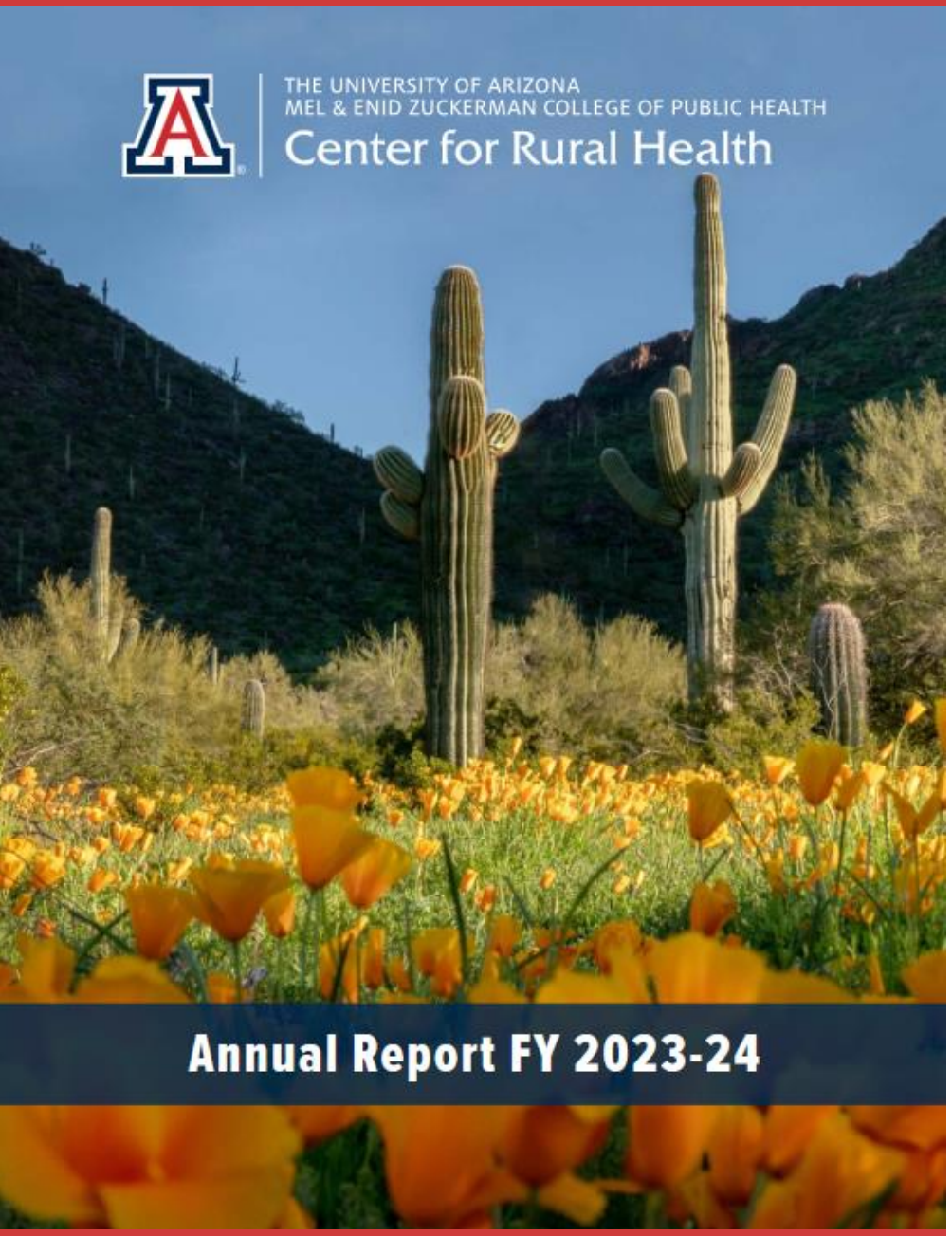
Arizona Center for Rural Health Workforce Data Resources

June 3, 2025

THE UNIVERSITY OF ARIZONA
MEL & ENID ZUCKERMAN COLLEGE OF PUBLIC HEALTH
Center for Rural Health

Session Overview

- Describe the features that inform healthcare access in rural Arizona;
- Describe how health workforce data can be used in grant applications, policy briefs, and in other materials to educate and inform policymakers and other health stakeholders; and
- Identify health workforce data available from the Arizona Center for Rural Health (AzCRH) and other state and federal workforce data sources;



Mission

Improve the health and wellness of Arizona's rural and underserved populations.

crh.arizona.edu

Uniqueness of rural communities

Voice for Arizona's rural populations

Quality of service

Access to care

Dr. Judith Hunt, physician preceptor, Payson
Read more

Our Workforce Efforts

Health workforce **data and analysis** to inform program and policy development.

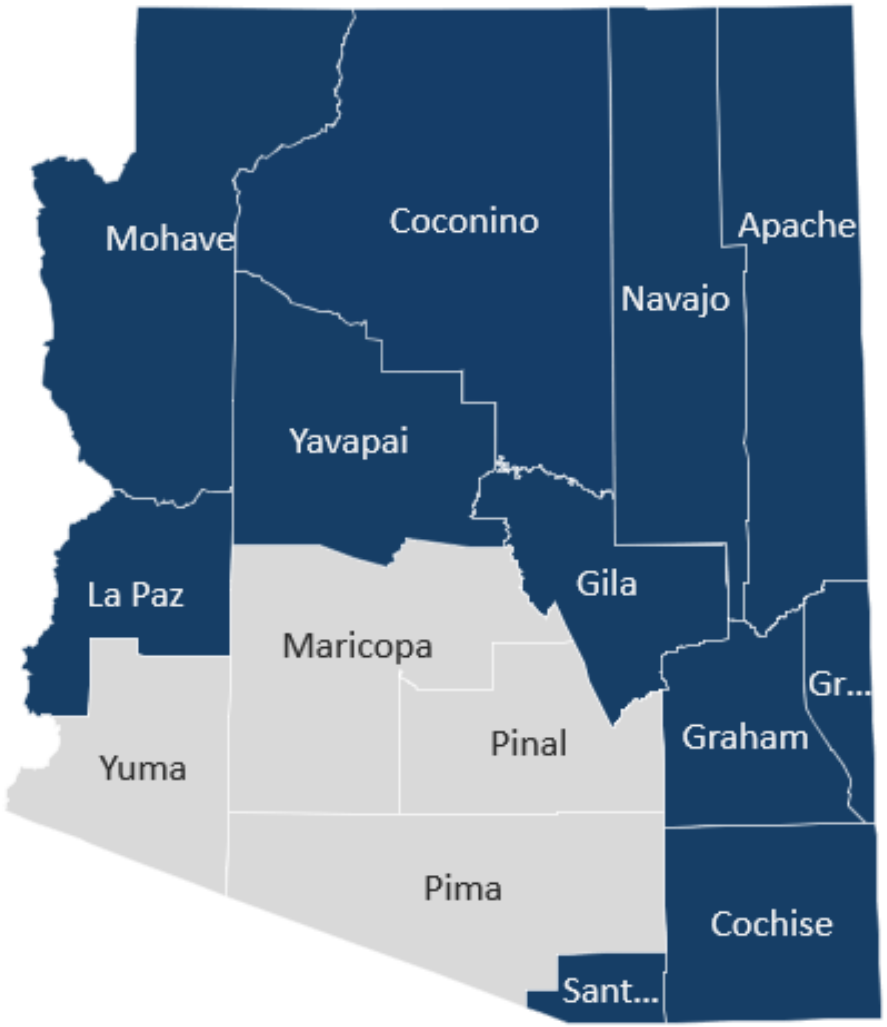
Collaboration with AzDHS Health Systems Development and other stakeholders.

Training through grants and partnerships with organizations like the AzAHEC and regional centers.

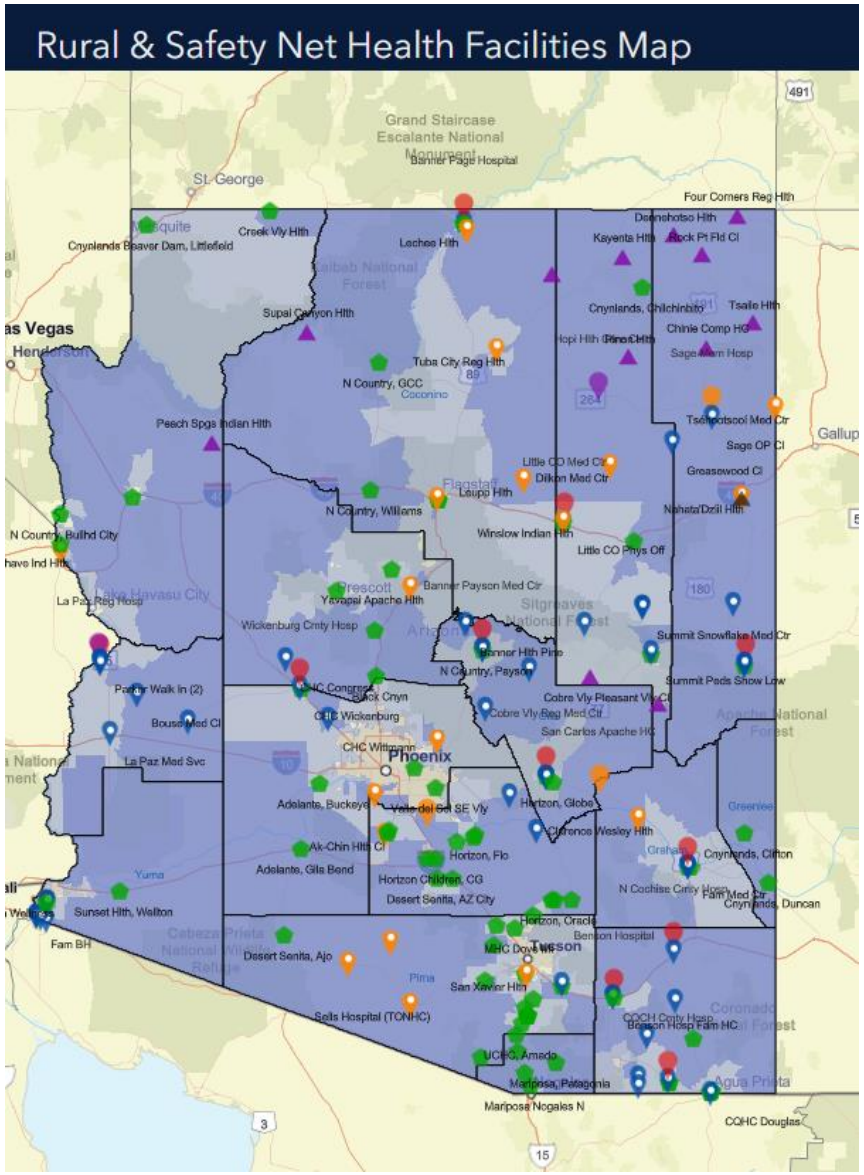
Partnership with AzDHS and Arizona Alliance for Community Health Centers (AACHC) to support 3RNet a rural recruitment program for health professionals.

Rural Health Care Context

Definitions of Rural Vary



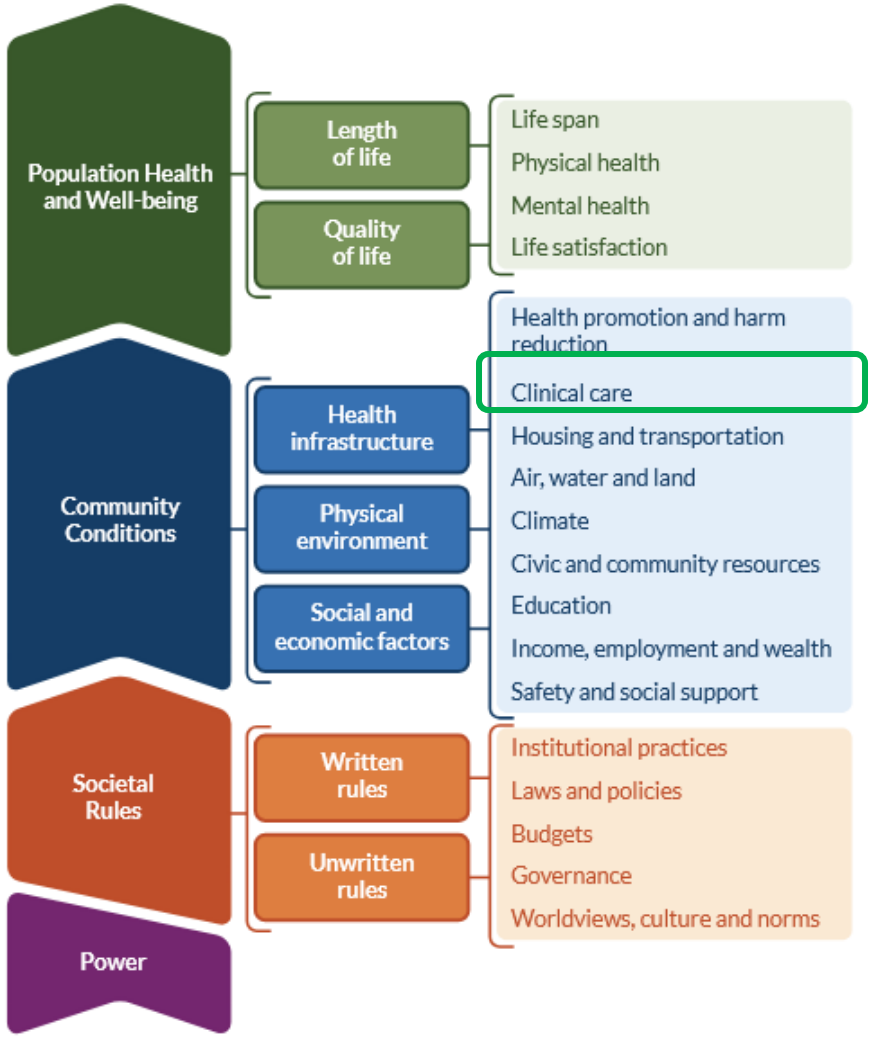
AzDHS Rural Counties = Rural



Census Tract Based = Rural = Mixed

Health Care Context in Rural Arizona

- Up to 25% of Arizona's population lives outside of a metro area
- Low population, low pop. density, large physical spaces, longer travel distance/time to urban areas
- Healthcare resources concentrated in urban areas
- Fewer total health care providers and lower ratios of providers per population
- Effects components of Access to Care – Coverage, Services, Timeliness, Workforce (AHRQ)



County Health Rankings Model of Health

Geographic Proximity

Further away = less likely to receive care, Decreases the likelihood of receiving preventive care

Disproportionately affects more rural, lower income, lower literacy, older, and under-resourced communities

Costs include economic, time, social etc.

Department of Health and Human Services (DHHS) travel standard > 30 minutes is excessively distant

Role of Data in Addressing Workforce Needs

The Role of Data Resources

Data Can

Help paint a picture

Set the context, but should be part of a STORY, data isn't the story in and of itself

- Story
- Framing
- Layout
- Images
- Data

Story

Framing

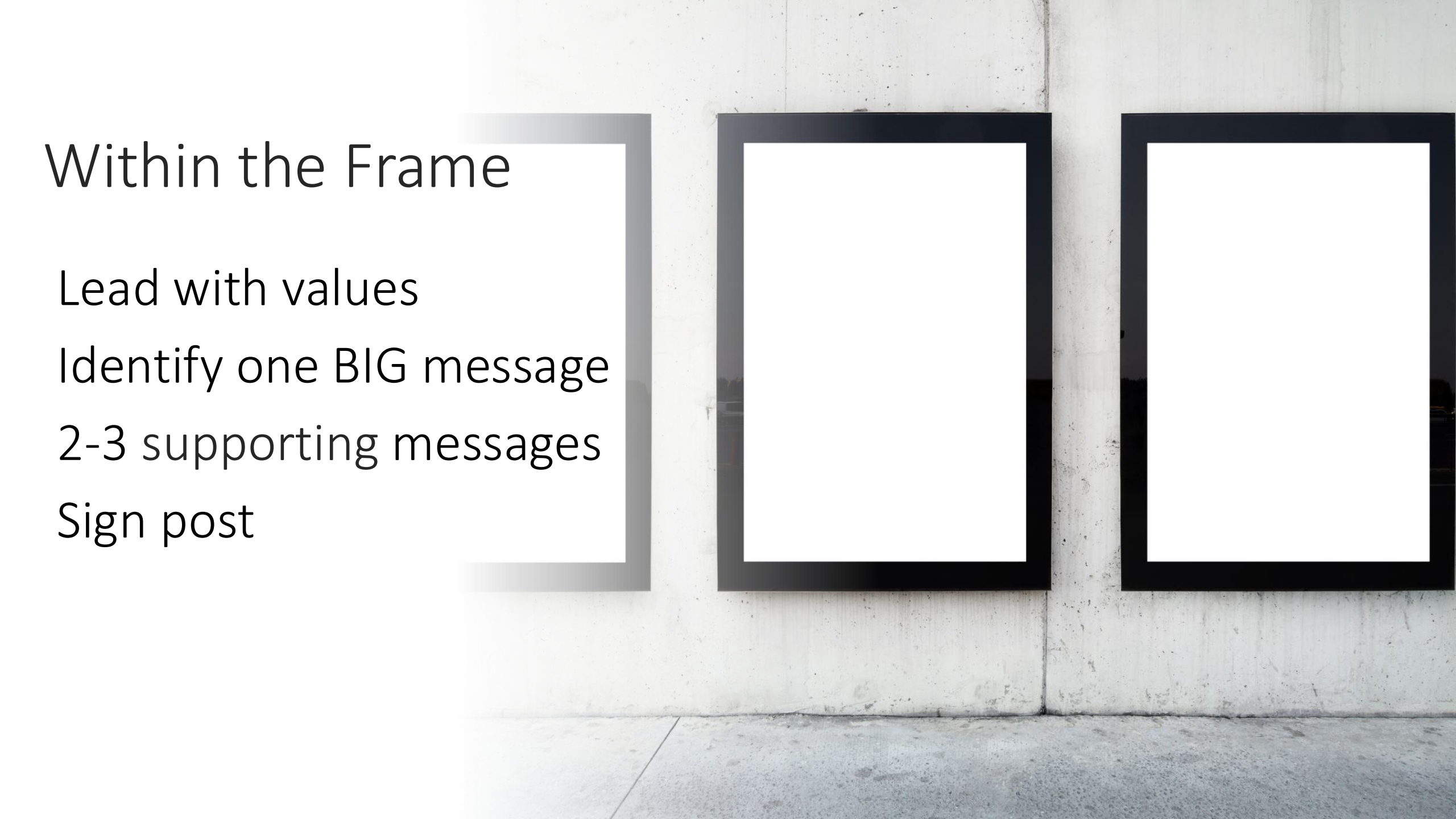
Within the Frame

Lead with values

Identify one BIG message

2-3 supporting messages

Sign post



Now What?

Using Data

Data is part of a message, it does not stand alone

Less is more (1 or 2 pieces of data)

Use complementary, not competing data, data should build/advance message, or focus on solution

The value of a number is in its values

Source: RWJF. 2010. A New Way to To Talk About the Social Determinants of Health.

Arizona Health Workforce Core Profile Report

Arizona Health Workforce Profile Report

Arizona Health Workforce Core Profile Data

- Healthcare workforce licensing data from the Arizona licensing boards
- All in a single location, cleaned/analyzed, and publicly available in summary form
- Combined with geographic data, U.S. Census population data, etc. to create population per provider ratios
- Three years of snapshot data provide some trend analysis

Health Professionals – 3 Years of Data

- Nurses (advance practice, registered nurses, nurse assistants, licensed practical nurses)
- Physicians, physician assistants
- Behavior analysts, counselors, marriage & family therapists, psychologists, social workers, substance abuse counselors

Health Professionals - 2 Years /New Data

- Dentists, dental hygienists – 2 years
- Respiratory therapists, occupational therapists, physical therapists – New this year

Data Caveats!

- Licensure data self-report, e.g., address accuracy may vary
- Licensure does not indicate active practice, type, hours, or setting
- State licensure may underrepresent federal healthcare workforce
- Address may or may not be work/business location
- New policy (A.R.S. § 32-3226) implemented between 2019 & permitting licensees to suppress their address from the public record data in certain cases (e.g., if they do not maintain a business address)
- We implement some data cleaning and imputation measures to try to best represent location information

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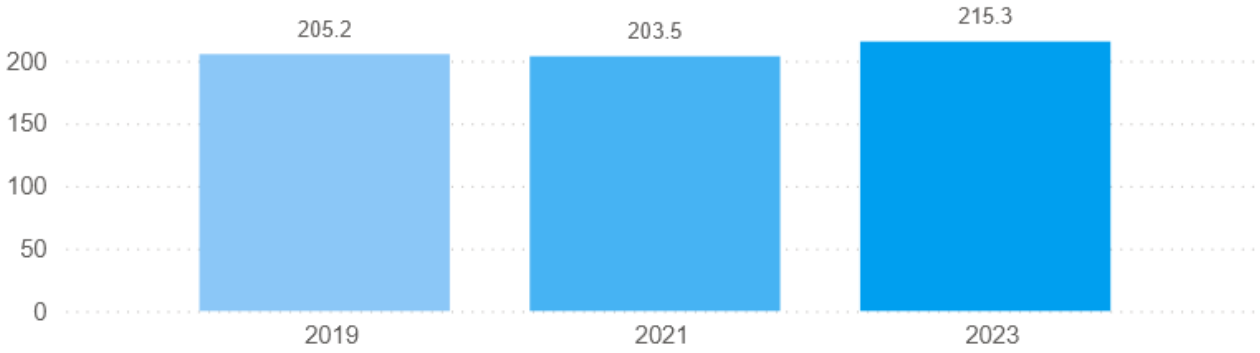
Arizona Health Professionals

Reset Filters

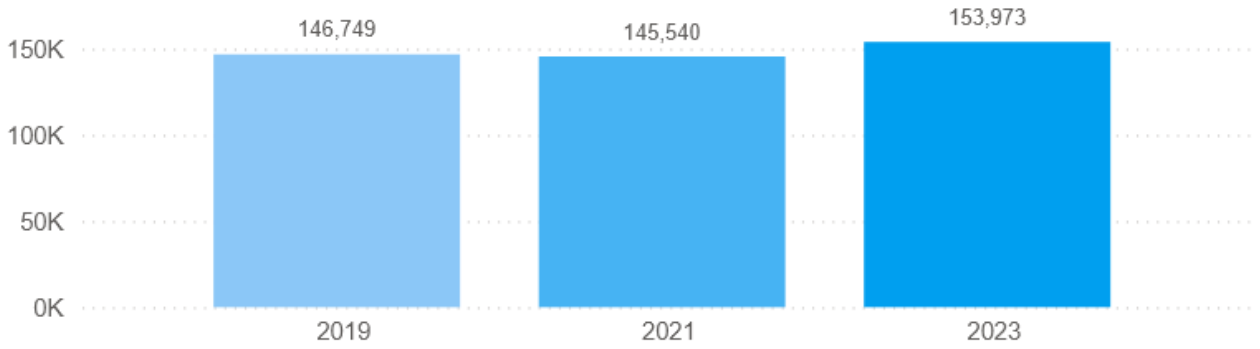
Profession Filter

Multiple selections

State Ratio per 10,000



State Count



Selected Professions

Behavior Analysts, Counselors, Marriage & Family Therapists, Nurses - Advanced Practice, Nurses - Nurse Assistants, Nurses - Practical Nurses, Nurses - Registered Nurses, Physician Assistants, Physicians, Psychologists, Social Workers, Substance Abuse Counselors

Profession	2019	2021	2023
Behavior Analysts	390	543	478
Counselors	4,613	5,250	5,690
Marriage & Family Therapists	567	724	819
Nurses - Advanced Practice	7,987	8,912	10,092
Nurses - Nurse Assistants	26,521	23,773	24,317
Nurses - Practical Nurses	8,878	8,087	7,882
Nurses - Registered Nurses	70,871	68,763	72,349
Physician Assistants	2,738	3,150	3,897
Physicians	17,163	18,683	21,009
Psychologists	1,548	1,576	1,022
Social Workers	4,608	5,228	5,591
Substance Abuse Counselors	865	851	827
Total	**146,749**	**145,540**	**153,973**

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Health Professionals by County

Reset Filters

Profession Filter: Multiple selections

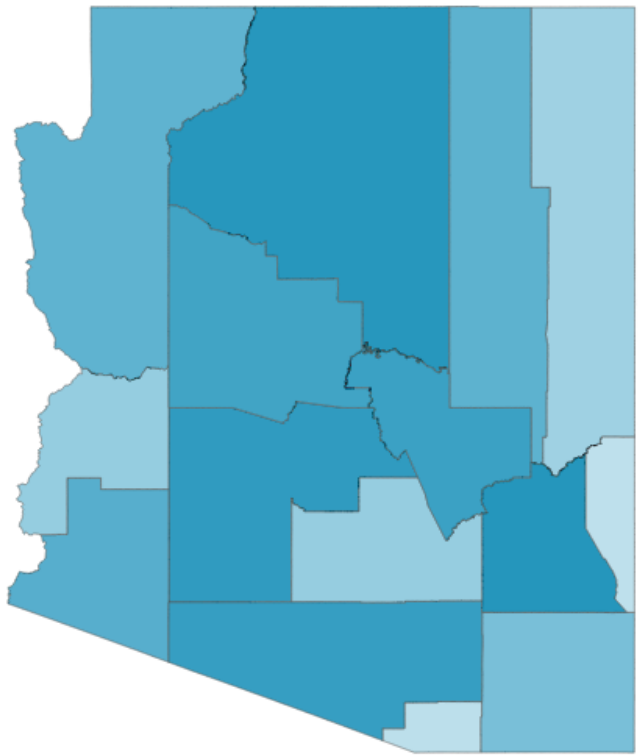
County Filter: All

Year Filter: 2023

State Professionals

Year	Professionals	Ratio per 10k	Population 2020
2023	153,973	215.3	7,151,502

AZ Profession Ratio by County per 10,000



Legend: Low to High

Selected Professions

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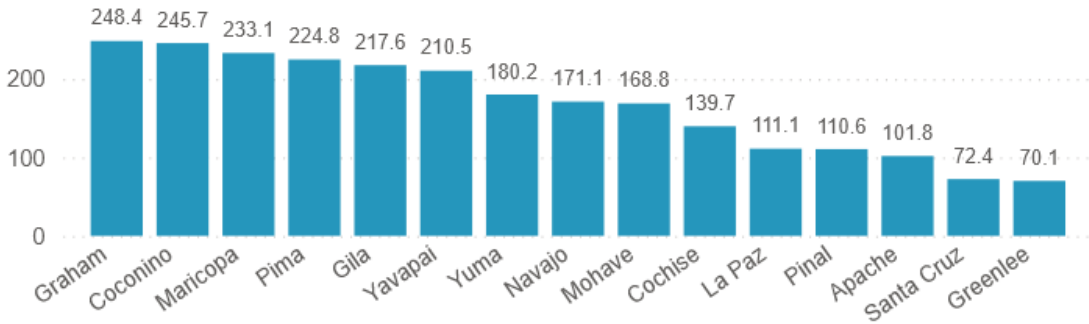

Count by County

County	Professionals	Professionals %	Population 2020
Maricopa County	103,040	66.9	4,420,568
Pima County	23,457	15.2	1,043,433
Yavapai County	4,973	3.2	236,209
Pinal County	4,703	3.1	425,264
Yuma County	3,673	2.4	203,881
Mohave County	3,600	2.3	213,267
Coconino County	3,565	2.3	145,101
Total	**153,973**	**100.0**	**7,151,502**

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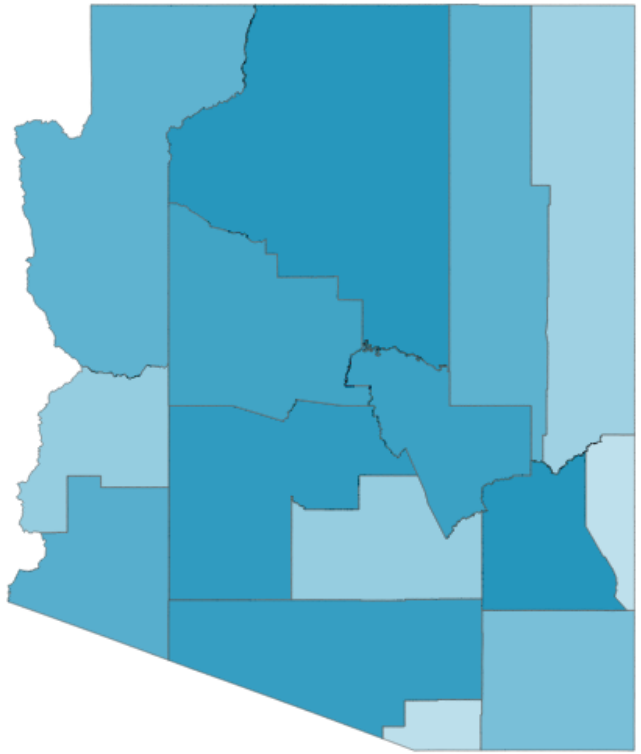
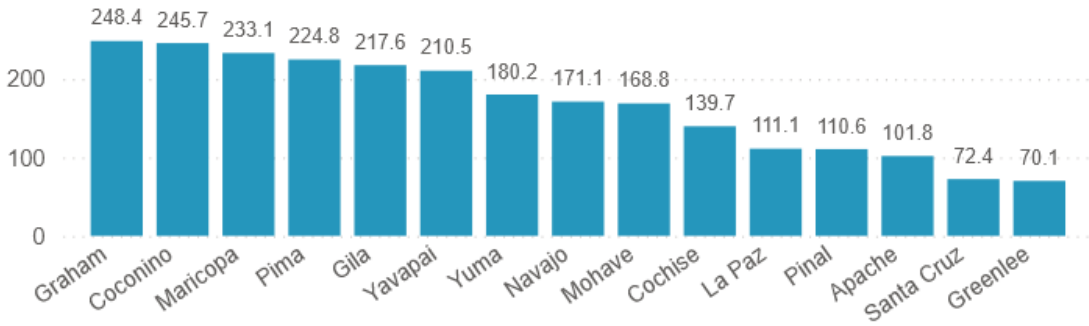


Legend: Low to High

Ratio by County per 10,000



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Behavior Analysts

Counselors

Dental Hygienists

Dentists

Marriage & Family Therapists

Nurses – Advance Practice

Nurses – Nurse Assistants

Nurses –Practical Nurses

Nurses – Registered Nurses

Occupational Therapists

Physical Therapists

Physician Assistants

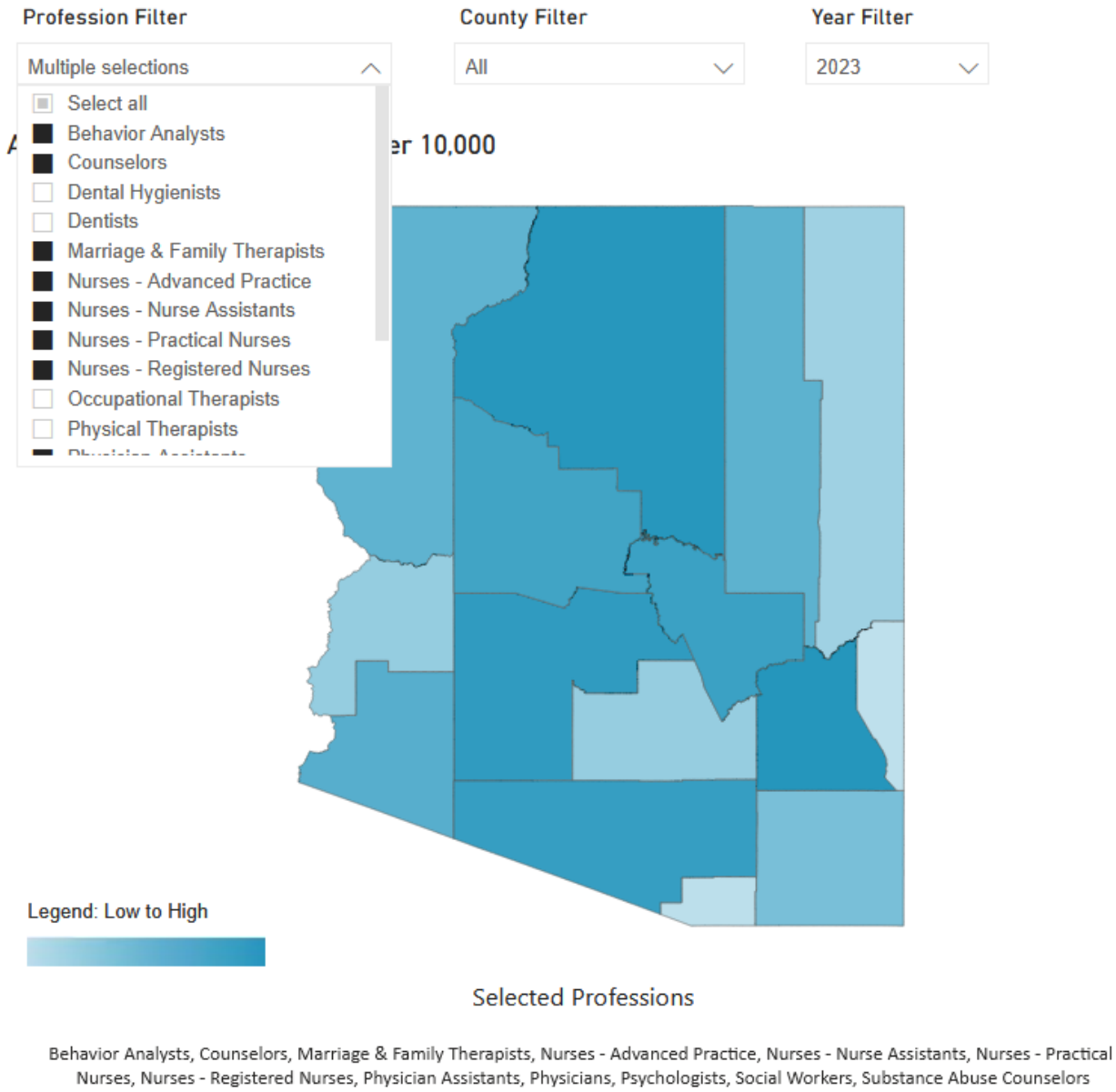
Physicians

Psychologists

Respiratory Therapists

Social Workers

Substance Abuse Counselors



Health Professionals by County

Reset Filters

Profession Filter

Nurses - Registered Nurses

- Select all
- Behavior Analysts
- Counselors
- Dental Hygienists
- Dentists
- Marriage & Family Therapists
- Nurses - Advanced Practice
- Nurses - Nurse Assistants
- Nurses - Practical Nurses
- Nurses - Registered Nurses
- Occupational Therapists
- Physical Therapists
- Physician Assistants

County Filter

All

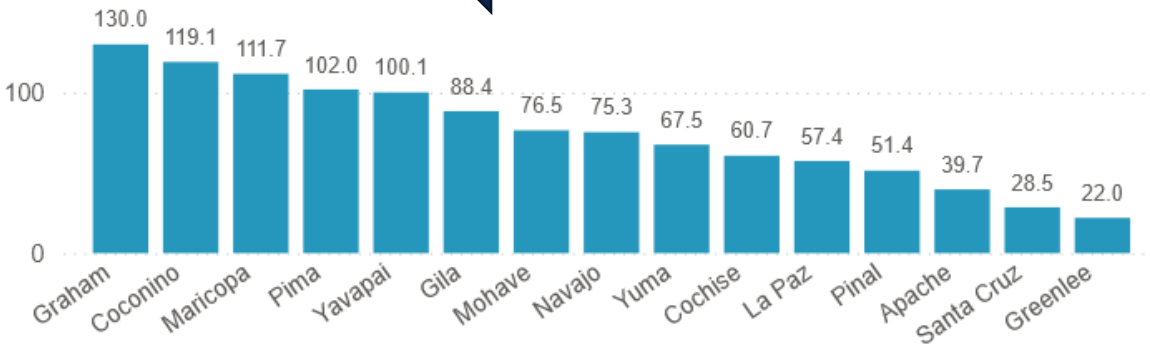
Year Filter

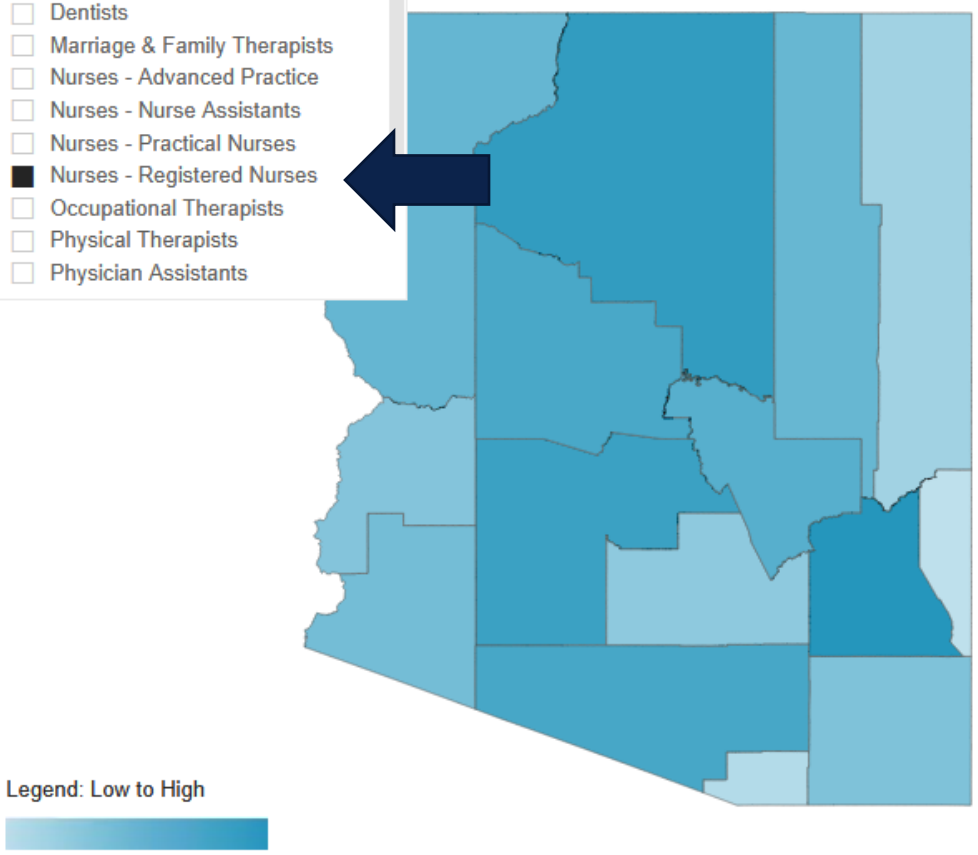
2023

State Professionals

Year	Professionals	Ratio per 10k	Population 2020
2023	72,349	101.2	7,151,502

Ratio by County per 10,000





Selected Professions

Nurses - Registered Nurses

Count by County

County	Professionals	Professionals %	Population 2020
Maricopa County	49,373	68.2	4,420,568
Pima County	10,639	14.7	1,043,433
Yavapai County	2,365	3.3	236,209
Pinal County	2,185	3.0	425,264
Coconino County	1,728	2.4	145,101
Mohave County	1,631	2.3	213,267
Yuma County	1,377	1.9	203,881
Total	**72,349**	**100.0**	**7,151,502**

Health Professionals by County

Reset Filters

Profession Filter

Multiple selections

County Filter

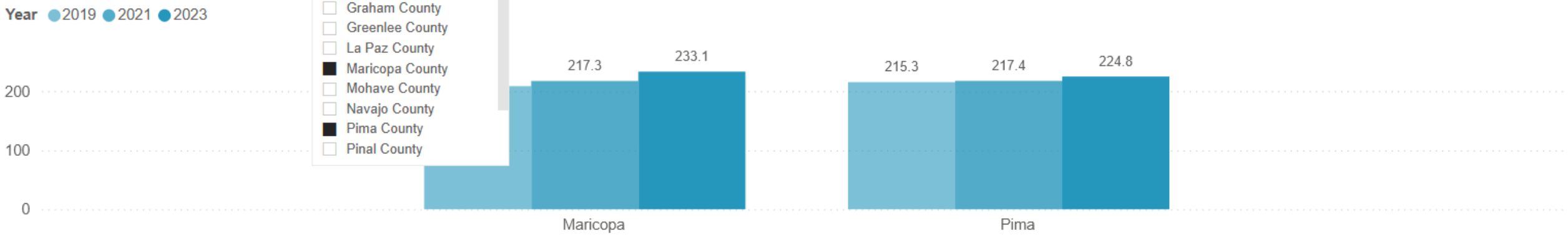
Multiple selections

- Select all
- Apache County
- Cochise County
- Coconino County
- Gila County
- Graham County
- Greenlee County
- La Paz County
- Maricopa County
- Mohave County
- Navajo County
- Pima County
- Pinal County

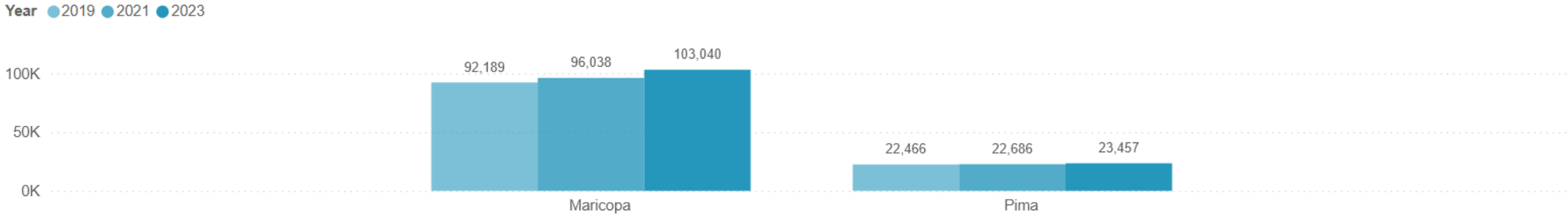
Year Filter

All

Ratio by County per 10,000



Count by County



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Health Professionals by County Subdivision (CCD)

Reset Filters

Profession Filter: Multiple selections

County Filter: All

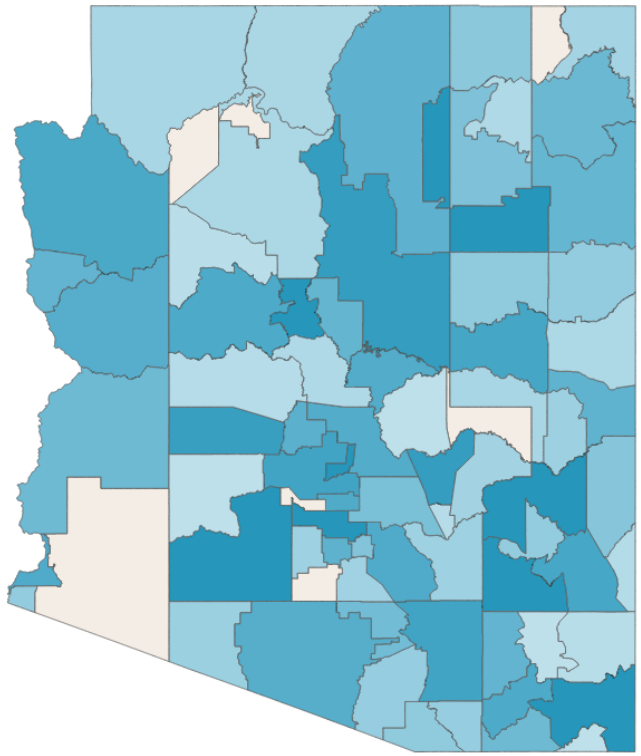
County Subdivision Filter: All

Year Filter: 2023

State Professionals

Year	Professionals	Ratio per 10k	Population 2020
2023	153,949	215.6	7,141,082

AZ Profession Ratio by County Subdivision per 1,000



Legend: Low to High

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Count and Ratio per 1,000 by County Subdivision

County Subdivision	Professionals	Ratio	Professionals %	2020 Population
Phoenix CCD	82,006	24.6	79.6	3,331,925
Tucson CCD	22,343	24.7	95.3	905,015
Chandler CCD	10,139	19.9	9.8	510,731
Deer Valley CCD	4,927	16.2	4.8	305,018
Wickenburg CCD	3,401	28.2	3.3	120,558
Flagstaff CCD	3,071	30.2	86.2	101,822
Prescott CCD	2,828	20.7	56.9	136,432
Yuma CCD	2,808	19.7	76.4	142,569
North Pinal CCD	1,748	9.7	37.2	179,637
Mingus Mountain CCD	1,590	37.6	32.0	42,342
Kingman CCD	1,546	21.4	43.0	72,205
Snowflake CCD	1,146	23.8	62.8	48,213
Lake Havasu City CCD	1,086	17.4	30.2	62,269
Sierra Vista CCD	1,026	20.6	58.6	49,797
Gila Bend CCD	980	35.5	1.0	27,573
Casa Grande CCD	941	15.0	20.0	62,730
Total	**152,628**		**99.1**	**7,138,846**

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Health Professionals by Rurality

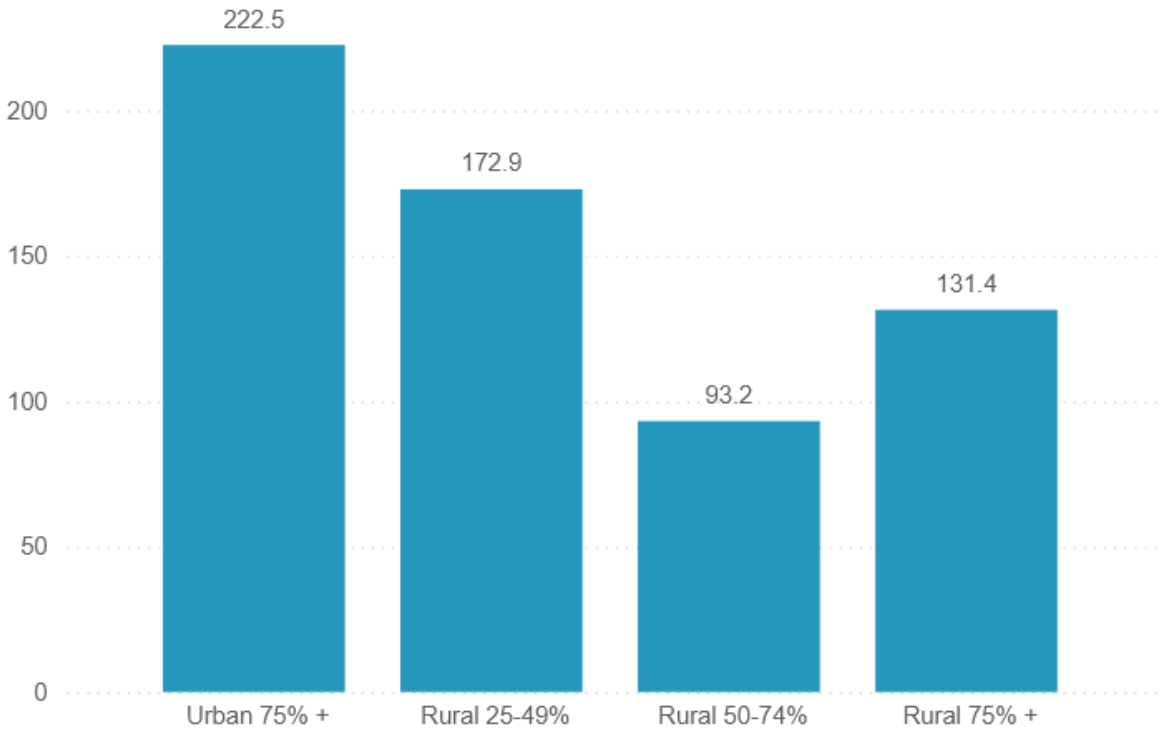
Reset Filters

Profession Filter: Multiple selections

Rurality Filter: All

Year Filter: 2023

Ratio by Rurality per 10,000



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Count by Rurality

Rurality	Professionals	Professional %	2020 Population
Urban 75% +	140,542	92.1	6,316,048
Rural 25-49%	7,389	4.8	427,370
Rural 75% +	3,096	2.0	225,820
Rural 50-74%	1,601	1.0	171,844
	152,628	**100.0**	**7,141,082**

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Health Professionals by State and Tribal Areas

Reset Filters

Profession Group Filter

Behavioral Health

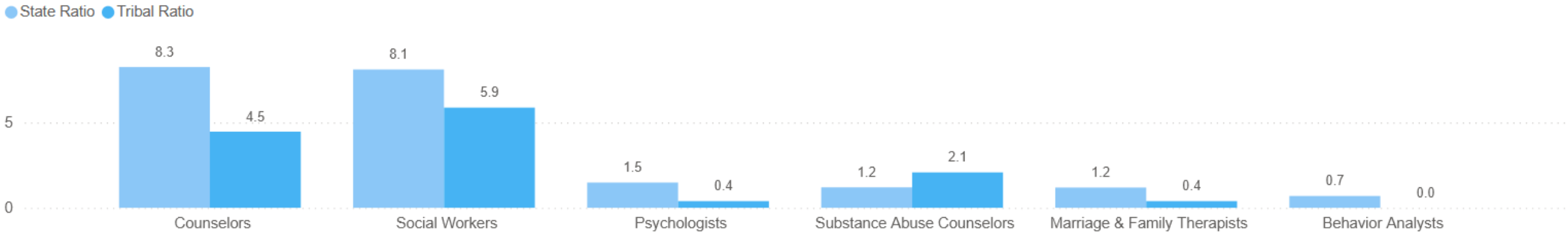
Profession Filter

All

Year Filter

2023

Ratio by State and Tribal Areas per 10,000



State and Tribal Count and Ratios

Profession	State Count	Tribal Count	State Ratio	Tribal Ratio
Counselors	5,690	114	8.3	4.5
Social Workers	5,591	150	8.1	5.9
Psychologists	1,022	10	1.5	0.4
Substance Abuse Counselors	827	53	1.2	2.1
Marriage & Family Therapists	819	10	1.2	0.4
Behavior Analysts	478	0	0.7	0.0
Total	**14,427**	**337**	**20.9**	**13.2**

Selected Profession Groups

Behavioral Health

Data Warehouse Content

Health Workforce Data

- Arizona Health Workforce Board Licensure Data - physicians, physician assistants, nurses, psychology, behavioral health
- CMS NPPES, NPI data

Geographic & Population Data

- U.S. Census data, population, social and demographic characteristics
- U.S. Census geographic characteristics, urban-rural, legislative districts
- USDA Rural Urban Commuting Area (RUCA) codes

Population Health & Health System Data

- HRSA Health Professional Shortage Area (HPSA) data
- ADHS licensed facilities data
- ADHS Uniform Account Reports for hospitals, nursing facilities & hospices

Data Warehouse

Workforce Data Resources

Arizona Department of Health Services

Shortage Designations

Public Health Data Portal

HRSA

HPSA Find

Workforce Projections

Data Downloads

Workforce Data Resources (cont.)

Department of Labor Bureau of Labor Statistics

Occupational Outlook Handbook & Occupational Profiles (example – dental hygienists)

Arizona Office of Economic Opportunity

Labor Market

- Industry Employment & Wages
- Occupation Employment & Wages
- Employment Projections

Other AzCRH Workforce Data Resources

Interactive Data Visualizations

- Physician and Advanced Practice Provider Report
- Arizona Healthcare Employment, Projections, and Wage Report
- Arizona Graduate Medical Education Funding Report

Workforce Reports and Briefs

- Physician Specialty
- Direct Care Workers
- Physical Therapists
- Critical Care Workforce

ArcGIS Maps Hub

Data in Action

Inform Grant Applications

- Provided data for grant applications:
  - Rural residency development grant
  - Rural health network development grant
  - Rural Maternity and Obstetrics Management Strategies grant
- Assist researchers in estimating study sample sizes based on population of professionals
- Data can can be useful often in the Background, Needs, or Justification sections

Describe Policy & Program Priorities

- Data to stakeholders to inform proposed policies (e.g., opportunities for GME support)
- Data to assist in identifying population of nurses by license type by county and by hospital to conduct program and training outreach
- Data to inform expert editorials on maternal health/maternal health workforce initiatives

Support Education Programs

- Health system summary data for educational program accreditation needs assessment requirements (physical therapy and physician assistant)
- Data to inform educational program development (e.g., Certified Nurse Midwife)

Data by Request

Health workforce page on the AzCRH website

Form to request data

Questions?

The Team

Contact: Bryna Koch, DrPH, brynak@arizona.edu

- Dr. Dan Derksen, Associate Vice President for Rural Health Workforce Development Initiatives, University of Arizona Health Sciences, Walter H. Pearce Endowed Chair & Director, Arizona Center for Rural Health, Professor of Public Health, Mel and Enid Zuckerman College of Public Health
- Leila Barraza, JD, MPH, Associate Professor
- Bryna Koch, DrPH, Assistant Research Professor
- Susan Coates, MBA, Principal Database Specialist
- Charles Drake, MS, MA, Data Architect III