Bachelor's Degree Attainment in the United States: 2005 to 2019

American Community Survey Briefs

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INTRODUCTION

The American Community Survey (ACS) is the nation's most current, reliable, and accessible data source for local statistics. Since 2010, the ACS has published estimates using 5 years of data for all geographic areas down to the census tract and block-group levels. For the first time ever, these 5-year estimates are available for three consecutive nonoverlapping periods (2005–2009, 2010–2014, and 2015–2019), thus providing trend data for small population groups and geographies covering a combined 15-year period.[1] This report uses the 2005–2009, 2010–2014, and 2015–2019 ACS 5-year estimates to investigate bachelor's degree attainment.[2, 3]

Bachelor's degrees are important marks of progress for both individuals and society. Compared with noncollege graduates, individuals who hold a bachelor's degree have higher lifetime earnings, lower odds of unemployment, and better health outcomes.[4] In this brief, we present findings for national- and county-level changes in bachelor's degree attainment from 2005–2009 to 2015–2019.[5, 6]

FINDINGS

National

Table 1 presents national trends in educational attainment in the United States using three nonoverlapping ACS 5-year estimates for 2005–2009, 2010–2014, and 2015–2019. Specifically, Table 1 presents the percentage of the population 25 years and older with a bachelor's degree or higher. Educational attainment in the United States increased over the 15-year period. The percentage of the population 25 years and older with at least a bachelor's degree increased by about 5 percentage points (from 27.5 percent to 32.1 percent) from 2005–2009 to 2015–2019.

Table 1 also presents the percentage of people with a bachelor's degree or higher by race and Hispanic origin. In the first 5-year estimate, there were differences in the percentage of people with bachelor's degrees between race groups. From 2005–2009 to 2015–2019, the percentage of people with a bachelor's degree increased for all groups. However, growth in bachelor's degree attainment varied by race, with each race group following a different pattern. Table 1 shows that race groups with relatively low levels of bachelor's degree attainment

[1] For more information about comparing 5-year estimates, see "Understanding and Using American Community Survey Data: What All Data Users Need to Know" at <www.census.gov/programs-surveys/acs/guidance/handbooks/general.html>.

[2] Estimates presented here do not reflect the COVID-19 pandemic and its potential impact.

[3] To examine this topic further by Hispanic origin and race, see the interactive data visualization, "Percentage of Population Aged 25 Years and Over With a Bachelor's Degree or Higher: 2015–2019" at <www.census.gov/library/visualizations/interactive/acs-percentage-bachelors-degree-2015-2019.html>.

[4] Philip Oreopoulos and Uros Petronijevic, "Making College Worth It: A Review of Research on the Returns to Higher Education," Working paper 19053, National Bureau of Economic Research, 2013.

[5] Publicly available data products were used to derive estimates for each 5-year data set: 2005–2009 (B15002 and C15002A-I), 2010–2014 (S1501 and C15002A-I), and 2015–2019 (S1501).

[6] Margins of errors were derived using the ACS approximation method, see <www.census.gov/content/dam/Census/library/publications/2018/acs/acs_general_handbook_2018_ch08.pdf>.

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in 2005–2009 experienced higher levels of growth (percent change) in attainment over the time period compared with race groups that started with higher levels of education. For example, respondents identifying as Black alone, Native Hawaiian and Other Pacific Islander alone, and Some Other Race alone all saw the percentage of people with bachelor's degrees expand by 20 percent or more. Moreover, Hispanics or Latinos (of any race) and those identifying as Two or More Races had bachelor's degree attainment increase by 30 percent or more from 2005–2009 to 2015–2019.

Table 1 also shows the percentage-point increases from 2005–2009 to 2015–2019 for each race group. These findings provide a different narrative than the analysis of percent change in bachelor's degree attainment. Table 1 shows that race groups that began with relatively high levels of educational attainment (Asian alone, White alone, and non-Hispanic White) experienced greater percentage-point increases than race groups with lower rates of bachelor's degree attainment in the first 5-year estimate.

County-Level Differences in Attainment

Nationally, the United States experienced consistent increases in bachelor's degree attainment from 2005–2009 to 2015–2019, but when examining smaller geographies, we see different patterns of growth. Table 2 presents trends for all counties in the United States over this time. Looking at the percentage of people (25 and older) with a bachelor's degree or higher in 2005–2009, the mean across all counties was 18.7 percent. In 2010–2014, mean bachelor's degree attainment across counties rose to 20.1 percent and 22.0 percent from 2015–2019. The average percent increase in bachelor's degree attainment was 3.3 percentage points between 2005–2009 and 2015–2019 across counties. Over half of all counties experienced a statistically significant increase in the share with a bachelor's degree or higher.

Table 2 shows that changes in bachelor's degree attainment were not uniform across counties. In 2005–2009, the distribution of bachelor's degrees was negatively skewed across counties,[7] and data from Table 2 suggest that gaps in bachelor's degree attainment between counties continued to grow over the time span. Counties below the mean (less than 18.7 percent with a bachelor's degree or more) had growth in bachelor's degree attainment, but their overall gains were smaller than those that started above the mean in 2005–2009. For example, counties below the mean had an average increase of 3 percentage points in bachelor's degree attainment from 2005–2009 to 2015–2019, compared to an average increase of 3.8 percentage points for counties that were above the mean

What Is the American Community Survey?

The American Community Survey (ACS) is an annual, nationwide survey designed to provide communities with reliable and timely social, economic, housing, and demographic data for the nation, states, congressional districts, counties, places, and other localities. It has an annual sample size of about 3.5 million addresses across the United States and Puerto Rico and includes both housing units and group quarters (e.g., nursing facilities and prisons).[1] The ACS is conducted in every county throughout the nation and every municipio in Puerto Rico (where it is known as the Puerto Rico Community Survey).

Beginning in 2006, ACS 1-year estimates have been released annually for geographic areas with populations of 65,000 and greater. Beginning in 2010, ACS 5-year estimates have been released annually for all geographies down to the block-group level. Beginning in 2015, ACS 1-year supplemental estimates have been released annually for geographic areas with populations of 20,000 and greater. ACS 1-year and 5-year estimates are all period estimates that represent data collected within particular intervals of time—12 months and 60 months, respectively. For information on the ACS, visit <www.census.gov/acs>.

[1] Group quarters were added in 2006, the second year of full implementation. For more information, see the American Community Survey Design and Methodology at <www.census.gov/programs-surveys/acs/methodology/design-and-methodology.html>.

[7] A negative skew means that more counties had bachelor's degree attainment below the mean (1,921) than above the mean (1,218).

Table 1.

Percentage of the Population 25 Years and Older With a Bachelor's Degree or More by Race and Hispanic Origin: 2005 to 2019

Characteristic	Percentage of population with a bachelor's degree or higher						Percentage-point change from 2005–2009 to 2015–2019		Percent change from 2005–2009 to 2015–2019	
	2005–2009		2010–2014		2015–2019					
	Estimate	Margin of error (±)[1]	Estimate	Margin of error (±)[1]	Estimate	Margin of error (±)[1]	Estimate	Margin of error (±)[1]	Estimate	Margin of error (±)[1]
Total, 25 years and over	**27.5**	**0.1**	**29.3**	**0.1**	**32.1**	**0.2**	**4.6**	**0.2**	**16.6**	**0.8**
Race and Hispanic Origin										
White alone	29.0	0.1	30.6	0.1	33.5	0.2	4.4	0.2	15.4	0.8
Black alone	17.2	0.1	19.0	0.1	21.6	0.1	4.4	0.1	25.4	0.9
American Indian and Alaska Native alone	12.8	0.2	13.6	0.2	15.0	0.2	2.2	0.3	17.0	2.4
Asian alone	49.6	0.2	50.9	0.1	54.3	0.2	4.7	0.3	9.5	0.5
Native Hawaiian and Other Pacific Islander alone	14.3	0.5	15.0	0.5	17.8	0.6	3.4	0.8	24.3	6.2
Some Other Race alone	10.0	0.1	10.1	0.1	12.0	0.1	2.0	0.1	20.2	1.4
Two or More Races	23.5	0.2	27.4	0.2	31.9	0.2	8.4	0.3	35.9	1.4
White alone, non-Hispanic	30.6	0.1	32.7	0.1	35.8	0.1	5.3	0.1	17.2	0.5
Hispanic or Latino (of any race)	12.6	0.1	13.9	0.1	16.4	0.2	3.9	0.2	30.3	1.9

[1] Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is at 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error. The effect of nonsampling error is not represented in this table.

Note: The percent change is calculated by subtracting the first estimate (2009 5-year estimate) from the most recent estimate (2019 5-year estimate) and then dividing that difference by the first estimate and multiplying by 100. For example, the share of Native Hawaiian and Other Pacific Islander alone with a bachelor's degree was 14.3 percent in 2009 and grew 3.5 percentage points by 2019, which means the share grew by over 20 percent.

Source: U.S. Census Bureau, 2005–2009, 2010–2014, and 2015–2019 American Community Survey, publicly released 5-year estimates.

Table 2.

Average Percentage of the Population 25 Years and Over With a Bachelor's Degree or Higher by County Type and Region

Characteristic	Number of counties	Mean percent with a bachelor's degree or higher						Mean percentage-point change, 2005–2009 to 2015–2019		Percent with no significant change or significant decrease	Percent with significant increase
		2005–2009		2010–2014		2015–2019					
		Estimate	Margin of error (±)[4]	Estimate	Margin of error (±)[4]	Estimate	Margin of error (±)[4]	Difference	Margin of error (±)[4]		
National[1]	**3,138**	**18.7**	**0.1**	**20.1**	**0.1**	**22.0**	**0.1**	**3.3**	**0.1**	**42.3**	**57.7**
Below mean in 2005–2009[2]	1,921	13.5	0.1	14.9	0.1	16.5	0.1	3.0	0.1	50.2	49.8
Above mean in 2005–2009[3]	1,217	26.9	0.2	28.3	0.1	30.6	0.1	3.8	0.2	21.4	78.6
Northeast	217	25.6	0.1	27.3	0.1	29.8	0.1	4.2	0.1	9.2	90.8
Midwest	1,055	18.4	0.1	19.9	0.1	21.9	0.1	3.6	0.1	39.1	60.9
South	1,421	16.8	0.1	18.1	0.1	19.7	0.1	3.0	0.1	46.5	53.5
West	445	22.3	0.3	23.5	0.1	25.4	0.1	3.1	0.4	52.8	47.2

[1] Due to the county boundary changes that occurred within the 2005–2009 and 2010–2019 periods, the following county equivalents have been excluded from this table: Petersburg, Alaska; Prince of Wales-Hyder, Alaska; Hoonah-Angoon, Alaska; Bedford, Virginia; and Bedford city, Virginia.

[2] This category refers to all counties that were below the mean percent with a bachelor's degree or higher of 18.7 in 2005–2009.

[3] This category refers to all counties that were above the mean percent with a bachelor's degree or higher of 18.7 in 2005–2009.

[4] Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is at 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error. The effect of nonsampling error is not represented in this table.

Source: U.S. Census Bureau, 2005–2009, 2010–2014, and 2015–2019 American Community Survey, publicly released 5-year estimates.

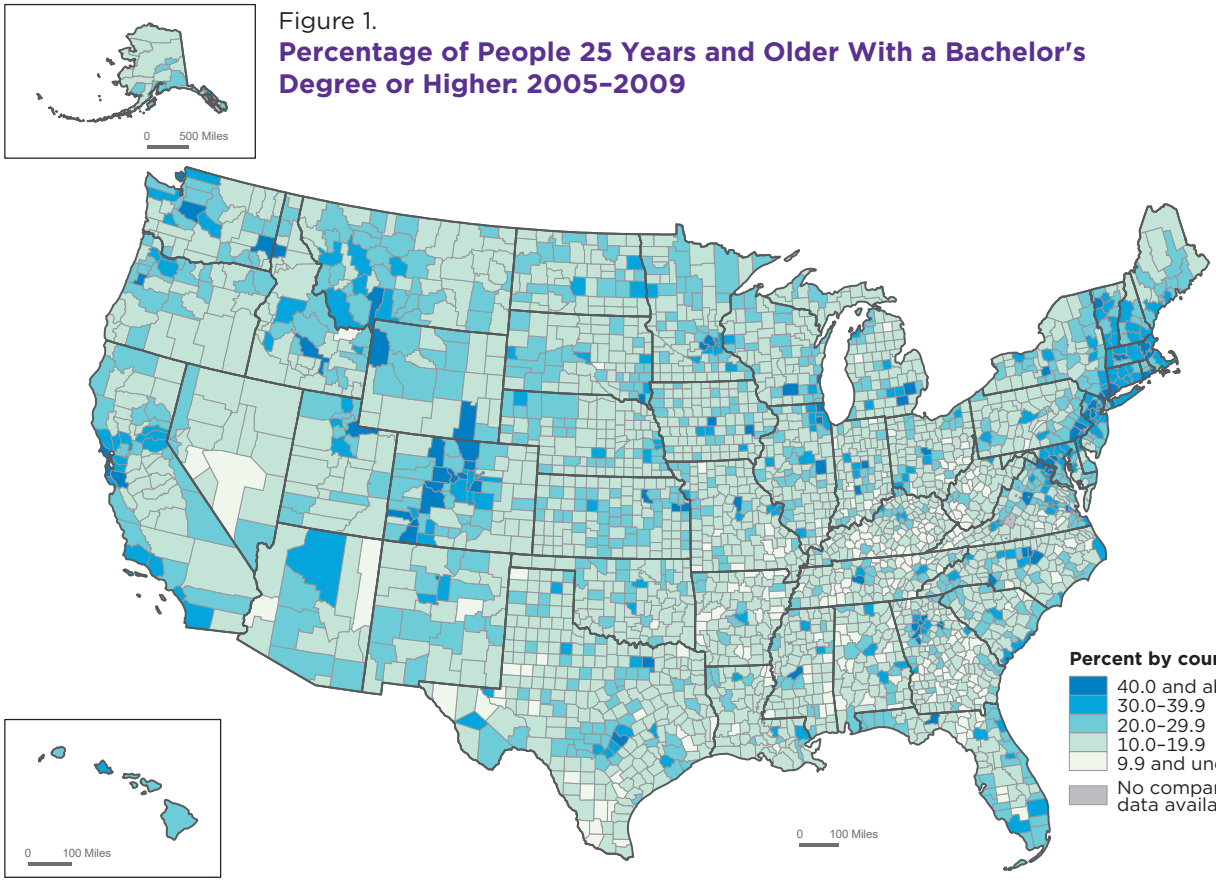
in 2005–2009. More striking is the difference in the share of counties that saw significant increases in the percentage with a bachelor's degree or higher. Roughly half of counties that were below the national average in 2005–2009 experienced significant increases in the share of the population with a bachelor's degree or higher, while over three-quarters of counties that were above the national average in 2005–2009 experienced significant increases.

Growth in bachelor's degree attainment among counties also varied by region. Counties in the Northeast had the highest average rate of residents with a bachelor's degree in both 2005–2009 (25.6 percent) and 2015–2019 (29.8 percent), followed by counties in the West, Midwest, and South. Counties in the Northeast also had the fastest rate of growth, seeing an increase of approximately 4.2 percentage points over this period. Counties in the South were not able to make up their gaps relative to counties in the Northeast and Midwest, as Southern counties had smaller rates of growth on average (3.0 percentage points).[8] A larger share of counties in the Northeast saw significant increases in the percentage of the population with a bachelor's degree or higher than in any other region (90.8 percent). In the Midwest (60.9 percent) and South (53.5 percent), most counties experienced increases, while in the West, just under half of all counties experienced significant increases (47.2 percent).

Figure 1 displays the patterns of educational attainment across

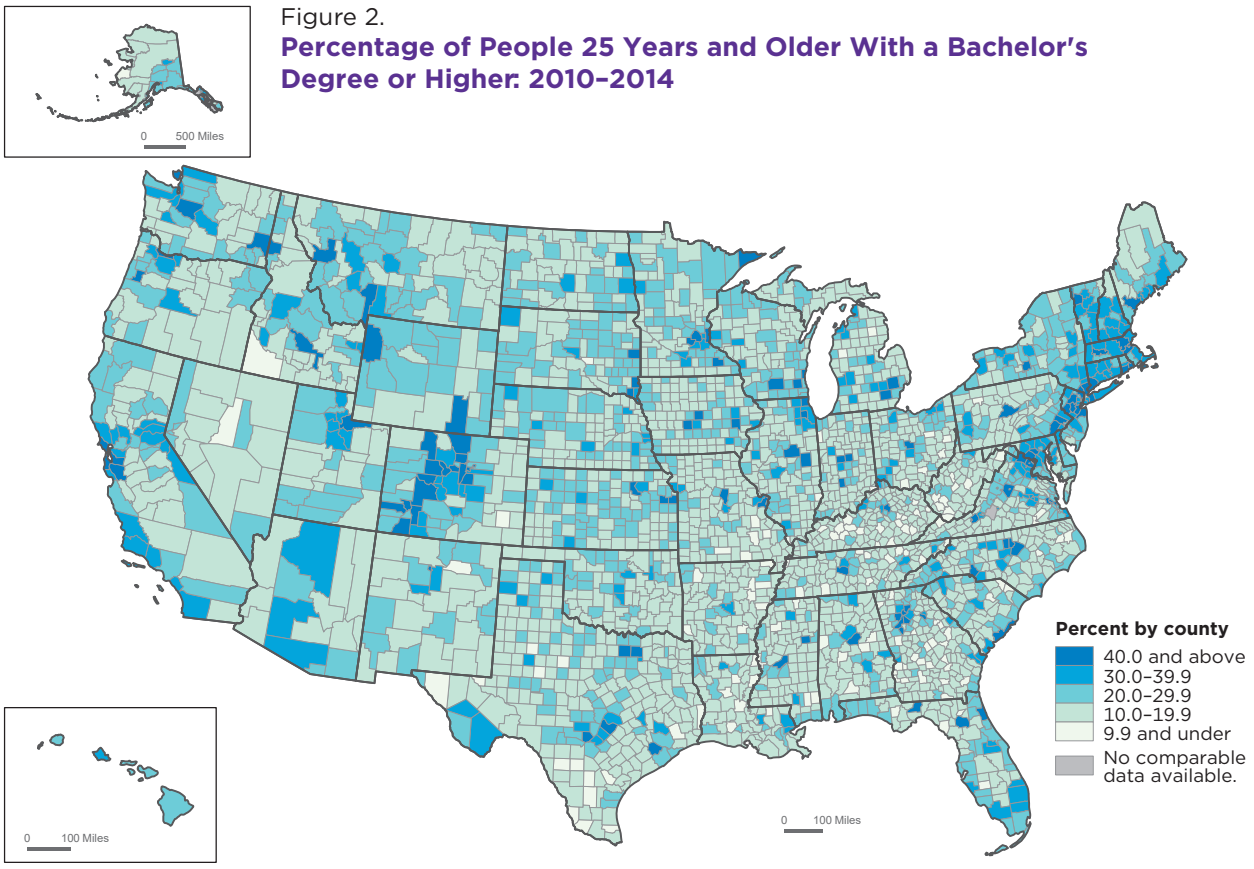
[8] Increases in the South were not significantly different from increases in the West over this span.

Figure 1.
Percentage of People 25 Years and Older With a Bachelor's Degree or Higher: 2005–2009



Notes: Due to the county boundary changes that occurred within the 2005–2009 and 2010–2019 time periods, the following county equivalents appear in the "No comparable data available" category: Petersburg, Alaska; Prince of Wales-Hyder, Alaska; Hoonah-Angoon, Alaska; Bedford, Virginia; and Bedford city, Virginia.
For more information, see <www.census.gov/acs>.
Source: U.S. Census Bureau, Table B15002, 2005–2009 American Community Survey, 5-year estimates.

Figure 2.
Percentage of People 25 Years and Older With a Bachelor's Degree or Higher: 2010–2014



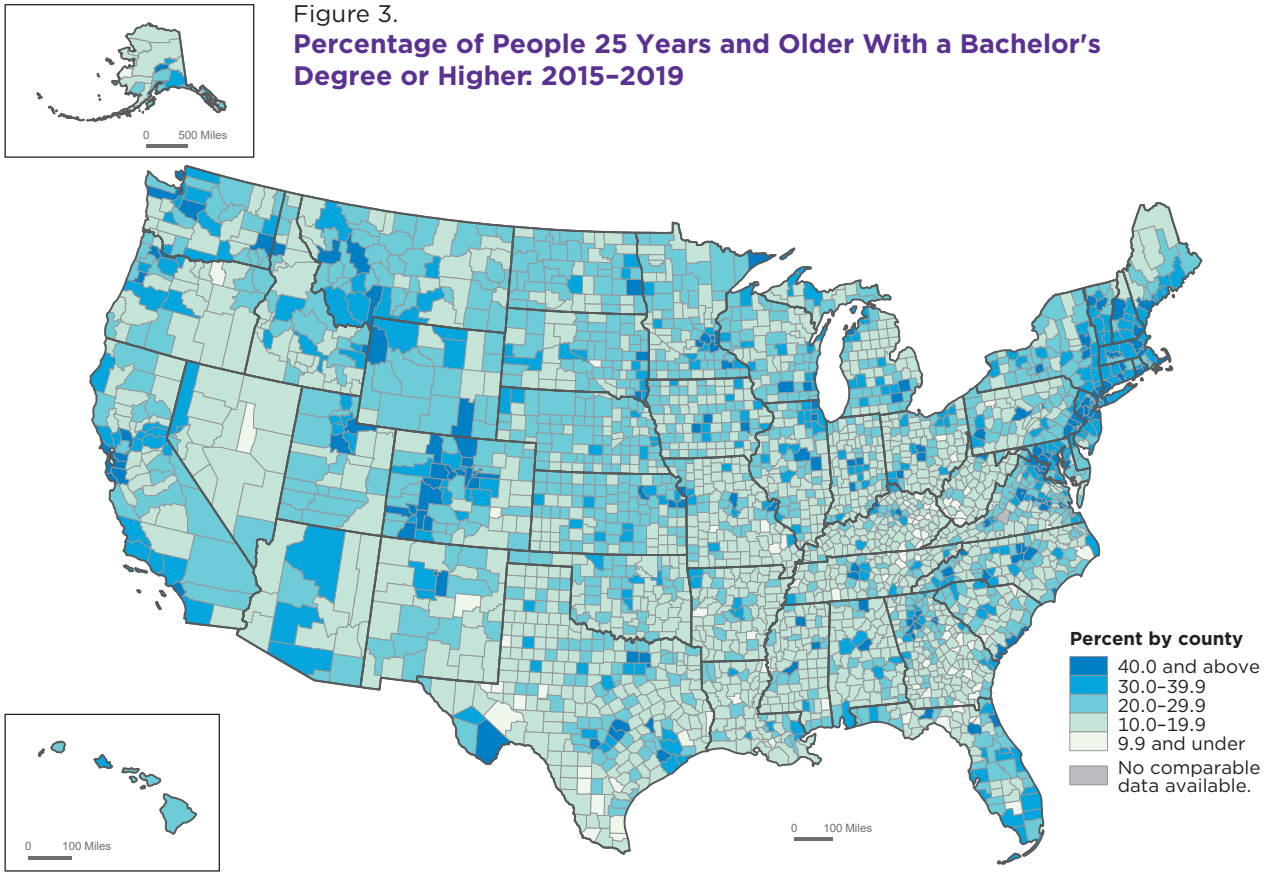
Notes: Due to the county boundary changes that occurred within the 2005–2009 and 2010–2019 time periods, the following county equivalents appear in the "No comparable data available" category: Petersburg, Alaska; Prince of Wales-Hyder, Alaska; Hoonah-Angoon, Alaska; Bedford, Virginia; and Bedford city, Virginia.
For more information, see <www.census.gov/acs>.
Source: U.S. Census Bureau, Table S1501, 2010–2014 American Community Survey, 5-year estimates.

counties from 2005–2009. Higher levels of educational attainment are often found in counties containing major metropolitan areas, such as the District of Columbia, New York, Chicago, and Seattle. Counties with a large number of undergraduate students also exhibit higher levels of attainment, such as Centre County, Pennsylvania, home of Pennsylvania State University. Figures 2 and 3 display similar patterns for 2010–2014 and 2015–2019, respectively. In 2005–2009, 259 counties across the United States had populations in which 9.9 percent or less of people 25 years or older had a bachelor's degree. Of these 259 counties, 213 were in states in the South. By 2015–2019, the number of these low-attainment counties had decreased substantially to only 89 such counties. Of these counties, 76 are in Southern states.

CONCLUSION

This brief uses ACS data from three nonoverlapping 5-year data sets (2005–2009, 2010–2014, and 2015–2019) to examine changes in bachelor's degree attainment over the time span. Table 1 provides three notable findings on educational attainment in the United States at the national level. First, the percentage of people with a bachelor's degree has steadily increased over the 15-year period. Second,

Figure 3.
Percentage of People 25 Years and Older With a Bachelor's Degree or Higher: 2015–2019



Notes: Due to the county boundary changes that occurred within the 2005-2009 and 2010-2019 time periods, the following county equivalents appear in the "No comparable data available" category: Petersburg, Alaska; Prince of Wales-Hyder, Alaska; Hoonah-Angoon, Alaska; Bedford, Virginia; and Bedford city, Virginia.
For more information, see <www.census.gov/acs>.
Source: U.S. Census Bureau, Table S1501, 2010–2014 American Community Survey, 5-year estimates.

bachelor's degree attainment increased for all race groups. Third, gaps in bachelor's degree attainment between race groups persisted over the 15-year period, but some metrics show that race groups with relatively low levels of educational attainment experienced comparatively high levels of growth in bachelor's degree attainment from 2005–2009 to 2015–2019. Table 2 and Figures 1 through 3 display the changes in bachelor's degree attainment across all U.S. counties from 2005–2009 to 2015–2019.

Bachelor's degree attainment has, for the most part, increased across the United States, but the level of growth varies across geographic regions. Using ACS data from three nonoverlapping 5-year data sets, we can examine these patterns in ways that would not be possible with less detailed geographies. This brief highlights the availability of three nonoverlapping 5-year data sets and some key findings related to bachelor's degree attainment across race groups and geographies. Future analyses could use these data to examine how demographic shifts, changing economies, and urban-rural divides relate to educational attainment in the United States.

SOURCE AND ACCURACY

The data presented in this report are based on the ACS sample interviewed each year from January 2005 through December 2019. The estimates based on these samples describe the person, household, and housing unit characteristics over each 5-year period of data collection

(2005–2009, 2010–2014, and 2015–2019). The ACS estimates are subject to both sampling and nonsampling error. Sampling error is the uncertainty between an estimate based on a sample and the corresponding value that would be obtained if the estimate were based on the entire population (as from a census). Measures of sampling error are provided in the form of margins of error for all estimates included in this report. All comparative statements in this report have undergone statistical testing, and comparisons are significant at the 90 percent confidence level unless otherwise noted.

In addition to sampling error, nonsampling error may be introduced during any of the operations used to collect and process survey data, such as editing, reviewing, or keying data from questionnaires. For more information on sampling and estimation methods, confidentiality protection, and sampling and nonsampling errors, see the "2019 ACS Accuracy of the Data" document located at <www.census.gov/programs-surveys/acs/technical-documentation/code-lists.html>. When comparing ACS estimates over time, it is necessary to consider changes to content, methodology, or geographic definitions. For more information about comparing ACS data across years or with a decennial census, see "Comparing ACS Data information" located at <www.census.gov/programs-surveys/acs/guidance/comparing-acs-data.html>.

HOW TO ACCESS AMERICAN COMMUNITY SURVEY DATA

All ACS data products are released on the U.S. Census Bureau's primary data dissemination and digital content platform located at <https://data.census.gov>.

An additional method for obtaining ACS data is through the Census Bureau's application programming interface at <www.census.gov/developers/>. This tool provides the public with maximum flexibility to query data directly from Census Bureau servers.