

THE U.S. HEALTH WORKFORCE CHARTBOOK

Part I: Clinicians

U.S. Department of Health and Human Services
Health Resources and Services Administration
National Center for Health Workforce Analysis



The Health Resources and Services Administration (HRSA), U.S. Department of Health and Human Services (HHS), provides national leadership in the development, distribution, and retention of a diverse, culturally competent health workforce that can adapt to the population's changing health care needs and provide the highest-quality care for all. The agency administers a wide range of training grants, scholarships, loans, and loan repayment programs that strengthen the health care workforce and respond to the evolving needs of the health care system.

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GENERAL LIST OF ACRONYMS

Acronym	Definition
AAPA	American Academy of Physician Assistants
ACNM	American College of Nurse-Midwives
ACS	American Community Survey
APRN	Advanced Practice Registered Nurse
ARF	Area Resource File
BHPr	Bureau of Health Professions
BLS	Bureau of Labor Statistics
BSN	Bachelor of Science in Nursing
CDC	Centers for Disease Control and Prevention
CMS	Centers for Medicare & Medicaid Services
EMT	Emergency Medical Technician
HHS	U.S. Department of Health and Human Services
HRSA	Health Resources and Services Administration
IPEDS	Integrated Postsecondary Education Data System
LPN	Licensed Practical and Licensed Vocational Nurse
NAICS	North American Industry Classification System
NCHWA	National Center for Health Workforce Analysis
NCLEX-PN [®]	National Counsel Licensure Examination for Practical Nurses
NCLEX-RN [®]	National Counsel Licensure Examination for Registered Nurses
NP	Nurse Practitioner
NPI	National Provider Identification
OT	Occupational therapy
PA	Physician Assistant
PA-C	Certified Physician Assistant
PUMS	Public Use Microdata Sample
RN	Registered Nurse

RSE Relative standard error
SOC Standard Occupational Classification

INTRODUCTION

The U.S. Health Workforce Chartbook provides extensive data on 35 health occupations and is part of the Health Resources and Services Administration's (HRSA's) effort to assist states, policymakers, local workforce planners, researchers, and the public in understanding the U.S. health workforce. The Chartbook may also be used as a baseline to track changes in the health workforce. While this Chartbook includes extensive data on supply, including comparative data by state, it does not include data on demand and, as such, does not address the adequacy of the supply.

The 35 occupations included in this Chartbook are classified based on the U.S. government's Standard Occupational Classification (SOC) system and included more than 14 million individuals in 2010.¹ These individuals represent approximately 10 percent of the nation's workforce.² The occupations included in this Chartbook also represent those with the largest current employment and those that are expected to grow substantially in the future.

The vast majority of workers are employed in what the U.S. Office of Management and Budget defines as the "health sector," which includes health settings such as hospitals, clinics, physician offices, and nursing homes. The health sector also includes many workers in occupations that are not considered health occupations. For example, workers such as accountants or food service workers employed in hospitals are working *in* the health sector, even though they are not working in a health occupation. Individuals in health occupations may also work outside the health sector in settings such as local governments, schools, or insurance companies. The information provided in this Chartbook includes individuals in health occupations that are both within and outside the health sector.

For most occupations, the Chartbook relies on the U.S. Census Bureau's ACS to estimate the total number of individuals in each occupation, their geographic distribution, the settings in which they work, and their demographic characteristics. The ACS, which uses self-reported data, is the most comprehensive source available for the broad range of occupations included in this report.³ This report also draws from the U.S. Department of Education's Integrated Postsecondary Education System (IPEDS) to include information on the number of graduates from educational programs leading to entry into specific occupations. No graduate data are presented for occupations in which formal educational requirements are completed in institutions not reporting to IPEDS or vary substantially by state.

Some important components of the health workforce are not included or fully represented in the Chartbook because of data limitations. These components include occupations for which data are not collected or reported separately by the U.S. Census Bureau. For example, data from public health nurses are not collected separately from other types of nurses. The report also does

¹HRSA analysis of the U.S. Census Bureau, American Community Survey (ACS) Public Use Microdata Sample (PUMS), 2008-2010.

²HRSA analysis of the U.S. Bureau of Labor Statistics (BLS), Employment Projections, 2010-2020. Note: The "workforce" is defined as individuals employed in the occupation and individuals whose last job was in the occupation and who are still seeking employment.

³Note: Self-reported data have limitations. Some individuals may report the occupation for which they are trained or licensed even when they are not currently working the majority of their time in that occupation. For example, a physician who is spending a majority of his/her time as an administrator may self-report as either a physician or an administrator. The ACS does not collect data on licensure or professional certification. See the Technical Documentation for additional details on ACS reporting and limitations.

not include important health occupations, because of the small size of the occupation, such as epidemiologists and other public-health oriented disciplines like laboratorians and environmental health professionals. In addition, some occupations in the Chartbook are limited by ACS occupational groupings because of the methods by which the ACS collects and reports SOC data. For example, although the SOC has two separate groupings for “medical and clinical laboratory technologists” and “medical and clinical laboratory technicians,” the ACS only reports on “medical and clinical laboratory technologists and technicians” as a single occupational grouping and does not report the two occupations separately.

The Chartbook is divided into four main parts for ease of reporting. Part I comprises clinicians. Part II presents additional clinician categories and occupations concerned with health care administration duties. Part III discusses health-related technologists and technicians as well as aides and assistants. Part IV describes behavioral and allied health occupations.

DATA SOURCES

Data for this Chartbook come primarily from two federal agencies: the U.S. Census Bureau and the U.S. Department of Education.

The U.S. Census Bureau’s American Community Survey (ACS): The ACS, a household survey, provides detailed self-reported data including demographic information (e.g., age, race, and sex data) on individuals working in the health occupations and is the major source of data for this report.

The U.S. Department of Education’s Integrated Postsecondary Education System (IPEDS): IPEDS data are used to measure the educational pipeline into the health occupations. IPEDS provides enrollment and graduation data on an annual basis for all institutions that receive or apply for federal funds. The number of graduates, by degree type, is presented for occupations for which there is a specific educational pathway into the occupation. No data are reported for those occupations without a distinct educational pathway.

Descriptions of the educational and training requirements for the various occupations have been obtained from the BLS, *Occupational Outlook Handbook*, 2012-13 Edition.

Also, data from ***HRSA’s Area Resource File (ARF)*** are included in this Chartbook. The ARF is a comprehensive, county-level source of health workforce and other health resources data. Included in the ARF are data from the American College of Nurse-Midwives (ACNM) and the Centers for Medicare & Medicaid Services’ National Provider Identification (NPI) file. The NPI file contains data on health professionals that require unique identification for federal billing (e.g., Medicare and Medicaid), private insurance, and other purposes. In this report, NPI data in the ARF have been used for cases in which ACS data were not available (i.e., nurse practitioners and nurse anesthetists).

Details on the data sources, definitions and analysis, and other information provided in the Chartbook are available in the *The U.S. Health Workforce Chartbook: Technical Documentation*, which can be found at <http://bhpr.hrsa.gov/healthworkforce/index.html>. Also, more detailed information on the work settings used in this report can be found on the U.S. Census Bureau website at www.census.gov/eos/www/naics.

The following table lists each of the selected occupations in Part I of *The U.S. Health Workforce Chartbook* along with the associated total workforce estimates from the ACS (unless noted otherwise).

Part I: Clinicians

	<u>Occupation</u>	<u>Total Workforce</u> ⁴
1.0	Physicians	861,463
2.0	Physician Assistants	99,651
3.0	Nurses	
3.1	Registered Nurses	2,824,641
3.1.1	Nurse Anesthetists	35,570 ⁵
3.1.2	Nurse-Midwives	12,383 ⁶
3.1.3	Nurse Practitioners	110,042 ⁷
3.2	Licensed Practical and Licensed Vocational Nurses	690,038
4.0	Oral Health	
4.1	Dentists	168,299
4.2	Dental Hygienists	151,933
4.3	Dental Assistants	283,593
5.0	Pharmacists	256,918

⁴Total workforce from HRSA analysis of the ACS PUMS, 2008-2010. The ACS data are based on self-reported occupation.

⁵Data from 2011-12 ARF. Data on this profession not available from ACS for the covered period.

⁶Data from 2011-12 ARF. Data on this profession not available from ACS for the covered period.

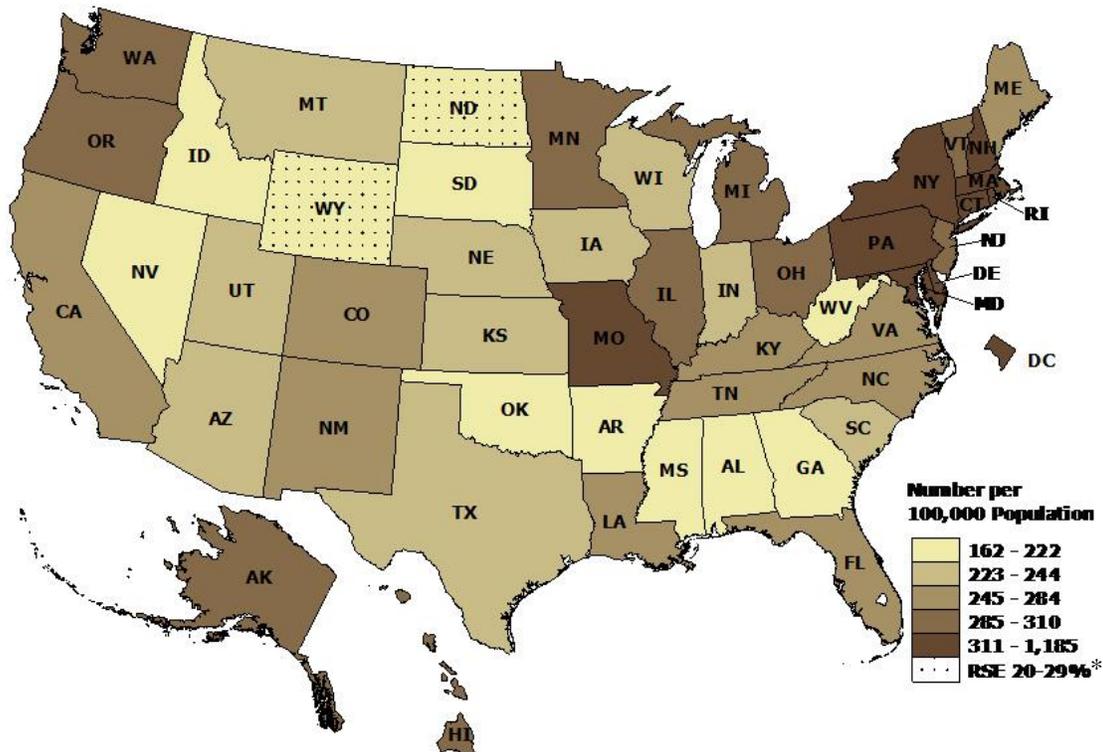
⁷Data from 2011-12 ARF. Data on this profession not available from ACS for the covered period.

1.0 PHYSICIANS

- An estimated 861,463 individuals in the U.S. workforce reported their occupation as physician.⁸
- To become a licensed physician, an individual must obtain an allopathic (medical) or osteopathic degree and complete additional graduate training (internship/residency).⁹

Current Distribution

Figure 1: Physicians per 100,000 Working-Age Population, by State



Data Source: HRSA analysis of the ACS PUMS, 2008-2010.

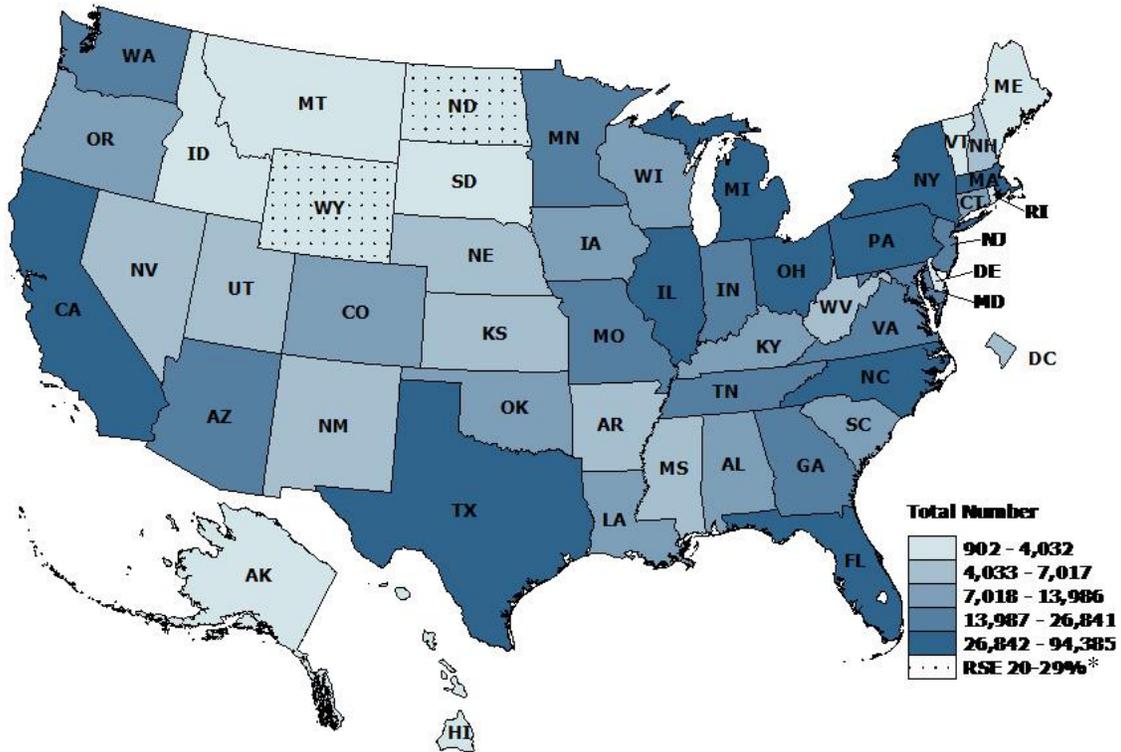
*Note: Estimated ratios in states with a relative standard error (RSE) > 20% should be used with caution because of large sampling error.

⁸Total workforce from HRSA analysis of the ACS PUMS, 2008-2010.

Note: The ACS estimate for physicians includes patient care physicians, those in residency training, and physicians not providing patient care a majority of the time.

⁹BLS, *Occupational Outlook Handbook*, 2012-13 Edition.

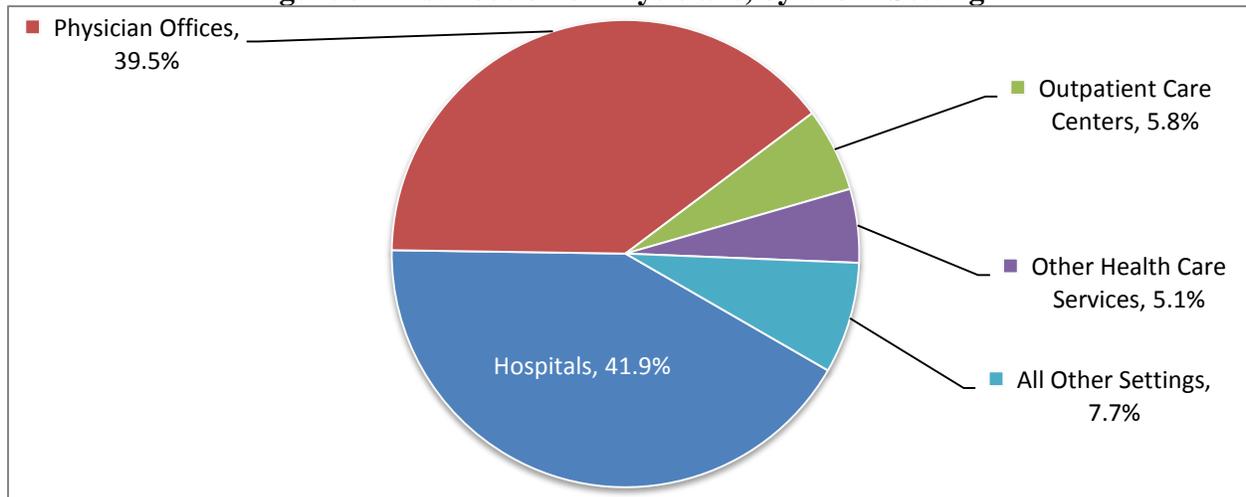
Figure 2: Number of Physicians, by State



Data Source: HRSA analysis of the ACS PUMS, 2008-2010.

* Note: Estimates in states with an RSE > 20% should be used with caution because of large sampling error.

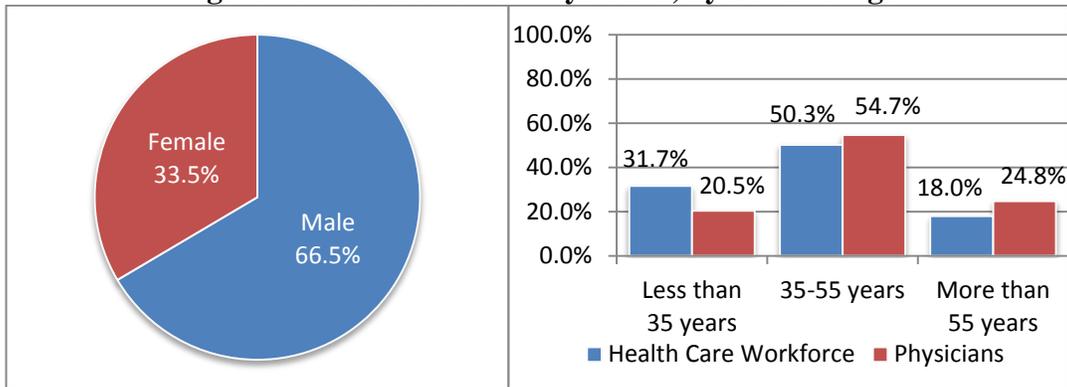
Figure 3: Distribution of Physicians, by Work Setting¹⁰



Data Source: HRSA analysis of the ACS PUMS, 2008-2010.

¹⁰Note: The ACS appears to overcount the number of physicians working in the hospital setting. Other sources of data, including the American Medical Association Masterfile, report that approximately 25 percent of physicians have a principal practice setting as the hospital. This percentage includes hospital staff and residents. The discrepancy may reflect the fact that the ACS is self-reported and that the actual ACS questionnaire lists “hospital” as the first example of a work location (only one setting is coded per ACS respondent). Some physicians who see patients in the hospital and others who may be in hospital-affiliated service sites may have responded that they work in a hospital.

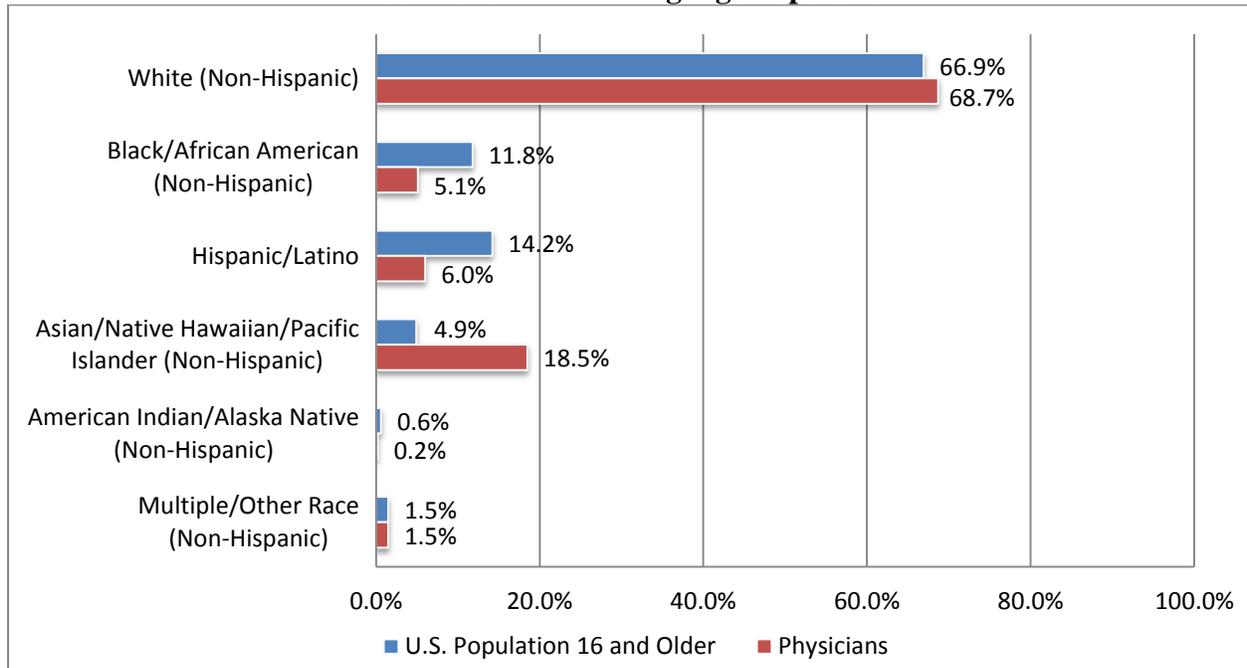
Figure 4: Distribution of Physicians, by Sex and Age



Data Source: HRSA analysis of the ACS PUMS, 2008-2010.

Note: The “Health Care Workforce” in this figure refers to the health occupations covered in this report.

Figure 5: Distribution of Physicians, by Race/Ethnicity, Relative to the Working-Age Population



Data Source: HRSA analysis of the ACS PUMS, 2008-2010.

Note: Percentages may not total 100, because of rounding.

Graduates

The total number of allopathic (medical) and osteopathic school graduates for the 2009 to 2010 academic year was 20,537.¹¹ This total does not include graduates of foreign medical schools who enter the physician pipeline at the graduate medical education level, also known as residency training.

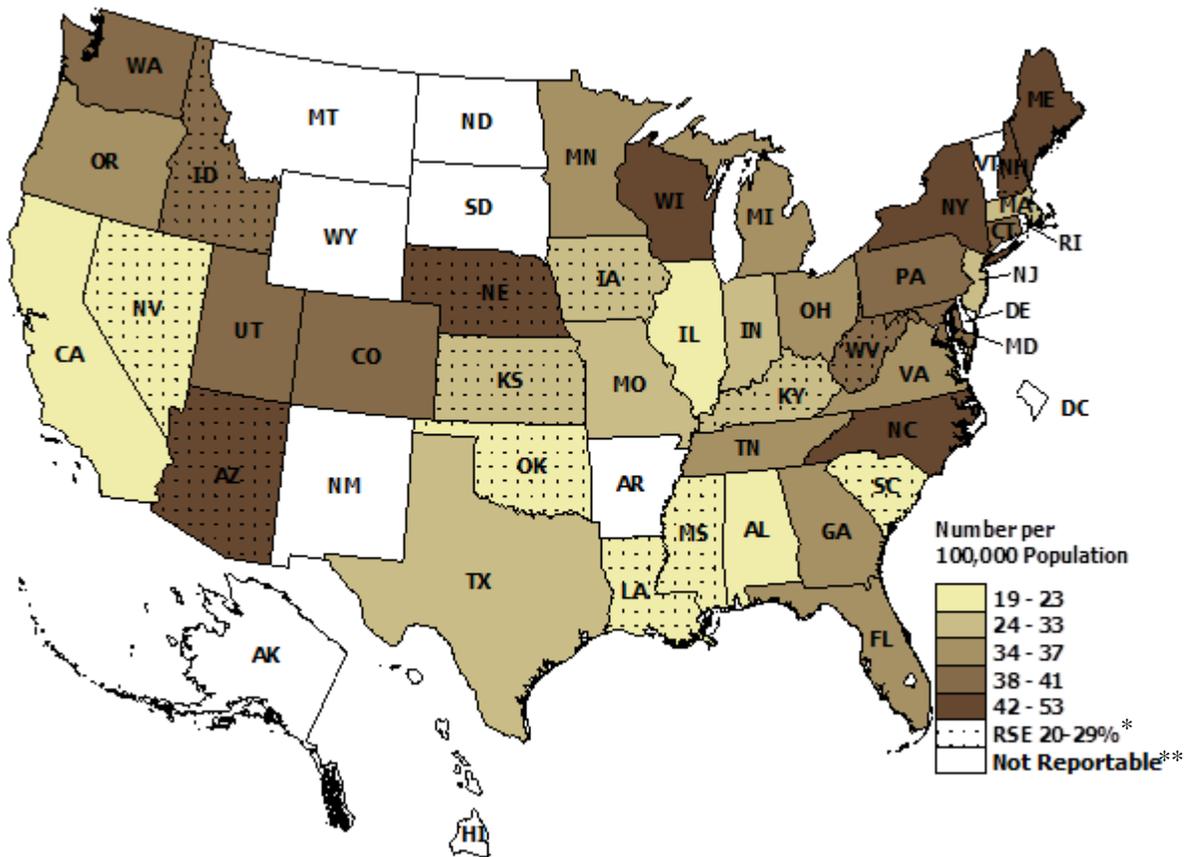
¹¹HRSA analysis of the National Center for Education Statistics IPEDS, 2009-2010.

2.0 PHYSICIAN ASSISTANTS

- An estimated 99,651 individuals in the U.S. workforce reported their occupation as physician assistant (PA).¹²
- The typical entry-level education for PAs is a master's degree.¹³

Current Distribution

Figure 6: PAs per 100,000 Working-Age Population, by State



Data Source: HRSA analysis of the ACS PUMS, 2008-2010.

*Note: Estimated ratios in states with an RSE > 20% should be used with caution because of large sampling error.

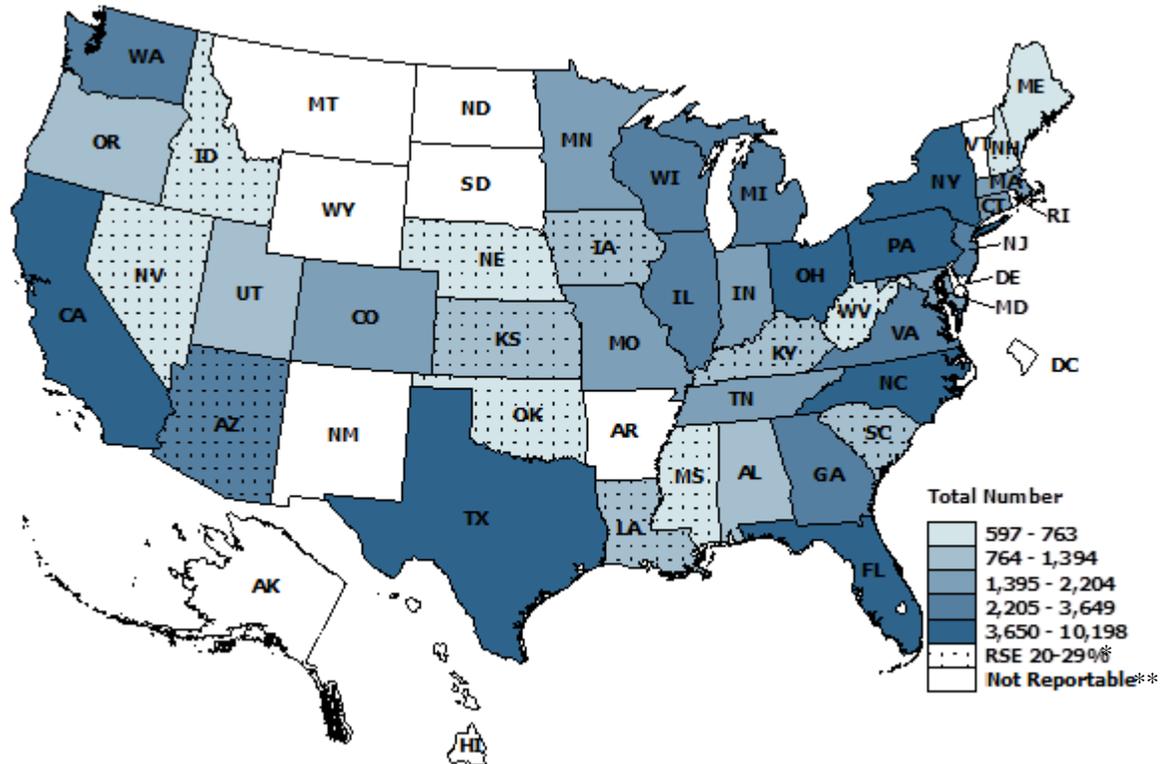
**Data are not reported at the state level, because the RSE ≥ 30%; estimate does not meet standards of reliability.

¹²Total workforce from HRSA analysis of the ACS PUMS, 2008-2010.

Note: According to the American Academy of Physician Assistants (AAPA), there were approximately 83,466 PAs in clinical practice in 2010. Since the ACS relies on self-reported data, the difference in the ACS and AAPA estimates may reflect individual responses on the ACS from persons who may assist physicians, but are not certified physician assistants (PA-Cs).

¹³BLS, *Occupational Outlook Handbook*, 2012-13 Edition.

Figure 7: Number of PAs, by State

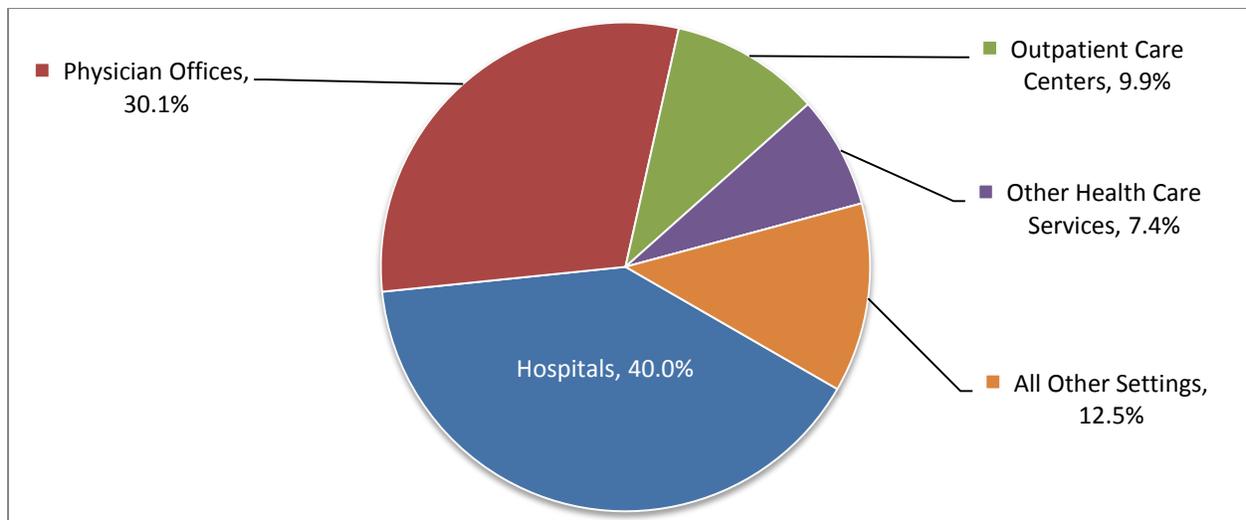


Data Source: HRSA analysis of the ACS PUMS, 2008-2010.

*Note: Estimates in states with an RSE > 20% should be used with caution because of large sampling error.

**Data are not reported at the state level, because the RSE ≥ 30%; estimate does not meet standards of reliability.

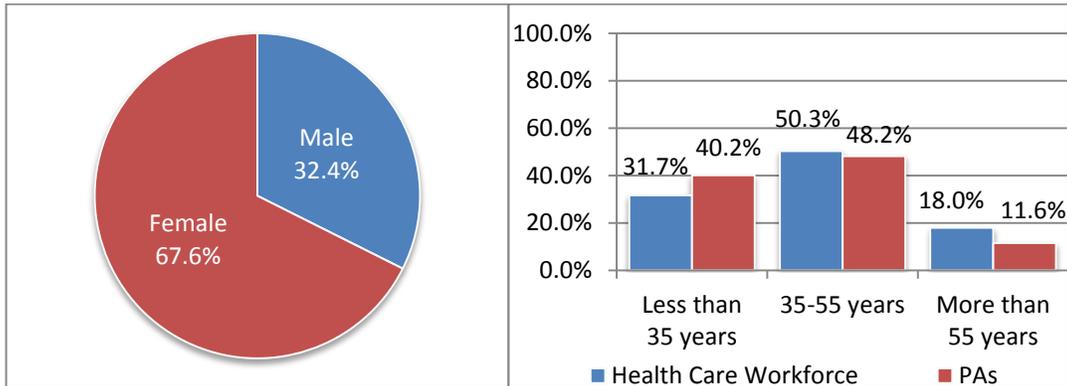
Figure 8: Distribution of PAs, by Work Setting



Data Source: HRSA analysis of the ACS PUMS, 2008-2010.

Note: Percentages may not total 100, because of rounding.

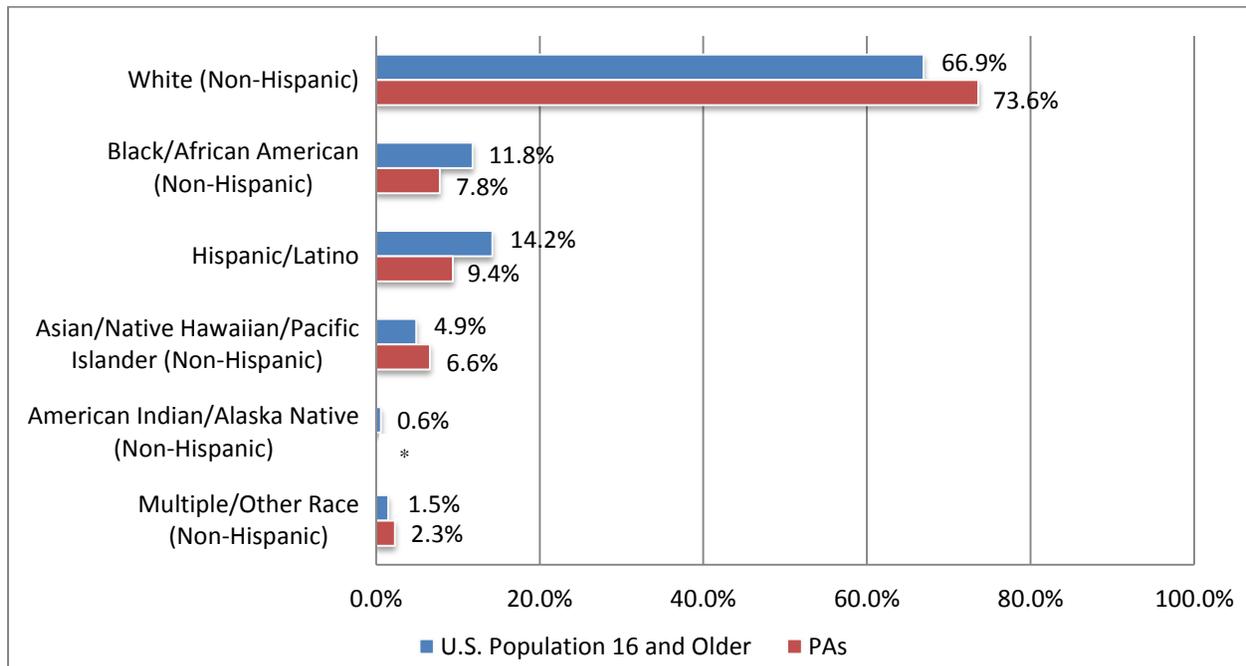
Figure 9: Distribution of PAs, by Sex and Age



Data Source: HRSA analysis of the ACS PUMS, 2008-2010.

Note: The “Health Care Workforce” in this figure refers to the health occupations covered in this report.

Figure 10: Distribution of PAs, by Race/Ethnicity, Relative to the Working-Age Population



Data Source: HRSA analysis of the ACS PUMS, 2008-2010.

Note: Percentages may not total 100, because of rounding.

*Note: RSE ≥ 30%; estimate does not meet standards of reliability.

Graduates

The total number of post-secondary PA graduates in the 2009 to 2010 academic year was 5,338. Of these, 84.4 percent of graduates received a master’s degree; 13.9 percent of graduates received a bachelor’s degree; and 1.7 percent of graduates received an associate’s degree.¹⁴

¹⁴HRSA analysis of the National Center for Education Statistics IPEDS, 2009-2010.

3.0 NURSES

Nursing occupations described in this section include:

3.1 Registered Nurses;

- Advanced Practice Registered Nurses, including:
 - 3.1.1 Certified Registered Nurse Anesthetists
 - 3.1.2 Certified Nurse-Midwives, and
 - 3.1.3 Nurse Practitioners; and

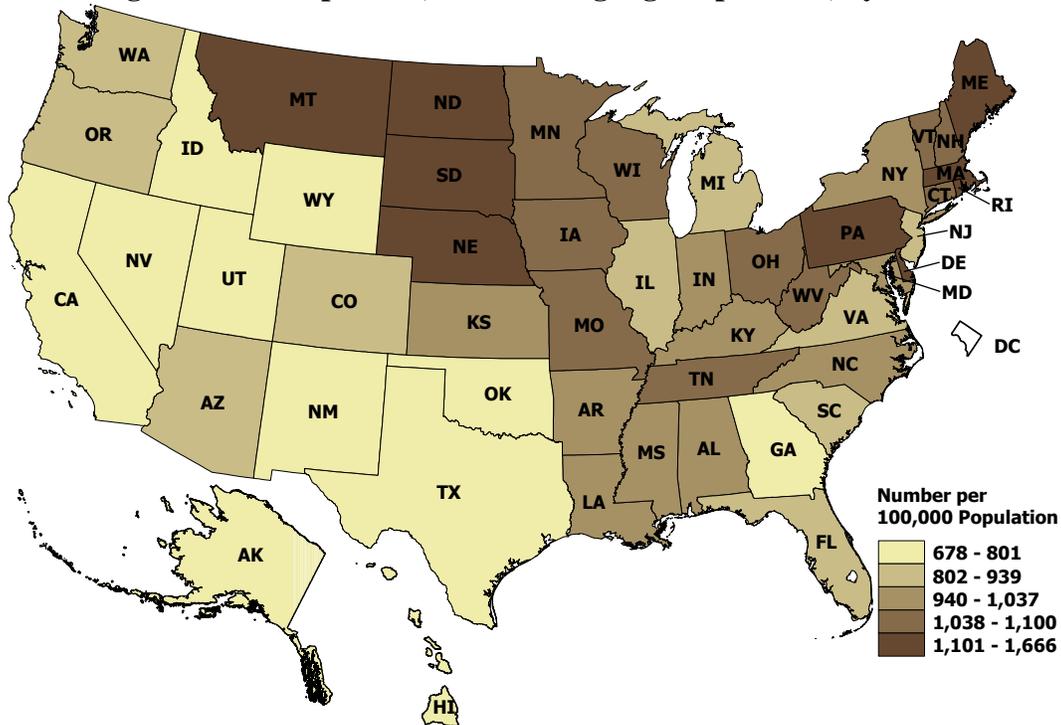
3.2 Licensed Practical and Licensed Vocational Nurses.

3.1 Registered Nurses

- An estimated 2,824,641 individuals in the U.S. workforce reported their occupation as registered nurse (RN).¹⁵
- The typical entry-level education for RNs is an associate's or a bachelor's degree.¹⁶

Current Distribution

Figure 11: RNs per 100,000 Working-Age Population, by State



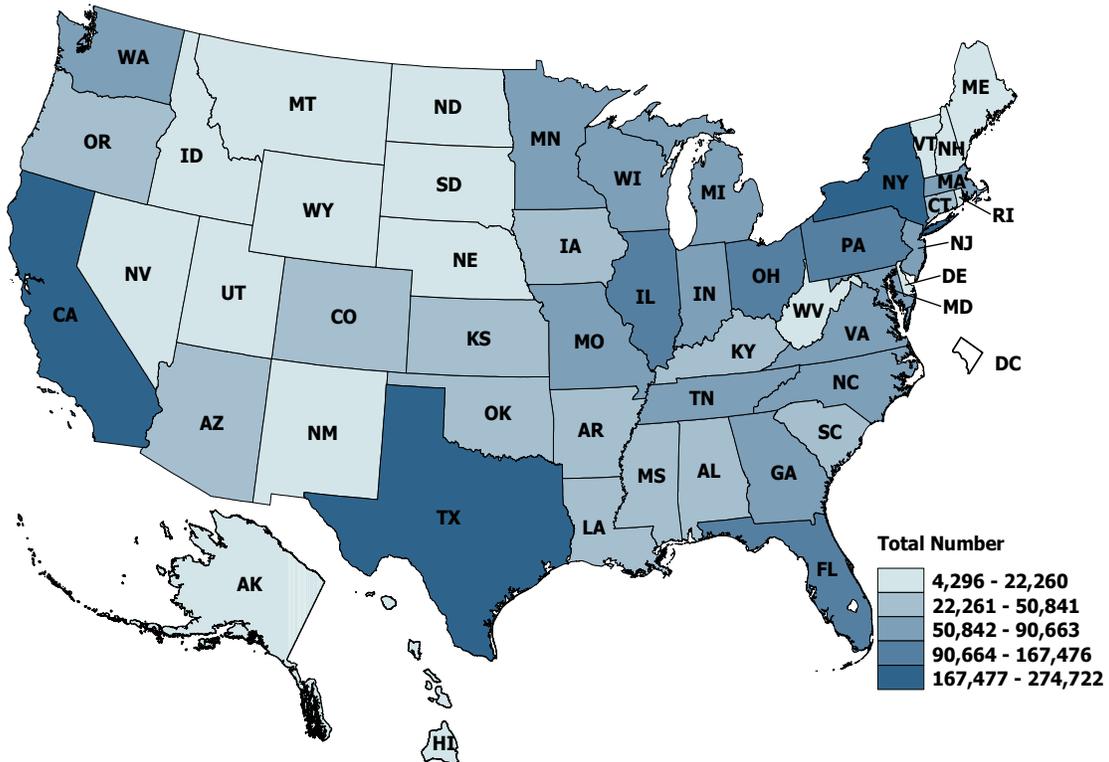
Data Source: HRSA analysis of the ACS PUMS, 2008-2010.

¹⁵Total workforce from HRSA analysis of the ACS PUMS, 2008-2010;

Note: RN data include advanced practice registered nurses (APRNs) such as certified nurse anesthetists, certified nurse-midwives, clinical nurse specialists, and nurse practitioners because the 2008-2010 three-year ACS PUMS file does not report data for APRNs separately.

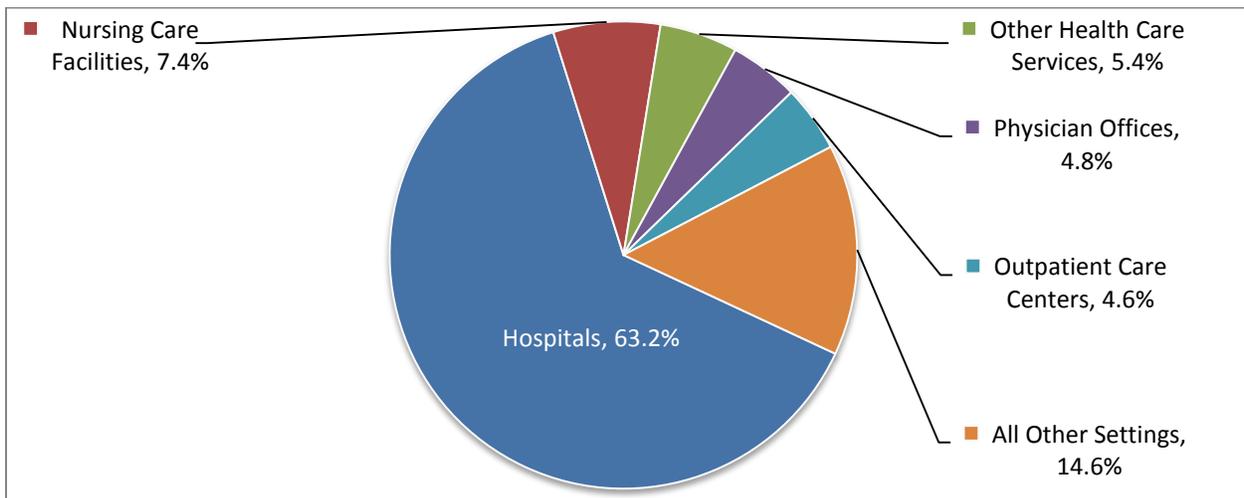
¹⁶BLS, *Occupational Outlook Handbook*, 2012-13 Edition.

Figure 12: Number of RNs, by State



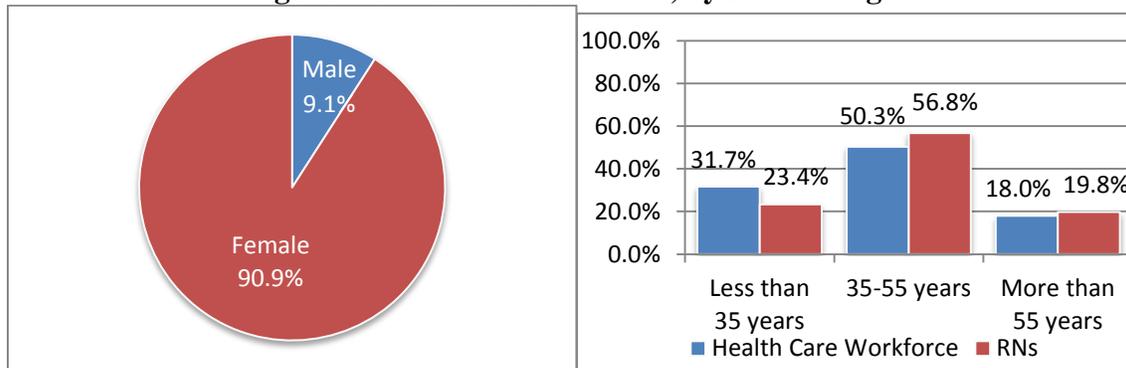
Data Source: HRSA analysis of the ACS PUMS, 2008-2010.

Figure 13: Distribution of RNs, by Work Setting



Data Source: HRSA analysis of the ACS PUMS, 2008-2010.

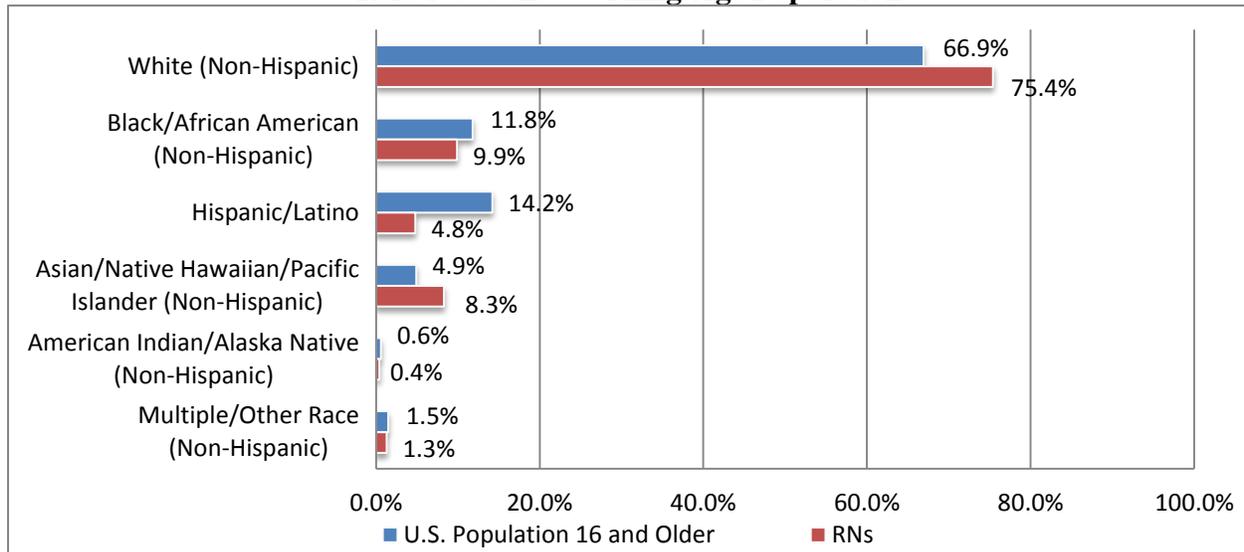
Figure 14: Distribution of RNs, by Sex and Age



Data Source: HRSA analysis of the ACS PUMS, 2008-2010.

Note: The “Health Care Workforce” in this figure refers to the health occupations covered in this report.

Figure 15: Distribution of RNs, by Race/Ethnicity, Relative to the Working-Age Population



Data Source: HRSA analysis of the ACS PUMS, 2008-2010.

Note: Percentages may not total 100, because of rounding.

Graduates

The total number of post-secondary RN graduates at the associate’s and bachelor’s levels in the 2009 to 2010 academic year was 161,705.¹⁷ Of these, 51.6 percent of graduates received an associate’s degree, and 48.4 percent received a bachelor’s degree.¹⁸ Post-licensure Bachelor of Science in Nursing (BSN) graduates, who were previously licensed as RNs with a lower degree, are included in the IPEDS counts of bachelor’s degrees.¹⁹

¹⁷HRSA analysis of the National Center for Education Statistics IPEDS, 2009-2010. Note: Data on RN graduates includes new nurses as well as those who are obtaining a higher level degree. Data from the National Council of State Boards of Nursing show that about 138,000 individuals became newly licensed RNs after passing the National Council Licensure Examination for Registered Nurses (NCLEX-RN®) exam in 2010.

¹⁸HRSA analysis of the National Center for Education Statistics IPEDS, 2009-2010.

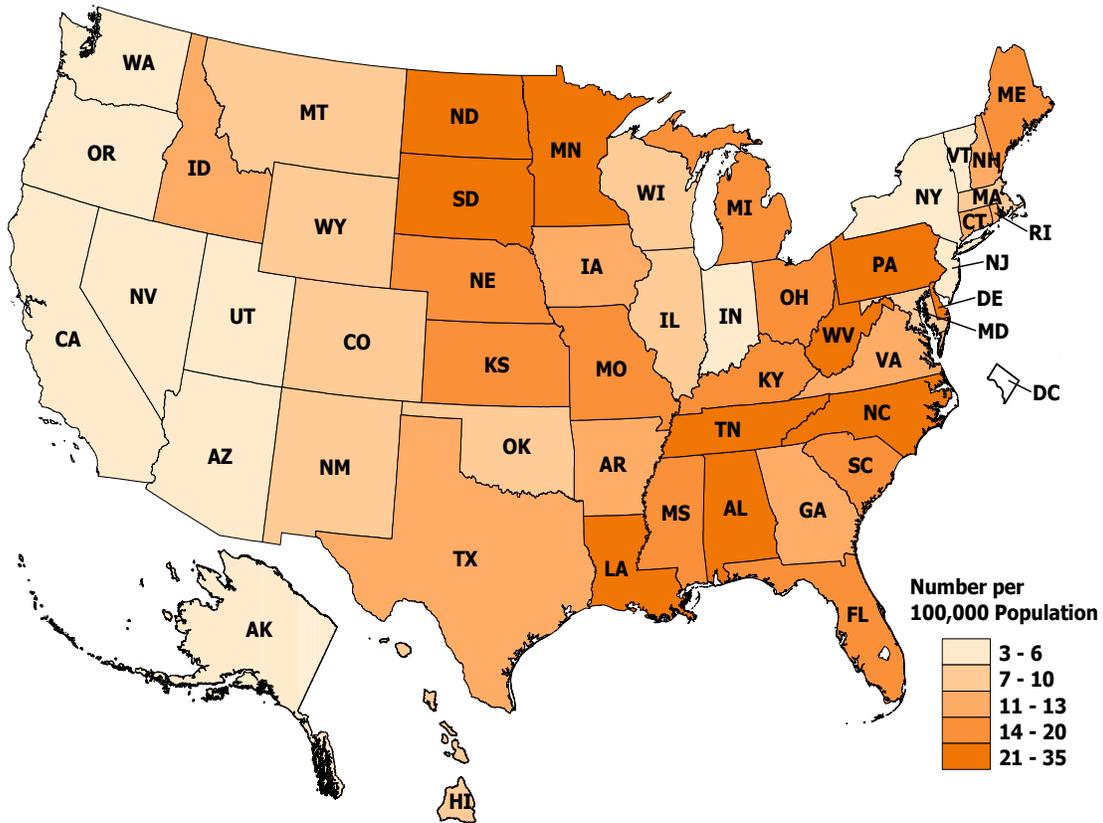
¹⁹Note: The American Association of Colleges of Nursing reported more than 22,000 graduates of post-licensure baccalaureate programs.

3.1.1 Nurse Anesthetists

- An estimated 35,570 individuals in the U.S. workforce reported their occupation as certified registered nurse anesthetist.²⁰
- The required education for certified registered nurse anesthetists is at least a master's degree.²¹

Current Distribution

Figure 16: Nurse Anesthetists per 100,000 Working-Age Population, by State



Data Source: 2011-12 ARF: 2010 CMS National Provider Identification (NPI) File information.

²⁰2011-12 ARF: 2010 Centers for Medicare & Medicaid Services (CMS) NPI File information. Total number includes nurse anesthetists with an NPI number.

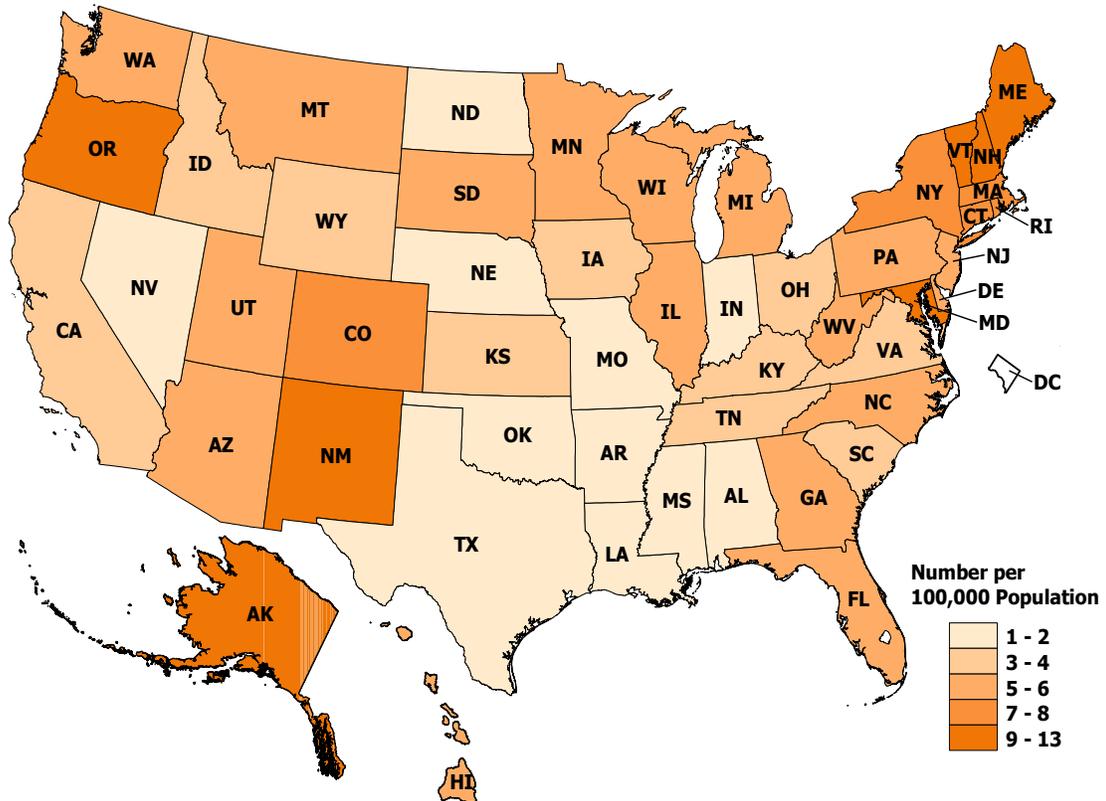
²¹BLS, *Occupational Outlook Handbook*, 2012-13 Edition.

3.1.2 Nurse-Midwives

- An estimated 12,383 individuals in the U.S. workforce reported their occupation as certified nurse-midwife.²²
- The required education for certified nurse-midwives is at least a master's degree.²³

Current Distribution

Figure 18: Nurse-Midwives per 100,000 Working-Age Population, by State

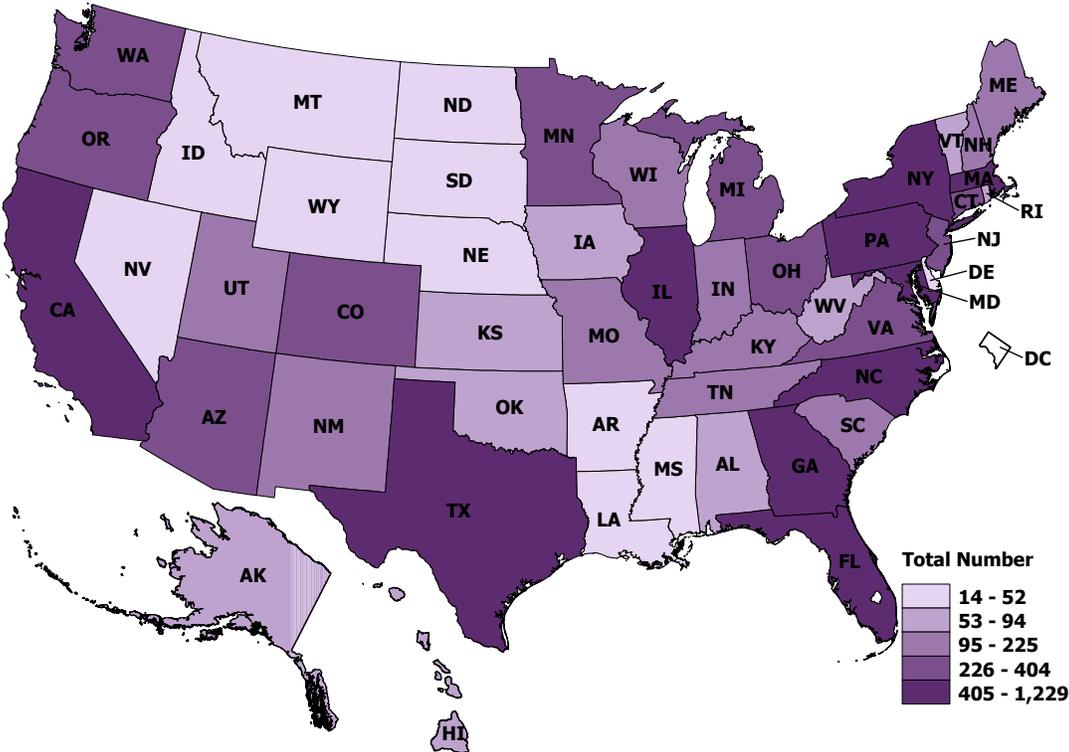


Data Source: 2011-12 ARF; 2011 ACNM data.

²²2011-12 ARF; 2011 ACNM data.

²³BLS, *Occupational Outlook Handbook*, 2012-13 Edition.

Figure 19: Number of Nurse-Midwives, by State



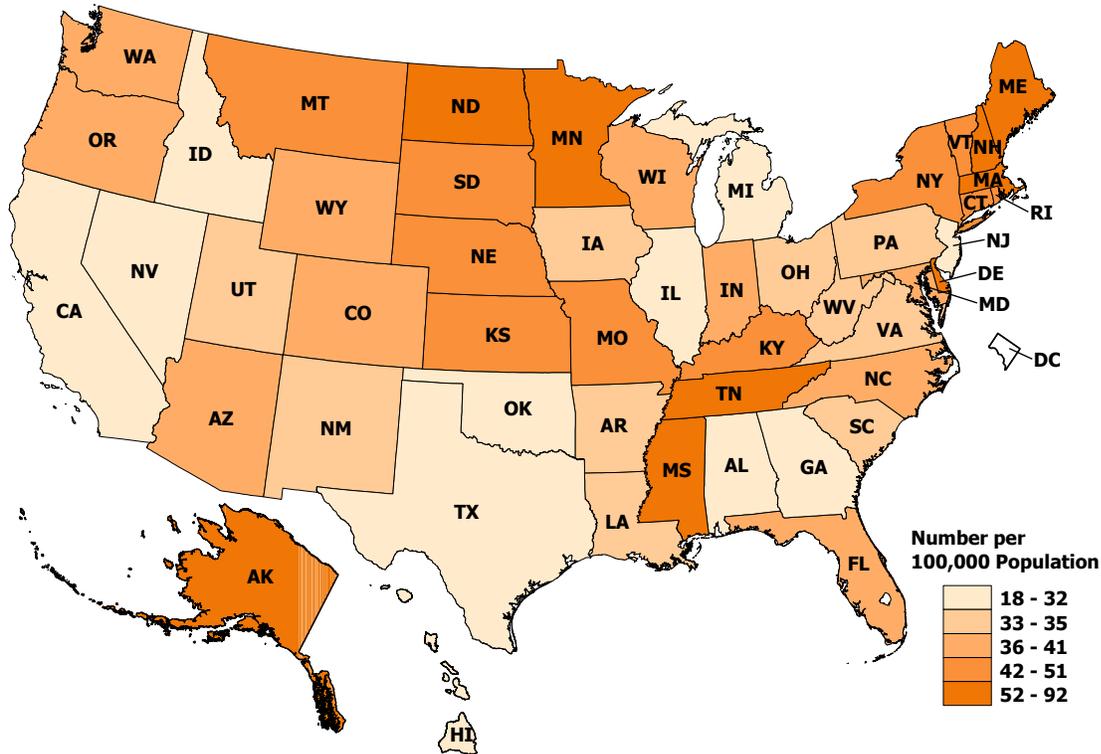
Data Source: 2011-12 ARF; 2011 ACNM data.

3.1.3 Nurse Practitioners

- An estimated 110,042 individuals in the U.S. workforce reported their occupation as nurse practitioner (NP).²⁴
- The required education for NPs is at least a master's degree.²⁵

Current Distribution

Figure 20: NPs per 100,000 Working-Age Population, by State

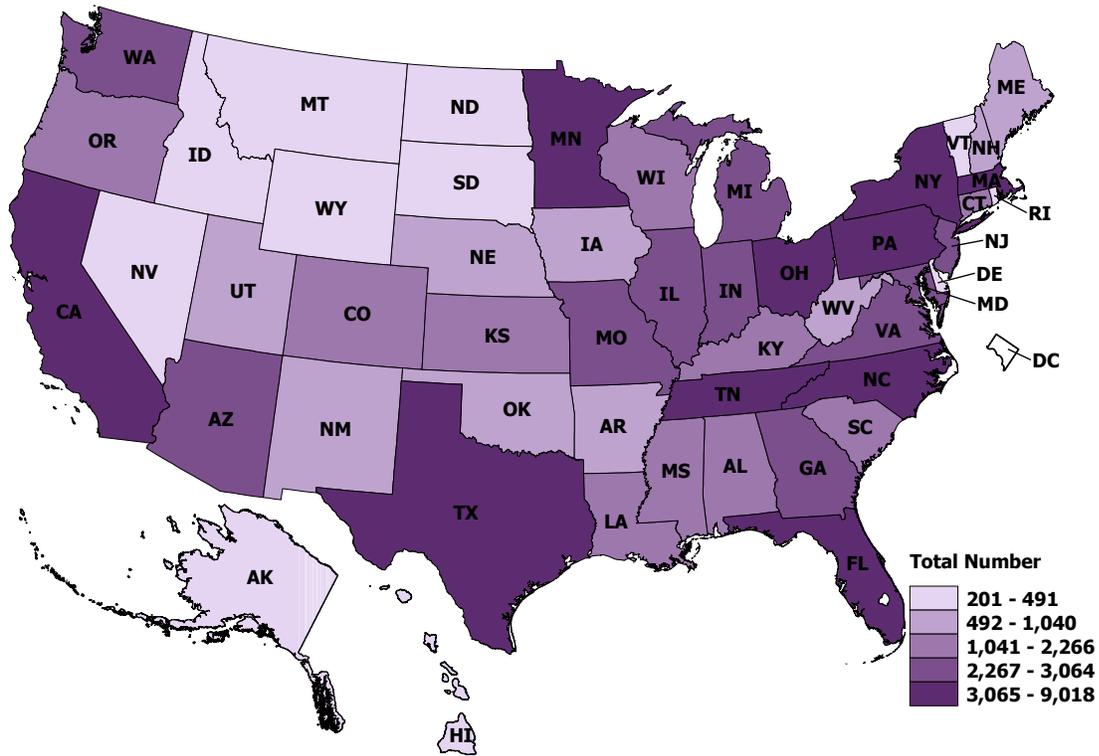


Data Source: 2011-12 ARF; 2010 CMS NPI File information.

²⁴2011-12 ARF; 2010 CMS NPI File information. Total number includes NPs with an NPI number.

²⁵BLS, *Occupational Outlook Handbook*, 2012-13 Edition.

Figure 21: Number of NPs, by State



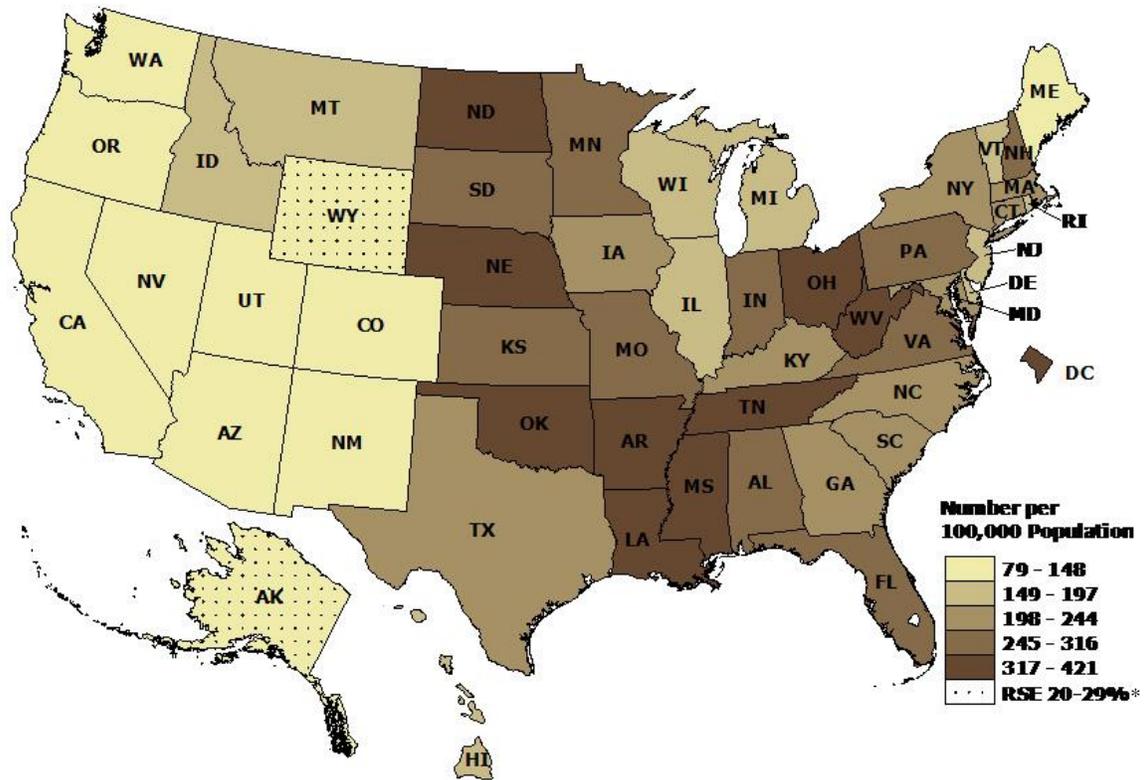
Data Source: 2011-12 ARF: 2010 CMS NPI File information.

3.2 Licensed Practical and Licensed Vocational Nurses

- An estimated 690,038 individuals in the U.S. workforce reported their occupation as licensed practical and licensed vocational nurse (LPN).²⁶
- The required education for LPNs is a post-secondary non-degree award.²⁷

Current Distribution

Figure 22: LPNs per 100,000 Working-Age Population, by State



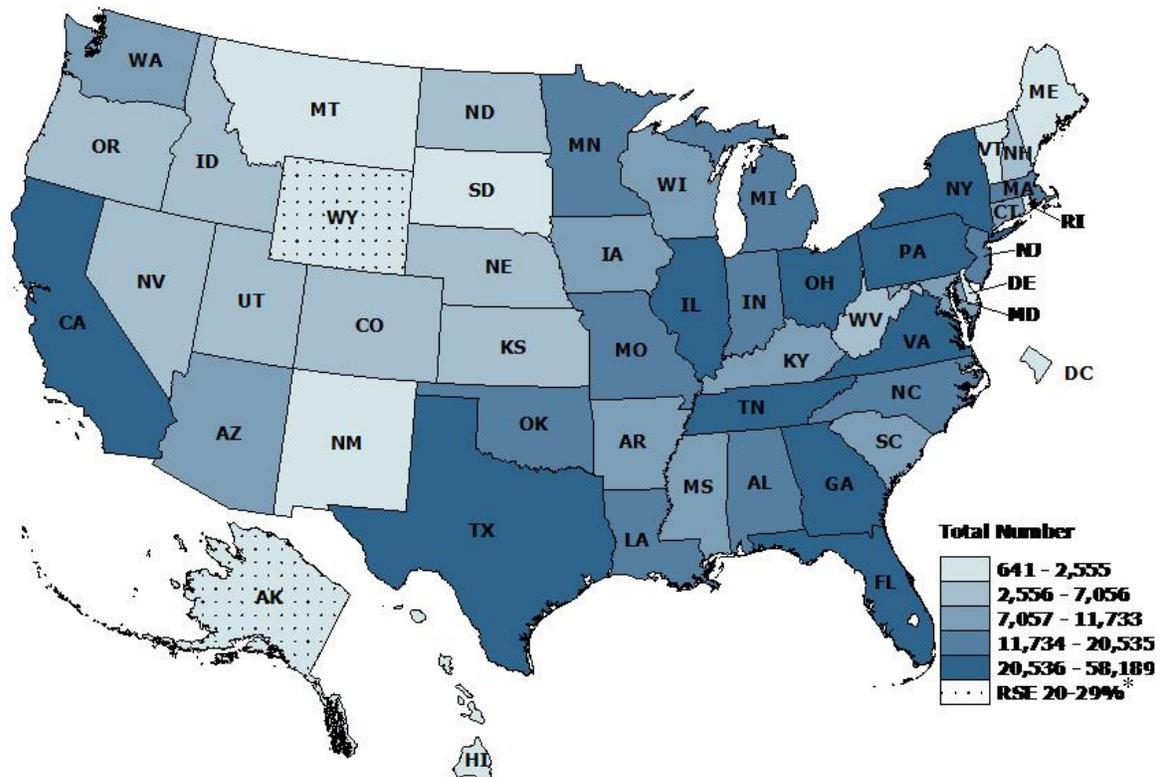
Data Source: HRSA analysis of the ACS PUMS, 2008-2010.

*Note: Estimated ratios in states with an RSE > 20% should be used with caution because of large sampling error.

²⁶Total workforce from HRSA analysis of the ACS PUMS, 2008-2010.

²⁷BLS, *Occupational Outlook Handbook*, 2012-13 Edition.

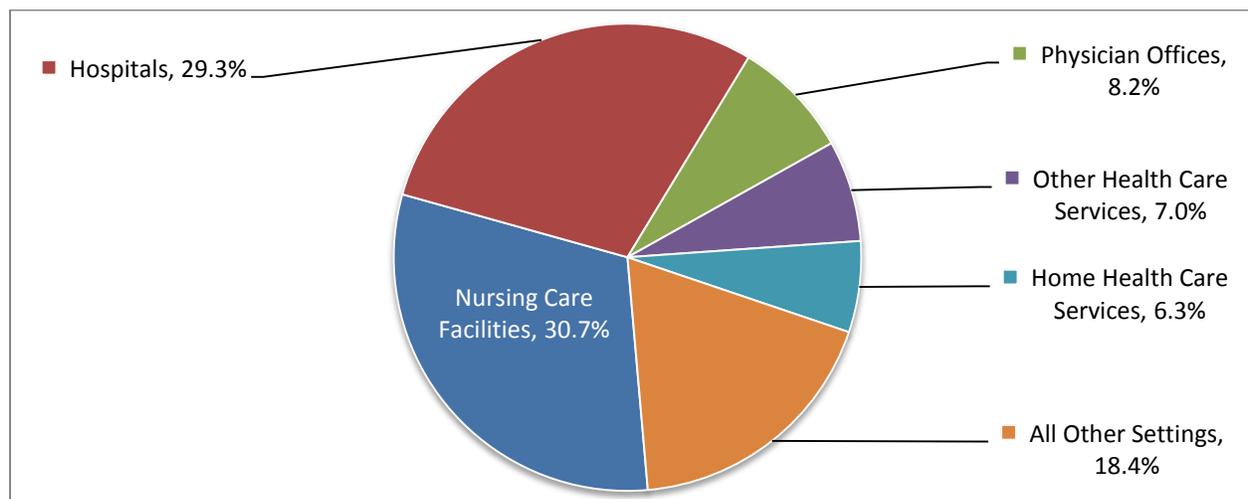
Figure 23: Number of LPNs, by State



Data Source: HRSA analysis of the ACS PUMS, 2008-2010.

*Note: Estimates in states with an RSE > 20% should be used with caution because of large sampling error.

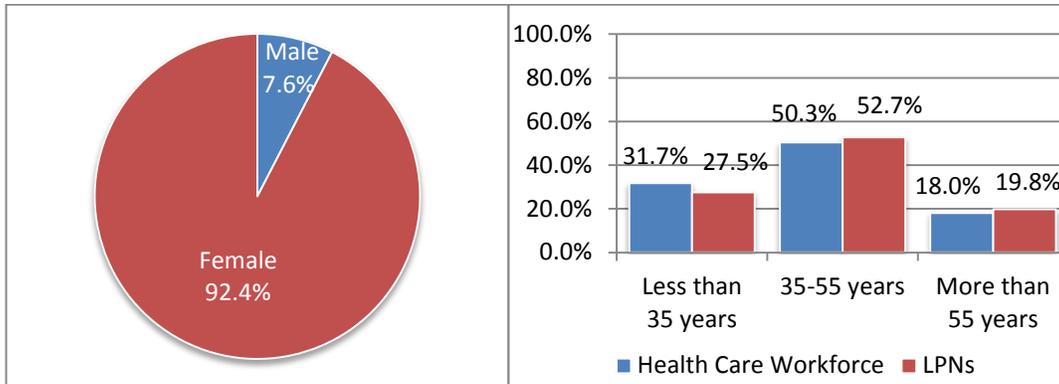
Figure 24: Distribution of LPNs, by Work Setting



Data Source: HRSA analysis of the ACS PUMS, 2008-2010.

Note: Percentages may not total 100, because of rounding.

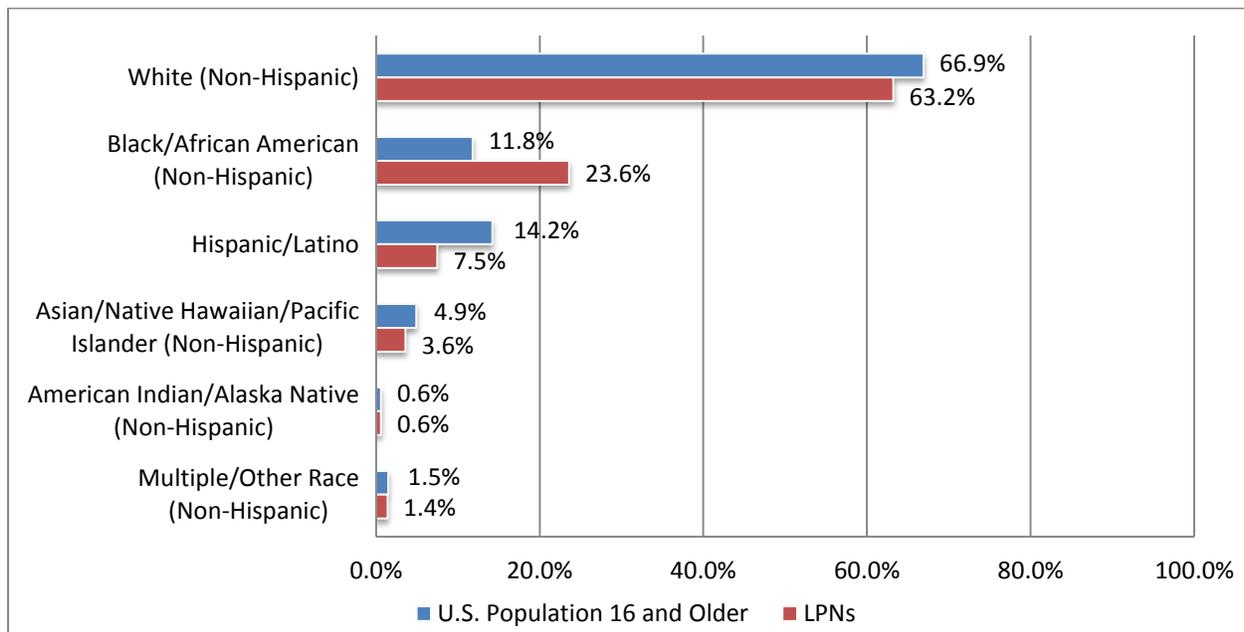
Figure 25: Distribution of LPNs, by Sex and Age



Data Source: HRSA analysis of the ACS PUMS, 2008-2010.

Note: The "Health Care Workforce" in this figure refers to the health occupations covered in this report.

Figure 26: Distribution of LPNs, by Race/Ethnicity, Relative to the Working-Age Population



Data Source: HRSA analysis of the ACS PUMS, 2008-2010.

Note: Percentages may not total 100, because of rounding.

Graduates

The total number of post-secondary LPN graduates at the respective levels in the 2009 to 2010 academic year was 52,211. Of these, 96.1 percent of graduates received at least one but less than two years of post-secondary education, and 3.9 percent of graduates received an associate's

degree.²⁸ It is important to note that LPNs may also be educated outside of post-secondary institutions included in IPEDS; as a result, the IPEDS estimates for LPN graduates may undercount new LPNs for a given year. Data from the National Council of State Boards of Nursing show that almost 64,000 individuals became newly licensed LPNs after passing the National Council Licensure Examination for Practical Nurses (NCLEX-PN[®]) in 2010.²⁹ The difference from IPEDS estimates may be a result of the large number of small, private institutions offering LPN education that would not be required to report to IPEDS.

²⁸HRSA analysis of the National Center for Education Statistics IPEDS, 2009-2010.

²⁹The National Council of State Boards of Nursing, Nurse Licensure and NCLEX Examination Statistics Publications, 2002-2012.

4.0 ORAL HEALTH

Dentistry occupations described in this section include:

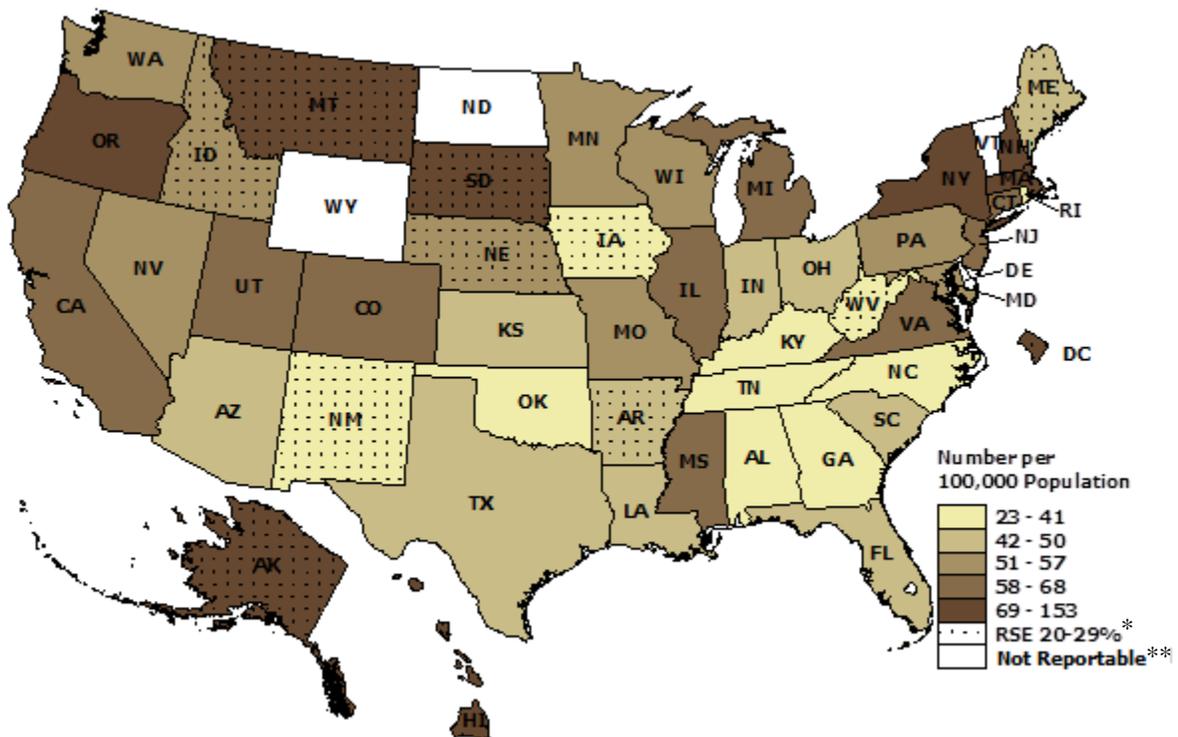
- 4.1 Dentists;
- 4.2 Dental Hygienists; and
- 4.3 Dental Assistants.

4.1 Dentists

- An estimated 168,299 individuals in the U.S. workforce reported their occupation as dentist.³⁰
- The required education for dentists is a doctoral degree.³¹

Current Distribution

Figure 27: Dentists per 100,000 Working-Age Population, by State



Data Source: HRSA analysis of the ACS PUMS, 2008-2010.

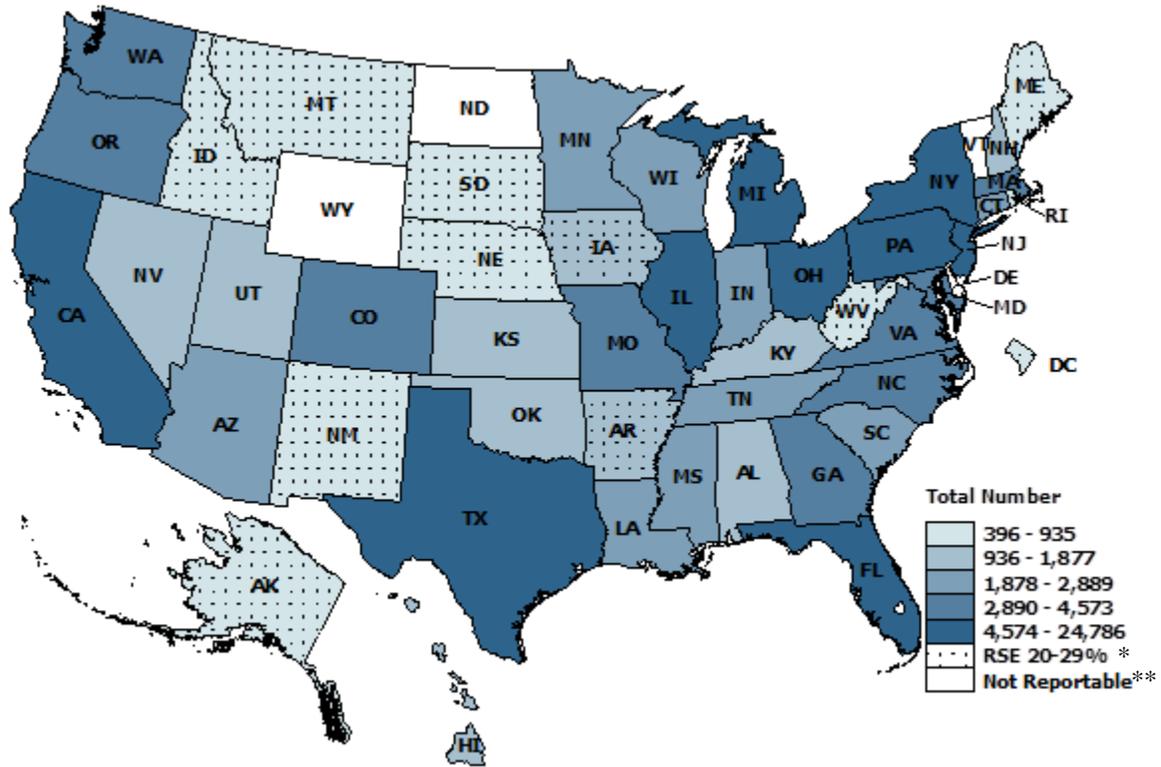
*Note: Estimated ratios in states with an RSE > 20% should be used with caution because of large sampling error.

**Data are not reported at the state-level, because the RSE \geq 30%; estimate does not meet standards of reliability.

³⁰Total workforce from HRSA analysis of the ACS PUMS, 2008-2010.

³¹BLS, *Occupational Outlook Handbook*, 2012-13 Edition.

Figure 28: Number of Dentists, by State

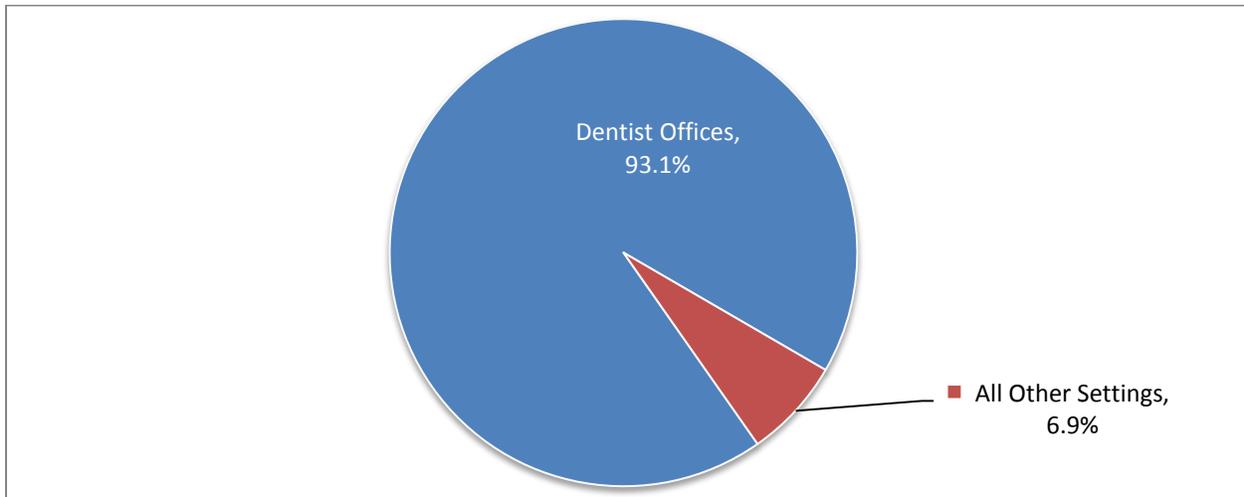


Data Source: HRSA analysis of the ACS PUMS, 2008-2010.

*Note: Estimates in states with an RSE > 20% should be used with caution because of large sampling error.

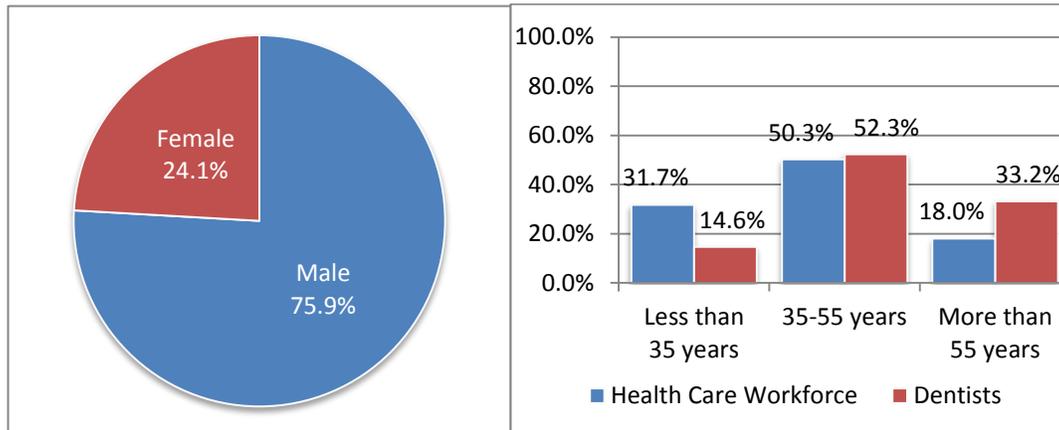
**Data are not reported at the state level, because the RSE ≥ 30%; estimate does not meet standards of reliability.

Figure 29: Distribution of Dentists, by Work Setting



Data Source: HRSA analysis of the ACS PUMS, 2008-2010.

Figure 30: Distribution of Dentists, by Sex and Age

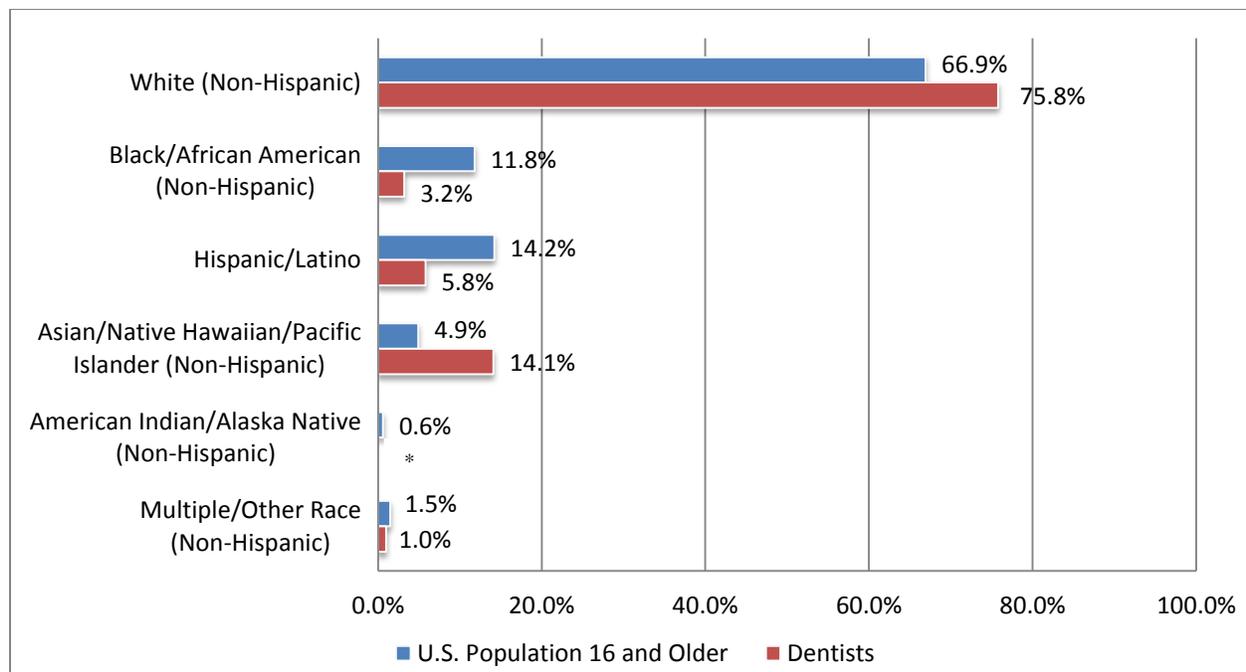


Data Source: HRSA analysis of the ACS PUMS, 2008-2010.

Note: The “Health Care Workforce” in this figure refers to the health occupations covered in this report.

Note: Percentages may not total 100, because of rounding.

Figure 31: Distribution of Dentists, by Race/Ethnicity, Relative to the Working-Age Population



Data Source: HRSA analysis of the ACS PUMS, 2008-2010.

Note: Percentages may not total 100, because of rounding.

*Note: RSE \geq 30%; estimate does not meet standards of reliability.

Graduates

The total number of dental graduates at the doctoral level in the 2009 to 2010 academic year was 5,087.³²

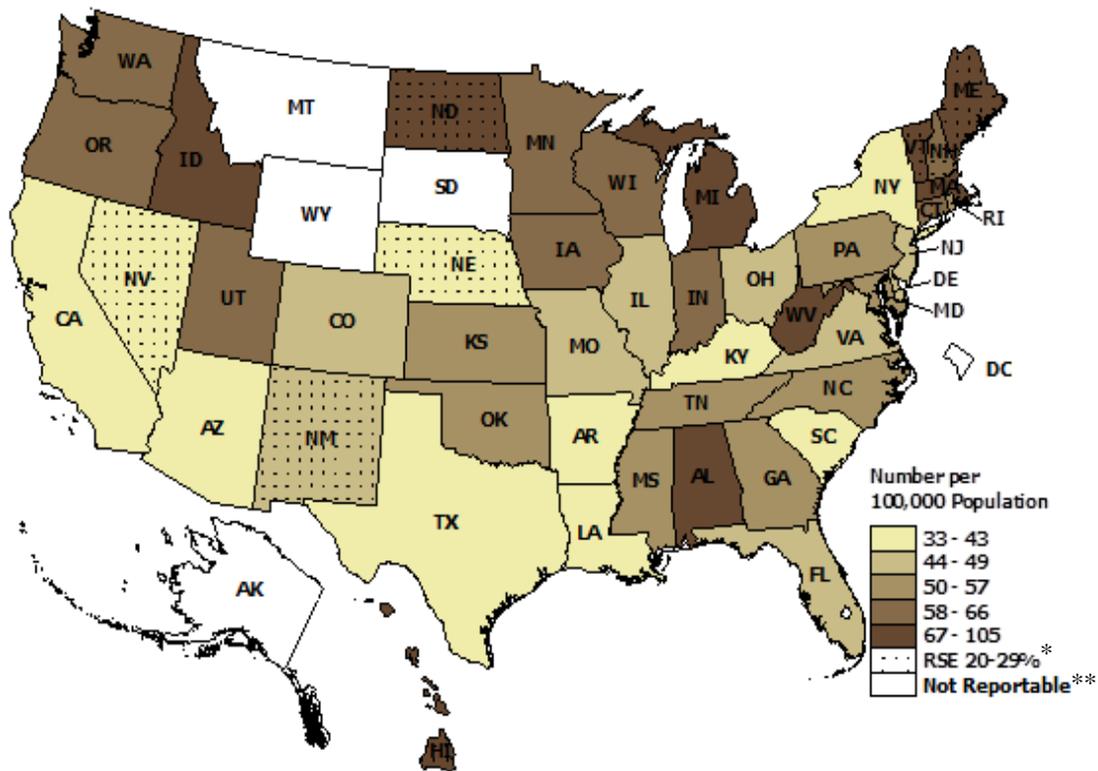
³²HRSA analysis of the National Center for Education Statistics IPEDS, 2009-2010.

4.2 Dental Hygienists

- An estimated 151,933 individuals in the U.S. workforce reported their occupation as dental hygienist.³³
- The required education for dental hygienists is an associate's degree.³⁴

Current Distribution

Figure 32: Dental Hygienists per 100,000 Working-Age Population, by State



Data Source: HRSA analysis of the ACS PUMS, 2008-2010.

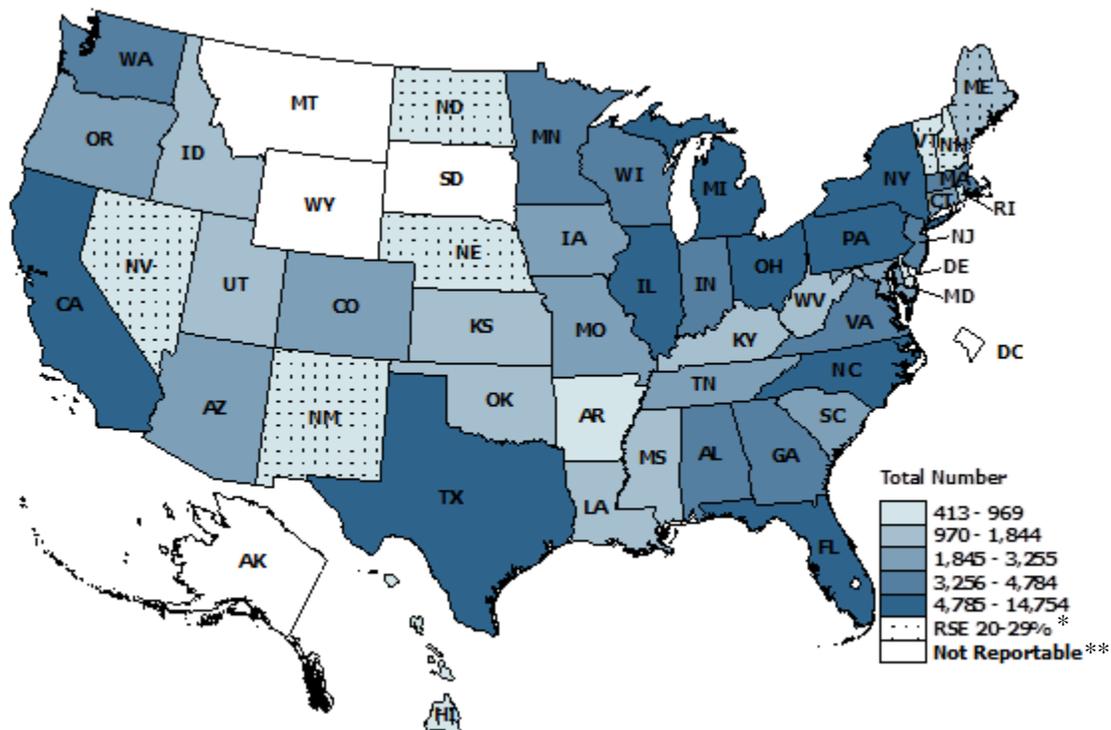
*Note: Estimated ratios in states with an RSE > 20% should be used with caution because of large sampling error.

**Data are not reported at the state level, because the RSE \geq 30%; estimate does not meet standards of reliability.

³³Total workforce from HRSA analysis of the ACS PUMS, 2008-2010.

³⁴BLS, *Occupational Outlook Handbook*, 2012-13 Edition.

Figure 33: Number of Dental Hygienists, by State

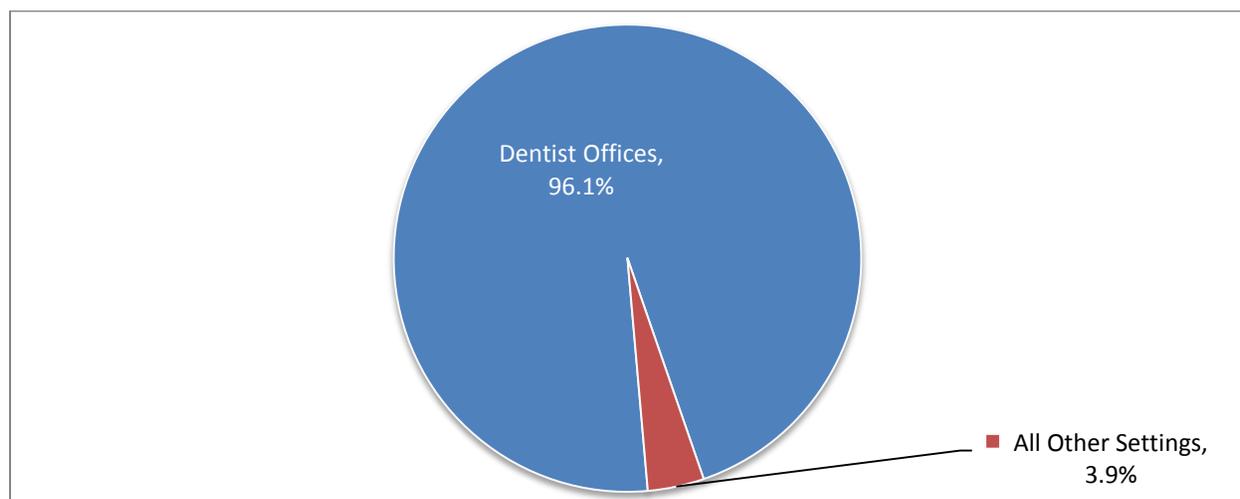


Data Source: HRSA analysis of the ACS PUMS, 2008-2010.

*Note: Estimates in states with an RSE > 20% should be used with caution because of large sampling error.

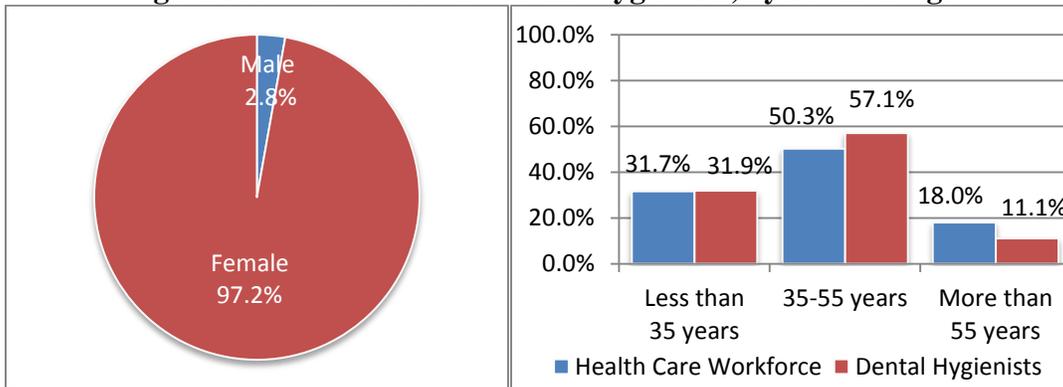
**Data are not reported at the state level, because the RSE ≥ 30%; estimate does not meet standards of reliability.

Figure 34: Distribution of Dental Hygienists, by Work Setting



Data Source: HRSA analysis of the ACS PUMS, 2008-2010.

Figure 35: Distribution of Dental Hygienists, by Sex and Age

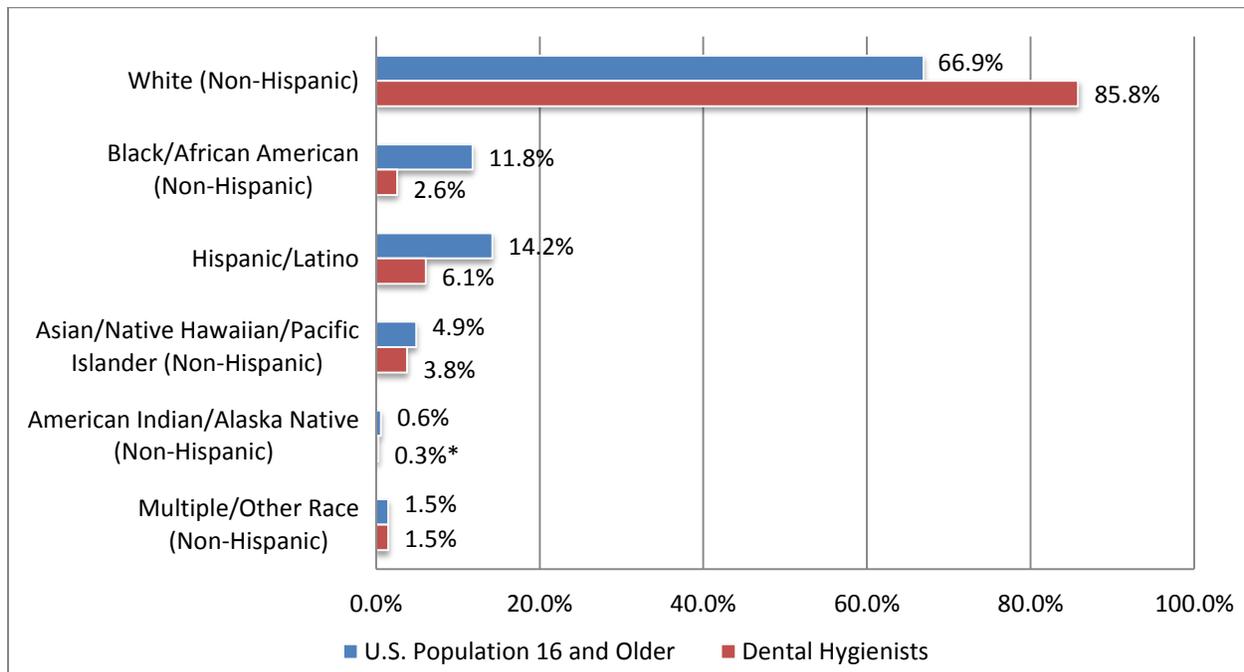


Data Source: HRSA analysis of the ACS PUMS, 2008-2010.

Note: The “Health Care Workforce” in this figure refers to the health occupations covered in this report.

Note: Percentages may not total 100, because of rounding.

Figure 36: Distribution of Dental Hygienists, by Race/Ethnicity, Relative to the Working-Age Population



Data Source: HRSA analysis of the ACS PUMS, 2008-2010.

Note: Percentages may not total 100, because of rounding.

*Note: 20% ≤ RSE < 30%; estimate should be used with caution because of large sampling error.

Graduates

The total number of post-secondary dental hygiene graduates at the associate’s and bachelor’s levels in the 2009 to 2010 academic year was 7,278.³⁵ Of these, 75.2 percent of graduates received an associate’s degree, and 24.8 percent of graduates received a bachelor’s degree.³⁶

³⁵HRSA analysis of the National Center for Education Statistics IPEDS, 2009-2010.

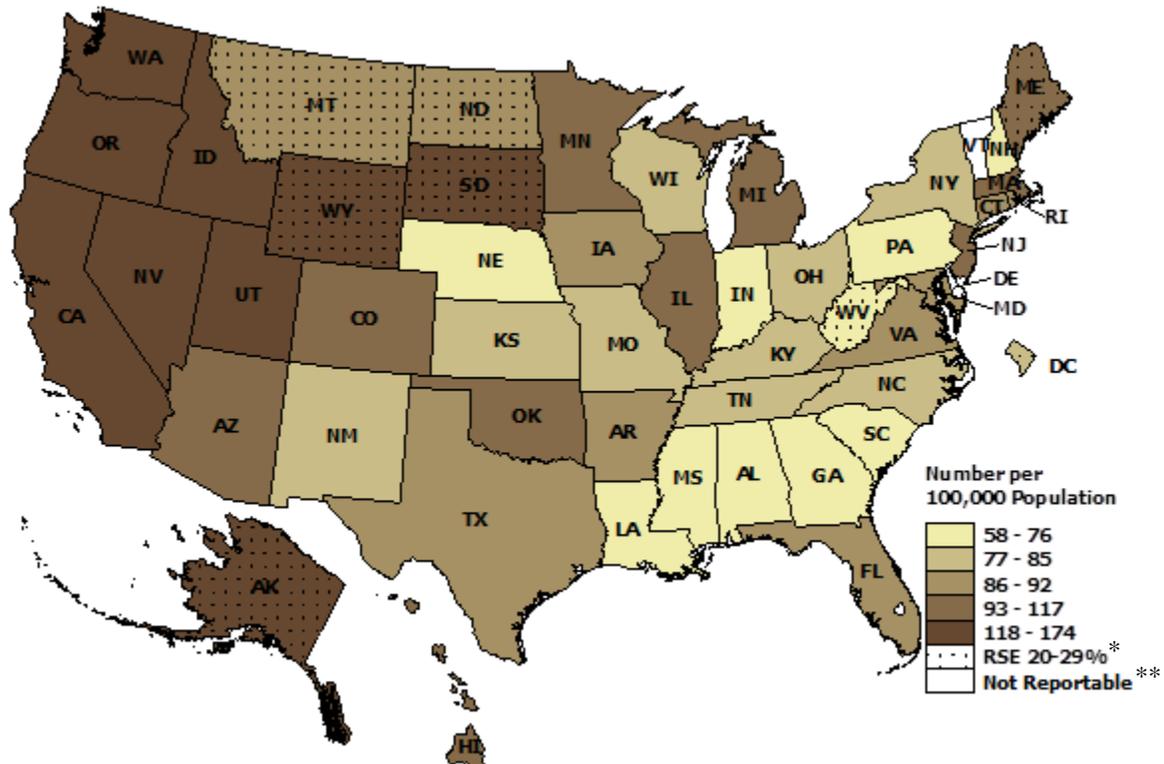
³⁶HRSA analysis of the National Center for Education Statistics IPEDS, 2009-2010.

4.3 Dental Assistants

- An estimated 283,593 individuals in the U.S. workforce reported their occupation as dental assistant.³⁷
- The required education for dental assistants is a post-secondary non-degree award.³⁸

Current Distribution

Figure 37: Dental Assistants per 100,000 Working-Age Population, by State



Data Source: HRSA analysis of the ACS PUMS, 2008-2010.

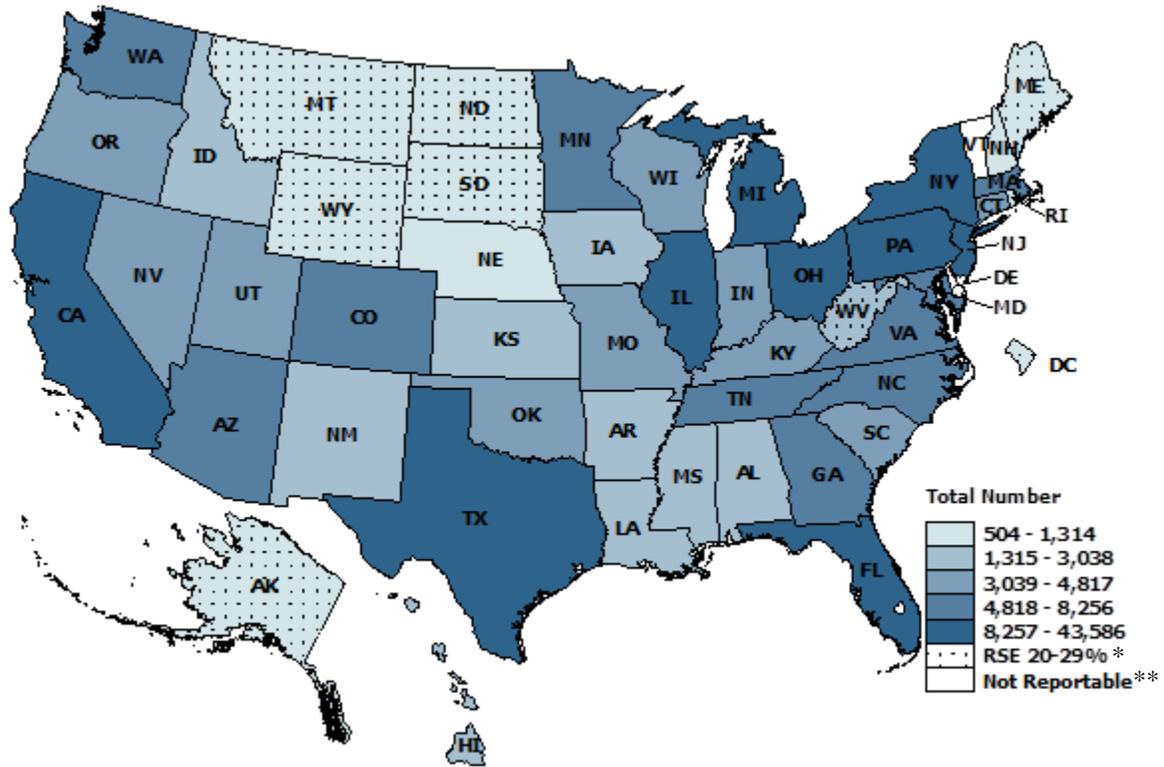
*Note: Estimated ratios in states with an RSE > 20% should be used with caution because of large sampling error.

**Data are not reported at the state level, because the RSE ≥ 30%; estimate does not meet standards of reliability.

³⁷Total workforce from HRSA analysis of the ACS PUMS, 2008-2010.

³⁸BLS, *Occupational Outlook Handbook*, 2012-13 Edition.

Figure 38: Number of Dental Assistants, by State

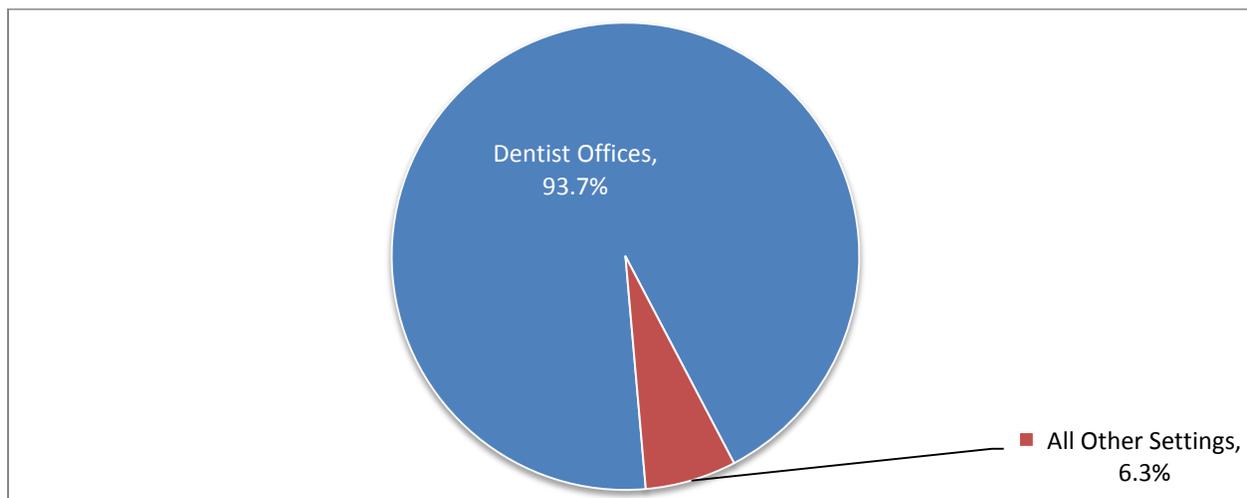


Data Source: HRSA analysis of the ACS PUMS, 2008-2010.

*Note: Estimates in states with an RSE > 20% should be used with caution because of large sampling error.

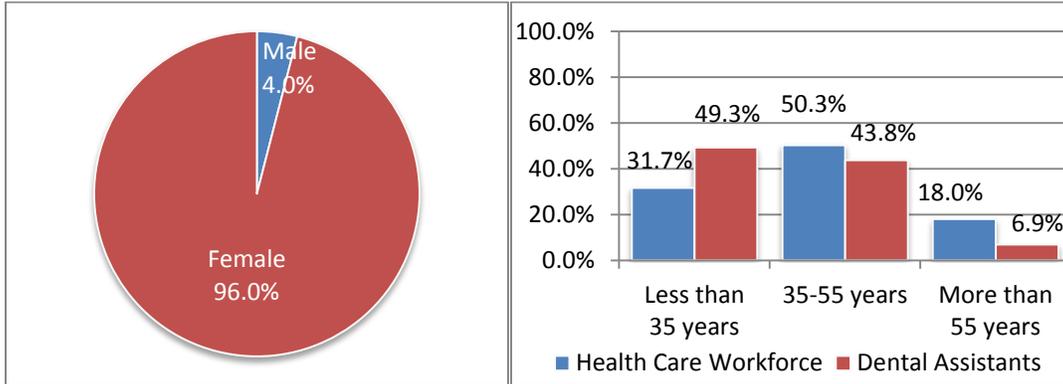
**Data are not reported at the state level because the RSE ≥ 30%; estimate does not meet standards of reliability.

Figure 39: Distribution of Dental Assistants, by Work Setting



Data Source: HRSA analysis of the ACS PUMS, 2008-2010.

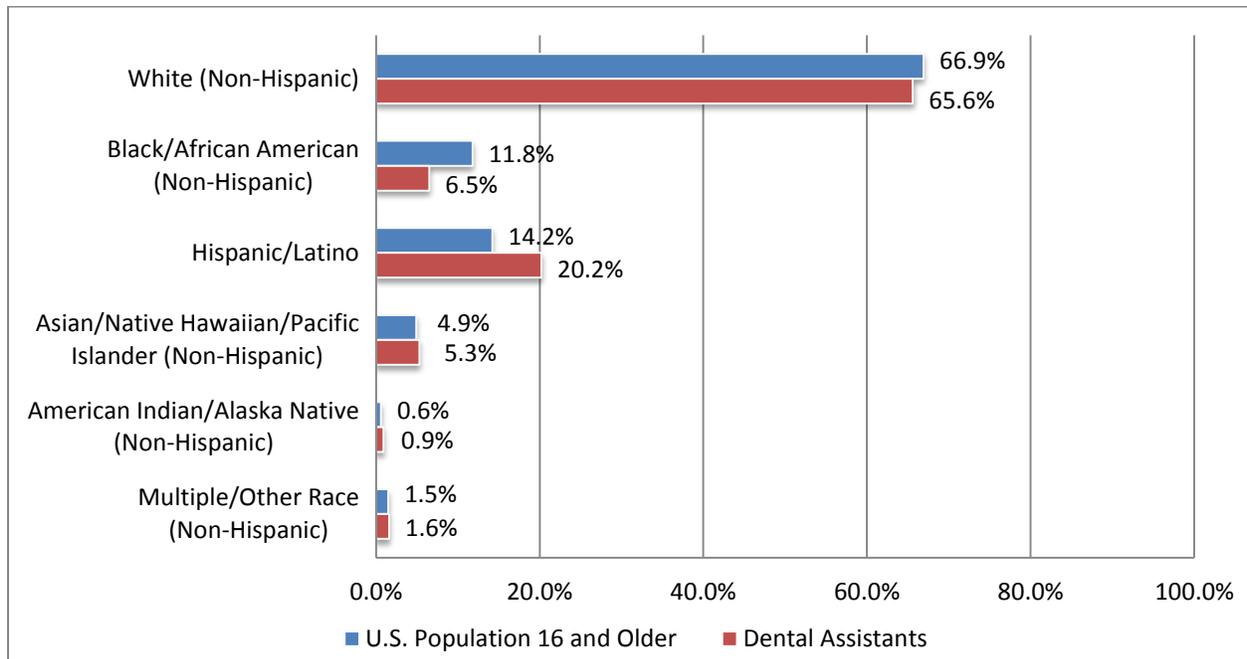
Figure 40: Distribution of Dental Assistants, by Sex and Age



Data Source: HRSA analysis of the ACS PUMS, 2008-2010.

Note: The "Health Care Workforce" in this figure refers to the health occupations covered in this report.

Figure 41: Distribution of Dental Assistants, by Race/Ethnicity, Relative to the Working-Age Population



Data Source: HRSA analysis of the ACS PUMS, 2008-2010.

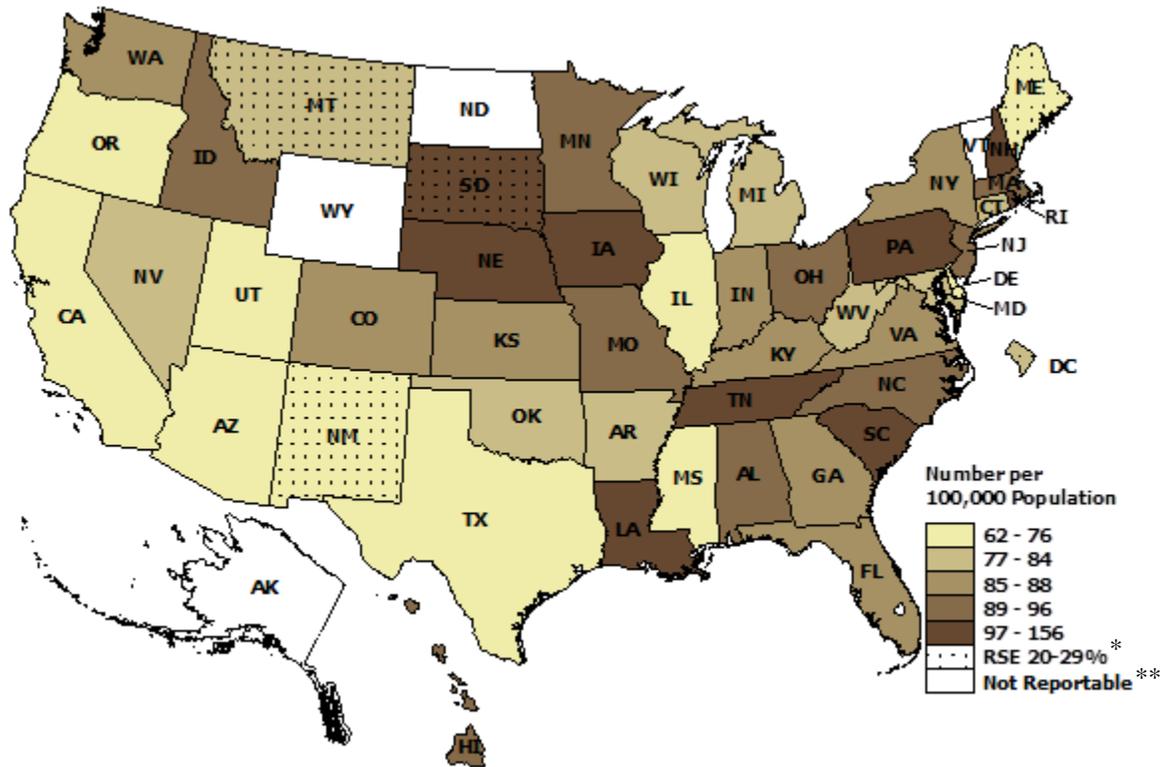
Note: Percentages may not total 100, because of rounding.

5.0 PHARMACISTS

- An estimated 256,918 individuals in the U.S. workforce reported their occupation as pharmacist.³⁹
- The required education for pharmacists is a doctoral degree.⁴⁰

Current Distribution

Figure 42: Pharmacists per 100,000 Working-Age Population, by State



Data Source: HRSA analysis of the ACS PUMS, 2008-2010.

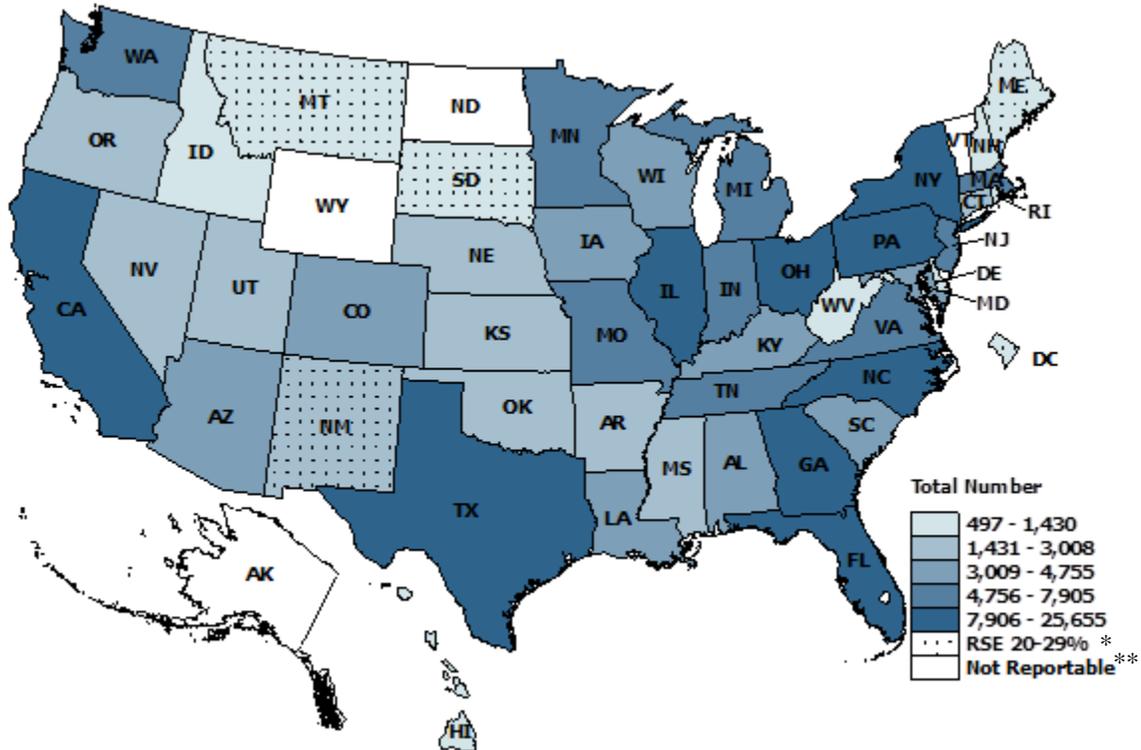
*Note: Estimated ratios in states with an RSE > 20% should be used with caution because of large sampling error.

**Data are not reported at the state level, because the RSE ≥ 30%; estimate does not meet standards of reliability.

³⁹Total workforce from HRSA analysis of the ACS PUMS, 2008-2010.

⁴⁰BLS, *Occupational Outlook Handbook*, 2012-13 Edition.

Figure 43: Number of Pharmacists, by State

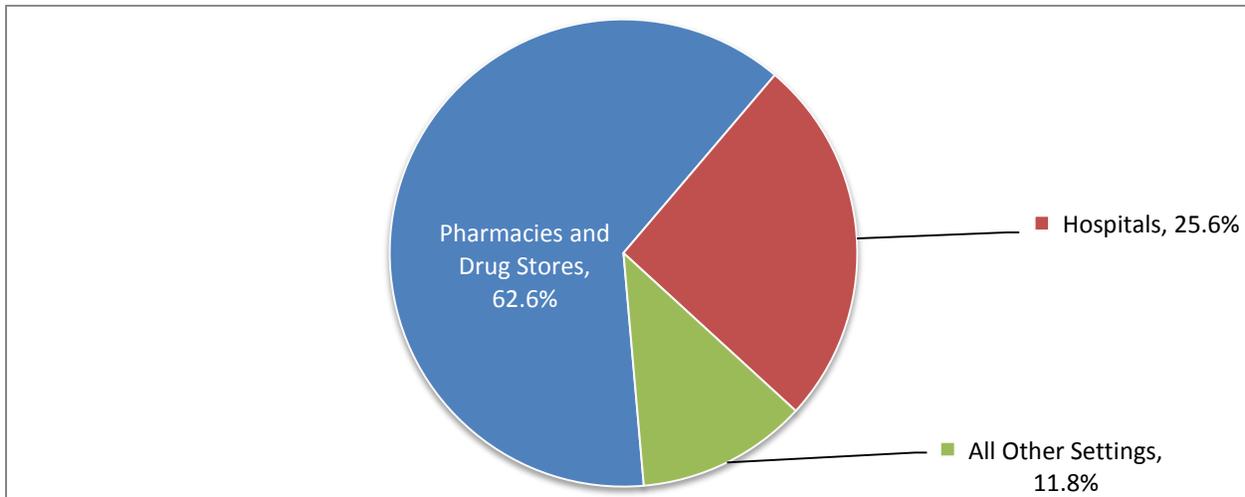


Data Source: HRSA analysis of the ACS PUMS, 2008-2010.

*Note: Estimates in states with an RSE > 20% should be used with caution because of large sampling error.

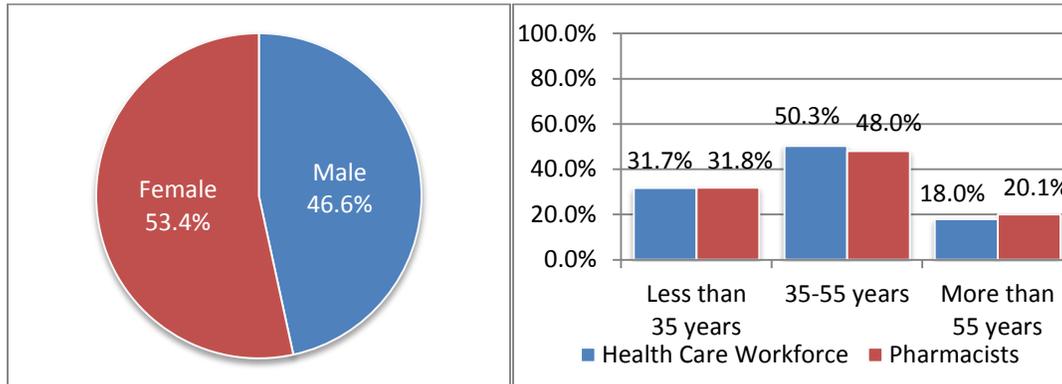
**Data are not reported at the state level, because the RSE ≥ 30%; estimate does not meet standards of reliability.

Figure 44: Distribution of Pharmacists, by Work Setting



Data Source: HRSA analysis of the ACS PUMS, 2008-2010.

Figure 45: Distribution of Pharmacists, by Sex and Age

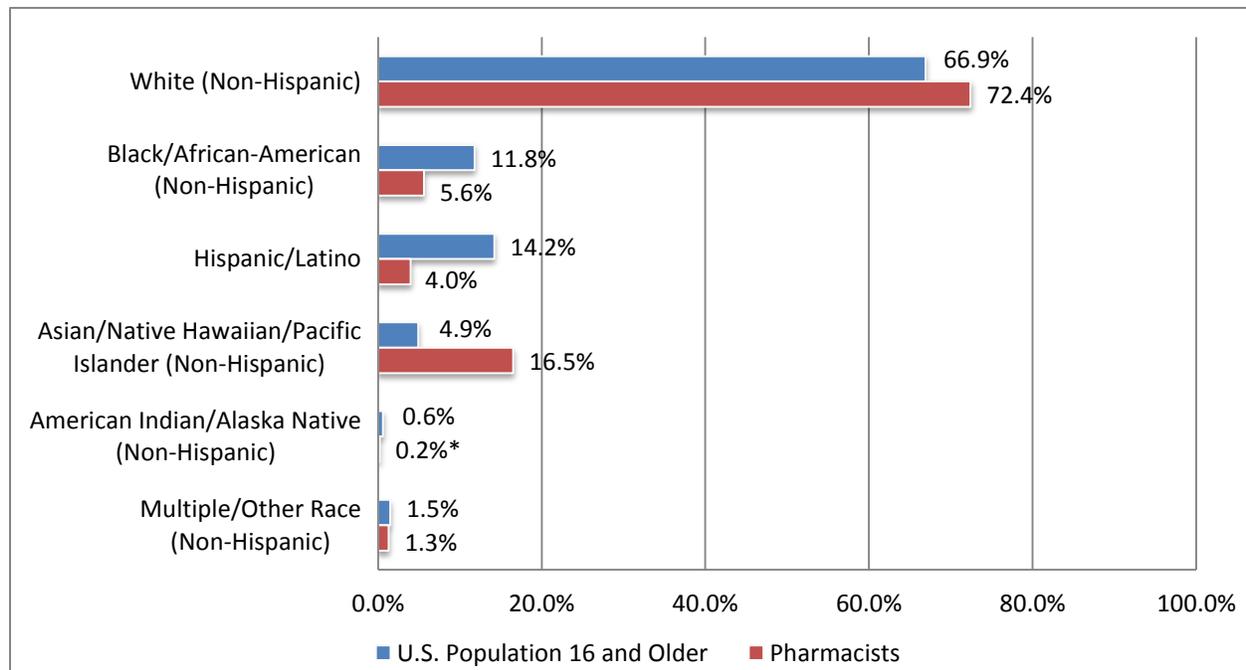


Data Source: HRSA analysis of the ACS PUMS, 2008-2010.

Note: The “Health Care Workforce” in this figure refers to the health occupations covered in this report.

Note: Percentages may not total 100, because of rounding.

Figure 46: Distribution of Pharmacists, by Race/Ethnicity, Relative to the Working-Age Population



Data Source: HRSA analysis of the ACS PUMS, 2008-2010.

Note: Percentages may not total 100, because of rounding.

*Note: 20% ≤ RSE < 30%; estimate should be used with caution because of large sampling error.

Graduates

The total number of pharmacy graduates at the doctoral level in the 2009 to 2010 academic year was 11,873.⁴¹

⁴¹HRSA analysis of the National Center for Education Statistics IPEDS, 2009-2010.