

Methodology

Arizona Health Workforce Core Profile Report | 2025

Purpose

The purpose of the Arizona Health Workforce Core Profile Report is to provide an estimate of the health workforce in Arizona at the state, county, and other geographic levels.

Limitations

There are several important limitations to be aware of when using this report.

- The data represents a snapshot of the workforce based on the date of the data request
- The sources are licensing data from the health professional licensing boards. Licensing data does not tell us if a professional is actively working, how much, or in what type of setting
- The licensing data is submitted by licensees and accuracy and completeness of data may vary
- The report includes only licensed professionals with any active status license type and an Arizona address that can be mapped to a county, county division, tribal area or Zip Code Tabulation Area (ZCTA)
- Professions have been added over time. Dentists and dental hygienists were added in 2021. Occupational therapists, physical therapists, and respiratory therapists were added in 2023. The default view shows only professions with all three years of data

Data Sources

Health Professionals

The data on health professionals for the Core Profile report is from the Arizona licensing boards. The boards provide public record mailing list files upon request. The board data represented in this report includes:

- The Arizona Board of Behavioral Health Examiners <u>https://www.azbbhe.us/</u>
- The Arizona Medical Board <u>https://www.azmd.gov/</u>
- The Arizona Board of Osteopathic Examiners <u>https://www.azdo.gov/</u>
- Arizona Board of Psychologist Examiners <u>https://psychboard.az.gov/</u>
- The Arizona Regulatory Board of Physician Assistants <u>https://www.azpa.gov/</u>
- Arizona State Board of Nursing <u>https://www.azbn.gov/</u>
- Arizona State Board of Dental Examiners <u>https://dentalboard.az.gov/</u>
- Arizona State Board of Respiratory Care <u>https://respiratoryboard.az.gov/</u>
- Arizona Board of Occupational Therapy Examiners <u>https://ot.az.gov/</u>
- Arizona State Board of Physical Therapy <u>https://ptboard.az.gov/</u>

The licensure data used in this report represents three snapshots of the licensed health workforce: from 2019, 2021, and 2023. For the 2019 snapshot, data files were requested between January 2019 and March 2020. For the 2021 snapshot, data files were requested between February 2021 and April



2022. For the 2023 snapshot, the data were requested between September 2023 and November 2024.

Dentists and dental hygienists were included in the 2021 snapshot. Occupational therapists, physical therapists and respiratory care therapists were included in the 2023 snapshot. The report profession filters default setting only includes professions with all three years of data. Professions added in each iteration can be added by the user.

The data in the report is limited to professionals with any active license status if license status is included in the source data. If license status is not included in the source data, we assume that all the records in the public record license file are active. We only include records with address field data that can be mapped to a US Census Geography.

Geographies

For the 2019, 2021, and 2023 snapshots, US Census data from the Decennial Census 2020 was used for the population estimates for geographic areas. In prior reports we have used <u>Rural-Urban Commuting</u> <u>Area</u> (RUCA) data from the Department of Agriculture (USDA), Economic Research Service (ERS). The RUCA has not been updated since 2013 and is not currently included in the 2023 snapshot. When RUCA data becomes available, we will include a professions by RUCA report page.

Population & Professionals per Population Ratios

US Decennial Census data from 2020 was used for population data by geography. Professionals per 10,000 are used at the state and county level. Professionals per 1,000 are used at the county division level. The count of professionals and population are used to create the professional to population ratios. To calculate the ratios, the health workforce in an area is multiplied by 10,000 then divided by the population of that area. For example, if there are 5 health professionals in a county with a population of 20,000, then to create the professional per 10,000 population ratio, we multiply 5 by 10,000 and divide by the county population of 20,000, (5 x 10,000)/ 20,000, resulting in a ratio of 2.5 professionals per 10,000. The professional per population sizes. However, keeping professional counts and population in mind will help contextualize the ratios, particularly in geographic areas with populations of less than 10,000. The same approach applies for professionals per 1,000 population.



Workforce Groups

The workforce groups included in the report may include multiple license types. The license types included in each group are listed in the table below.

Profession Group	Workforce Group	Licenses Included
Behavior Analysts	Behavioral Health	ВА
Counselors	Behavioral Health	LAC, LPC
Dentists	Dentist	BDS, DDS, DMD
Dental Hygienists	Dentist	RDH
Marriage and Family Therapists	Behavioral Health	LAMFT, LMFT
Nurses- Advanced Practice Registered Nurse	Nurse	APRN-RNP, APRN-CNM, APRNS- CNS, APRN-CRNA
Nurses - Nurse Assistant	Nurse	UCNA, CNA, LNA
Nurses – Practical Nurse	Nurse	LPN
Nurses – Registered Nurse	Nurse	RN
Occupational Therapists	Allied Health	OTH, OTA
Physical Therapists	Allied Health	LPT, PTA
Physicians	Physician	MD, DO
Physician Assistants	Physician	PA
Psychologists	Behavioral Health	PSYCH
Respiratory Therapists	Allied Health	RC
Social Workers	Behavioral Health	LBSW, LCSW, LMSW
Substance Abuse Counseling	Behavioral Health	LASAC, LISAC, LSAT



Board Data & Year

Board	Profession Groups	Data Year	Years Available
The Arizona Board of Behavioral Health Examiners	Counselors, Social Workers, Substance Abuse Counseling, Marriage and Family Therapists	2019	2019, 2021, 2023
The Arizona Medical Board	Physicians	2019	2019, 2021, 2023
The Arizona Board of Osteopathic Examiners	Physicians	2019	2019, 2021, 2023
Arizona Board of Psychologist Examiners	Behavior Analysts Psychologists	2019	2019, 2021, 2023
The Arizona Regulatory Board of Physician Assistants	Physician Assistants	2019	2019, 2021, 2023
Arizona State Board of Nursing	Advanced Practice, Registered Nurse, Practical Nurse, Nurse Assistant	2019	2019, 2021, 2023
Arizona State Board of Dental Examiners	Dentists, Dental Hygienists	2021	2021, 2023
Arizona State Board of Respiratory Care	Respiratory Therapists	2023	2023
Arizona Board of Occupational Therapy Examiners	Occupational Therapists, Occupational Therapist Assistants	2023	2023
Arizona State Board of Physical Therapy	Physical Therapists, Physical Therapist Assistants	2023	2023

Use of Ratios on Heat Maps

Ratios are utilized to create heat maps. Ratio and counts are provided in the map tooltip. Ratios and counts are typically also displayed in charts and tables on each report page. Professionals per 10,000 are used at the state and county level. Professionals per 1,000 are used at the county division level.

Other Considerations

The data in this report should be considered an estimate of the selected health workforce professionals in Arizona. The data represents a snapshot in time from the date the data was requested. Additionally, the health workforce included in the report are those who have an active license (if license status is available in the data). An individual may maintain a license but not necessarily be actively delivering healthcare in their field.

Some licensees may have multiple license types. If this occurs within a single board, we apply a selection process to identify a primary license associated with an individual. This is implemented to limit some over-counting of individuals. To select the primary license, we rely on a selection function that examines the license active date as well as the type of license and its associated education and training requirements. Some individuals may maintain licenses for different professions licensed under different boards. We are do not deduplicate in these instances.



The nurse, dental hygienist, and respiratory therapists public licensing data contains mailing address, however the information available in this field indicates most entries are unlikely to represent an employment address. Therefore, in this data we use the ZIP code to represent their possible employment location. Utilizing the ZIP code instead of the full address is a limitation as we are unable to provide counts or ratios of these professions by Tribal Areas.

Data determined as outliers from three county divisions have been suppressed from the county division and county division by rurality pages.

Lastly, changes between years should be interpreted with caution. Between 2019 and 2021, a new policy was passed permitting licensees to suppress their address from the public record data in certain cases (e.g., if they do not maintain a business address) (A.R.S. § 32-3226). For 2021 and 2023 we used a data imputation process to identify geographic information for some licensees with missing public record addresses. However, there is some location-based data loss each year even with imputation. This may be due to suppressed public record addresses, incomplete or partial addresses that cannot be accurately corrected, etc.

Updates

New health professional data may be included in future reports.

Cite This Report

Derksen, D, Koch, B, Drake, C, and Coates S. 2025. Arizona Health Workforce Core Profile Report. Retrieved from: <u>https://crh.arizona.edu/resources/interactive-data-visualizations/arizona-health-workforce-profile-report</u>

If you have questions, please contact Bryna Koch, DrPH at <u>brynak@email.arizona.edu</u>.