

**State-by-State Progress Map: Background and Sources**  
**Joanne Spetz, PhD**  
**University of California, San Francisco**

Data from the 2015 American Community Survey (ACS) were used to calculate the percent of employed RNs with a bachelor's degree in nursing or graduate degree in any field. The number of respondents per state varies in this survey, and for some states, the margin of error in the survey is relatively large.

We also searched for data collected directly by states. When these data were either newer than the 2015 American Community Survey or produced a higher estimate, we used the state data. Note that some states do not report data that are exactly comparable to the ACS calculation. For example, some state reports include both employed and non-working RNs, and some only consider nursing degrees (the ACS includes graduate degrees in non-nursing fields). We relied upon the ACS when a state's data was before 2015 and had a lower value than the ACS. This applied to CT, HI, IL, IN, NE, NV, NY, PN, and SC.

The national average of the share of RNs with a BSN in nursing or graduate degree was 53.2% in 2015. The 95% confidence interval is 52.5% to 53.8%.

For states for which we relied upon the ACS, we designated a state as having a BSN percentage "above average" if its 95% confidence interval was entirely above the upper bound of the national confidence interval (53.8%). We designated a state as having a BSN percentage "below average" if its 95% confidence interval was entirely below the lower bound of the national confidence interval (52.5%).

For states that provided such data, we designated a state as having a BSN percentage "above average" if their data was at least one percentage points higher than the upper bound of the national confidence interval (53.8%), and "below average" if their data was at least one percentage point lower than the lower bound of the national confidence interval (52.5%). One exception to this rule is Hawaii, for which the 2013 state data was higher than the national upper bound by nearly 6 percentage points, and the 2015 ACS was even higher but its confidence interval was not above the national upper bound. Given the consistency of the two estimates, we identify Hawaii as above the national average. Another exception is Louisiana, for which the state report is 51% (only slightly below one point less than the lower bound) and the national ACS estimate is above the national lower bound.

\* A 95% confidence interval is the range of values for which there is only a 5% chance that the true value is outside that range. When a dataset has a small number of observations, the confidence interval tends to be large; when the dataset has a large number of observations, the confidence interval tends to be small. For example, there are 3,137 observations in the data for California, and the confidence interval is 54.4% to 58.6%. There are only 94 observations for Delaware, and the confidence interval is 39.8% to 63.9%.

State	Percentage		State	Percentage	
	BSN+	95% CI		BSN+	95% CI
Alabama*	45.8%		Missouri*	56.3%	
Alaska*	61.0%		Montana	51.3%	37.4-65.0%
Arizona	53.2%	48.3-58.1%	Nebraska	67.2%	58.1-75.1%
Arkansas*	40.0%		Nevada	59.1%	50.8-66.9%
California*	61.5%		New Hampshire	49.3%	40.6-58.1%
Colorado	60.2%	55.1-65.1%	New Jersey*	61.1%	
Connecticut	56.5%	50.9-61.9%	New Mexico	51.1%	40.7-61.4%
Delaware*	63.5%		New York	53.0%	50.3-55.7%
District of Columbia*	67.0%		North Carolina*	51.3%	
Florida*	45.7%		North Dakota	69.8%	55.8-81.0%
Georgia	54.9%	50.8-58.9%	Ohio*	57.0%	
Hawaii	62.9%	53.0-71.7%	Oklahoma	45.8%	39.0-52.7%
Idaho*	62.2%		Oregon*	55.4%	
Illinois	57.6%	54.4-60.8%	Pennsylvania	51.2%	48.0-54.5%
Indiana	52.1%	47.5-56.7%	Rhode Island	50.8%	40.5-60.9%
Iowa*	41.2%		South Carolina	46.5%	41.1-52.0%
Kansas*	60.5%		South Dakota*	49.2%	
Kentucky	46.0%	40.8-51.3%	Tennessee	51.8%	47.3-56.3%
Louisiana*	51.0%		Texas*	55.5%	
Maine*	51.4%		Utah*	52.6%	
Maryland	59.4%	55.0-63.7%	Vermont*	43.5%	
Massachusetts*	58.2%		Virginia*	54.9%	
Michigan*	62.3%		Washington	56.6%	52.0-61.1%
Minnesota*	65.0%		West Virginia	51.5%	43.3-59.6%
Mississippi	50.2%	43.6-56.8%	Wisconsin*	57.5%	
			Wyoming	38.3%	21.5-58.5%

\* Data obtained from state-level sources.

## **Sources:**

Alabama: Alabama 2014 RN Workforce Survey.

[http://media.wix.com/ugd/79741c\\_091bb922c0cd4ca5a6374f1ccd230b3d.pdf](http://media.wix.com/ugd/79741c_091bb922c0cd4ca5a6374f1ccd230b3d.pdf). Note - their data includes BS in other field as BSN+ and they report 50% as a result

Alaska: Alaska Registered Nurses 2014. [https://www.uaa.alaska.edu/academics/college-of-health/departments/ACRHHW/health-programs-development/\\_documents/alaska-registered-nurses-2014-information-from-the-2014-nursing-workforce-survey.pdf](https://www.uaa.alaska.edu/academics/college-of-health/departments/ACRHHW/health-programs-development/_documents/alaska-registered-nurses-2014-information-from-the-2014-nursing-workforce-survey.pdf)

Arkansas: Data are for employed RNs, fall 2015. Personal communication, Debra Jeffs, Director, Academic Nursing Education

California: Spetz, Joanne, Lela Chu, Zachary Levin, Ulrike Muench, and Dennis Keane. 2015. Survey of Registered Nurses in California, 2014. Sacramento, CA: California Board of Registered Nursing. <http://www.rn.ca.gov/pdfs/forms/survey2014.pdf>

Connecticut: Connecticut League for Nursing. 2013 RN Workforce Survey Report. <http://www.aacn.nche.edu/media-relations/nursing-shortage-resources/CT-RN-Workforce.pdf>

Delaware: Panunto, Karen L. and Sarah L. Carmody. Nursing Workforce in the State of Delaware: A Current Look 2014. Delaware Nurses Association. <http://www.denurses.org/Doc-Vault/Workforce-Study-2014.pdf>

District of Columbia: 2012 data from: District of Columbia Nurse, volume 11, Number 1, april 2014.

[http://doh.dc.gov/sites/default/files/dc/sites/doh/release\\_content/attachments/DCNurse\\_40.pdf](http://doh.dc.gov/sites/default/files/dc/sites/doh/release_content/attachments/DCNurse_40.pdf)

Florida: 2015 data from: Florida Center for Nursing, Statewide Status Report on Nursing Supply and Demand, June 2016.

[https://www.flcenterfornursing.org/DesktopModules/Bring2mind/DMX/Download.aspx?Command=Core\\_Download&EntryId=1208&PortalId=0&TabId=151](https://www.flcenterfornursing.org/DesktopModules/Bring2mind/DMX/Download.aspx?Command=Core_Download&EntryId=1208&PortalId=0&TabId=151)

Hawaii: LeVasseur, Sandra A. Hawai'i Nursing Workforce 2013. Honolulu, HI: Hawai'i State Center for Nursing. <http://www.hawaiiicenterfornursing.org/wp-content/uploads/2015/09/FINAL-HI-Workforce-Survey-2013-Report.pdf>. Data on state total obtained by multiplying reported 85.3% employment rate by number licensed and living in HI in 2013. Data on percent BSN provided in executive summary but no supporting table exists in the report.

Idaho: Personal communication, Randall Hudspeth

Illinois: Illinois Center for Nursing, Registered Nurse Workforce Survey 2014.

[http://nursing.illinois.gov/PDF/2015-05-04\\_icn\\_rnws2014\\_report.pdf](http://nursing.illinois.gov/PDF/2015-05-04_icn_rnws2014_report.pdf)

Indiana: Indiana Health Workforce Studies Program Data Report, 2013 Nursing Licensure Survey.

<https://www.ic4n.org/wp-content/uploads/2015/02/DataReport2013IndianaNursingWorkforceFinal.pdf>

Iowa: Nursing Trends: Nurse Licensees and Nursing Education in Iowa, Academic Year 2014-2015, Released October 2016.

[https://nursing.iowa.gov/sites/default/files/media/2015%20Trends%20in%20Nursing%20Report%2010192016%20FINAL\\_0.pdf](https://nursing.iowa.gov/sites/default/files/media/2015%20Trends%20in%20Nursing%20Report%2010192016%20FINAL_0.pdf)

Kansas: Personal communication, Jill Peltzer, University of Kansas

Louisiana: Nursing Education Capacity and Nursing Supply in Louisiana 2015 Snapshot.

<http://lcn.lsbns.state.la.us/Portals/0/Documents/RNsInLouisiana2015Snapshot.pdf>

Maine: Maine Nursing Workforce Supply Data Sample 09/01/2014 to 11/20/2015

Massachusetts: Massachusetts Department of Public Health. Data Brief: Health Professions Data Series - Registered Nurses 2014. <http://www.mass.gov/eohhs/docs/dph/com-health/primary-care/health-professions-data-series-registered-nurses.pdf>

Michigan: Michigan Center for Nursing, Survey of Nurses 2015.

[https://michigancenterfornursing.org/downloads/2015\\_Survey\\_of\\_Nurses\\_Report.pdf](https://michigancenterfornursing.org/downloads/2015_Survey_of_Nurses_Report.pdf)

Minnesota: Minnesota's Registered Nurse Workforce, 2013-2014,  
<http://www.health.state.mn.us/divs/orhpc/workforce/nurse/2016rn.pdf>

Missouri: Missouri Department of Health and Senior Services. Missouri's Nursing Workforce - 2014.  
<https://www.mocenterfornursing.org/Documents/MissourisNursingWorkforce2014.pdf>

Nebraska: 2014 data from: Nebraska RN Survey Report 2015.  
<http://www.center4nursing.com/documents/2015RNWORKFORCEREPORT.pdf>

Nevada: Analysis of 2013 NCSBN survey data published as: UNSOM Health Policy Report, Registered Nurse Workforce Trends in Nevada, May 2014.  
[http://med.unr.edu/Documents/unsom/statewide/reports/Registered\\_Nurse\\_Workforce\\_in\\_Nevada\\_-\\_May\\_2014\\_-\\_FINAL\\_V.2.pdf](http://med.unr.edu/Documents/unsom/statewide/reports/Registered_Nurse_Workforce_in_Nevada_-_May_2014_-_FINAL_V.2.pdf)

New Jersey: New Jersey Collaborating Center on Nursing, Nurses in New Jersey, Nurse Workforce Report, 2014-2015. <http://www.njccn.org/wp-content/uploads/2016/09/Workforce-Report-2014-2015.pdf>

New York: Percent BSN are 2013 data. Total number is from licensing data and includes non-employed. All data provided in personal communication, David Armstrong, NY Center for Health Workforce Studies

North Carolina: Data are from 2013. Personal communication, Erica L. Richman, PhD, MSW, Program on Health Workforce Research & Policy, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill

Ohio: 2015 Registered Nurse Ohio Workforce Data Summary Report.  
<http://www.nursing.ohio.gov/PDFS/Workforce/2015RN/RN%20Workforce%202015%20FINALREV.pdf>

Oregon: 2015 data from: Personal communication, Kelley Ilic, Oregon Center for Nursing

Pennsylvania: 2012/2013 Pulse of Pennsylvania's Registered Nurse Workforce.  
<http://www.health.pa.gov/Your-Department-of-Health/Offices%20and%20Bureaus/Health%20Planning/Documents/WR/2012-2013%20Pulse%20of%20PA%20Registered%20Nurse%20Workforce%20Report%20Final.pdf>

South Carolina: South Carolina Office for Healthcare Workforce, The Registered Nurse Workforce in South Carolina - 2014.  
[http://www.sc.edu/study/colleges\\_schools/nursing/centers\\_institutes/center\\_nursing\\_leadership/office\\_healthcare\\_workforce\\_research/reports/workforcedatasummary2013/rn\\_workforce\\_sc\\_2014.pdf](http://www.sc.edu/study/colleges_schools/nursing/centers_institutes/center_nursing_leadership/office_healthcare_workforce_research/reports/workforcedatasummary2013/rn_workforce_sc_2014.pdf)

South Dakota: South Dakota Board of Nursing. South Dakota Nursing Workforce Supply and Employment Characteristics: 2015. <https://doh.sd.gov/boards/nursing/documents/2015WorkforceReport.pdf>

Texas: Texas Health Professions Resource Center. Registered Nurses: Trends, Distribution, Demographics. <file:///C:/Users/jspetz/Downloads/2015RNFactSheet.pdf>

Utah: Utah Medical Education Council. Supply of Nurses in Utah: The 2016 Survey of Utah's Registered Nurses. <http://www.utahmec.org/uploads/files/187/RN-report-final-updated5-9-2016.pdf>

Vermont: University of Vermont AHEC, Registered Nurses in Vermont: 2015 Board of Nursing Relicensure Survey. [https://www.uvm.edu/medicine/ahec/documents/2015AHEC\\_RN.pdf](https://www.uvm.edu/medicine/ahec/documents/2015AHEC_RN.pdf)

Virginia: Virginia Healthcare Workforce Data Center, Virginia's Registered Nurse Workforce: 2015.  
<https://www.dhp.virginia.gov/hwdc/docs/Nursing/0001RN2015.pdf>

Wisconsin: Wisconsin Center for Nursing, Wisconsin 2016 RN Workforce Survey.  
[http://www.wisconsincenterfornursing.org/documents/2016\\_RNSurvey\\_v5.pdf](http://www.wisconsincenterfornursing.org/documents/2016_RNSurvey_v5.pdf)