

# Utah advanced practice registered nurse workforce data report

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# Executive summary

Utah appears to be well staffed with Advanced Practice Registered Nurses (APRNs); however, some robust workforce measures indicate some room for improvement such as wages, work hours, and better understanding turnover. Additionally, certain patient populations, such as pregnant women, those experiencing homelessness, newborns, incarcerated individuals, and those requiring sliding fee scales, often face difficulties accessing APRNs as indicated by survey responses. These groups are particularly likely to encounter restrictions when practitioners are not accepting new patients. Additionally, the CNMs (certified nurse midwives) response rate was only 39% but with a comparatively small population compared to APRNs, accessing care can have even more restrictions.

While finding counts of active APRNs to make appropriate comparisons, Utah's rate of APRNs appears higher than both national and other state averages (45 per 100,000 vs. 34 per 100,000). Rural counties typically have fewer APRN providers than metropolitan or urban areas; however, when adjusting for county population, the rates of providers in many rural counties are often comparable to those in more populated areas. County rates of providers is explored in the geographic distribution section of the report. While many APRNs earned their qualifying degrees in Utah (41%), most respondents received their degrees from other states (59%). Most respondents also engage in preceptorships, mentoring students or new staff members (58%). According to unemployment insurance data, the average wage for Utah APRNs has increased every year from 2018 through 2023 (\$72,932 to \$103,964). However, the average annual wage for an APRN in Utah is about 19% lower than the national average. Furthermore, the 2023 average female APRN wage is 81% of the average male APRN wage, \$99,951 compared to \$123,819, a difference of \$23,868.

While most respondents plan to maintain their current working hours over the next two years (78%), almost 6% indicated they plan to reduce their hours or retire. Additionally, while forecasts for APRN job postings suggest that job opportunities are expected to grow during the first half of 2025, the latter part of the year may see a sharp reduction.

# Utah APRN workforce in context

To better contextualize Utah's APRN workforce several estimates of providers were collected and organized. Illinois was selected because of the similarities in survey methodology specifically with the reliance on voluntary participation as opposed to those who require participation as part of renewing licensure.

## Comparing provider to 100k population estimates from various sources

Utah APRN survey	Illinois APRN survey	Milbank Utah NP estimate	Milbank USA NP estimate	HPSA PCP estimate
45	34	21	26	17

The table above compares Utah's APRN respondent rate per 100k population to multiple rates including the commonly referenced HPSA primary care provider estimate. There are a few things to note. First, health professional shortage area (HPSA) only considers physicians as primary care providers and does not include physician assistants or APRN providers. Second, HPSA excludes counties with provider to population ratios that are considered too high such as Weber and Davis counties. Also, HPSA measures come from National Plan and Provider Enumeration System (NPPES) National Provider Identifiers (NPIs) data.

There are major differences in methodology between the survey calculation and HPSA beyond what is considered primary care, geographical considerations, and nuances of activity. HPSA did not report on eight counties, but all those counties show APRN providers from survey data and were included. Also, HPSA reported four counties as not having any primary care providers however, survey data shows three of them do have APRN providers.

A slightly better comparison is from the Milbank Memorial Fund 2025 Primary Care Scorecard Dashboard. Their data from 2016 to 2022 shows Utah's nurse practitioner (NP) per 100k population increasing every year from 11 to 21 but is still lower than the national average of 26. While the most recent rate of 21 for 2022 is significantly lower than our 2024 survey rate of 45, it is closer than HPSA's rate. Based on the Illinois 2022 APRN survey responses and estimated state population, the Illinois APRN rate is 34 which is closer to the Utah survey rate although substantially lower (Illinois Department of Financial and Professional Regulation, 2023). It is important to note that the Illinois survey is significantly limited by a 24% response rate and only those who responded were included in the estimated APRN rate per 100k population (Illinois Department of Financial and Professional Regulation, 2023).

It is important to note that in calculating the number of providers, both primary and secondary practice locations were included, and counts were based on distinct providers by county. As a result, a provider who has multiple practice locations in the same county was only counted once while a provider with a practice location in two different counties is counted in each county. This method may differ from how others calculate provider to population ratios as they might only include primary locations or include multiple locations in the same area or county.

### **APRN survey results compared to HPSA status, APRN workforce survey, Utah, 2024**

County	APRN per 100k population	HPSA	Flag
Beaver	41	Designated	Low
Box Elder	36	Designated	Low
Cache	35	Designated	Low
Carbon	73	NA	NA
Daggett	100	Designated	Low
Davis	38	NA	Low
Duchesne	65	Designated	Low
Emery	10	NA	Low
Garfield	78	Designated	Low
Grand	71	Designated	Low
Iron	44	Designated	Low
Juab	16	Designated	Low
Kane	0	Designated	Low
Millard	22	NA	Low
Morgan	23	Designated	Low
Piute	0	Designated	Low
Rich	110	Designated	Low
Salt Lake	69	Designated	Low

County	APRN per 100k population	HPSA	Flag
San Juan	87	Designated	Low
Sanpete	36	Designated	Low
Sevier	36	Designated	Low
Summit	57	NA	NA
Tooele	23	Designated	Low
Uintah	36	NA	Low
Utah	53	Designated	Low
Wasatch	34	NA	Low
Washington	72	Designated	Low
Wayne	0	Designated	Low
Weber	51	NA	NA

The table above displays APRN rates per 100k population based on survey results and HSPA primary care status by county. The state average and the individual county rates are calculated from the results of the APRN workforce survey. The flag column displays low when a county has a HPSA designation and/or has an APRN rate below the Utah state average. The flag is not intended to give a comprehensive filter on possible issues and should be treated as an indicator that further investigation is warranted as the county in question seems to have a concerning provider profile considering HPSA status and below average survey data results.

**Below average rate without HPSA designation, APRN workforce survey, Utah, 2024**

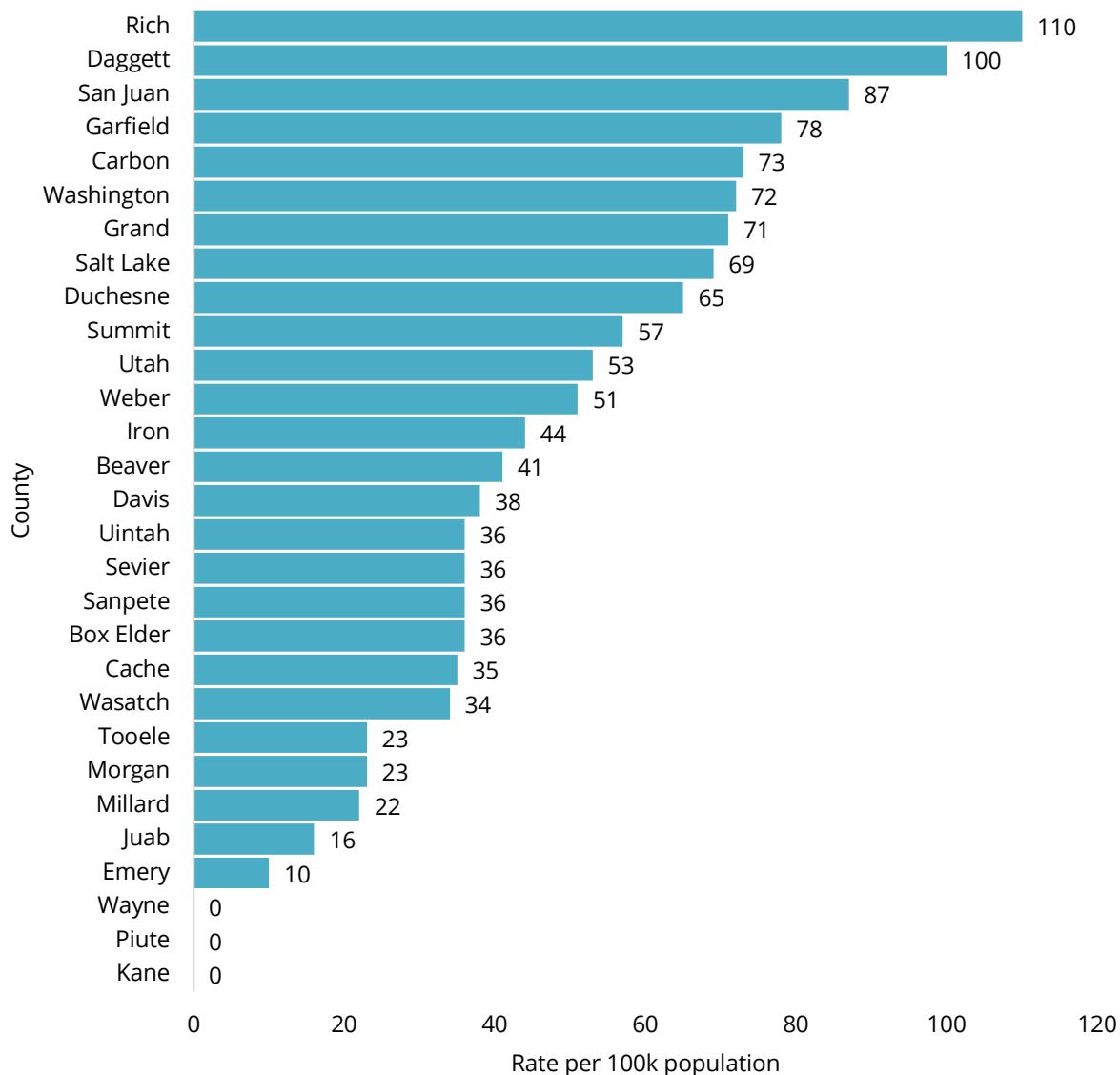
County	APRN per 100k population	HPSA	Flag
Davis	38	NA	Low
Emery	10	NA	Low
Millard	22	NA	Low
Uintah	36	NA	Low
Wasatch	34	NA	Low

The table presented above lists counties where the rate of APRNs per 100,000 residents falls below the state average. Interestingly, these counties do not have a HPSA designation. The Health Resources and Services Administration (HRSA) and state Primary Care Offices (PCOs) review applications and determine if an area in question meets the criteria for designation. The criterion for designation includes the number of providers relative to the population with consideration given to high need populations, proportion of the area's population below 100% of the federal poverty level (FPL), and the time to travel to the nearest source of care (NSC) outside the HPSA designation area (HRSA Health Workforce, 2022).

There are issues with HPSA designations that extend beyond just the limitations of their primary healthcare provider classification. Markowski et al. (2023) argue that HPSA has not had a significant effect on mortality or physician density. Specifically, Markowski et al. (2023) found that "73 percent of counties designated as HPSAs remained physician shortage areas for at least 10 years after their inclusion in the program" (p. 1507). Additionally, the HPSA designation process can trigger "anti-welfare sentiments" or biases (Snowden et al., 2022, p. 325). Snowden et al. (2022) argues that biases against the poor or disenfranchised "may restrain state officials considering supporting [Federally Qualified Health Centers] FQHC applicants and operations and hinder officials developing cases for HPSA designation" (p. 326).

In their conclusion, Snowden et al. (2022) highlight institutional and cultural shortcomings associated with HPSA designations:

As with other federal net programs, state governments can embrace, remain neutral, or restrict their FQHC and HPSA participation by taking or neglecting actions that would support FQHCs and HPSA designations. . . HPSAs too are subject to the preferences and actions of state officials. States collect and prepare data to secure federal designation of HPSAs through Primary Care Offices (PCOs), usually located in States Health Departments. PCOs obtain and update HPSA designations by collaborating and providing technical assistance to local agencies and communities. Local actors often lack resources for independent participation and they face competing priorities, especially in states where FQHCs do not seem economically viable due to limited state supplemental funding and limited state-wide advocacy and organizational support. It is reasonable to believe that, operating in state administrative hierarchies, by subtle and direct means, climates of disapproval can circumscribe PCO efforts to prepare and forward what would otherwise be HPSA designations.

**APRN per 100k population by county, APRN workforce survey, Utah, 2024**


The above chart plots the county APRN rate per 100k value based on survey responses from highest to lowest. It is interesting to note that Rich, Daggett, San Juan, Garfield, and Carbon have the highest APRN rates although they are all rural counties. This does not mean all rural counties have more favorable provider rates compared to more urban counties as the nice counties with the lowest rates are also all rural.

# Introduction

The Utah Health Workforce Information Center (HWIC, <https://hwic.utah.gov/>), established in 2022 through HB176 (<https://le.utah.gov/~2022/bills/static/HB0176.html>), is a key entity in efforts to collect and analyze healthcare workforce data in Utah. This legislation also created the Governor's Health Workforce Advisory Council (HWAC), which provides strategic guidance and oversight on policies and initiatives aimed at strengthening the state's healthcare workforce across all sectors. The Department of Professional Licensing (DOPL), responsible for the licensure of healthcare professionals in Utah, is now required to integrate workforce survey questions into the licensing process. These surveys, previously developed and administered by the UMEC, help inform decisions regarding workforce trends and needs. By incorporating these surveys and capturing this data, the HWAC will now have data to inform health workforce initiatives and recommendations for Utah.

## Background

An advanced practice registered nurse (APRN) is a registered nurse (RN) prepared at the postgraduate level who holds a specialized certificate. The definition of APRN according to the American Nursing Association (Institutes of Medicine, 2011, p. 330) is a nurse:

- who has completed an accredited graduate-level education program preparing him/her for one of the four recognized APRN roles
- who has passed a national certification examination that measures APRN, role and population-focused competencies, and who maintains continued competence as evidenced by recertification in the role and population through the national certification program
- who has acquired advanced clinical knowledge and skills preparing him/her to provide direct care to patients, as well as a component of indirect care; however, the defining factor for all APRNs is that a significant component of the education and practice focuses on direct care of individuals
- whose practice builds on the competencies of registered nurses (RNs) by demonstrating a greater depth and breadth of knowledge, a greater synthesis of data, increased complexity of skills and interventions, and greater role autonomy
- who is educationally prepared to assume responsibility and accountability for health promotion and/or maintenance as well as the assessment, diagnosis, and management of patient problems, which includes the use and prescription of pharmacologic and non-pharmacologic interventions

- who has clinical experience of sufficient depth and breadth to reflect the intended license

While all APRN providers are educated and trained to provide a variety of healthcare services there are differences in the emphasis among APRN roles or types. APRNs are not necessarily “limited by setting but rather by patient care needs” as “all APRNs are educationally prepared to provide care to patients across the health wellness-illness continuum, the emphasis and how implemented within each APRN role varies” (Institutes of Medicine, 2011, p. 330).

There are four main categories of APRN practitioners:

- Certified nurse midwives (CNM)-provides a full range of primary health care services to women throughout the lifespan, including gynecologic care, family planning services, pre-conception care, childbirth, and care of newborns (American Nurses Association, 2022).
- Clinical nurse specialists (CNS)-has a unique role of integrating care across patients, the nursing workforce, and health systems. The primary goal of the CNS is to create positive environments for patients and nurses through mentoring, evidence-based practices, high quality coordination, and prevention of illness and risk behaviors among individuals, families, and communities (American Nurses Association, 2022).
- Certified registered nurse anesthetists (CRNA)-trained to provide the full spectrum of patients’ anesthesia care for individuals of all ages and health statuses (American Nurses Association, 2022).
- Nurse practitioners (NP)-practices autonomously across the healthcare system and specializes in diverse aspects of healthcare delivery. They are educated to diagnose, treat, and manage patient conditions including prescribing medication (with some restrictions state-by-state) and making appropriate referrals for patients (American Nurses Association, 2022).

## Limitations

This report only represents those healthcare workers who responded to the APRN workforce survey. The report does not attempt to make inferential claims about the APRN workforce population or generalize results onto those who did not respond to the survey. Any statistical analysis included in the report only represents those who participated in the survey.

The APRN workforce survey was distributed to all APRN licensees during the license renewal period and participation was voluntary. Sampling designs dependent on voluntary participation are often referred to as convenience samples or non-probability samples. Convenience or non-probability samples likely introduce biases that can significantly distort

estimates of population characteristics (Bailey et al. 2024). While the response rate for the APRN survey was 51%, providers who chose to respond to the survey may not be representative of the entire APRN workforce. Therefore, the statistical analysis included in this report only represents individuals who participated in the survey and does not attempt to make inferences about the entire population.

Comprehensive unit or item response rates are provided to guide interpretation of the results. These are in the methodology section at the end of this report. Additional limitations that provide important context for subsequent report information will be included on an as-needed basis.

Contact information is provided at the end of this report to assist with communicating additional details and answer questions.

# Workforce supply survey results

## Overview

While the focus of this analysis is on the APRN survey, supplemental data is also used to put the presentation of survey results into context.

The following analysis first reviews the APRN workforce participation which includes supplemental data. The analysis will then focus more on survey results, specifically describing practice characteristics, demography, and educational backgrounds. Educational debt, employment characteristics, and employment plans are followed by a discussion on workforce indicators which includes data from other sources besides the survey results. The 2024 survey saw a significant increase in the number of respondents compared to the 2022 survey, more than doubling the previous participation. This improvement may be a result of including the survey in the license renewal process.

A review of the survey methodology including response rate and item response rates are included after the workforce indicators analysis and conclusions.

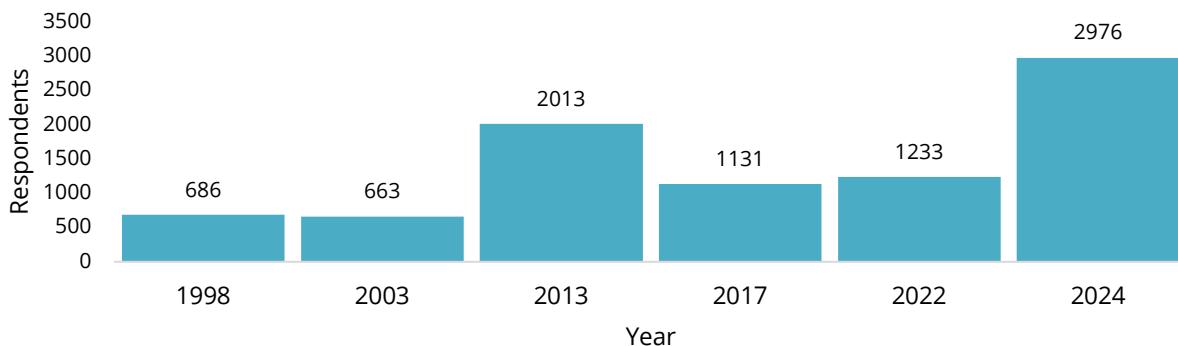
The survey tool or questionnaire is accessible through a link provided in the appendix.

## Licensed and active workforce

Depending on how license and Utah status is determined with DOPL data, counts can vary substantially. For example, if APRN related licenses is simply filtered on license status being active, the results include 13,133 APRN licenses. However, if Utah state is included in the query filtering, then the resulting count is 9,237. If location is determined by Utah ZIP codes, the results will include 8,609 licenses compared to Utah counties which results in 6,980 licenses. To further complicate matters, filtering on license expiration date produces differences between 20 to 30 licenses in addition to the differences in how Utah state, county, or ZIP code is used. Regardless of the nuances of license status and who is considered in-state, counts from DOPL overestimate counts of Utah providers as many providers keep state licenses active although they do not actively provide services in that state. Some may keep a state license active in case they move, for career flexibility, providing care through telehealth, locum tenens, or other considerations (Stamper, 2024). As a result, it is important to differentiate providers with a Utah license who actively practice in Utah.

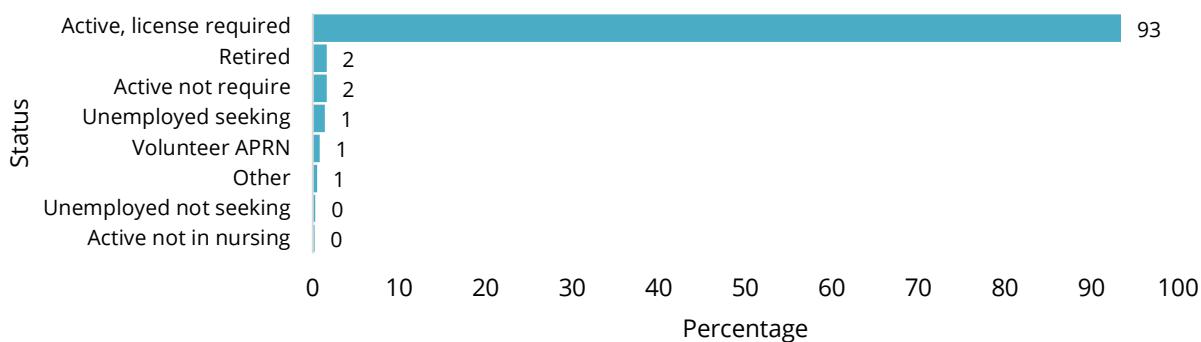
APRN providers who renewed their license during 2023 and those whose license expired in the previous two years were eligible for online renewal and were invited to participate in the survey. Of those, approximately 51% responded to at least one survey question and provided a valid license number that matched APRN licenses from DOPL's database.

## Respondents by year, APRN workforce survey, Utah, 2024



The 2024 survey results look to be a dramatic improvement compared to past surveys in terms of number of responses and a substantial improvement in response rates compared to 2022. The 2024 survey more than doubled the number of responses of the 2022 survey and while it is somewhat disappointing that the 2024 survey only had a 51% response rate, it is an improvement to the 27% response rate of the 2022 survey. Moreover, the 2024 survey maintained relatively high item response rates that are detailed in the response rates section of the report's methodology.

## Employment status, APRN workforce survey, Utah, 2024



Response options were modified for the presentation of the chart. What is displayed as active, license required appeared on the survey as actively working in a position that requires this license. Active not require appeared on the survey as actively working in a position in the field of nursing that does not require this license. Unemployed seeking appeared on the survey as unemployed and seeking work that requires this license. Volunteer APRN appeared on the survey as Volunteer as an APRN. Unemployed not seeking appeared on the survey as unemployed and not seeking work that requires this license. Active not in nursing appeared on the survey as actively working in a position in a field other than nursing.

Of those who responded to the question, 93% report actively working in a position that requires their license. While 97% of respondents indicated they were working, only 3% of respondents indicated they were not working.

Unemployed not seeking and active not in nursing both had respondents, but the values were less than 1% for each.

## Full-time equivalence (FTE) and direct patient care

To better estimate the APRN workforce supply full-time equivalence (FTE), and direct patient care (DPC) is determined below.

### FTE status, APRN workforce survey, Utah, 2024

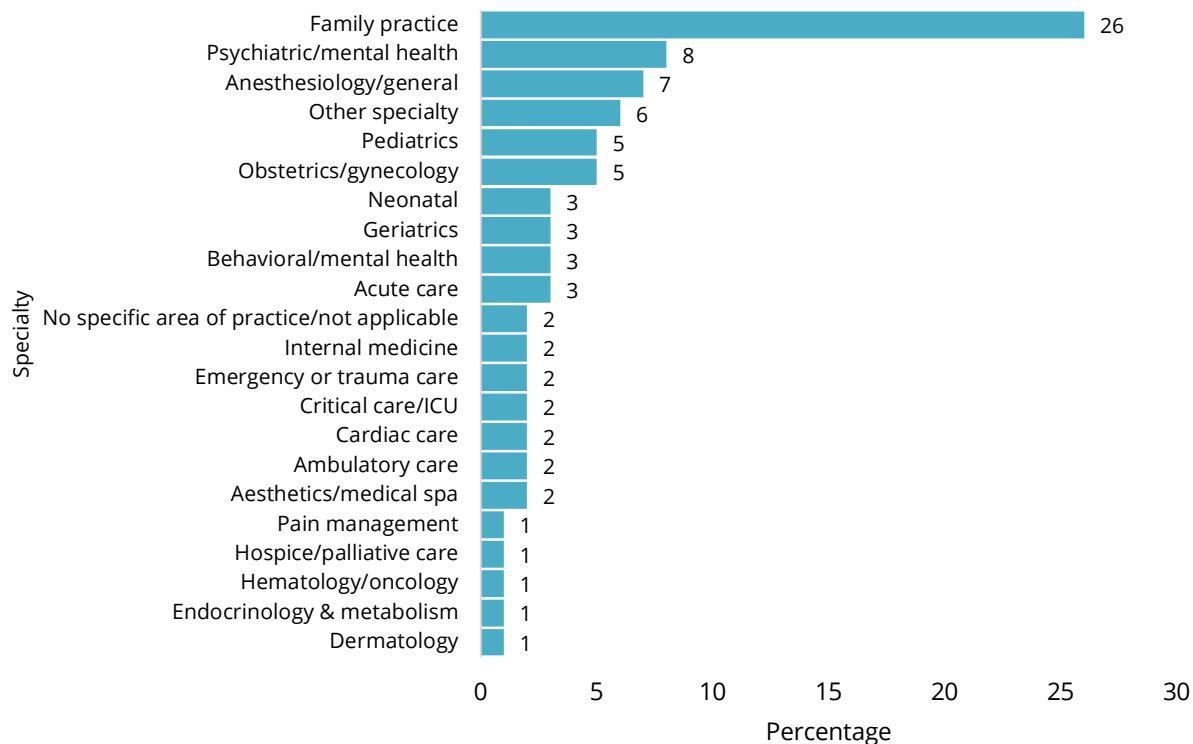


Most respondents indicate they work 37 hours or more per week. To estimate the proportion of respondents working full-time, the median of the response range of primary and secondary practice locations was summed and divided by the total number of respondents who report working at least one hour in Utah. Sixty-one percent of respondents report working full-time which is less than the nursing national average of 70% (Smiley et al., 2023) but comparable to other state APRN FTE estimates of 68% from Illinois (Illinois Department of Financial and Professional Regulation, 2023).

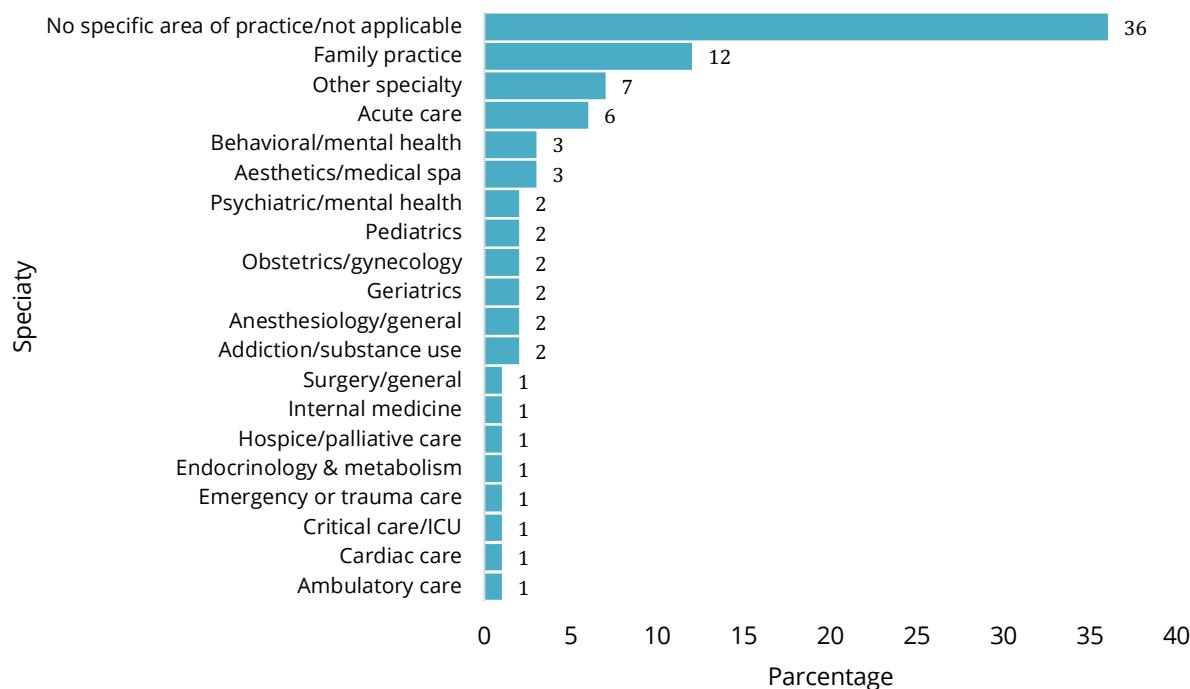
## Specialty

Specialties of providers is analyzed below. While there are many different types of specialties, for the purpose of this report due to space limitations, only the 20 most common specialties are included in the charts below.

## Top 20 primary specialties, APRN workforce survey, Utah, 2024

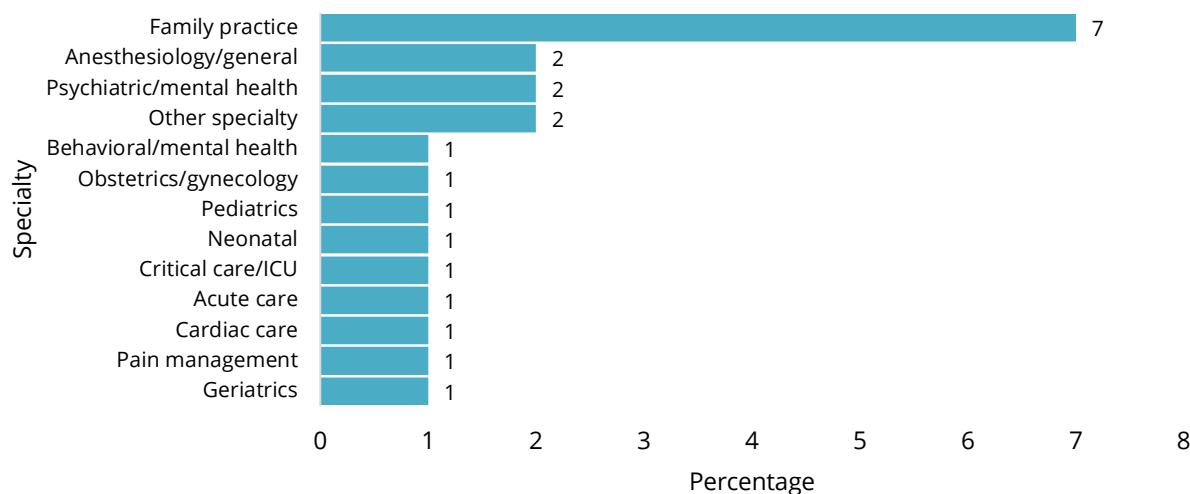


### Top 20 secondary specialties, APRN workforce survey, Utah, 2024



Most respondents indicated they either do not have a secondary specialty, did not provide a secondary specialty, or indicated a secondary specialty was not applicable in their situation.

### Top FTE specialties, APRN workforce survey, Utah, 2024



The chart above looks at FTE by primary specialty. Family practice is by far the most common specialty with more than three times the FTE than the second most common specialty. While the chart above does not include hospitalist, surgery/general, endocrinology & metabolism, aesthetics/medical spa, emergency or trauma care, ambulatory care, or internal medicine, those specialties did have FTE respondents, but the percentage was below 1%.

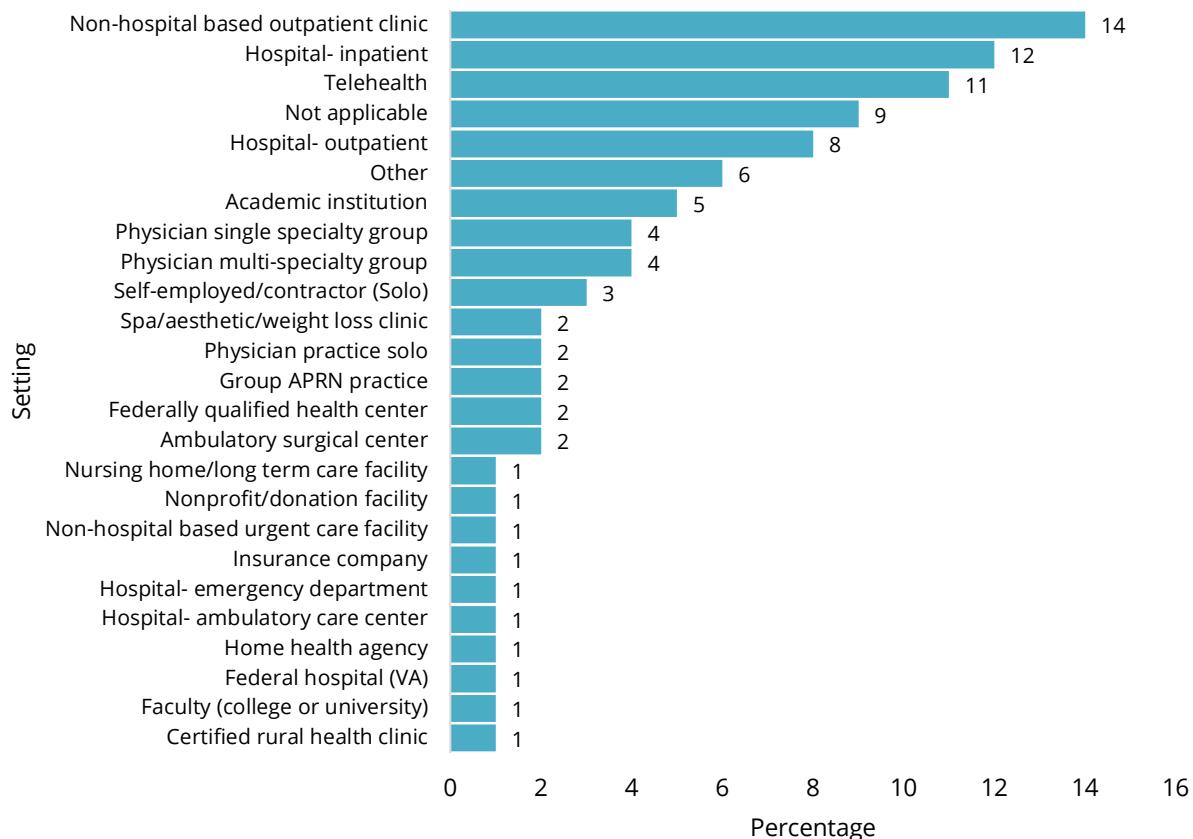
## Practice characteristics

*This section includes practitioner survey response information on practices where they provide services, such as setting type and geographic distribution*

### Setting

Settings of providers' practice is analyzed below. While there are many different types of settings, for the purpose of this report due to space limitations, only the most common specialties are included in the charts below.

### Top primary practice setting, APRN workforce survey, Utah, 2024

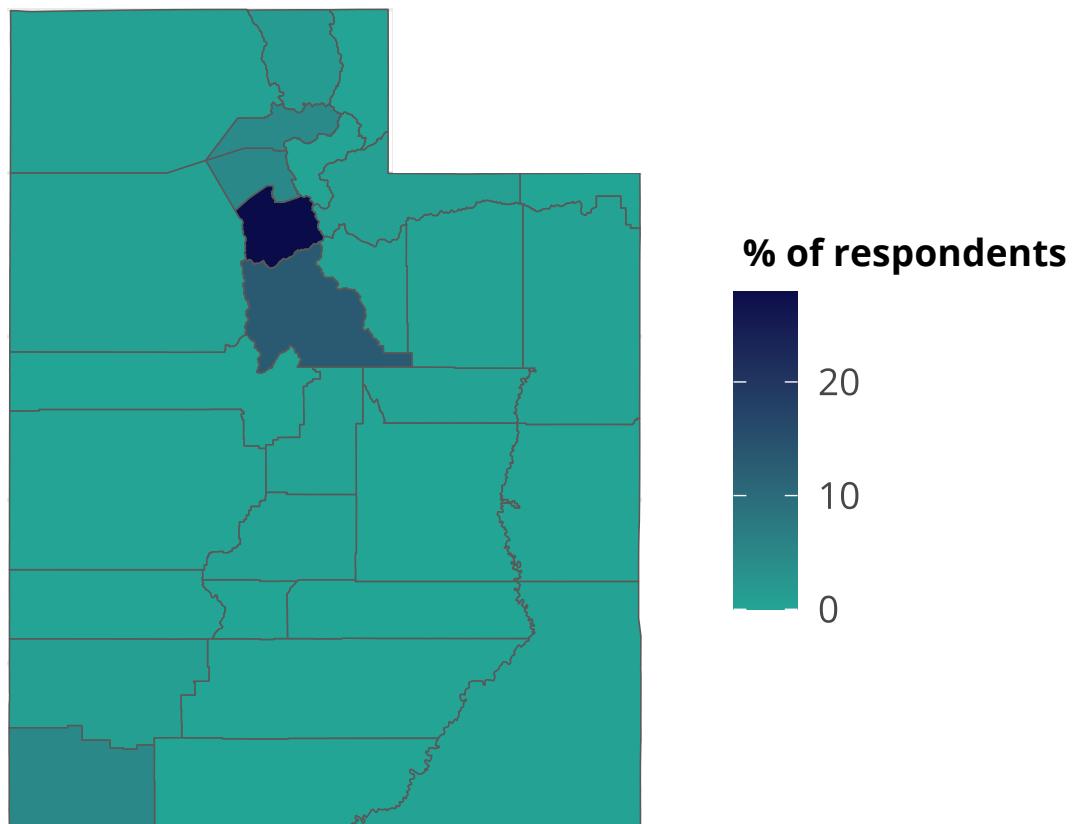


Outpatient clinics, hospital-inpatient, and telehealth were the most common primary practice settings. While birthing centers, corrections facilities, government/planning agencies, hospice, occupational health, pharmaceutical, and student/school settings are not displayed in the chart above, there were responses, but their percentage values were lower than 1%. There was an error on the 2024 survey instrument regarding secondary practice settings and as a result only primary practice settings data was collected and analyzed.

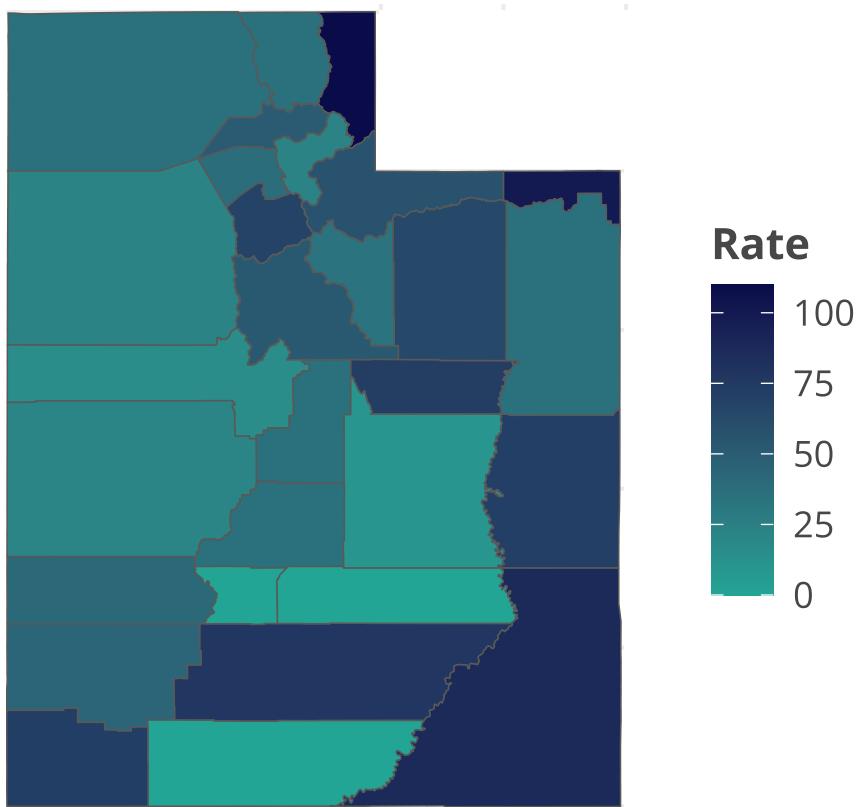
### Geographic distribution

The geographic location of providers is analyzed below. While survey data contains ZIP codes of practice locations, for the purpose of this report locations are mapped to county on the below maps.

APRN % of respondents, APRN workforce survey, Utah, 2024



### APRN respondents per 100k population, APRN workforce survey, Utah, 2024



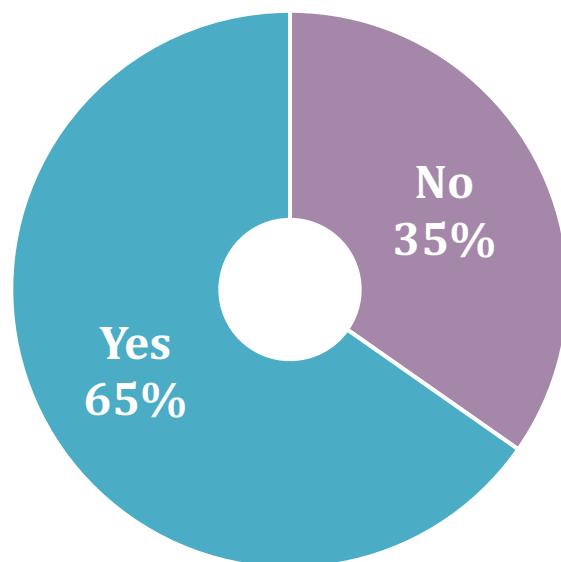
All but five Utah counties are considered rural. However, about 75% of the state's estimated population lives in those five counties, and those counties will generally be disproportionately represented by counts. While this is necessary to get an understanding of the distribution of providers in Utah, it is limited in terms of controlling for the population. The providers per 100k population map uses the ratio of responding providers to county population rather than the percentage of responding providers for the value to better account for differences in population. While geographic features like distance and terrain still need to be considered, this additional statistic can better represent providers in relation to the relevant patient population.

It is important to note that in calculating the number of providers both primary and secondary practice locations were collected but counts were based on distinct providers by county. As a result, a provider who has multiple practice locations in the same county is only counted once, while a provider who has a practice in two different counties is counted in each county.

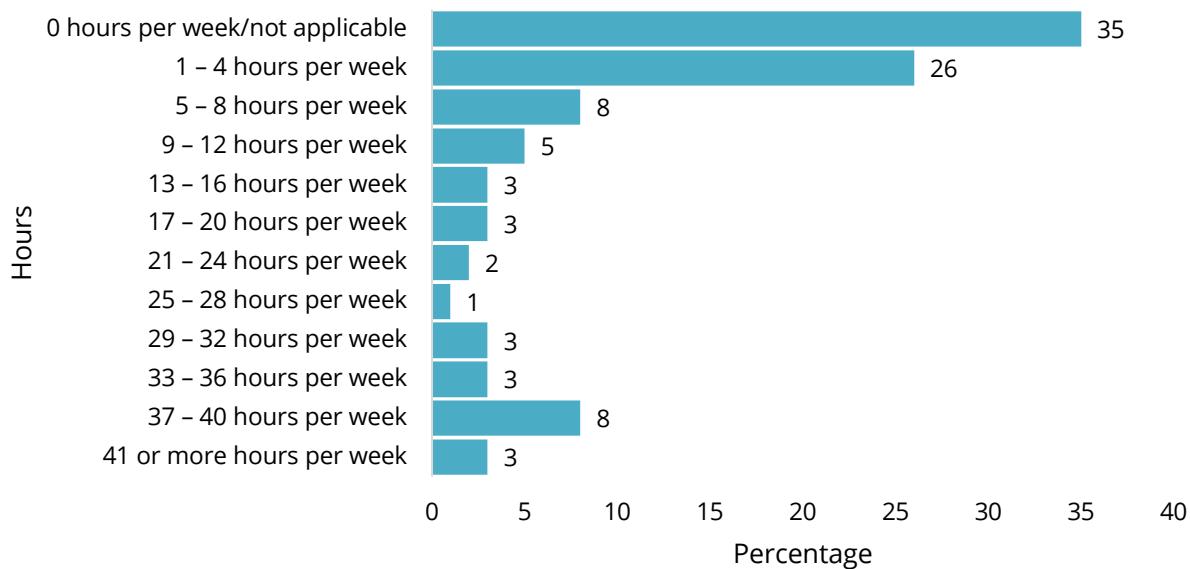
## Telehealth services

The prevalence of telehealth used by APRN providers is depicted below along with a breakdown of hours used.

**% providing telehealth services, APRN workforce survey, Utah, 2024**



## Telehealth hours, APRN workforce survey, Utah, 2024



The ratio for responding APRN providers working hours versus hours spent providing telehealth services was found to be 30:10. This means that the average APRN respondent works an average of about 30 hours a week and provides an average of 10 hours of telehealth a week. Note that these are averages due to the responses being in range format (such as 21-24 hours worked a week).

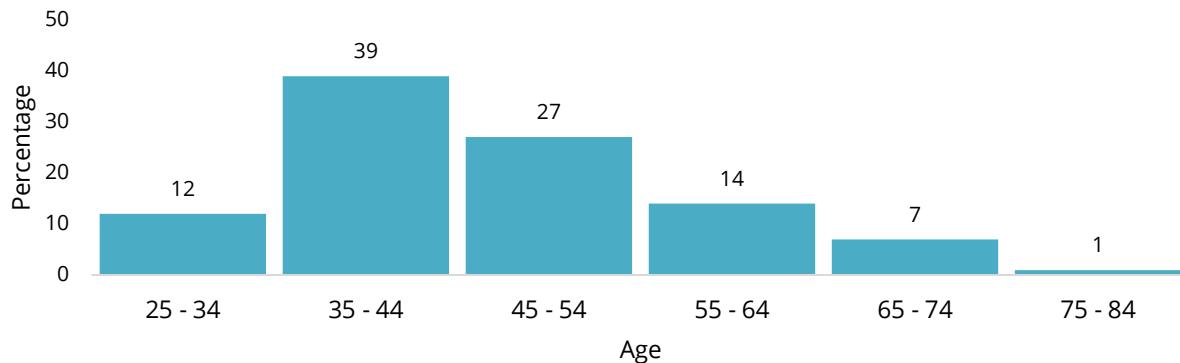
## Demographics

*The following section includes practitioner survey response information on demographic information such as age, race/ethnicity, and sex/gender.*

### Age

The age of the provider workforce is important to consider in anticipating supply levels.

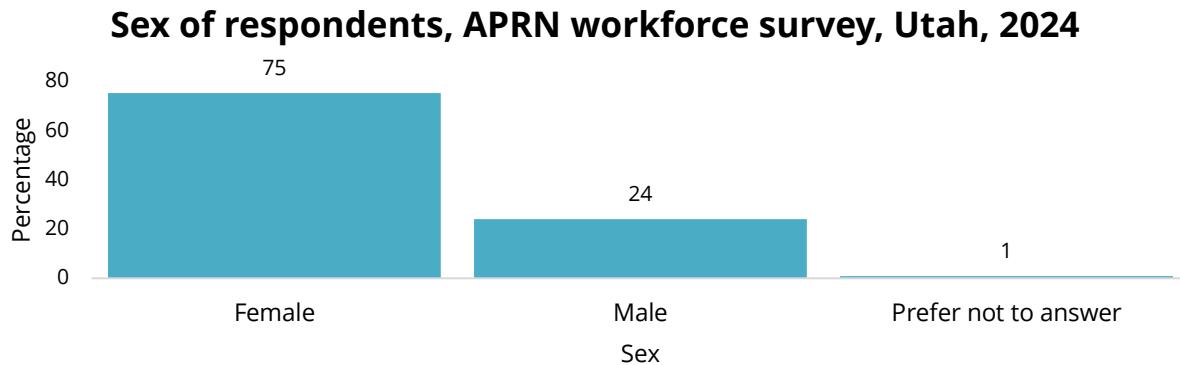
## Age of respondents, DOPL, Utah, 2024



Age data comes from DOPL and not from the survey. Age is calculated from determining if the day of the birth date is before the date the survey was made available.

## Sex and gender

Sex is an important characteristic to consider due to patient-provider relations as it can impact patient experiences. Sex and gender interact in a variety of ways that can affect patient health outcomes (WHO, 2021).

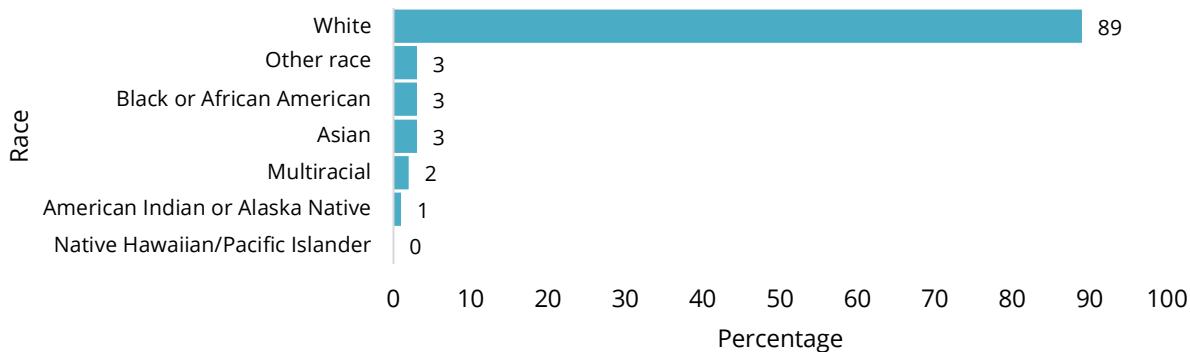


75% of respondents identify as female and 24% identify as male which is very similar to the 2022 survey results.

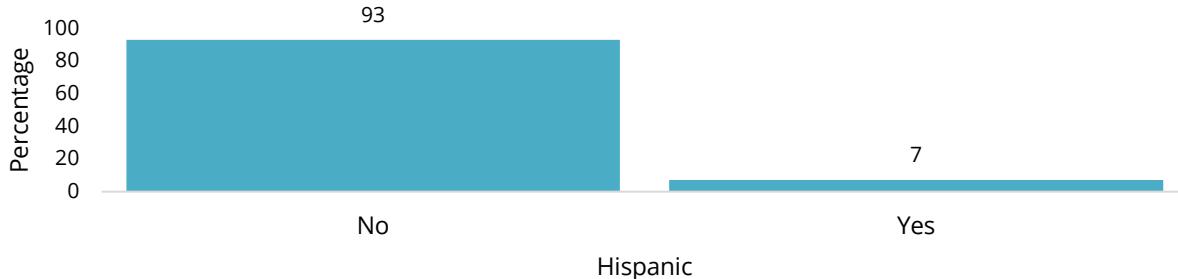
## Race and ethnicity

Similar to issues of sex and gender, race and ethnicity are important to consider when analyzing provider workforce demographics (Togioka, et al., 2024).

## Race of respondents, APRN workforce survey, Utah, 2024



## Ethnicity of respondents, APRN workforce survey, Utah, 2024



Multiracial did not appear as a response option but was created for this report by counting respondents who selected multiple racial options.

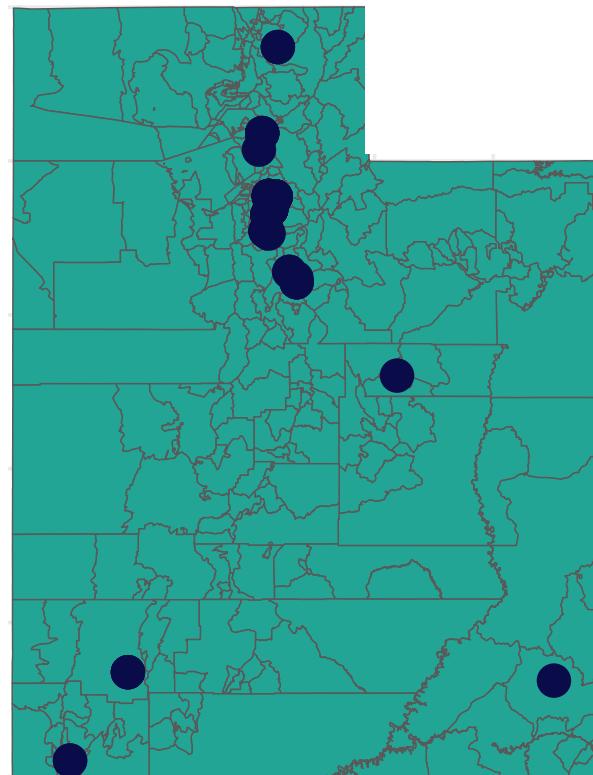
## Education

*This section includes a review of educational programs, graduates, as well as practitioner survey response information on education information, including qualifying education and highest education.*

## Programs

APRN related educational programs located in the state of Utah are mapped below along with counts.

## APRN educational programs, urban institute education data portal, 2024



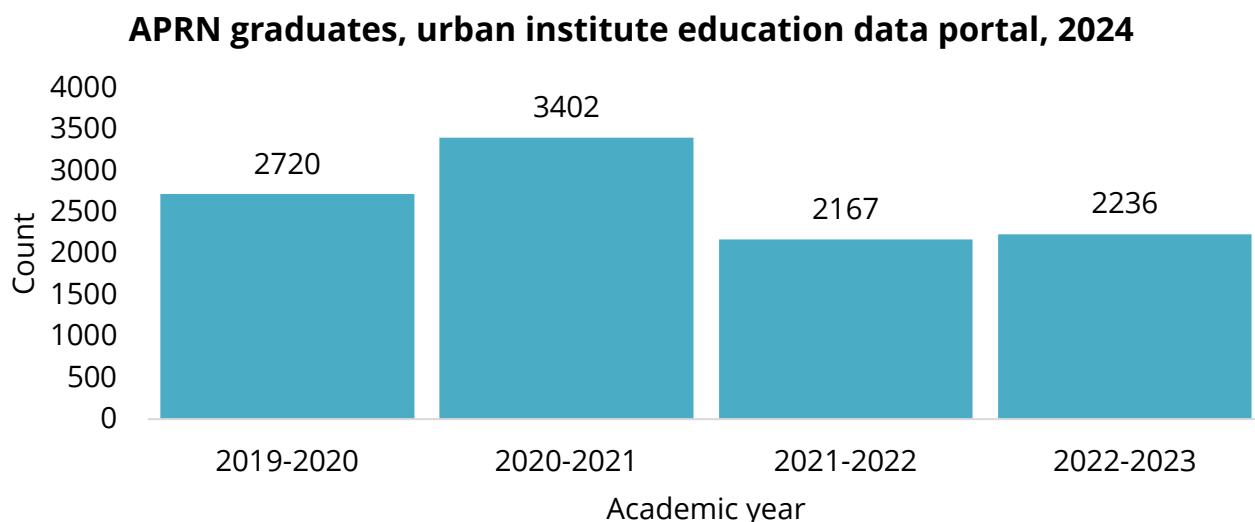
County	School Count	Program Count
Salt Lake	7	40
Utah	3	6
Weber	1	4
Iron	1	3
Cache	1	2
Washington	1	2
Carbon	1	1
Davis	1	1

County	School Count	Program Count
San Juan	1	1

To better approximate programs that produce APRN practitioners apart from other types of nurses, entry level nursing programs were excluded and only those beyond associate degree and equivalent certificate programs such as bachelor and graduate degree curricula were included.

## Graduates

Counts of Utah's APRN related program graduates by academic year are provided below.

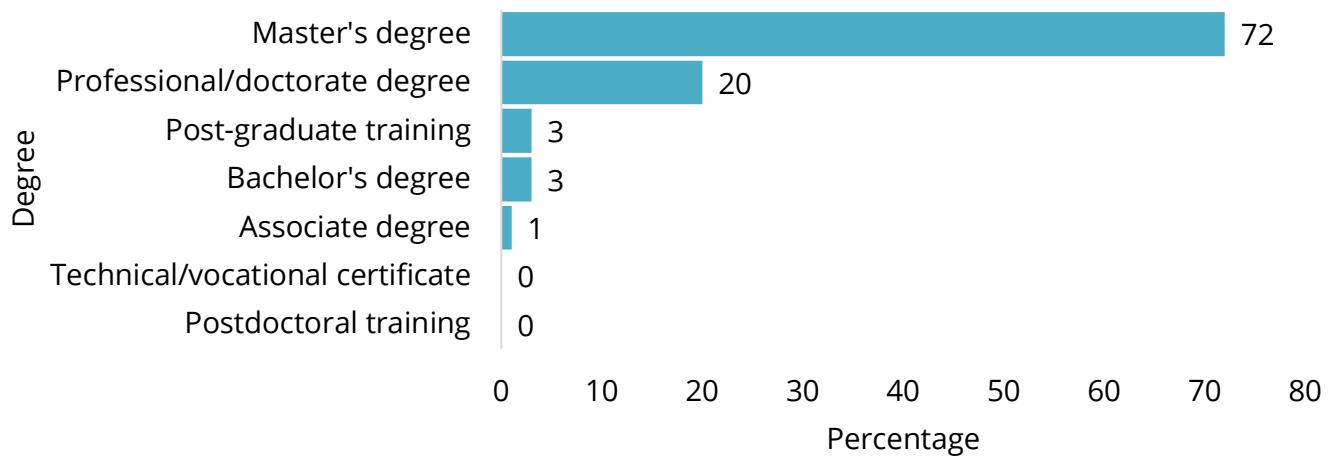


The chart above displays APRN graduates derived from medicine classification of instructional programs or CIP code (51.1201) completions by academic year. While 2022-2023 academic year's number of graduates is lower than the four-year average, it is higher than the prior years' count. Data comes from Integrated Postsecondary Education Data System (IPEDS), via Education Data Portal v. 0.22.0, Urban Institute, under ODC Attribution License. 2023 provisional data files from the IPEDS Data Center, were accessed November 2024.

## Qualifying education

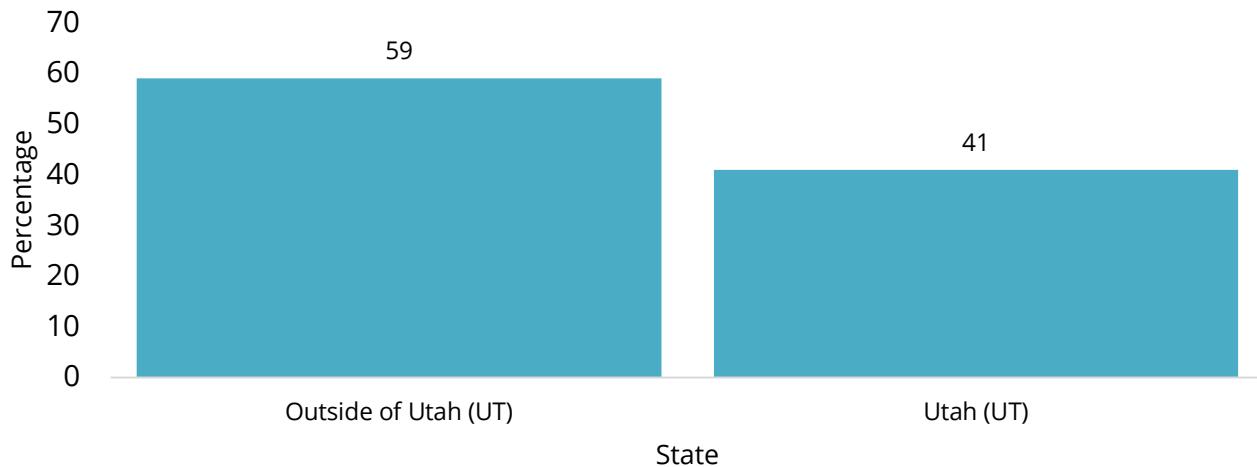
Aspects of providers' qualifying education such as degree and degree location are reviewed below.

### Qualifying degree of respondents, APRN workforce survey, Utah, 2024



There were respondents who indicated they earned their qualifying degree from technical/vocational certificate and postdoctoral training programs, but the percentage values were less than 1%.

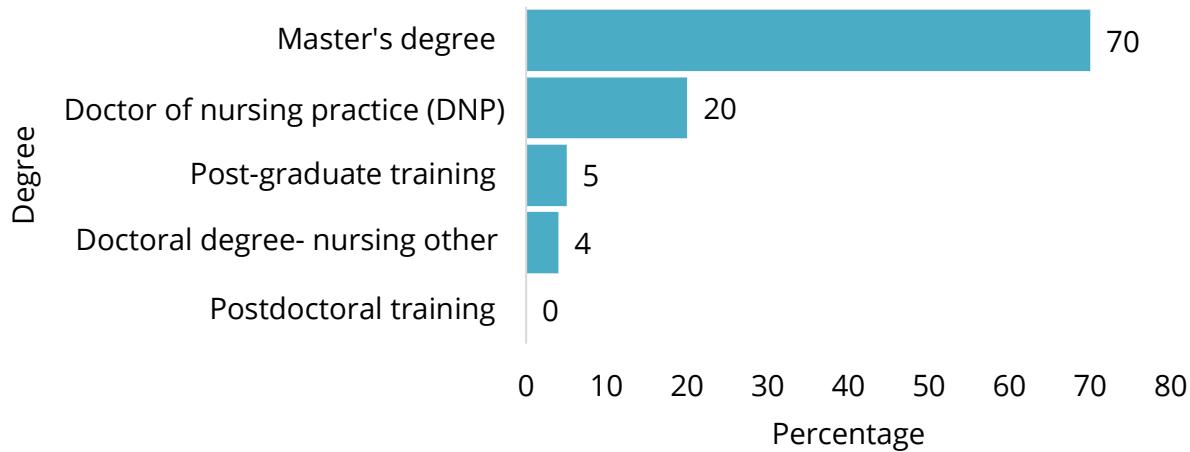
### Qualifying degree inside/outside of Utah, APRN workforce survey, Utah, 2024



## Highest education

Providers' highest education is reviewed below.

### Highest nursing degree, APRN workforce survey, Utah, 2024



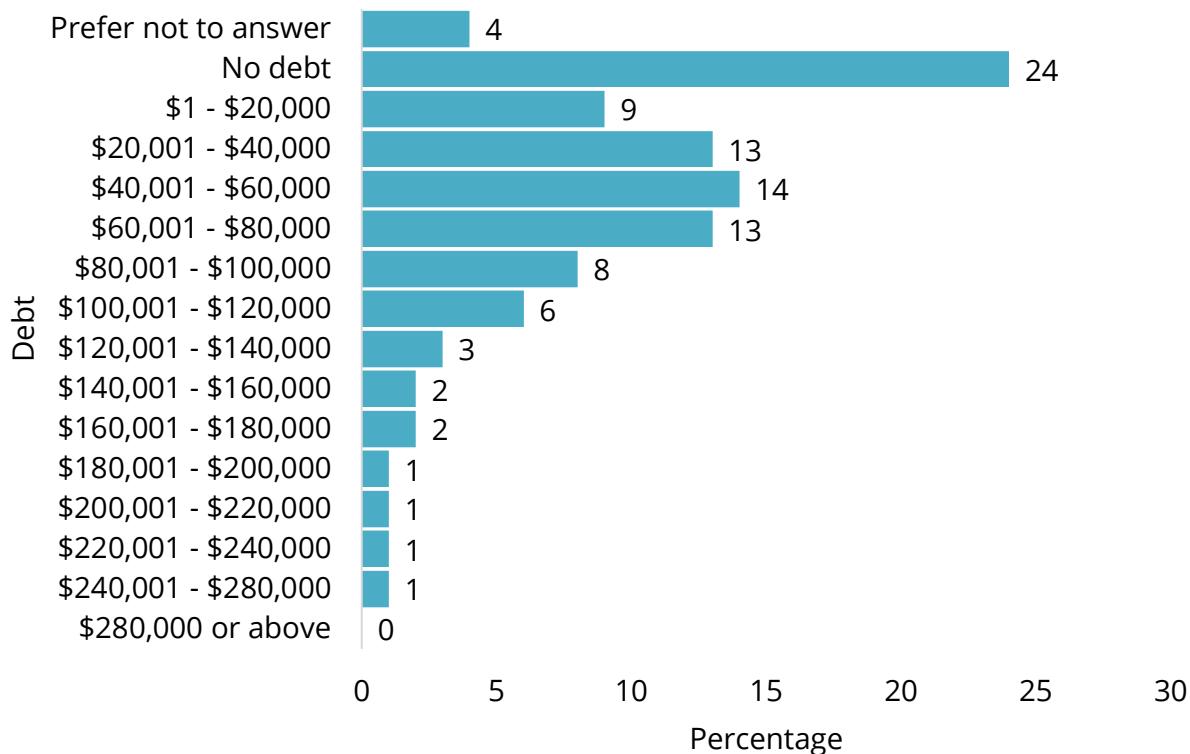
Most respondents indicate having earned a master's degree (70%). There were respondents who indicated their highest nursing degree is postdoctoral, but the percentage value is less than 1%.

## Education debt

*This section includes practitioner survey response information on educational debt.*

Responding providers' educational debt is depicted below. It is important to note that responses were regarding total educational debt at the time of graduation as opposed to their current educational debt.

## Educational debt, APRN workforce survey, Utah, 2024



There was a typo in the \$280,000 or above option as it should have been \$280,001 or above. There were respondents who indicated they have \$280,000 or more in educational debt but the percentage value is less than 1%.

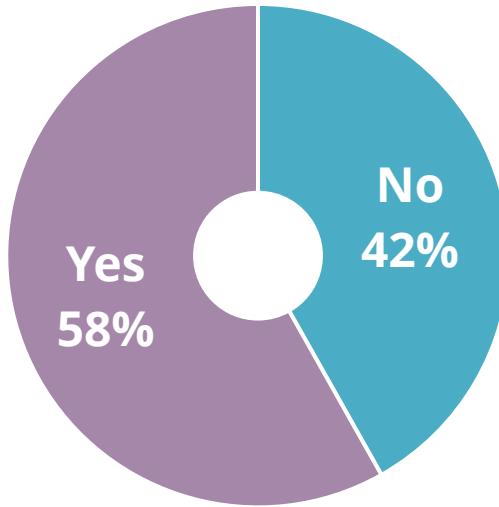
## Employment characteristics

*This section includes practitioner survey response information on their employment such as specialty, role, telehealth hours, precepting status, and patient types.*

### Precepting

The proportion of responding providers who precept is depicted below.

## % precepting, APRN workforce survey, Utah, 2024

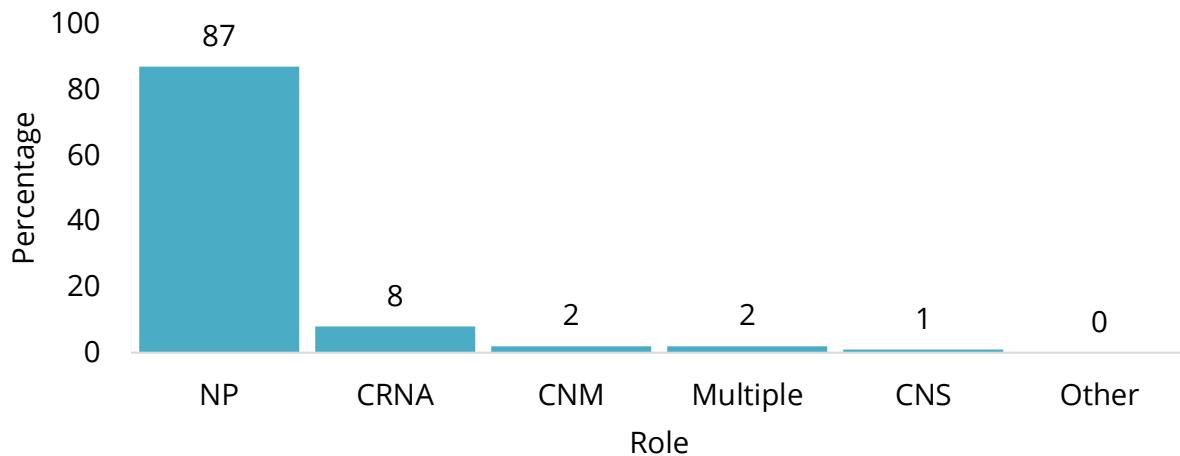


APRN providers who mentor, teach, or instruct a student or new staff member are considered to precept. The donut chart above shows the percentage of responding APRN providers who precept excluding those who responded with prefer not to say, and grouping those who selected not applicable with those who selected no.

## Role and employment type

Responding providers role and employment type is depicted below.

## Role type, APRN workforce survey, Utah, 2024



Multiple did not appear as a response option on the survey but was constructed for this report by counting respondents who selected multiple response options. Also, there were respondents who indicated their role was other, but the percentage value was less than 1%.

## Income

Income data including employment and wages comes from matching APRN providers from DOPL data to unemployment insurance (UI) data from DWS.

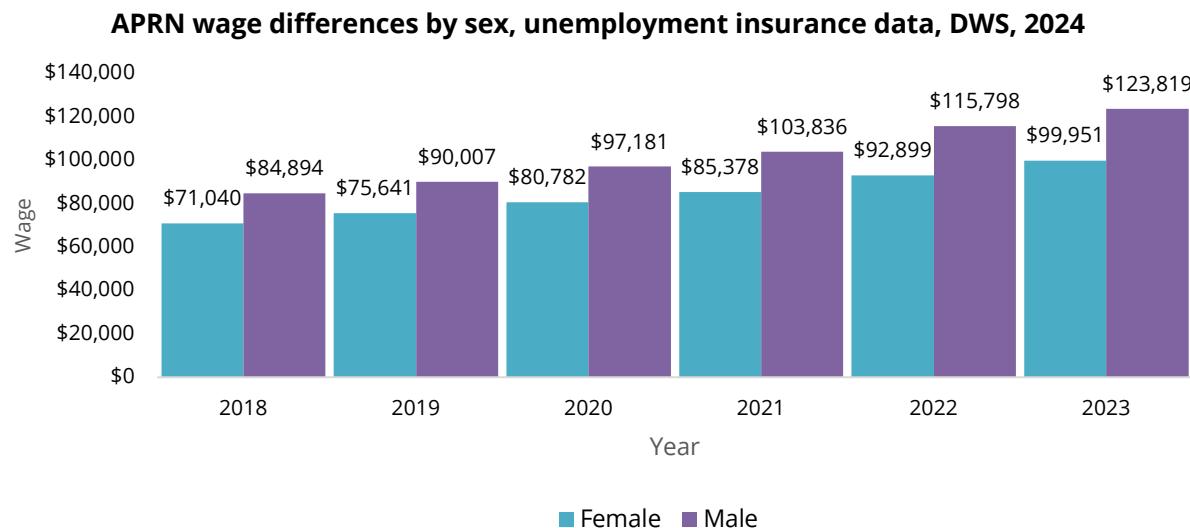
### Income data, unemployment insurance data, DWS, 2024

Year	APRN count	Employer count	Total wages	Average wage
2018	3829	1177	\$ 279,257,304	\$ 72,932
2019	3874	1146	\$ 303,140,806	\$ 78,250
2020	3917	1187	\$ 329,590,351	\$ 84,144
2021	3973	1217	\$ 355,735,354	\$ 89,538
2022	4038	1273	\$ 396,656,869	\$ 98,231
2023	4071	1315	\$ 423,238,950	\$ 103,964

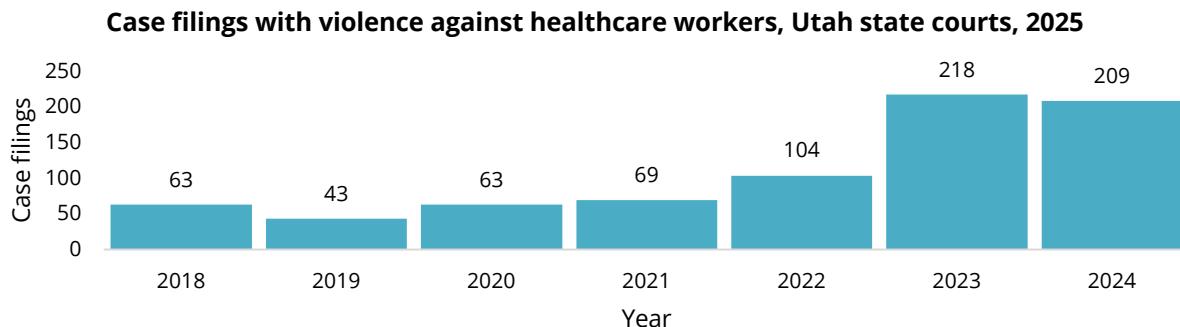
APRN counts are of distinct providers while employer counts are of distinct employers of APRN providers. Total wages are the sum of APRN provider wages while average wage is the mean APRN provider wage. The average APRN wage from UI data increased 43% from

2018 to 2023. However, compared to the national average of \$128,490 (Bureau of Labor Statistics 2023), Utah's average is about 19% lower.

There is a long history of a national sex/gender pay gap (Majumder et al., 2025; Fry et al., 2025; Coillberg, 2025; Criado-Perez, 2019) and that gap is wider in Utah (Kervin, 2022; Alberty, 2023; Majumder et al., 2025). While the causes for lower female pay can be multifaceted, females commonly "provide essential care to family members, including children and adults who need help" and consequently "often face significant financial consequences when they reduce their employment to provide unpaid family care" (Johnson et al., 2023, para. 1 & 5). It is estimated that the costs related to females "providing unpaid care averages \$295,000 over a lifetime, based on the 2021 U.S. dollar value, adjusted for inflation" (Johnson et al., 2023, para. 6).

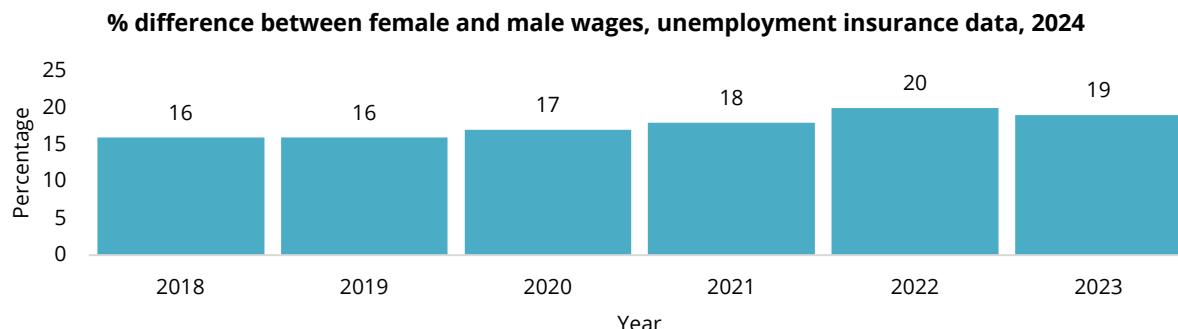


In addition to the issues of lower wages compared to male counterparts and unpaid labor, female healthcare workers face a considerably more dangerous work environment. Female nurses are "subjected to more acts of violence than police officers or prison guards" and "required time off work due to violence four times more often than other types of injury" (Criado-Perez, 2019, para. 33). While the higher rates of violence are alarming, perhaps even more concerning is that such instances are routinely and dramatically underreported as only 12% of workers report violence because of how common and frequently it occurs (Criado-Perez, 2019, para. 38). While there are many different reasons for violence against females, research suggests "wait times as a trigger for violent behavior directed towards staff" (Criado-Perez, 2019, para. 40).



Utah court case filings involving a charge of violence against a healthcare worker has dramatically increased. From 2018 to 2021 there were only between 43 and 69 cases filed per year. In 2022 the count of case filings jumped to 104 and in 2023 it more than doubled with 218. While the rise might not be completely due to more instances of violence but more willingness to file, the workplace for many healthcare staff is dangerous. Using unemployment insurance data to estimate the healthcare worker count for Utah in 2023 (88,383) and Utah court case filings involving charges of violence against healthcare staff, the rate of violence per 100,000 was 247 for healthcare workers in Utah. The Commission on Criminal and Juvenile Justice (CCJJ) estimates the rate of violence per 100,000 Utah residents for 2023 was 232 (CCJJ, 2024). This means healthcare workers are about 6.5% more likely to be subjected to violence. Future research and analysis should look at the proportion of violence directed at female and male healthcare workers. It is also important that the rate of violence on healthcare workers is based on court case filings which likely substantially underestimates the rate as most violence goes unreported.

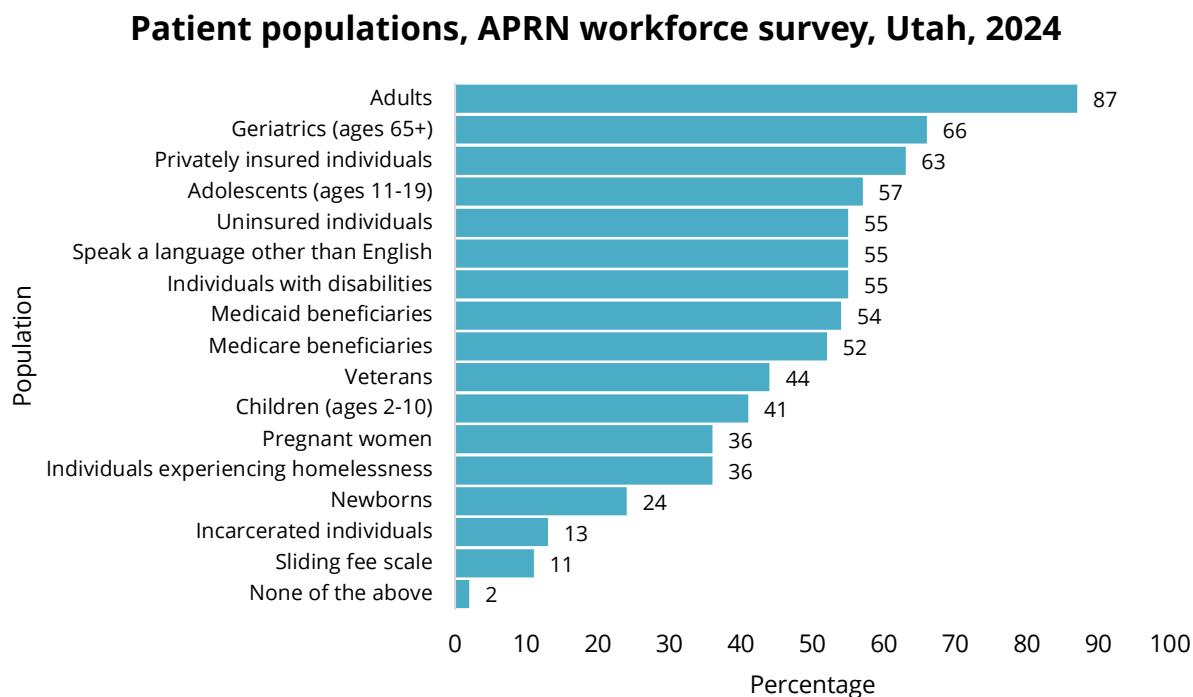
Possible family care and injuries may explain a fraction of the wage penalties females encounter in the workplace but there are many others. While DWS reports that in 2022 female healthcare workers generally only made 51% of male wages (Kervin, 2022), the gap is narrower for APRNs. From unemployment insurance data, the sex wage gap for APRNs is not only substantial but seems to have grown. The female to male wage gap in 2018 was 84%, meaning the average female wage was 84% of the average male wage. However, in 2023 the gap had grown to where the average female wage was only 81% of the average male wage, \$99,951 for females compared to \$123,819 for males, a difference of \$23,868.



From 2018 through 2023, both female and male average APRN wages have increased but they have increased at different rates. The average female wage increased 41% whereas the average male wage increased 46%. While higher wages are welcomed, the different rates of growth in addition to a preexisting 16% difference, helps explain how the female and male wage gap continues and expands for APRNs.

## Patient characteristics

The patient population chart below was derived from a multiple selection (i.e. "select all that apply") option question.



Adults, geriatrics, and privately insured individuals are the most common patient population groups seen by responding providers while pregnant women, the homeless, newborns, those incarcerated, and those requiring a sliding scale fee are the least likely populations to be accepted.

It is important to note that the low rates of providing services to pregnant women and newborns may be in part due to the low response rates among CNMs which was about 39%.

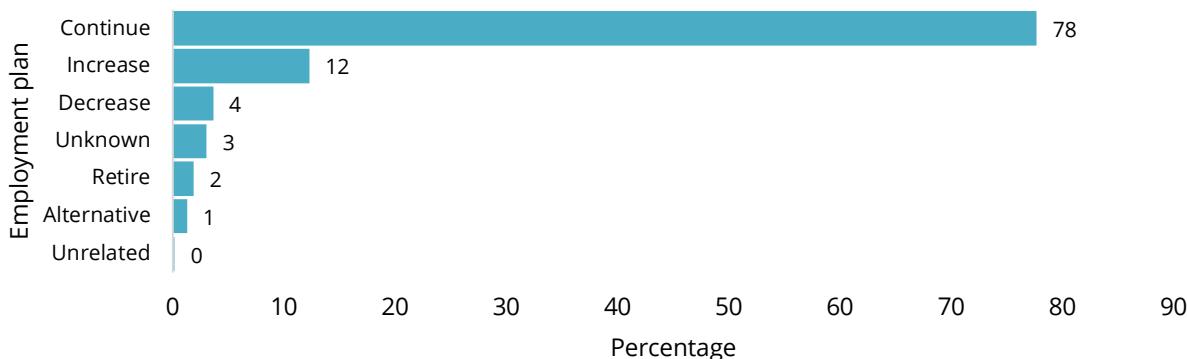
## Future employment

*This section includes practitioner survey response information on employment intentions, including employment plans for the next two years, anticipated changes in hours worked (change in FTE status), and projections.*

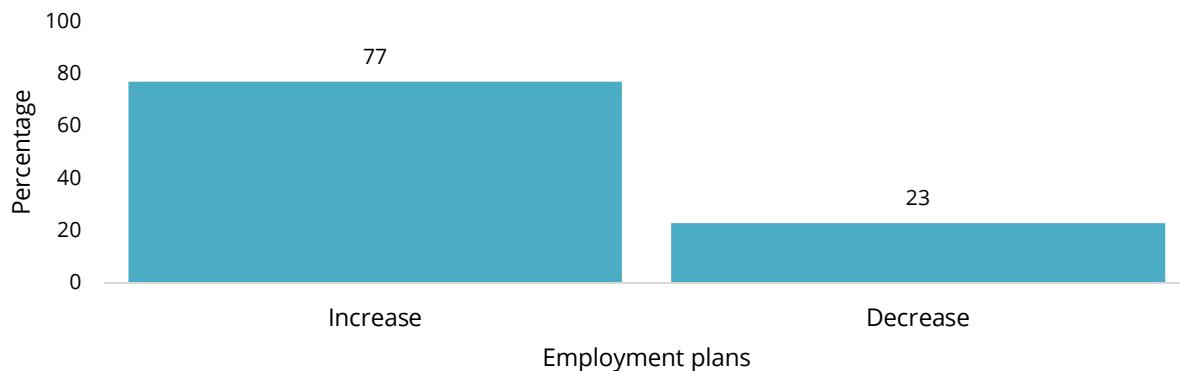
### Two-year employment intentions

The following charts look at responses to future employment plans over the next two years regarding changing the hours they work per week.

**Two-year employment plans, APRN workforce survey, Utah, 2024**

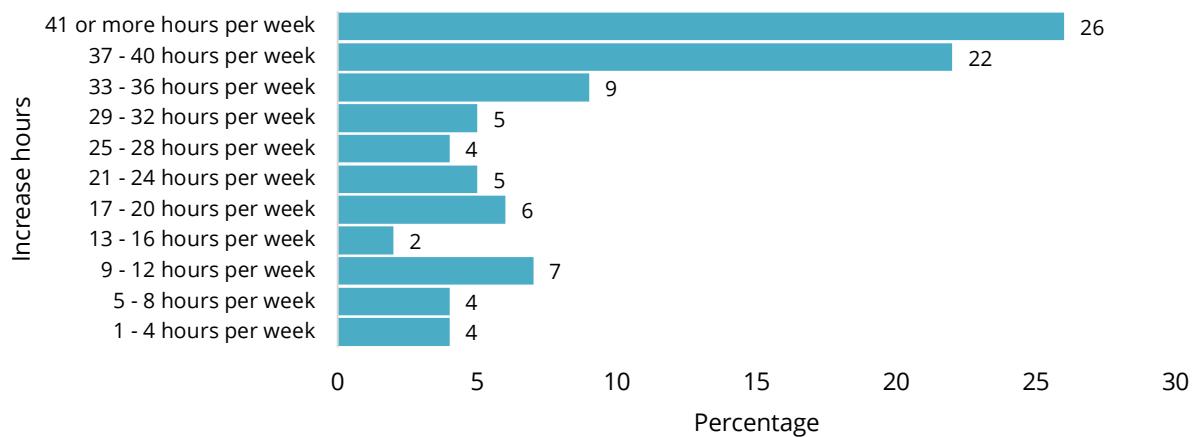


### Increase vs decrease hours, APRN workforce survey, Utah, 2024

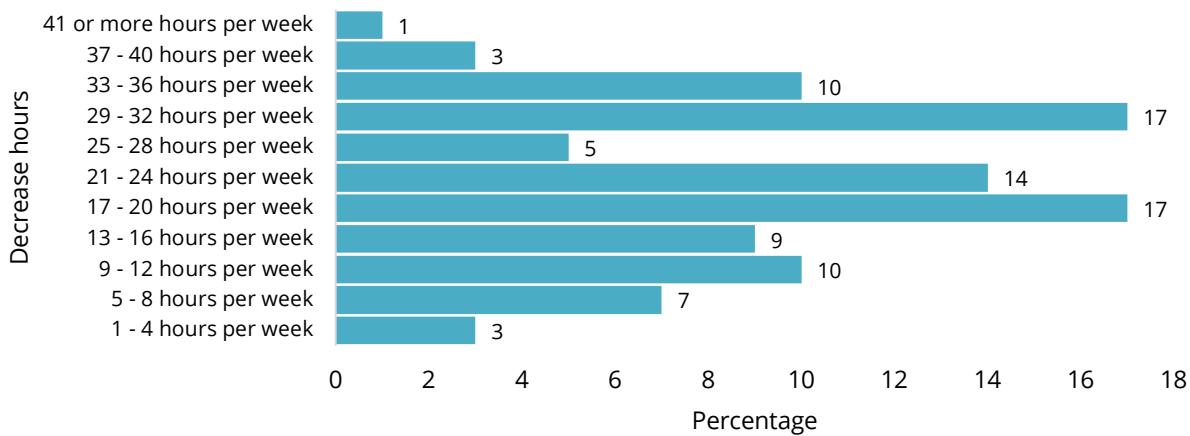


The following charts below look at just those respondents who indicated they plan to increase or decrease their work hours per week and how many hours they plan to work per week following their change.

### Hours for increase plans, APRN workforce survey, Utah, 2024



### Hours for decrease plans, APRN workforce survey, Utah, 2024



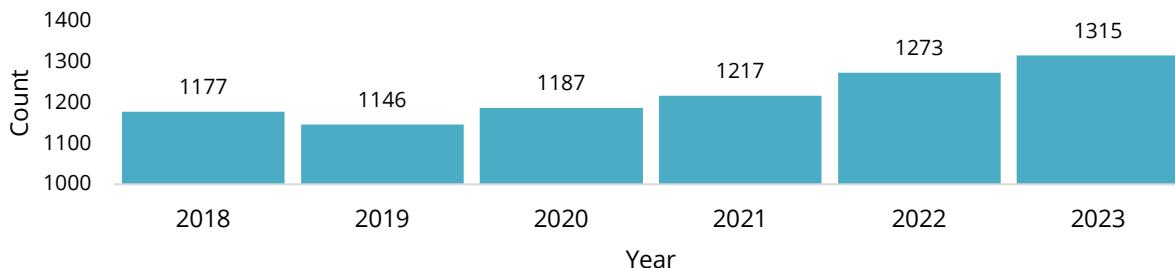
It should be noted the small response rate related to the question regarding change in hours is a consequence of the relatively low number of respondents who indicate they plan to increase or decrease hours. Most respondents (78%) indicate they plan to continue working the same hours as they do currently.

## Workforce indicators

*This section includes workforce indicators and help wanted online data.*

Employer counts of APRN providers derived from unemployment insurance data is depicted below.

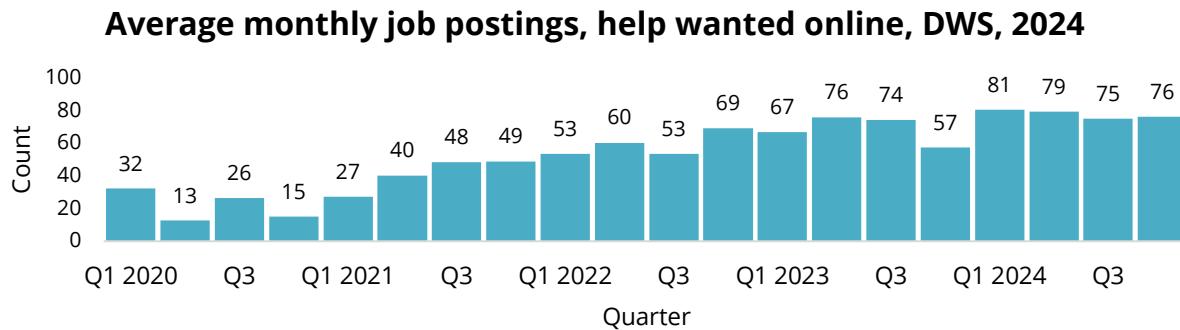
### APRN employers, unemployment insurance data, DWS, 2024



APRN employer counts from unemployment insurance data suggest a 2023 increase of 3% from 2022 with an increase of 12% from 2018. The count of distinct employers has increased every year since 2019.

## Help wanted online job postings

The quarterly average number of APRN help wanted online job postings along with the advertised salary is depicted below.



Data comes from DWS help wanted online job postings. Job postings are received as monthly counts of unique listings. For the purposes of this report, those counts are used to calculate quarterly averages. Advertised wages are averages of wages specified in monthly job postings. Averages or means are based on monthly distinct counts of job postings. Monthly counts are of all distinct job postings and not just monthly new postings. Displaying values of means rather than the sum of counts was decided because there was a perceived higher risk of inflating counts through summing due to the possibility of including duplicates which is avoided by taking the mean. While it is possible that the same job is listed in different months the mean would avoid compounding its representation while the sum would not.



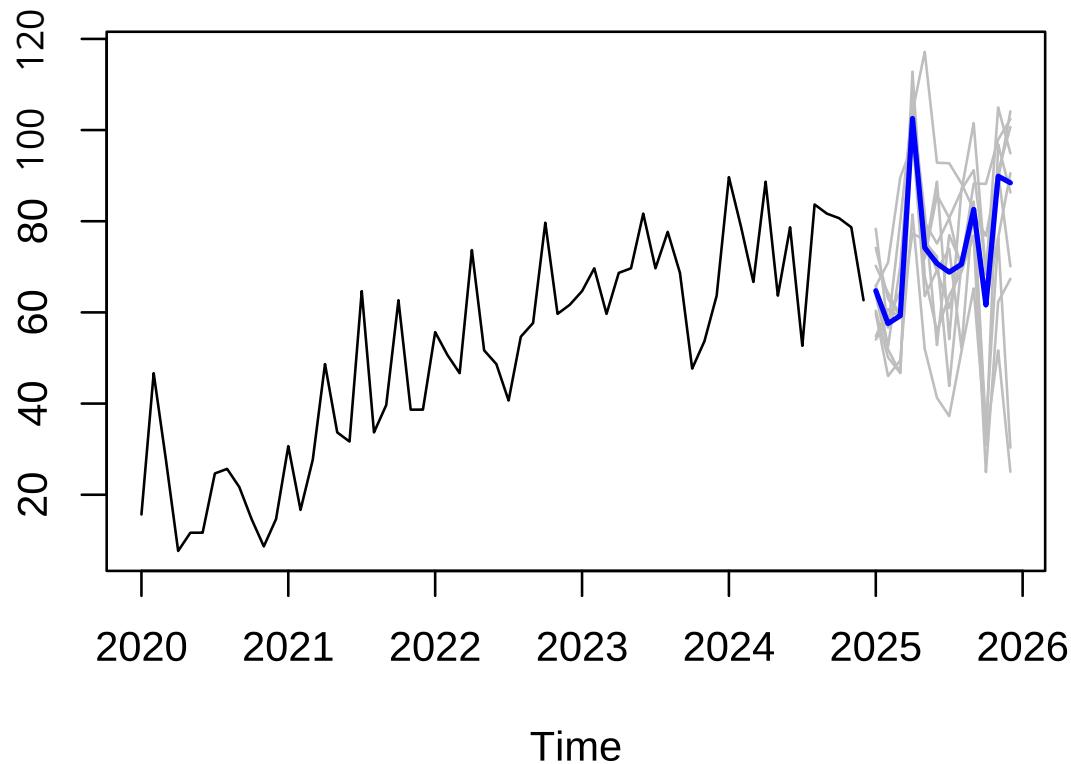
The bar chart above displays the monthly average hourly wage for help wanted online job postings. Not all job postings advertise the salary. Comparing the count of unique job postings to the count of job postings with an advertised salary during 2024, about 49% do advertise a salary. It cannot be determined from the data if the advertised salary is an

accurate representation of pay or wages. It might be accurate for some professions or jobs but might not be for others.

### Forecasting job postings, help wanted online, DWS, 2024

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
65	58	59	103	74	65	69	71	83	62	90	88

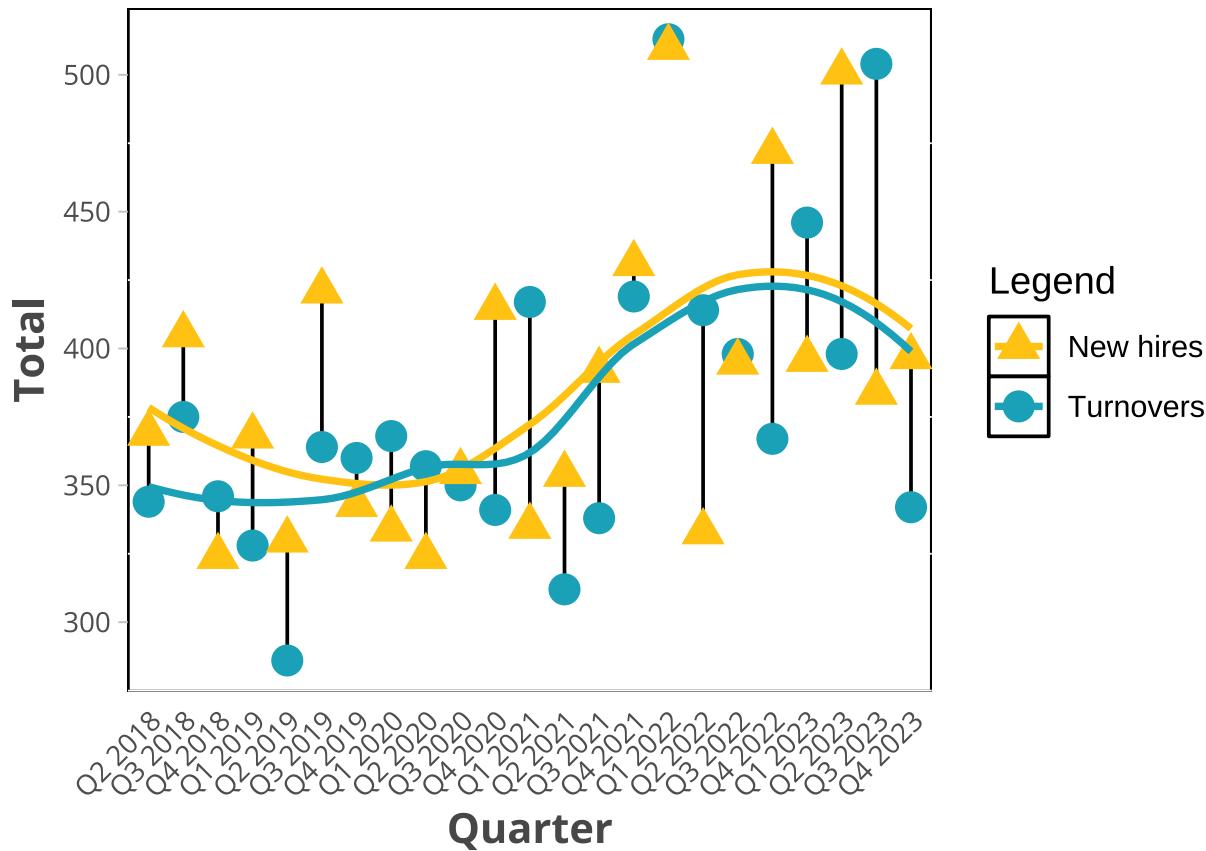
### Forecasts from MLP, help wanted online, DWS, 2024



The graph above displays the projected outlook on APRN job listings. Projections are done using a multi-layer perceptron (MLP) which is a low-level neural network. This architecture is the baseline for many common AI applications today. Grey lines show the various simulations run by the neural network, while the blue line is the averaged prediction over the next year which gives us the most likely scenario. Simulated predictions like these are healthy estimates of future projections, but they should not be taken as concrete truth as unpredictable factors are in play (COVID being a great example).

The MLP projection forecasts a general retraction or correction to 2024 APRN job postings. The MLP projects an early rise in job listings followed by a relatively rapid drop. Although the projection forecasts a bit of a recovery later in the year, there is expected to be a following dip resulting in job posting levels that are expected to be below levels of the previous year and more comparable to those of 2022.

### APRN turnovers and new hires, unemployment insurance data, DWS, 2024



Data may not capture self-employed provider job change counts.

The forecast model is based on the DWS data on unique job postings. The number of APRN job postings are expected to ebb and flow with greater fluctuations than previous years. While jobs are expected to grow during the first part of 2025, the year may contract, experiencing a general decline from the projected high from the beginning of the year.

APRN turnover continues to be a concern as it seems gains made by new hires are substantially mitigated by regularly occurring waves of quarters where turnover is much greater than new hires. The amount of turnover seemed relatively small compared to new hires from 2018 through 2019, but starting in 2020, the amount of turnover increased substantially. However, starting in 2020 the amount of turnover substantially proliferated.

From 2020 through 2023 there have been six quarters where turnover is 10% or more than the new hires. The biggest margin was in the third quarter of 2023, when turnovers were almost a third more than the number of new hires. Turnover trends should be further investigated and researched to gain a better understanding.

## Unemployment insurance data workforce activity

Counts of APRN providers who were hired and those who stopped employment are provided in the table below.

### APRN providers added/loss, unemployment insurance data, DWS, 2024

Year	Added	Loss	Net
2020	1428	1416	12
2021	1512	1486	26
2022	1710	1692	18
2023	1678	1690	-12

Unemployment insurance data is used to determine the general yearly trend of job growth or loss. The added column are counts of new hires while the loss column are counts of providers leaving employment. The net column is simply the sum of the added and loss aggregates. A major limitation to unemployment insurance data since it does not include all providers who work in a self-employed practice. The proportion of APRN providers in an unemployment insurance exemption type practice may increase as they are now allowed to be sole proprietors of their own practice.

### APRN NAICS groupings, unemployment insurance data, DWS, 2024

NAICS group	All	APRN	APRN %
Ambulatory Health Care Services	7814	2558	33
Hospitals	8878	2361	27
Nursing and Residential Care Facilities	4290	419	10
Social Assistance	2857	230	8
Total	23839	5568	23

The table above displays counts of providers by NAICS groupings which is the North American Industry Classification System used by federal agencies to analyze business data. The column named all includes all waged labor while the APRN column is simply APRN providers, excluding all other types of healthcare providers. While most healthcare labor is employed in hospital settings, most APRNs work in ambulatory health care where they make up nearly a third of the labor force and more than 26% of hospital setting employees. A majority of APRNs (88%) are employed in either hospital or ambulatory care settings.

It is important to note that while the analysis counts distinct APRN providers by year and NAICS group, there is some double counting when an APRN provider changes employment with different NAICS codes. For example, a worker may have started a year employed in a hospital setting but later in the year moved to an ambulatory care setting. That worker in the above table would be counted once in each setting during the year in question. There seems to have been a fair about of labor movement as the sum of APRNs across NAICS groups is 5,568 although there were only 4,537 unique APRN providers or individuals.

# Conclusions

The workforce survey data is a product of non-probability samples and therefore inferences and generalizing to non-respondents, other populations, or other healthcare provider groups is not appropriate or valid.

More robust and generalizable results can be produced though shifting survey methods toward probability or random sampling. However, compared to previous health workforce profession surveys the 2024 iteration observed greater overall response rates and improved item response rates which improves the quality of analysis.

While Utah's APRN provider to 100k population rate compares favorably to national and other state estimates and the vast majority of APRN survey respondents plan to continue working the same hours they are currently work over the next two years, almost 6% plan to reduce their hours or retire.

Although rural counties have fewer APRN providers compared to more metro or urban areas, when controlling for county population, the rates of responding survey providers for many rural counties is generally comparable to more populated counties.

APRN turnover continues to be a concern as it seems gains made by new hires are substantially mitigated by regularly occurring waves of turnover. Quarterly measures of new hires and turnover highlights the gap grew substantially from 2020 through 2023 peaking in the third quarter of 2023 where turnovers were almost a third greater than the number of new hires. Additionally, the average annual wage for a APRN provider in Utah is 19% less than the national average. Lastly, the 2023 average female APRN wage is 81% of the average male APRN wage, \$99,951 compared to \$123,819, a difference of \$23,868.

Pregnant women and newborns can face more restrictions to accessing care than other patient populations for two reasons. Few APRN respondents report providing care to them and compared to APRNs there are far fewer CNMs. Of the response population, only 3% had a CNM license. These limitations can be exacerbated in more rural areas and among patients experiencing a deficiency in resources or support.

# Methodology

Convenience or non-probability sampling is used as survey participation was voluntary and all practitioners who were eligible for online renewal were offered the survey during their license renewal process. Non-probability sampling is a method of data collection that does not use probability sampling.

Survey participants were prompted to enter their license number to access the survey. However, the license number field accepted any entry. As a result, it was decided that a valid license number and one question response would be the minimum threshold for inclusion in the survey database and analysis. It was observed that invalid license numbers can introduce bias, as the missing data might represent a distinct group that could potentially skew results. Additionally, many statistical methods require complete data for accurate calculations, interpretation, and analysis.

There are considerable limitations to non-probability sampling. Non-probability sampling is typically not representative of the population in question and quantities are unlikely to be adjusted using inclusion probabilities because they are not known (Boyd, et al., 2023). Non-probability sampling is susceptible to selection bias because some members or groups are more likely to participate or be included than others (Lucas 2014).

## Supply survey

Questions were asked about practitioners' Utah status, practice characteristics, demographics, employment plans, and patient population types.

## Objectives

The HWAC has developed and adopted, with support from the Data Subcommittee, the Utah cross-profession minimum data set (UCPMDS). The UCPMDS is the underlying set of questions covering the highest priority data elements needed for health workforce planning throughout Utah.

Seven national healthcare regulatory organizations worked with Veritas Health Solutions, a consultant in health workforce data, policy, and planning, to create the UCPMDS. The intent of the UCPMDS is to standardize certain information captured from various health professions to support within-profession and between-profession analyses to better inform health policies and strategies. The UCPMDS serves as a fundamental data system, upon which individual profession-specific tools are being developed and implemented into the re-licensure process.

Profession-specific surveys are being created for all licensed health professions. They are optional and are being implemented into the application process through the Division of Professional Licensing.

## Target population

All DOPL APRN related licenses were included in the license renewal process. APRN related license types include:

- APRN controlled substance
- APRN
- APRN without PP
- Time limited APRN
- Volunteer APRN controlled substance
- Temporary APRN intern
- Volunteer APRN
- APRN - temporary
- APRN-CRNA controlled substance
- APRN intern without PP
- APRN intern
- APRN-CRNA without PP
- Temporary APRN- CRNA without PP
- Time Limited APRN-CRNA without PP
- Certified nurse midwife

## Response rates

Observing the count of eligible practitioners provided by DOPL, the survey response rate was approximately 51%. The following item response rates are based on those who provided a valid license number and responded to at least one question rather than those who were eligible to receive the survey. Accompanying the item response rate is the question text. The question text displayed is as it appeared on the survey instrument.

Number	Text	%
1	What is your sex?	99.97
2	What is your race? Mark one or more boxes.	99.60
3	Are you of Hispanic, Latina/o, or Spanish origin?	99.46
4	What type of degree/credential first qualified you for this license?	99.53

Number	Text	%
5	What year did you complete the education program/degree that first qualified you for this APRN license?	99.29
6	Where did you complete the education program/degree that first qualified you for this APRN license? (Note: for online programs, please select the location where this program was housed).	99.19
7	In which city & country did you complete the education program/degree that first qualified you for this APRN license?	0.03
8	What is your highest level of nursing education?	99.16
9	What year did you complete your highest level of nursing education?	98.92
10	What is your highest level of non-nursing education?	96.27
11	What year did you complete your highest level of non-nursing education?	94.62
12	Please indicate your APRN role.	98.72
13	What is your employment status?	99.23
14	What best describes your employment plans for the next 2 years?	99.03
15	If you previously indicated you plan to increase or decrease hours in a field related to this license in the next 2 years, please estimate the total number of hours per week you expect to work after the change. If this does not apply, please select not applicable.	16.77
16	Of the hours per week spent in direct patient care, estimate the average number of hours per week delivering patient care via telehealth.	97.55
17	Please indicate the population groups to which you provide clinical services. Please check all that apply.	98.12
18	Which of the following best describes your primary specialty/field/area of practice, in which you spend most of your professional time?	98.42
19	Which of the following best describes your secondary specialty/field/area of practice?	91.77

Number	Text	%
20	What is your primary practice location? If this does not apply, please select "N/A".	88.84
21	Which of the following best describes your current employment arrangement at your principal practice location?	97.45
22	Please identify the role/title(s) that most closely corresponds to your primary employment/practice type.	97.41
23	Which of the following best describes the practice setting at your primary practice location? If this does not apply, please select "not applicable".	96.88
24	Estimate the average number of hours per week spent at your primary practice location. If this does not apply, please select not applicable. Does not include time on call.	96.74
25	Estimate the average number of hours per week spent IN DIRECT PATIENT CARE at your primary practice location. If this does not apply, please select not applicable.	96.77
26	What is your secondary practice location? If this does not apply, please select "N/A".	54.10
27	Which of the following best describes your current employment arrangement at your secondary practice location?	74.66
28	Please identify the role/title(s) that most closely corresponds to your secondary employment/practice type.	72.72
29	Estimate the average number of hours per week spent at your secondary practice location. If this does not apply, please select not applicable. Does not include time on call.	61.16
30	Estimate the average number of hours per week spent IN DIRECT PATIENT CARE at your secondary practice location. If this does not apply, please select not applicable.	61.22
31	Please indicate the amount of total educational debt incurred for your highest nursing degree (at time of graduation, excluding pre-APRN and non-education debt).	95.63

Number	Text	%
32	Have you mentored/precepted students within the last two years?	96.67

## Data preparation and analysis

DOPL sends a secure csv file with all survey responses to the HWIC once the re-licensure process is complete. Quality checks are performed including how to evaluate duplicate respondent records, questions with multiple responses, and null-type values. Only participants from respondents who replied to a question and provided a valid license number are included in analysis.

## Education data

Graduation counts and programs comes from Integrated Postsecondary Education Data System (IPEDS) Graduates data. Urban Institute Education Data Portal (UIEDP) API directory: <https://educationdata.urban.org/documentation/colleges.html#ipeds-awards-by-6-digit-cip-code>.

Additional API information is available at: <https://urbaninstitute.github.io/education-data-package-r/>

## Demand data

Unemployment insurance analysis is based on data captured through the Utah Department of Workforce Services' unemployment insurance program. Employers pay unemployment taxes based on the wages earned by their employees. A data sharing agreement is in place that allows the Health Workforce Information Center to request data for individuals found in healthcare workforce professional licenses.

DWS unemployment insurance data has limitations. Notably the data contains an industry code and employer name but does not specify geographic area, job title, or scope of work performed by the individual. The data indicates a provider was employed in a healthcare related industry based on the North American Industry Classification System (NAICS) code, which all start with 62. In addition, self-employed healthcare workers like those in private practice do not report their wages since they do not pay into the Utah unemployment insurance program.

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# Appendix A - survey tool

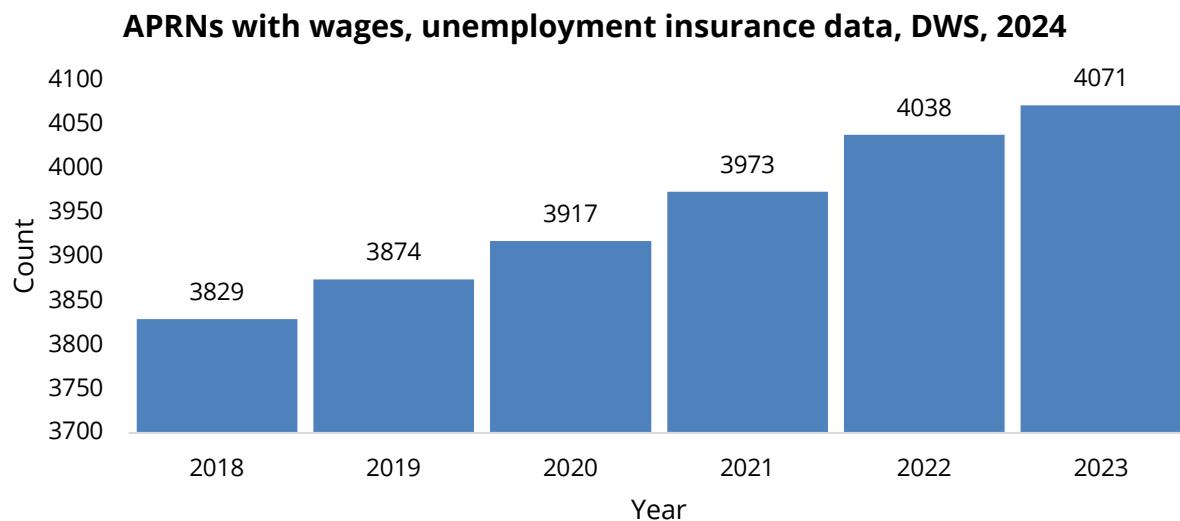
Accessible at:

[https://ruralhealth.utah.gov/wp-content/uploads/APRN\\_-profession-specific-survey-HWAC-adopted-.pdf](https://ruralhealth.utah.gov/wp-content/uploads/APRN_-profession-specific-survey-HWAC-adopted-.pdf)

# Appendix B - alternative counts

## Unemployment insurance (UI)

The following are counts of APRNs from DWS's unemployment insurance data. Unemployment insurance data includes employees of businesses with at least one person or those that have paid wages of \$1,500 or more in a quarter.



The data shows there were 4,537 APRN providers between 2018 and 2023 with the yearly count increasing every year with 3,829 in 2018 and 4,071 in 2023.

## National Plan and Provider Enumeration System (NPPES)

The following counts are of APRNs from the National Plan and Provider Enumeration System (NPPES). NPPES serves as the national system designed to assign unique identifiers to health care providers and health plans who apply for the National Provider Identifier (NPI). NPIs are used across the health care industry and government health care programs.

### Count of APRN related licenses, NPPES, 2024

License name	NPPES count
APRN	3133

## Count of APRN related licenses, NPPES, 2024

License name	NPPES count
APRN controlled substance	186
APRN-CRNA without PP	181
APRN intern	76
APRN - temporary	18
APRN-CRNA controlled substance	18
APRN without PP	7
APRN intern without PP	1
CNM	146
Total	3766

There are 3,766 individual APRN providers including CNMs with a Utah license located in Utah. To verify NPPES results had valid Utah licenses the results were matched to DOPL licenses, validated the last four digits correspond to those of APRN related license types, and had a registered practice location in Utah.