median Poverty Spells by Selected Characteristics: 2009 to 2011



Duration of Poverty Spells: 2009 to 2011



Source: U.S. Census Bureau, Survey of Income and Program Participation, 2008 Panel.

Any Questions or Comments?

Additional information about SIPP can be found at:

<https://www.census.gov/sipp/>

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