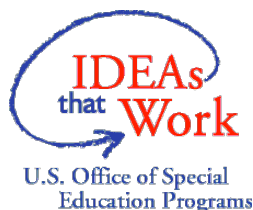


State Rankings of Postsecondary Achievement for Deaf People: 2012-2016

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NDC
National Deaf Center
on Postsecondary Outcomes



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Introduction

In this report, we analyze educational and employment outcomes across states in the United States, the District of Columbia, and Puerto Rico. We used 2012-2016 data from the American Community Survey (ACS), a national survey conducted by the U.S. Census Bureau. We limited our sample to individuals ages 25-64 to capture data for individuals more likely to have completed postsecondary education and training, those who are typically considered the “working age” population.

DEAF POPULATION

At the National Deaf Center, we use the term “deaf” in an all-encompassing manner to include individuals who may identify as Deaf, hard of hearing, hearing impaired, late deafened, and deafdisabled, and we will be doing so throughout this report. However, the U.S. Census collects data on functional limitations rather than disability or identity labels, so the variable “hearing difficulty” was used to capture deaf individuals who responded to the Census. The final sample included more than 19 million deaf individuals. More information about this

dataset and analyses are shared in the Methods section of this report.

OVERVIEW

In previous NDC reports, analyses of U.S. Census data show significant gaps in educational attainment and employment between deaf and hearing individuals. In this report our aim is to understand how these gaps in high school completion, bachelor’s degree completion, and employment rates vary across states. States with the smallest and largest gaps are highlighted, and overall state gap rankings are provided.

This report is not intended to be a conclusive ranking of how states are doing in postsecondary attainment for deaf individuals, but to serve as a data point that encourages continued analysis of state-level data in a more nuanced way. The U.S. Census dataset has the advantage of large sample sizes, but is not able to reach the depth that can be available with smaller state-level datasets or those that collect data specific to deaf populations. Each dataset has its own advantages and limitations.

NDC Reports for Further Reading

Deaf People and Employment in the United States: 2016.

Deaf People and Educational Attainment in the United States: 2017.

State Reports: Postsecondary Achievement of Deaf People in (your state): 2017.

Data Interpretation Guide for State Reports FAQs: 2017.

High School Completion

Overall, fewer deaf individuals complete high school compared to their hearing peers. From 2012-2016, 82.1% of deaf adults in the United States reported completing high school, compared to 88.6% of hearing adults, a gap of 6.5%. This is a sizable gap and one that has a significant impact on long term educational equity for deaf individuals.

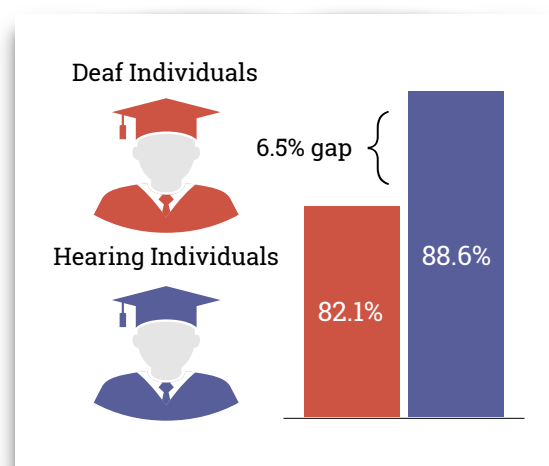
There are many regional factors that affect high school attainment that are important to recognize. The high school completion gap between deaf and hearing individuals varies greatly across states, from -0.7% in Utah to 17.5% in Puerto Rico.

The high school completion data in these reports include individuals who have a GED or diploma of any type. Given that our sample population includes individuals ages 25 to 64, the standards for obtaining a high school degree may have varied over time. This is something to consider when interpreting these results.

The map on the next page highlights states with the largest and the smallest high school completion gaps, compared to national averages. The states in teal are those with the smallest gaps, averaging a 2.8% high school completion gap between deaf and hearing individuals. These states had the smallest gaps: Utah, Nebraska, Nevada, Arizona, Oklahoma, Colorado, Washington, and California. States in dark grey had the largest gaps, averaging a 12.7% high school completion gap between deaf and hearing

individuals. These states had the largest gaps: Louisiana, Tennessee, Mississippi, West Virginia, Kentucky, and Puerto Rico.

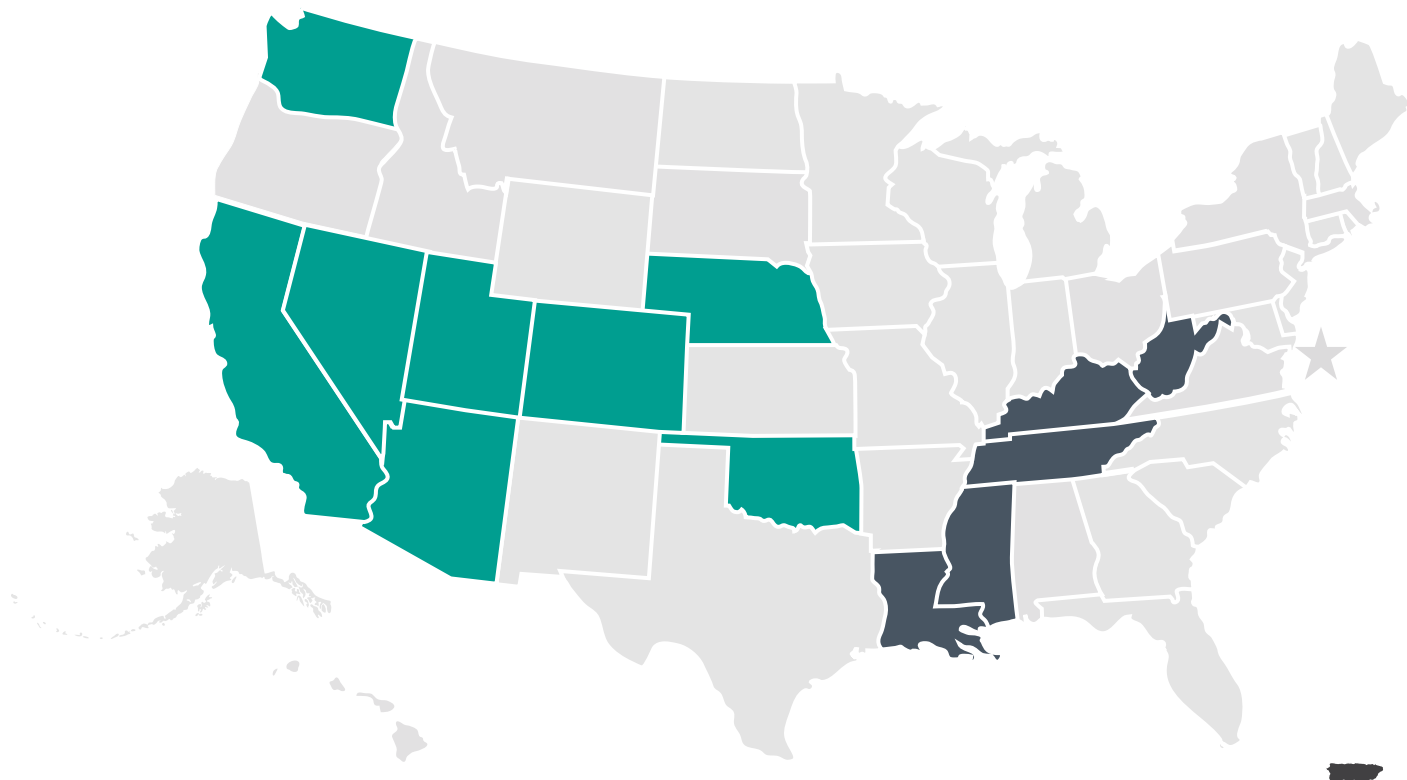
State rankings in high school completion gaps between deaf and hearing individuals are present in the Ranking section (pages 6-7). High school completion rates for deaf individuals in each state are also included in the table. A total of 29 states have a smaller high school completion gap compared to the national average, while 21 states, the District of Columbia, and Puerto Rico have larger gaps. Some states with robust levels of high school completion for deaf individuals still ranked among the bottom in gaps because the educational attainment levels for hearing individuals in those states were so high (e.g., Pennsylvania, Michigan, Virginia, Missouri, Ohio, Delaware, Massachusetts, and the District of Columbia).



High School Completion

Achievement Gaps between Deaf and Hearing Individuals

The **National Deaf Center on Postsecondary Outcomes** research team analyzed trends over a five-year period from 2012-2016 and identified 6 states with the largest gaps (Puerto Rico, Kentucky, West Virginia, Mississippi, Tennessee, and Louisiana) and 8 states with the smallest gaps (Utah, Nebraska, Nevada, Arizona, Oklahoma, Colorado, Washington, and California).



states with the smallest gaps

states with the largest gaps

Ranking

High School Completion 2012-2016

Rank	State	Deaf Individuals Completion Rate	Deaf-Hearing Completion Gap
1	Utah	92.5%	-0.7%
2	Nebraska	89.9%	1.5%
3	South Dakota	91.6%	1.8%
4	Nevada	83.5%	2.5%
5	Idaho	87.8%	2.9%
6	Arizona	83.7%	3.0%
7	Hawaii	90.6%	3.2%
8	Oklahoma	85.3%	3.2%
9	Colorado	88.2%	3.3%
10	Montana	90.6%	3.5%
11	Wyoming	90.3%	3.6%
12	Oregon	86.4%	4.1%
13	Washington	86.8%	4.4%
14	North Dakota	90.3%	4.7%
15	Alaska	88.7%	4.8%
16	Minnesota	89.0%	4.9%
17	Iowa	88.2%	5.2%
18	Connecticut	87.1%	5.3%
19	Illinois	84.7%	5.4%
20	New Hampshire	89.0%	5.4%
21	Wisconsin	87.6%	5.4%
22	California	77.6%	5.5%
23	Texas	78.4%	5.5%
24	Maryland	85.8%	5.6%
25	Florida	83.3%	5.7%
26	Kansas	85.5%	5.7%

Ranking

High School Completion 2012-2016

Rank	State	Deaf Individuals Completion Rate	Deaf-Hearing Completion Gap
27	Maine	88.7%	5.7%
28	Vermont	87.8%	5.9%
29	New Jersey	84.9%	6.2%
National Average		82.1%	6.5%
30	New Mexico	79.7%	6.6%
31	Georgia	80.8%	7.0%
32	Pennsylvania	84.9%	7.1%
33	New York	80.9%	7.3%
34	Michigan	84.3%	7.4%
35	Virginia	83.5%	7.4%
36	Missouri	83.5%	7.5%
37	North Carolina	80.8%	7.5%
38	Indiana	82.3%	7.6%
39	Ohio	84.2%	7.6%
40	South Carolina	80.5%	7.9%
41	Delaware	82.4%	8.1%
42	Alabama	78.9%	8.4%
43	Arkansas	79.3%	8.5%
44	Massachusetts	83.3%	8.9%
45	District of Columbia	82.2%	9.4%
46	Rhode Island	80.2%	9.6%
47	Louisiana	76.5%	9.9%
48	Tennessee	78.0%	10.9%
49	Mississippi	74.3%	12.0%
50	West Virginia	76.3%	12.7%
51	Kentucky	74.9%	13.1%
52	Puerto Rico	65.3%	17.5%

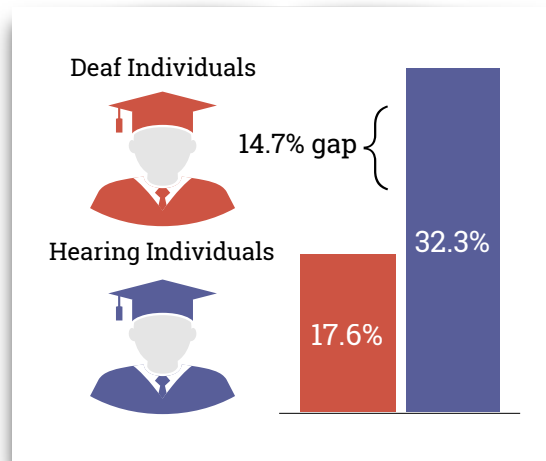
Bachelor's Completion

Overall, fewer deaf individuals attain a bachelor's degree compared to their hearing peers. From 2012-2016, 17.6% of deaf adults in the United States reported completing a bachelor's degree, compared to 32.3% of hearing adults, a gap of 14.7%. This is a sizable gap and one that has a significant impact on long term outcomes for deaf individuals. Earlier analyses have demonstrated that higher levels of educational attainment are linked to successful employment and earnings for deaf individuals.

There are many regional factors that affect bachelor's attainment that are important to recognize. The bachelor's attainment gap between deaf and hearing individuals varies greatly across states, from 7.7% in Idaho to 25.8% in the District of Columbia.

The map on the next page highlights states with the largest and the smallest bachelor's completion gaps, compared to national averages. The states in teal are those with the smallest gaps, averaging a 10.6% bachelor's completion gap between deaf and hearing individuals. These states had the smallest gaps: Idaho, Nevada, New Mexico, Oklahoma, Mississippi, Florida, Arkansas, Alabama, Arizona, Louisiana, South Carolina, Texas and California. States in dark grey had the largest gaps, averaging a 18.7% bachelor's completion gap between deaf and hearing individuals. These states had the largest gaps: Pennsylvania, Minnesota, and Massachusetts.

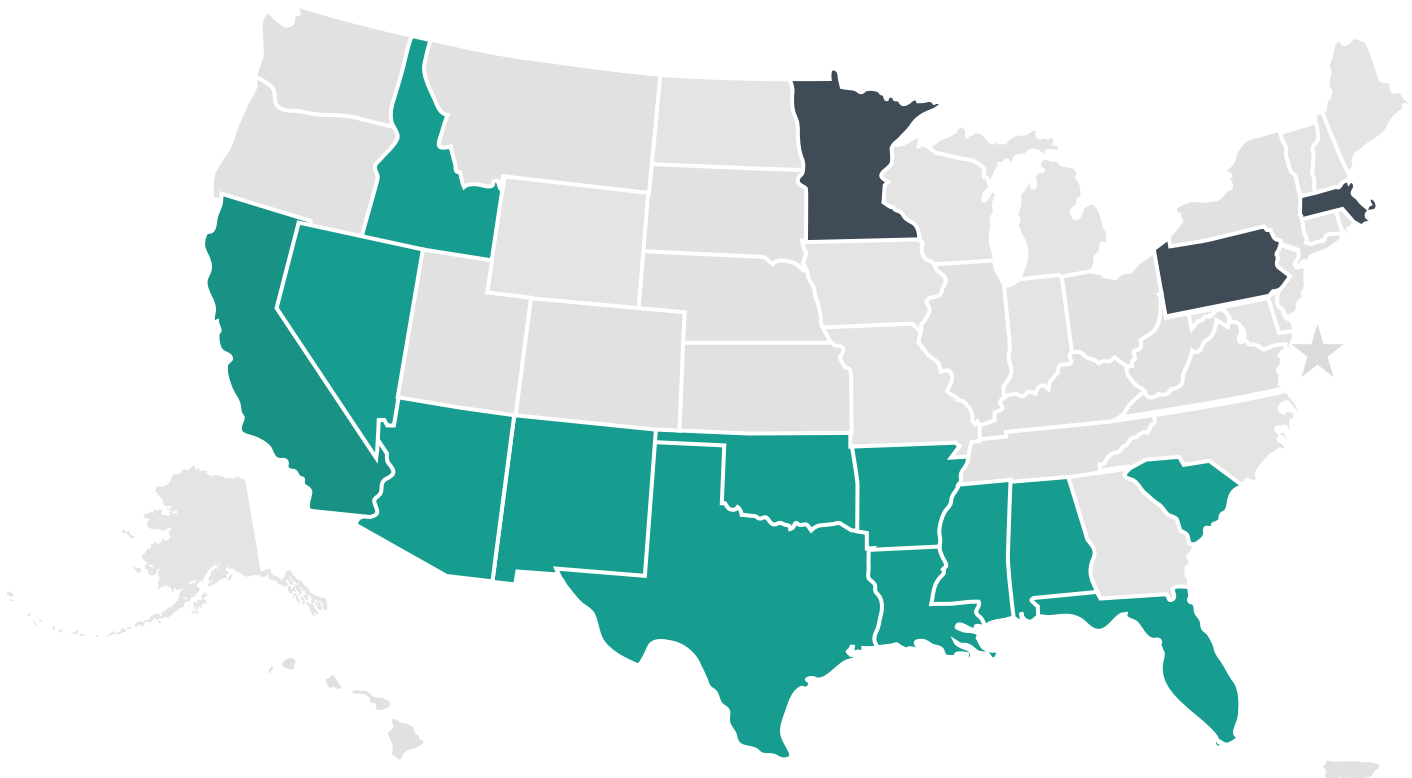
State rankings in bachelor's completion gaps between deaf and hearing individuals are presented in the Rankings section (pages 10-11). Bachelor's completion rates for deaf individuals in each state are also included in the table. A total of 33 states and Puerto Rico have a smaller bachelor's completion gap compared to the national average, while 17 states and the District of Columbia have larger employment gaps than the national average. Some states with robust levels of bachelor's completion levels for deaf individuals still ranked among the bottom in gaps because the educational attainment levels for hearing individuals in those states were so high (e.g., Connecticut, Virginia, Maryland, New Jersey, Massachusetts, and the District of Columbia).



Bachelor's Completion

Achievement Gaps between Deaf and Hearing Individuals

The [National Deaf Center on Postsecondary Outcomes](#) research team analyzed trends over a five-year period from 2012-2016 and identified 3 states with the largest gaps (Massachusetts, Minnesota, and Pennsylvania) and 13 states with the smallest gaps (Idaho, Nevada, New Mexico, Oklahoma, Mississippi, Florida, Arkansas, Alabama, Arizona, Louisiana, South Carolina, Texas, and California).



states with the smallest gaps

states with the largest gaps

Ranking

Bachelor's Completion 2012-2016

Rank	State	Deaf Individual Attainment Rate	Deaf-Hearing Achievement Gap
1	Idaho	19.3%	7.7%
2	Nevada	14.5%	9.0%
3	Hawaii	24.0%	9.1%
4	Montana	21.3%	9.1%
5	New Mexico	17.1%	9.5%
6	Oklahoma	16.4%	9.7%
7	Mississippi	12.3%	9.8%
8	Florida	18.7%	10.3%
9	Wyoming	16.5%	10.8%
10	Arkansas	12.1%	11.0%
11	Alabama	14.5%	11.2%
12	Arizona	17.4%	11.3%
13	Louisiana	12.9%	11.6%
14	South Carolina	16.1%	11.8%
15	Utah	20.3%	11.9%
16	Texas	17.5%	12.0%
17	North Dakota	19.1%	12.2%
18	Puerto Rico	16.2%	12.6%
19	West Virginia	8.9%	13.1%
20	Delaware	19.4%	13.3%
21	Kentucky	11.7%	13.3%
22	Indiana	13.6%	13.4%
23	California	19.5%	13.5%
24	South Dakota	16.5%	13.5%
25	Kansas	19.8%	14.2%
26	Georgia	17.0%	14.3%

Ranking

Bachelor's Completion 2012-2016

Rank	State	Deaf Individual Attainment Rate	Deaf-Hearing Achievement Gap
27	New Hampshire	23.3%	14.3%
28	Iowa	15.8%	14.4%
29	North Carolina	16.7%	14.4%
30	Colorado	25.7%	14.5%
31	Tennessee	13.3%	14.5%
32	Alaska	15.0%	14.6%
33	Michigan	14.8%	14.7%
34	Wisconsin	16.4%	14.7%
National Average		17.6%	14.7%
35	Oregon	17.6%	15.2%
36	Washington	19.6%	15.2%
37	New York	22.2%	15.3%
38	Missouri	14.7%	15.5%
39	Maine	15.2%	15.6%
40	Ohio	13.6%	15.6%
41	Connecticut	25.2%	15.8%
42	Virginia	23.7%	15.8%
43	Maryland	24.6%	15.9%
44	Illinois	19.5%	16.3%
45	New Jersey	24.3%	16.3%
46	Rhode Island	17.5%	17.2%
47	Pennsylvania	15.4%	17.3%
48	Nebraska	16.2%	17.6%
49	Vermont	20.0%	17.6%
50	Minnesota	18.7%	18.0%
51	Massachusetts	23.8%	20.9%
52	District of Columbia	33.8%	25.8%

Employment

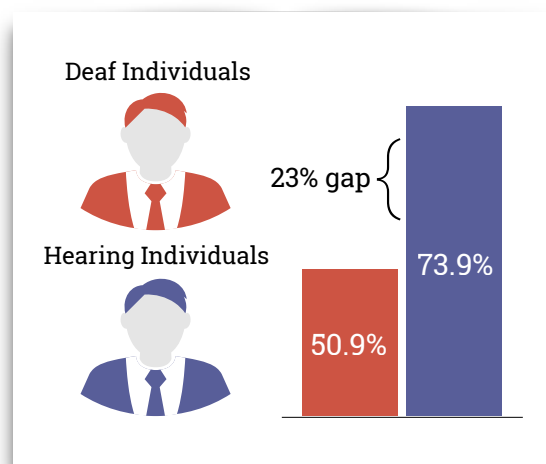
Across the nation, fewer deaf individuals are employed compared to their hearing counterparts. From 2012-2016, 50.9% of deaf adults in the United States reported being employed, compared to 73.9% of hearing adults, a gap of 23.0%. This is a sizable gap and one that has a significant impact on the quality of life of deaf individuals.

There are many regional factors that affect employment experiences and opportunities for deaf people that are important to recognize. The employment gap between deaf and hearing individuals varies greatly across states, from 12.3% in Wyoming to 28.7% in West Virginia.

The map on the next page highlights states with the largest and the smallest employment gaps, compared to national averages. The states in teal are those with the smallest gaps, averaging a 16.7% employment gap between deaf and hearing individuals. These states had the smallest gaps: Wyoming, South Dakota, Utah, Nevada, Connecticut, Minnesota, and Colorado. States in dark grey had the largest gaps, averaging a 27.4% employment gap between deaf and hearing individuals. These states had the largest gaps: West Virginia, Kentucky, Tennessee.

State rankings in employment gaps between deaf and hearing individuals are presented in the Rankings section (pages 6-7). Employment rates for deaf individuals in each state are also included in the table. A total of 34 states have a smaller employment gap compared to the

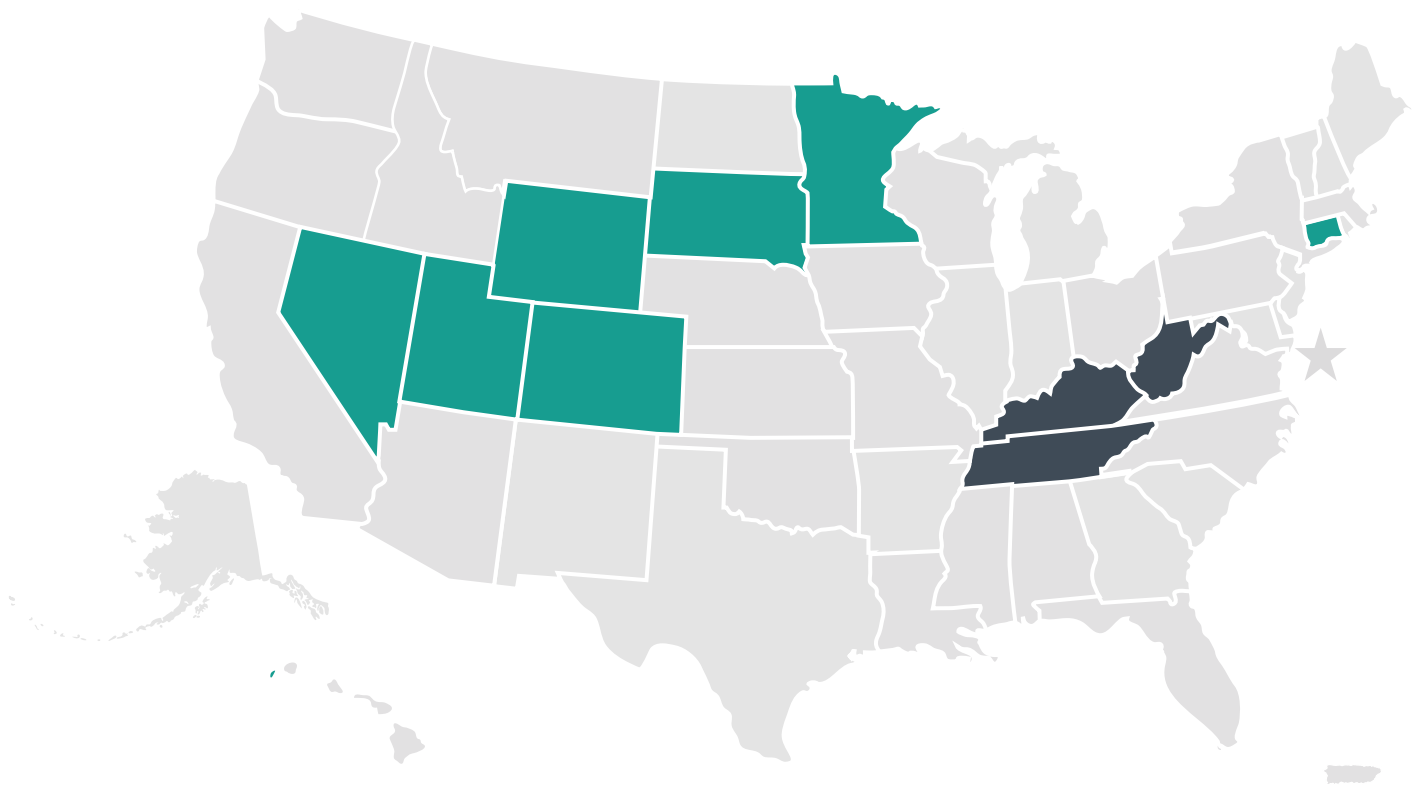
national average, while 16 states, the District of Columbia, and Puerto Rico have larger employment gaps than the national average. Some states with robust employment rates for deaf individuals still ranked among the bottom in employment gaps because the employment rates for hearing individuals in those states were so high (e.g., Maine, Ohio, New York, Vermont, Massachusetts, and the District of Columbia).



Employment

Employment Gaps between Deaf and Hearing Individuals

The [National Deaf Center on Postsecondary Outcomes](#) analyzed trends over a five-year period from 2012-2016 and identified 3 states with the largest gaps (West Virginia, Kentucky, and Tennessee) and 7 states with the smallest gaps (Wyoming, South Dakota, Utah, Nevada, Connecticut, Minnesota, and Colorado).



states with the smallest gaps

states with the largest gaps

Ranking

Employment 2012-2016

Rank	State	Deaf Individuals Employment Rate	Deaf-Hearing Employment Gap
1	Wyoming	66.0%	12.3%
2	South Dakota	67.5%	14.1%
3	North Dakota	66.5%	16.3%
4	Utah	59.1%	17.0%
5	Idaho	56.8%	17.2%
6	Nebraska	65.2%	17.2%
7	Nevada	55.2%	17.2%
8	Connecticut	59.9%	17.5%
9	Hawaii	59.4%	18.0%
10	Iowa	62.3%	18.5%
11	Montana	56.5%	18.7%
12	Minnesota	62.7%	19.0%
13	Alaska	56.1%	19.4%
14	Wisconsin	59.5%	19.5%
15	Kansas	58.8%	19.6%
16	Colorado	57.9%	19.9%
17	Maryland	58.5%	20.4%
18	Oklahoma	52.1%	20.7%
19	New Hampshire	59.6%	20.8%
20	Washington	53.6%	20.8%
21	Indiana	53.6%	21.3%
22	Texas	53.2%	21.5%
23	Delaware	53.4%	21.8%
24	Arizona	49.0%	22.1%
25	Louisiana	48.6%	22.1%
26	Pennsylvania	52.7%	22.1%

Ranking

Employment 2012-2016

Rank	State	Deaf Individuals Employment Rate	Deaf-Hearing Employment Gap
27	Alabama	46.1%	22.2%
28	Oregon	50.4%	22.3%
29	Virginia	55.0%	22.5%
30	Michigan	48.3%	22.7%
31	Illinois	52.5%	22.9%
32	Georgia	49.1%	23.0%
33	New Jersey	53.2%	23.0%
34	Rhode Island	53.3%	23.0%
National Average		50.9%	23.0%
35	Arkansas	46.3%	23.7%
36	Maine	51.2%	23.7%
37	Ohio	50.4%	23.8%
38	California	48.7%	23.9%
39	Mississippi	43.9%	24.1%
40	New York	50.3%	24.1%
41	South Carolina	47.2%	24.3%
42	Puerto Rico	28.1%	24.5%
43	North Carolina	47.8%	24.9%
44	Florida	47%	25.0%
45	Vermont	54.3%	25.2%
46	New Mexico	43.4%	25.6%
47	Missouri	48.8%	25.8%
48	Tennessee	45.2%	26.1%
49	Massachusetts	51.9%	26.2%
50	District of Columbia	50.9%	26.4%
51	Kentucky	41.9%	27.3%
52	West Virginia	37.3%	28.7%

Methods

The data for this project were taken from the Public Use Microdata Samples (PUMS) of 5-year estimates (2012-2016) of the American Community Survey conducted by the U.S. Census. The PUMS provides a confidential subset of the ACS for the public to analyze. More information on the ACS can be found at www.census.gov/programs-surveys/acs/about.html.

The sample of interest in these analyses was people ages 25-64. Recall that the U.S. Census collects data on functional limitations rather than disability or identity labels, so we used the variable “hearing difficulty” to track deaf individuals. The survey respondents who stated they had “hearing difficulties” were used to represent the deaf population in these analyses. The final sample included more than 19 million deaf individuals. The comparison group, what we call hearing individuals, were those who did not report having “hearing difficulties.” For the most part, the data for the group of hearing individuals was largely comparable to the data for the general population. But for comparison purposes, this analysis focuses on individuals in the general population who did not report any type of “hearing difficulties,” which allows for an understanding of postsecondary experiences that may be unique to the deaf population. Individuals who reside in institutionalized settings were excluded from these analyses.

The descriptive statistics in this report were all corrected by the person-level survey weights provided by the U.S. Census. These survey weights are intended to account for the intricacies involved in getting a sample that is representative of the United States population. These statistical tests are purely descriptive in nature, and we do not intend to suggest that any of the associations described are causal in nature. We did not correct

for any other variables in providing descriptive statistics. The state gap ranking sections list states in order by actual gaps between deaf and hearing individuals for the relevant data point (high school completion; bachelor’s degree completion; or employment rates). Rankings are provided in order from smallest to largest gap. These rankings do not indicate statistical significance. In many cases, apparent differences between states may not be statistically significant since samples from deaf populations are relatively small, corresponding to larger sampling error.

Statistical analyses were conducted to identify the states with gaps that were significantly larger or smaller than national averages. These analyses, corrected for multiple comparisons, compared states’ gaps with the national average of all other states. States with gaps that were significantly larger or smaller than those national averages were identified in the U.S. maps in this report. States with the smallest gaps are highlighted in teal, while states with the largest gaps are highlighted in dark grey. The states in light grey did not have gaps that were identified as significantly different than national averages. This could be because the state’s gap was not much different than national averages, or the state’s sample size was too small to definitively determine the relative size of its gap.

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