POST-COVID HEALTHCARE WORKFORCE CHALLENGES IN WASHINGTON STATE

Seattle Jobs Initiative and SEIU
Healthcare 1199NW Multi-Employer Training & Education Fund

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Elodie Marlet, PhD,
Eileen Calderon, and
Kathleen Carson, PhD

Executive Summary

The healthcare workforce has been under extraordinary pressure for many years, which was only exacerbated by the pandemic. To assess the state of the workforce, the Washington Workforce Training & Education Coordinating Board, the Washington Center for Health Workforce Studies at the University of Washington, the Health Workforce Council, the Behavioral Health Workforce Advisory Committee, and the Center for Nurses have conducted several surveys, employers and healthcare workers. Their findings point to consistent stresses across the workforce.

Nursing

Nurses, particularly middle-skills nurses (e.g., LPN and RNs) are in high demand across all healthcare settings. Long-term care, assisted living, health centers, clinics, and small hospitals have difficulty competing with large hospitals and nursing agencies for both recruitment and retention. These facilities' ability to offer competitive pay, sign-on bonuses, referral incentives, and other financial incentives is constrained by reimbursement rates.

The pandemic has led to a more flexible provision of care. First, is the rapid increase in telehealth. This demands a new set of skills and regular access to adequate technology to provide this care. Second, the shortage of healthcare workers has required that workers, particularly nurses, take on aspects of care and patient management they were not responsible for before the pandemic.

Nurses' mental health has suffered during the pandemic, with a spike in the number of nurses contemplating leaving the field or retiring. Despite the reported dissatisfaction and a short-term dip in active licensed nurses in 2020, their number has rebounded and continued to grow in 2021 and 2022.

Primary Care Clinics

In addition to difficulty recruiting nurses, primary care clinics have consistently reported that Medical Assistants are the most in-demand positions. MA pay is consistently low, making it difficult to attract people into the occupation. In the pandemic era, the shortage of MAs has constrained clinic capacity more than the availability of providers.

Behavioral Health

Behavioral Health workers face similar pressures to nursing. They are in high demand, but their pay is comparatively low, particularly for advanced degree holders. This is also constrained by reimbursement rates. These issues pre-dated the pandemic, and the pandemic increased the demand for mental healthcare. As a result, workers' caseloads and the complexity of caseloads have increased. Smaller facilities have difficulty competing with larger facilities for staff because large facilities can offer somewhat smaller and less complex caseloads.

Dental Care

Dental clinics are being squeezed by a combination of a high rate of deferred care patients, an increase in workload per patient due to Covid-19 safety protocols, and reduced capacity due to staff shortage, especially dental hygienists. Retention is an issue because there is high competition for hygienists.

Technologist and Technicians

Technologists and technicians are middle-skill jobs that are essential to the provision of care in hospitals and pharmacies. The periodic suspension of non-emergent care in hospitals to accommodate Covid surges

depressed hospital revenue and these positions were particularly impacted. In addition, like in other healthcare positions, the per-patient workload has increased. The potential for a bottleneck at licensing is the primary concern regarding fully restaffing these positions.

Themes

The most consistent themes across the occupations and work settings are:

1. **Long-term staffing shortages are being created by current conditions**. Staffing shortages, high workloads, and Covid protocols meant that many facilities had to reduce or stop offering internships, practicums, and clinicals that are required components of healthcare students' training and education. While training programs have added simulation labs into their curriculum, neither students nor employers express confidence that this is an adequate substitution.

Figure 1. Labor Shortage Contributing Factors

2. **There is a high demand for middle-skill jobs across occupation fields and facilities.**
3. **Employers' ability to compete for new recruits or retain existing employees is constrained by reimbursement rates.** Low pay for large and more complex patient loads is consistent across roles and settings.
4. **Healthcare workers are experiencing a high rate of burnout.** Employers have been offering financial and in-kind incentives to curb attrition rates.

Figure 2. Employers' Initiatives to Retain the Workforce

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1. Introduction

There is a long-standing shortage of healthcare workers, both in Washington state and nationwide. The shortage is due to the labor supply* not keeping pace with increasing labor demand.† The growing regional population and life expectancy have increased the number of new patients, but there has not been a commensurate increase in the number of healthcare workers, particularly nurses. At the same time, workers have been reporting low pay rates, increasing caseloads, and deteriorating working conditions. Many employers identified low reimbursement rates from insurance providers as a leading cause of low salaries.

The Covid-19 pandemic also exacerbated these challenges. First, facilities implemented stringent safety protocols to curb contamination rates at the expense of allowing non-essential personnel (e.g., students in training) on-site. Second, some workers chose to exit the healthcare field rather than comply with the Washington state government's statewide vaccine[1] mandate and the federal government's vaccine requirement in facilities participating in Medicare and Medicaid Services (CMS).[2] Finally, some workers decided to leave the profession out of fear of exposure and passing Covid-19 onto their family and friends. However, despite rather dire numbers of predicted exits from the industry through 2020 and early 2021, recent data show that the number of nurses has recovered and surpassed its pre-pandemic level as of April 2021.

A review of the recent reports about the healthcare workforce in Washington state reveals clear patterns about the impact of Covid-19 on the workforce and its current state. Because nurses account for the largest share of the healthcare workforce, the reports available focus in part or entirely on nursing. Thus, the following review of the literature also focuses primarily on nursing. Some reports were also available that offered insights into Behavioral Health, Dental Care, and Technologists and Technician workers. Future research will explore the labor market data for technologists and technicians,and identify alternatives to nursing for entry-level and middle-skills jobs in the healthcare sector.

2. State of the Workforce

The Washington Center for Nurses partnered with Survey Information Analytics (SIA) to survey 418 nurses with active licenses about their experiences in 2020 to understand the impact of Covid-19 on the workforce and reported the results in June of 2021.[3] While the survey was distributed to a convenience sample,‡ it captures preliminary data of experiences during the early phases of the Covid-19 pandemic.

Some of the important and potentially long-term effects identified from the survey responses include:

- 51% of participants were laid off or furloughed from one or more nursing/healthcare job
- 42% thought about or made plans to leave the nursing field

* The number of nurses available for hire including those who have recently separated from an employer but remain in the field and those who have graduated from a training program.
† The number of positions, typically proxied by the number of positions advertised as vacant and how long they remain vacant.
‡ In a convenience sample, participants are easy to access but do not necessarily represent the entire population, potentially leading to biased survey responses.

- 67% agreed or strongly agreed that their employer provided more telehealth nursing services during the pandemic than pre-pandemic services.[3(p5)]

The 2020 Health Workforce Council confirmed a growing short-term and long-term demand for healthcare workers. One key point is the need for qualified behavioral health workers. The report indicated "barriers to educational attainment, professional recruitment, and long-term retention."[4(p14)]

As a result of the pandemic, 42% of surveyed nurses thought about or planned to leave the field of nursing. Twenty-four percent retired or thought about retirement earlier than they planned. [3(p11)] Forty percent made a career change out of nursing for better pay or working conditions. Registered Nurses (RNs) were most likely to make a career change during the pandemic (40%), followed by Nurses Assistants Certified (NACs) and Licensed Practical Nurses (LPNs) at 22% and 24%, respectively. The report suggests that Advanced Registered Nurse Practitioners (ARNPs) were less likely to report Covid-19 related impacts on their careers than other nurses.[3(p12)]

The focus groups showed that nurses have a perception that they are viewed as cheap expendable labor, hurting their perception of job security and financial stability.[3(p13)]

When considering the growth of the nursing workforce from 2018 through 2020, there was an increase of 4.9% between August 2018 and August 2019 but a decrease of 0.5% in nurses with active licenses between August 2019 and August 2020. Monthly year-to-year trends in Washington state show that the number of active nursing licenses reached a peak at the onset of the Covid-19 Pandemic in March 2020 at 123,784 licenses. The number of licenses fell by 2% in August 2020 before rebounding to 128,699 in April 2021. This is a 4.1% increase compared to April 2020 and 13% from April 2018.[7(p14-15)] These numbers are encouraging and point to a fast-paced recovery.

3. Nursing

a. Representation

Data from pre-pandemic years show pre-existing racial inequities. A 2019 survey of ARNPs showed that the number of Hispanic/Latinx and non-White nurses was not reflective of the Washington population. This was especially noticeable for nurse midwives in rural areas. Inequities and underrepresentation in the workforce remained despite previous efforts to address them.[3(p29)] The 2019 report of RNs indicated that the occupation has become more representative of the state's demographics than in 2007 but still falls short. Increasing workforce representation could be facilitated decreasing the financial cost of accessing training programs for underrepresented communities and low-income students. The availability of support services is also crucial to encourage students to make the decision to enroll in a training program or help them stay enroll longer and graduate. The lack of childcare availability, transportation, or affordable housing are common factors of concerns among younger and adult students. This would help increase representation in entry-level occupations while ensuring that all workers have equitable access to skill development would facilitate the move to middle and more experienced positions for all.

Increasing Workforce Representation

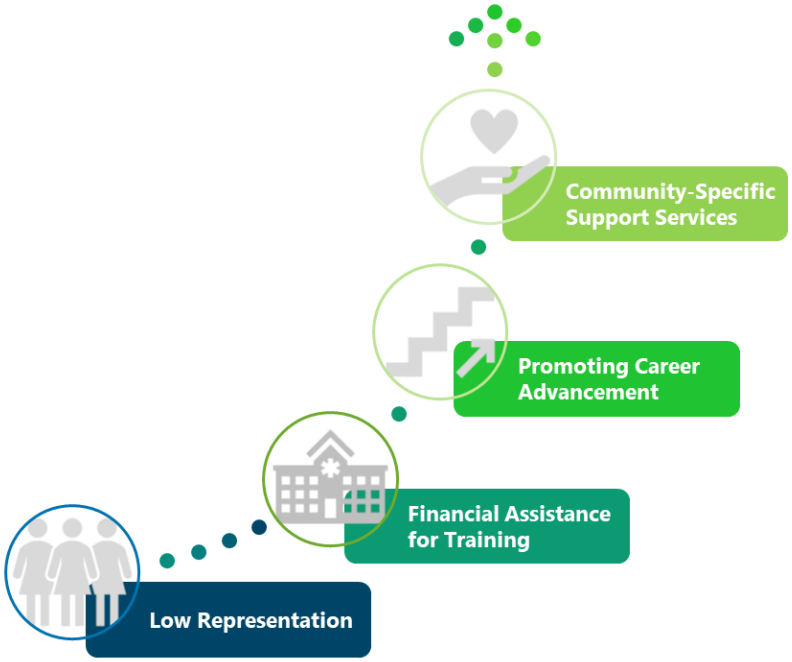

Figure 3. Steps to increasing healthcare workforce representation

2021 data for Washington State from Lightcast (formerly known as Emsi-Burning Glass) shows the discrepancy between earnings and representation in the nursing sector. The percentage of workers from minority communities (Black or African American, followed by Hispanic or Latino, and American Indian or Alaska Native) is the largest for Nursing Assistants (Table 1), but this occupation is also the one with the smallest median annual earnings. On the other hand, Nurse Anesthetists are mostly made up of White workers, with Asian staff making up the most of workers from underrepresented communities. This occupation is also the one with the highest earning potential, with a median annual wage of $249,989 in 2021 in Washington state.

The percentage of workers from underrepresented communities starts declining during the move from Nursing Assistants to Licensed Nurses. The declining trend then accelerates even further when going from Licensed to Registered Nurses, particularly for Black or African American and Hispanic or Latino nurses.

	Median Annual Earnings	2021 Workers	Number of Jobs Created by 2031	% Women	% BIPOC	% Hispanic or Latino	% Black or African American	% Asian	% American Indian or Alaska Native	% Native Hawaiian or Other Pacific Islander	% Two or More Races	% Aged <25 yo	% Aged 25-54 yo	% Aged 55+
Nursing Assistants	$37,116	27,884	1,045	87%	45%	13%	15%	11%	1%	1%	4%	13%	64%	23%
Licensed Practical and Vocational Nurses	$61,032	7,970	676	90%	34%	9%	11%	9%	1%	1%	4%	6%	67%	27%
Registered Nurses	$96,905	65,413	4,219	90%	27%	5%	4%	15%	1%	0%	3%	2%	70%	27%
Nurse Midwives	$121,005	145	10	90%	22%			11%		0%		0%	76%	19%
Nurse Practitioners	$128,605	4,154	1,810	90%	20%	4%	3%	9%	0%		3%	0%	75%	25%
Nurse Anesthetists	$249,989	347	78	62%	15%			8%				0%	70%	29%

Table 1. Worker demographics in entry-level Nursing occupations (requiring less than a bachelor's degree). Empty cells indicate that the number was so small that reporting it would make individuals identifiable.

Diversity among nursing occupations varies across the state as the Seattle Metropolitan Statistical Area (which includes King, Pierce, and Snohomish counties), as well as Yakima and Franklin have the highest share of workers who identify as BIPOC. Discrimination and the lack of diversity and equity in nursing were noted in focus groups. The areas mentioned included accent or language barrier, age, sexual orientation, and race-related discrimination.[3(pp30-32)] Of the 51% of nurses surveyed for this study who reported being laid off or furloughed during 2020, 83% reported that it was Covid-related. Notably, among them, 59% were non-white.[3(p32)]

The Washington State Legislature passed two bills, SB 5227 and SB 5228, to require coursework on health inequities in medical training and diversity, equity, inclusion, and antiracism training and evaluation at higher education institutions. These bills were signed into law in July 2021.[3(p29),5,6] With 7,838 new jobs projected to be created between 2021 and 2031, it is essential to ensure an equitable to nursing careers.

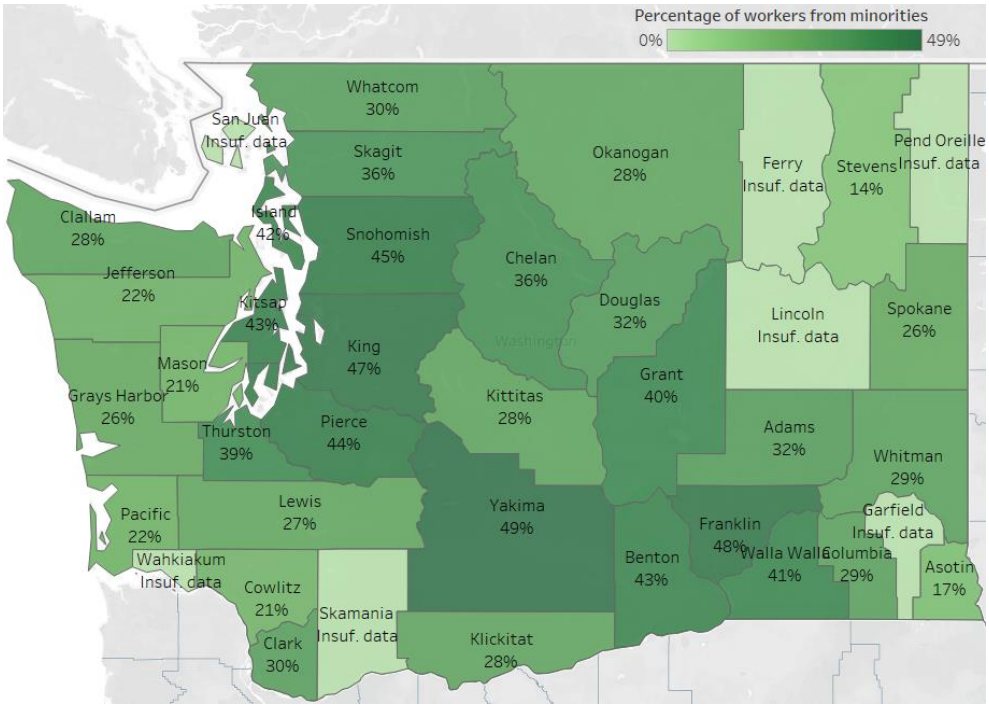

Figure 4. Percentage of workers who do not identify as White among entry-level Nursing occupations (requiring less than a bachelor's degree)

b. Education

Covid impacts on education were significant. Due to healthcare facilities' stringent safety protocols and higher patient loads, practicum placements were particularly limited. Due to this, programs tested alternatives, including clinical simulation. However, focus groups suggested that program directors and students were not as confident in their preparation with this substitution. Some concern seems to be related to differences in simulation quality across training programs. Students reported disappointment about not having "hands-on practice."[3(pp17-18)]

Despite COVID-19 impacting the ability to complete hands-on training, the number of graduates from Licensed Practical Nurse (LPN), Associate Degree of Nursing (ADN), and Bachelor of Science Nursing -

General Education (BSN-GE) programs taking and passing the National Council Licensure Examination (NCLEX) increased by approximately 3% in 2020 when compared to 2019. However, this increase hides a range of dynamics: while the number of ADN exam takers (the largest cohort) increased by about 14%, LPN exam takers (third largest cohort) decreased by 14%, and Bachelor of Science Nursing (BSN) exam takers (second largest cohort) decreased by 6%.[3(p16)]

c. Nurses' Mental Health

According to the WHO, nurses make up 50% of the global healthcare workforce, and many are frontline workers. The pandemic had a significant impact on their mental and physical well-being. Several reports have shown higher levels of depression, anxiety, and stress among frontline nurses than doctors, the general population, and nurses not directly exposed to Covid conditions. Higher levels of stress were reported by those who felt inadequately protected or overworked. Nurses faced shortages of PPE and had fears of infection and transmitting Covid to family or friends.[3(p20)]

Some participants mentioned self-care strategies such as therapy, setting boundaries, and other methods that helped with coping with increased stress during the pandemic.[3(pp20-22)] These findings support recommendations to promote awareness of mental health conditions and symptoms among the nursing workforce and change policies to better support nurses.[3(pp22-23)]

For example, focus groups emphasized the need for employer support, better connection with management, and a more supportive work environment overall to maintain the nursing workforce. [3(pp23-24)] These discussions also highlighted the impact of poor communication and inadequate communication channels on nurses' jobs, mental health, and perception of being heard and valued.[3(pp27-28)]

d. COVID-19's Impact on Clinical Practice

Responding to the Covid-19 crisis demanded a more flexible framework to increase labor supply, maintain manageable caseloads, and reduce burnout. To that end, healthcare agencies implemented a series of changes. For example, the Nursing Care Quality Assurance Commission (NCQAC) authorized LPNs, RNs, and ARNPs to determine and pronounce death (nursing assistant-registered and nursing assistant-certified are not). In addition, the NCQAC also affirmed that RNs and LPNs are qualified to provide care in a supervised injection services (SIS) facility.[3(p28)]

Similarly, in May 2021, the Washington State Department of Health updated the list of authorized providers for the administering of vaccines, including students, out-of-state license holders, and inactive or expired license holders.[3(pp28-29)]

In addition, the rapid shift or increase in telehealth significantly changed work in clinical settings. First, it required additional skills to facilitate patient care via telehealth. Upskilling the extant workforce was a challenge given the need to do it virtually and the current workers' and students' inconsistent access to adequate technology.[3(p29),7] In addition, there was a complex array of employers' preferences, patients' needs and preferences, and patients' inconsistent access to the necessary technology and digital skills that conflicted with many workers' fears of being exposed to Covid-19 and preference for working remotely.

The 2020 Health Workforce Council Annual Report[4] reported challenges such as contacting clients, increased rates of 'no-show' sessions, lack of access to technology, and gaps in digital literacy. However, providing or supporting telehealth was increasingly typical for nurses in 2020. Eighty-four percent of the

Washington Center for Nursing survey's respondents reported engaging in telehealth appointments during 2020, and 67% agreed that this was more than before the pandemic.[3(p33)] Seventy-six percent agreed that they were prepared to provide these services. Fifty-six percent agreed or strongly agreed that they had the resources needed, while 19% disagreed or strongly disagreed.[3(pp33-34)]

e. Demand for Nursing by Facility Type

i. Assisted Living Facilities[8]

In Fall 2021, Assisted Living Facilities reported experiencing worker shortages across all services, despite incorporating financial incentives (e.g., higher wages, sign-on bonuses, etc.) into hiring practices. However, overhead costs and payroll limit incentive amounts. Many institutions in the Assisted Living field reported not being able to compete with larger hospital wages. This led facilities to reassign workers to tasks other than their primary focus, giving workers additional caregiving or general support assignments.

Worker shortage for certified occupations like nurses also means that current staff works overtime. For example, nurses in these facilities worked between 50 and 60 hours per week in Summer-Fall 2021. The worker shortage also creates a vicious cycle. There are not enough workers available to train and supervise students, and current workers experience higher rates of burnout and on-the-job injury, deepening future labor shortages.[8,9]

Facilities have focused their efforts on damage control and curbing attrition rates by ramping up incentives for current workers. These included higher pay, retention and performance bonuses, and gas stipends. However, many workers still left due to burnout, the vaccine mandate, or better pay elsewhere. As a result, vacancies have grown significantly since the beginning of the Covid-19 pandemic, while applications per job advertisement from qualified vaccinated candidates have shrunk by more than half.

Occupations experiencing acute workforce shortages* have changed since the beginning of the Covid-19 pandemic. While Nursing Assistant remains the occupation that takes the longest to fill, Registered Nurse is now the occupation with the second most vacancy days, replacing Licensed Practical Nurse. The latter now takes the fourth position, after Home Health Aides.

ii. Nursing Homes & Skilled Nursing Facilities

Nursing Homes have also experienced an acute healthcare worker shortage. Institutions reported that the lack of staff capacity prevented them from taking in new patients. These patients then remain hospitalized or in the care of family members. Staffing shortage also means that workers' patient load is higher than pre-pandemic. To care for current patients, facilities have had to resort to mandatory overtime, leading to burnt-out staff and decreased quality of care. [9]

This was exacerbated by new state regulations increasing continuous coverage hours from 16 to 24 (nursing homes are now required to have staff on duty 24 hours daily, with a minimum staff-to-residents ratio). As in assisted living facilities, nursing homes and skilled nursing facilities first paused and then sharply reduced the presence of students on-site to comply with Covid-related safety regulations and protocols. Then these facilities' staff shortage has forced them to curtail staff availability for training and supervising students. [9]

* The Sentinel Network uses the number of days a vacancy remains unfilled a proxy to estimate this.

To address the dramatic increase in worker dissatisfaction and burnout due to the increased patient load and mandatory overtime, facilities have also ramped up retention and recruiting incentives, including sign-on bonuses. Facilities report that these incentives have proved fruitless because workers prefer larger hourly wages to one-time bonuses. Some facilities have tackled the issue by providing opportunities for current workers to train for other positions. For example, some nursing assistants can now train as medical assistants or nursing assistants certified. Other programs have created their own licensed practical nurse apprenticeship programs to ensure a pipeline of new workers.[*] [9]

Based on the Sentinel Network's biannual survey of Nursing Homes and Skilled Nursing Facilities,[9] Nursing Assistant and Registered Nurse have consistently been the two occupations with the longest unfilled vacancies on average. In Fall 2021, Licensed Practical Nurse became the second occupation with the longest unfilled vacancies for the first time since Fall 2017. In addition, Occupational Therapist is now third among occupations with the most acute shortage since the beginning of the study period.

This is consistent with the Health Workforce Council's annual report.[10] This report identifies Nursing assistants (NAs), licensed practical nurses (LPNs), and registered nurses (RNs) are the top three occupations with the most vacancies in LTC over the last five years (2016-2020). NAs and LPNs represent the largest occupations in US nursing homes (36%). They face a particularly challenging context, with decreasing labor supply and growing labor demand. The population aged 65-plus has grown rapidly, increasing more than 24% since 2016. At the same time, the number of actively credentialed NACs and LPNs has declined by 4% and 4.8%, respectively. [10]

In Washington State, only 9.6% of RNs work in LTC, compared to 40.1% of LPNs. This is likely attributable to RNs commanding higher wages in hospitals.[10] Helping more LPNs move on to being an RN would help tackle the sector's labor shortage, but it could exacerbate the shortage in long-term care facilities without adequate backfill.

iii. Health Centers, Clinics, and Small Hospitals

In health centers, clinics, and small hospitals, Registered Nurses became the occupation with the most significant shortage during the pandemic, replacing Physicians/Surgeons for the job with the most extended unfilled vacancies. Recent trends indicate that Physician/Surgeon is poised to redeem this first place. Still, Registered Nurses have long vacancies and are in high demand.

iv. Small Hospitals (25 beds or less)

Like the other practices, small hospitals had to limit the new patient intake and increase over time due to staffing shortages, particularly Nurses and Certified Nursing Assistants. Ensuring an adequate pipeline of new workers would require sufficient financial resources earmarked for training programs. The low reimbursement rates from insurance providers are another common complaint from smaller hospitals. Sign-on bonuses have been commonly used throughout the pandemic and have successfully attracted recruits. Some facilities preferred to focus efforts on improving work conditions, reducing exposure to the Covid-19 virus, and promoting quality of life. Facilities have also offered retention bonuses and recognition programs to retain workers and limit resignations due to competition with larger facilities offering higher salaries. Vacancies increased for many facilities, some experiencing a two-fold increase in vacant positions. Early retirement and increased care demand are contributing to this increase. Registered

[*] To be included in survey

Nurses, Medical Assistants, and Nursing Assistants are the occupations with the longest vacancies. Physicians/Surgeons experienced fewer acute vacancies during the pandemic.[11]

4. Health Centers, Clinics, and Small Hospitals

Health centers, clinics, and small hospitals employ a wider array of healthcare workers. They have responded to the staffing constraints by curbing staff training responsibilities, particularly at larger institutions. [11–13]

To attract more candidates, many facilities are now offering sign-on bonuses. Other strategies used include referral bonuses, ensuring quick follow-ups to applications, and increasing sign-on bonuses. However, these strategies are too costly for many clinics, and some report that these do not have a strong impact on recruitment. They cannot increase wages that are limited by low healthcare insurance reimbursements. Larger hospitals poach qualified candidates with more funding and higher pay. [11–13]

Retention initiatives to curb staff leaving because of burnout include offering hybrid work, providing more supervision training, flexible scheduling, and vacation cash-out options. Retention strategies for existing staff are not necessarily financial but often focused on benefits, wellness, and recognition.[11–13]

Still, the staffing shortage is especially acute for health centers, clinics, and small hospitals located in rural areas due to a range of challenges[17(p17)]. First, these regions are less likely to have a strong public transport network, limiting potential students access to training programs. Service providers in rural settings are also already understaffed and may find it difficult to free staff capacity to train and mentor new recruits. Finally, limited funding and scarce community-based support also constrain the development of new training programs and providing adequate support to low-income and underserved students from these rural areas.

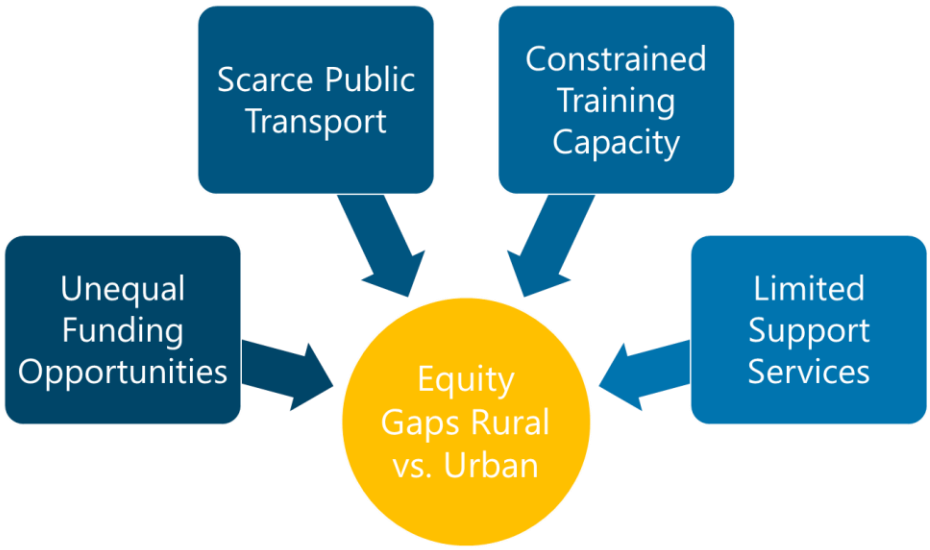

Figure 5. Contributing factors to the equity gaps between rural and urban areas

a. Primary Care Clinics

In primary care clinics, Medical Assistant has been the occupation with the longest vacancies since 2016, followed by Physician/Surgeon. The pandemic temporarily changed workforce needs and challenges as Registered and Licensed Practical Nurse became the occupations with the second and third-longest vacancies.[14]

As in other facilities, staffing shortages and the increased work per patient due to additional Covid-19 safety protocols, particularly among Certified Medical Assistants, have led clinics to reduce elective appointments and prioritize servicing acute care visits. The Covid-19 pandemic has also taken a toll on patients' mental health, as they delayed care at the height of the pandemic and become increasingly frustrated with the general context. This has led to deteriorating working conditions for staff. [12]

Staffing shortage might also be exacerbated in the future as many facilities reported curbing down training activities to face increased workload. Only a handful have been able to keep their training programs, including for Medical Assistants, to ensure a future pipeline of workers.

The primary factors limiting the supply of Medical Assistants are regulatory and structural. First, apprenticeship programs in Washington State can take up to three years, with the first year of apprenticeship training and two years of post-graduation employment. Additionally, experienced candidates from out-of-state must obtain a Department of Health-issued medical assistant credential to be allowed to work in the state. Finally, wages are determined by reimbursements for primary care from insurance companies. However, facilities have long criticized these as being significantly lower than the cost of providing care. Employers are thus calling for relaxing training program requirements and for increasing reimbursement rates from insurance providers.[12]

b. Representation

Orderlies and Medical Assistants have the largest share of workers from minority communities (40%) among occupations in medical facilities in Washington state. The latter is also expected to generate the

most number of new positions by 2031 (1,983). Hispanic or Latino, followed by Black or African American and Asians are most represented in these occupations.

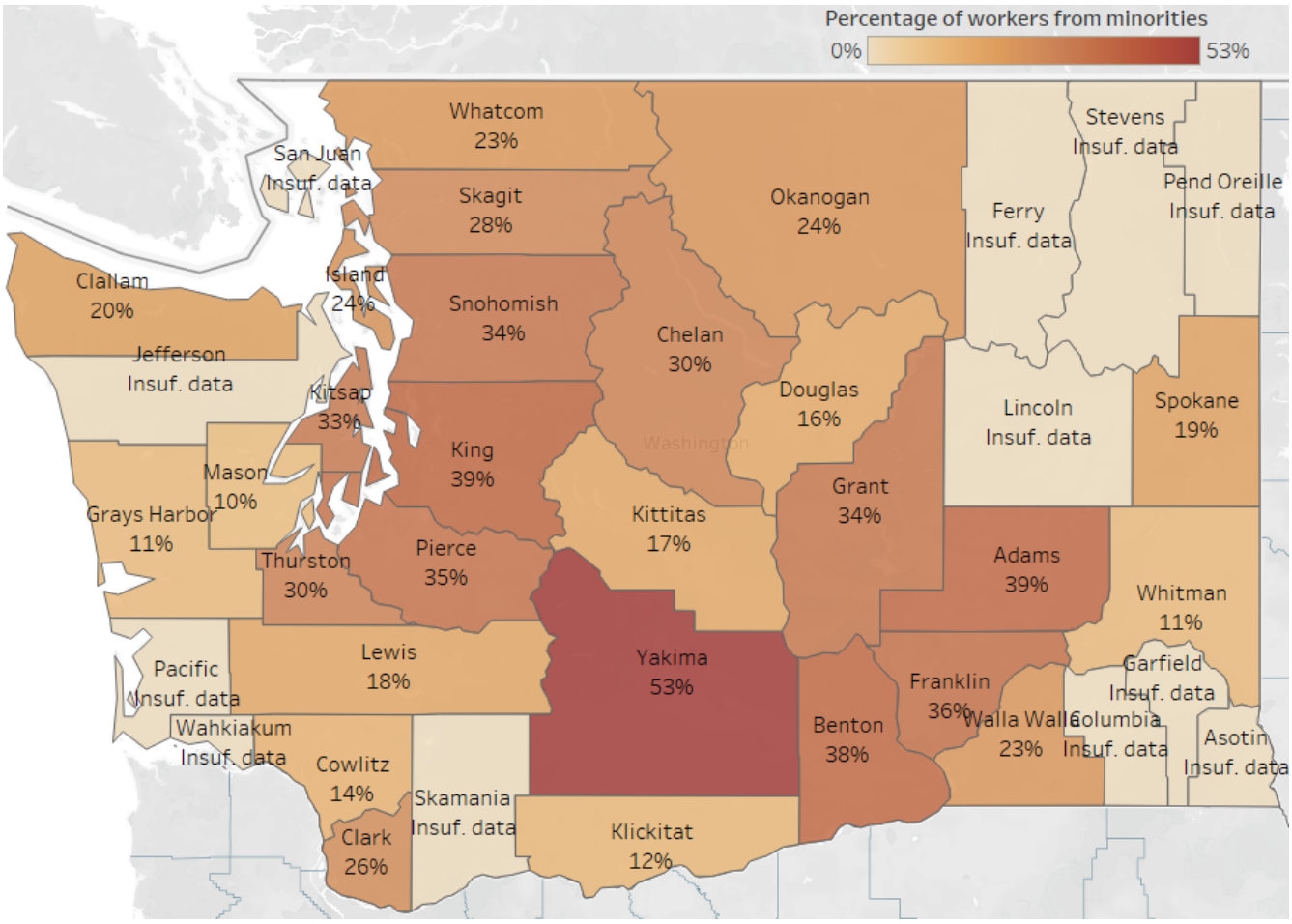

Figure 6. Percentage of workers who do not identify as White among entry-level occupations in Healthcare Facilities (requiring less than a bachelor's degree

	Median Annual Earnings	2021 Workers	Number of Jobs Created by 2031	% Women	% BIPOC	% Hispanic or Latino	% Black or African American	% Asian	% American Indian or Alaska Native	% Native Hawaiian or Other Pacific Islander	% Two or More Races	% Aged <25 yo	% Aged 25-54 yo	% Aged 55+
Ambulance Drivers and Attendants	$30,765	182	29	35%	30%	11%	8%			0%		6%	62%	28%
Emergency Medical Technicians	$36,127	2,865	327	40%	20%	8%	2%	4%	1%		5%	15%	75%	10%
Orderlies	$37,168	590	39	74%	40%	12%	12%	9%			4%	9%	67%	23%
Medical Appliance Technicians	$38,218	448	2	52%	33%	11%	2%	14%			3%	5%	67%	26%
Phlebotomists	$42,847	2,622	367	84%	35%	14%	7%	8%	1%	0%	4%	11%	74%	15%
Medical Transcriptionists	$44,318	911	-101	92%	22%	7%	3%	8%			3%	13%	59%	28%
Medical Equipment Preparers	$46,524	1,978	92	76%	37%	13%	8%	10%	1%	1%	4%	12%	65%	24%
Healthcare Support Workers, All Other	$46,575	3,747	167	76%	39%	12%	9%	8%	4%	1%	5%	13%	65%	22%
Medical Secretaries and Administrative Assistants	$47,173	8,562	844	95%	24%	10%	4%	6%	1%	0%	3%	6%	63%	31%
Medical Assistants	$47,380	18,561	1,983	92%	40%	21%	6%	8%	1%	1%	4%	12%	77%	11%
Health Information Technologists and Medical Registrars	$48,063	1,033	48	60%	25%	7%	5%	7%			4%	5%	75%	19%
Health Technologists and Technicians, All Other	$48,588	3,660	178	66%	41%	13%	8%	14%	1%	1%	4%	6%	74%	20%

	Median Annual Earnings	2021 Workers	Number of Jobs Created by 2031	% Women	% BIPOC	% Hispanic or Latino	% Black or African American	% Asian	% American Indian or Alaska Native	% Native Hawaiian or Other Pacific Islander	% Two or More Races	% Aged <25 yo	% Aged 25-54 yo	% Aged 55+
Surgical Technologists	$60,040	2,299	137	75%	33%	11%	5%	10%	1%	0%	5%	7%	77%	16%
Healthcare Practitioners and Technical Workers, All Other	$60,068	917	97	56%	27%	8%	4%	6%	2%		5%	6%	72%	21%
Surgical Assistants	$60,239	155	13	64%	26%	7%		9%				0%	77%	13%
Clinical Laboratory Technologists and Technicians	$61,017	6,689	408	72%	37%	8%	5%	18%	1%	1%	4%	8%	68%	25%
Radiologic Technologists and Technicians	$77,141	3,439	255	71%	24%	9%	3%	8%	1%	0%	3%	4%	75%	21%
Respiratory Therapists	$77,730	2,150	415	64%	25%	7%	4%	11%	1%		3%	2%	73%	25%
Paramedics	$93,642	2,767	159	35%	21%	9%	3%	3%	1%	0%	4%	15%	76%	9%
Magnetic Resonance Imaging Technologists	$98,139	757	51	66%	25%	9%	3%	9%			3%	3%	76%	21%
Radiation Therapists	$101,109	263	16	71%	23%	7%		10%				0%	82%	13%
Physician Assistants	$130,159	2,694	613	65%	27%	9%	2%	11%	1%		4%	3%	83%	14%
Medical Dosimetrists	$152,601	43	1	67%	31%				0%	0%		0%	32%	0%

Table 2. Worker demographics in entry-level Healthcare Facilities occupations (requiring less than a bachelor's degree). Empty cells indicate that the number was so small that reporting it would make individuals identifiable.

In particular, Hispanic or Latinos represent 21% of Medical Assistants. Other occupations with better representation include Medical Appliance Technicians, Clinical Laboratory Technicians, and Phlebotomists. Among underrepresented populations, Hispanic or Latino appear to be better integrated into the medical facilities labor market than other races and ethnicities. Still, representation is low in other entry-level occupations, particularly in Emergency Technicians or Ambulance Drivers, and in the better-paid positions (Radiation Therapists for example).

5. Large Hospitals (more than 25 beds)

Larger hospitals (more than 25 beds) have faced similar workforce challenges during the Covid-19 pandemic, with a need for increased staffing to cover additional Covid-19-related tasks such as vaccination, implementing safety protocols, or covering for staff placed in quarantine. This resulted in some institutions being short-staffed in Spring 2021 despite extending telehealth, with some even reporting having reduced hiring due to lower revenue. Other concerns related to administrative bottlenecks slowing up licensing (limited test-taking days availability, process length, etc.). As mentioned in other reports, the current staff had to increase work hours and workload and were subject to burnout. Some facilities leveraged this crisis to create workforce development opportunities by cross-training nurses and using float pool teams* more frequently.[15]

Still, Registered Nurses is the occupation for which hiring is the most difficult at larger hospitals, similar to other healthcare areas. The need for Physicians/Surgeons and Nursing Assistants grew during the pandemic, and they are now tied for the occupations with the second-longest vacancies in Spring 2021. [15]

* Float Pools are hospital-wide nursing float pools commonly used to cope with understaffing. Nurses who are part of the pool typically work flexible schedules and can be assigned to multiple divisions of the hospital.

a. Technologists and Technicians

Of interest is the sudden apparition of Surgical Technologists and Med/Clinician Laboratory Technicians among the occupations with the longest vacancies. These occupations, along with Pharmacy Technicians, Med/Clinician Laboratory Technologists, and Respiratory Therapists, have been experiencing a growing demand as patient volume return to pre-pandemic levels.[15]

While smaller institutions have been reporting difficulties competing with larger hospitals for healthcare workers due to wage differences based on institutions' financial resources, larger hospitals experienced difficulties keeping up with salaries offered by traveler staffing agencies. Worse, some occupations like Pharmacy technicians were less likely to receive financial incentives or hazard pay at some hospitals during the Covid-19 pandemic, leading some workers to leave their employment for more lucrative positions elsewhere.[15]

6. Community, Retail, and Hospital Pharmacies

Like many other facilities, pharmacies interviewed by the Sentinel Network also reported understaffing, with many worrying about staff's well-being and burnout. Workload vastly increased due to new Covid-19-related tasks (vaccination and testing in particular) and prior responsibilities. Licensing appears to have also slowed down during the pandemic, straining the current workforce.[16]

To help solve these issues, some facilities have been calling for permanently authorizing Pharmacy Technicians to administer vaccines and removing the college degree requirement necessary to become licensed in Washington state. The national Pharmacy Technician Certification Board exam is the only

requirement in other states. This would help make the occupation more accessible to job seekers while increasing the labor pool and facilitating recruitment. [16]

Pharmacy Technician was still the occupation with the longest vacancies in Spring 2021 in pharmacies, followed by Pharmacists, Pharmacy Aides, and Registered Nurses. In fact, some pharmacies reported having trouble with retention as Pharmacy Technicians experienced shifting responsibilities (again focusing more often on Covid-19-related tasks) and increased exposure to the Covid-19 virus. It is still the occupation within the sector with the greatest expected job creation (1,396 by 2031).

Representation in Pharmacy is higher on average than in other healthcare sectors. Workers of color make up 43% of the most entry-level position, Pharmacy Aides, but still account for 37% and 38% of Pharmacy Technicians and Pharmacists respectively.

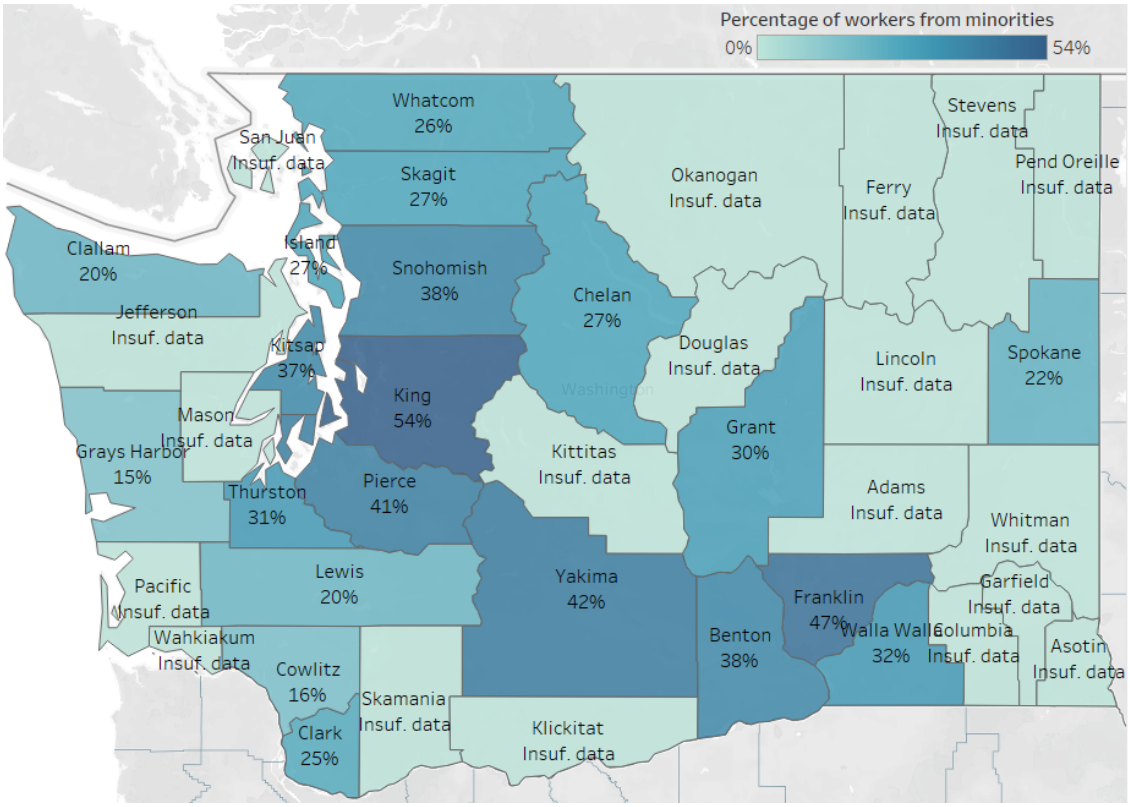

Figure 7. Percentage of workers who do not identify as White among entry-level Pharmacy occupations (requiring less than a bachelor's degree)

While this could indicate that the sector enables workers of color to climb up the career ladder easier than in other sectors, it appears that Hispanic or Latino and Black or African American entry-level workers do not progress as fast as American Indian or Alaska Native. Workers from the latter category go from making 17% of Pharmacy Aides to 30% of Pharmacists, while Hispanic or Latino representation decreases from 16% to 3% for the same occupations.

	Median Annual Earnings	2021 Workers	Number of Jobs Created by 2031	% Women	% BIPOC	% Hispanic or Latino	% Black or African American	% Asian	% American Indian or Alaska Native	% Native Hawaiian or Other Pacific Islander	% Two or More Races	% Aged <25 yo	% Aged 25-54 yo	% Aged 55+
Pharmacy Aides	$36,088	1,826	16	78%	46%	15%	6%	21%		1%	3%	17%	68%	15%
Pharmacy Technicians	$46,690	8,130	1,396	78%	38%	10%	5%	18%	1%	1%	4%	15%	73%	13%
Pharmacists	$131,077	7,635	403	55%	39%	3%	2%	31%	0%	0%	3%	3%	75%	22%

Table 3. Worker demographics in entry-level Pharmacy occupations (requiring less than a bachelor's degree). Empty cells indicate that the number was so small that reporting it would make individuals identifiable.

7. Behavioral Health

Like Nurses, Behavioral Health workers have been in short supply due to difficult working conditions and low pay. The pandemic has taken a toll on the general population's mental health, increasing patient visits. Mental Health Counselors, Substance Use Disorder Professionals (SUDP), and Social Workers specializing in Mental Health/SUDP are experiencing the most acute shortages.[17,18(p3)]

WA STEM has drafted a tool to reflect and project openings in the behavioral health labor market. Using their draft tool, the job titles with the highest annual openings that do not require a bachelor's or higher are Mental Health Personal Care Aides and Self-Enrichment Education Teacher. Other occupations with similar numbers of projected annual openings are Community Health Worker, Service Care Coordinator, Housing Specialist, Behavioral Health Clinical Care Coordinator, and Medical Assistant. Medical Assistant, which is listed as needing an apprenticeship or less than two years of post-secondary training or education, is the only job title in this group needing more than a high school diploma.

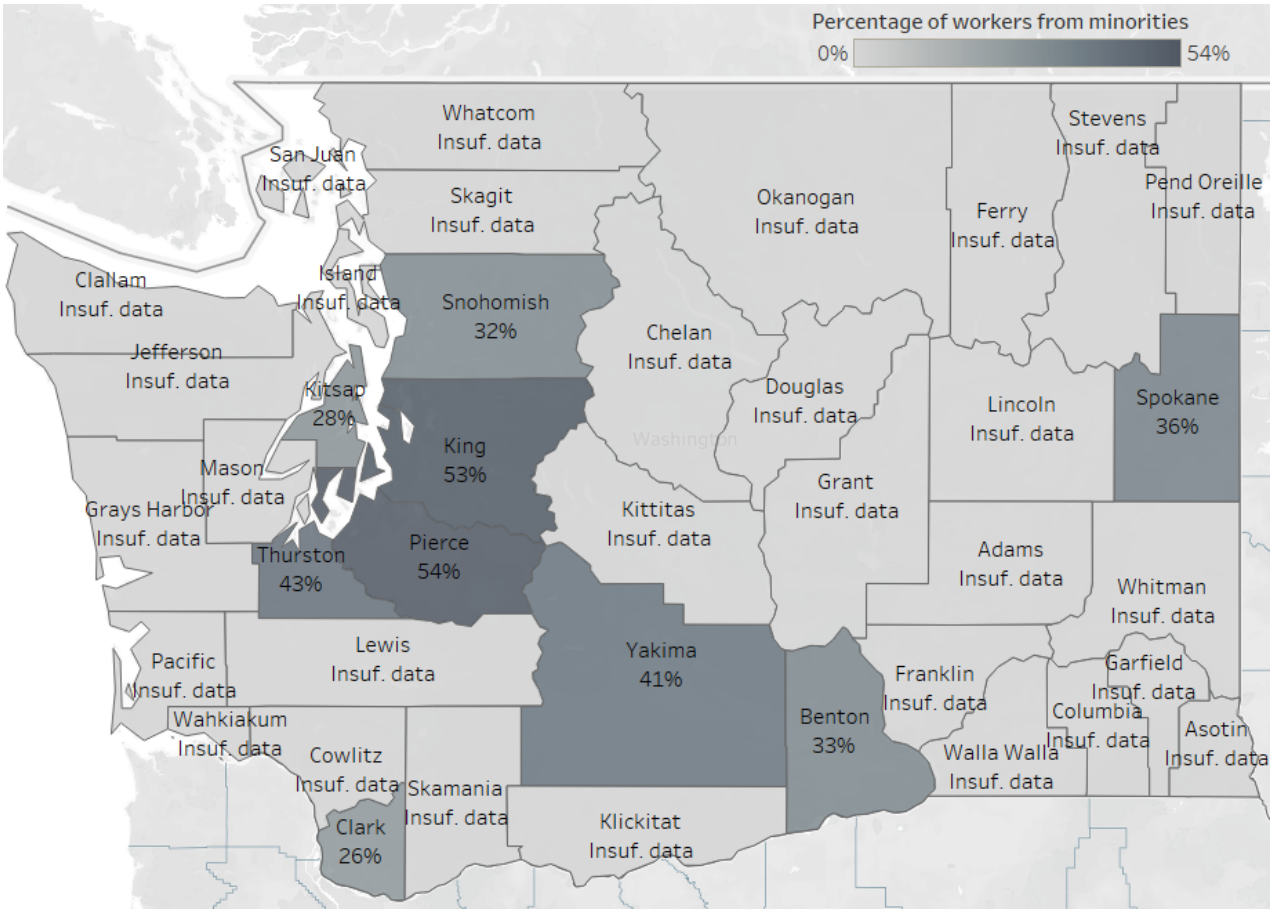

Figure 8. Percentage of workers who do not identify as White among entry-level occupations in Mental Health (requiring less than a bachelor's degree)

	Median Annual Earnings	2021 Workers	Number of Jobs Created by 2031	% Women	% BIPOC	% Hispanic or Latino	% Black or African American	% Asian	% American Indian or Alaska Native	% Native Hawaiian or Other Pacific Islander	% Two or More Races	% Aged <25 yo	% Aged 25-54 yo	% Aged 55+
Social and Human Service Assistants	$38,752	8,740	2,060	77%	40%	14%	12%	7%	2%	1%	5%	7%	66%	27%
Community Health Workers	$45,252	2,943	437	72%	37%	14%	9%	6%	3%	1%	5%	7%	67%	26%
Psychiatric Technicians	$47,466	1,183	345	77%	42%	13%	10%	12%	1%		5%	18%	69%	13%
Psychiatric Aides	$48,234	477	102	78%	48%	10%	19%	10%	2%		5%	11%	68%	21%
Substance Abuse, Behavioral Disorder, and Mental Health Counsel..	$49,812	13,673	2,627	72%	32%	10%	9%	7%	1%	1%	5%	6%	69%	25%
Child, Family, and School Social Workers	$59,930	9,293	1,296	83%	34%	11%	10%	6%	1%	1%	6%	3%	72%	25%
Mental Health and Substance Abuse Social Workers	$62,164	2,803	514	82%	30%	11%	9%	5%	1%	0%	5%	3%	69%	29%
Healthcare Social Workers	$77,197	4,235	544	80%	31%	10%	9%	6%	1%	0%	4%	3%	71%	26%
Clinical and Counseling Psychologists	$98,259	1,384	223	72%	19%	5%	2%	8%			4%	1%	62%	37%
Psychiatrists	$259,903	500	75	37%	43%	5%		32%			3%	0%	66%	34%

Table 4. Worker demographics in entry-level Mental Health occupations (requiring less than a bachelor's degree). Empty cells indicate that the number was so small that reporting it would make individuals identifiable.

Representation in Behavioral Health is somewhat even across occupations, except for Clinical, Counseling, and School Psychologists for which workers of color only represent 19% of workers. Otherwise, the percentage of non-white workers varies between 30% (Healthcare Social Workers and Mental Health and Substance Abuse Social Workers) and 48% (Psychiatric Aides). Unfortunately, similar to Nursing or Pharmacy, Black or African American workers seem to lose ground between entry- and middle-level occupations as they represent 19% of Psychiatric Aides, but only 10% of Psychiatric Technicians.

a. Behavioral Health Clinics

The staffing shortage is acute in Behavioral Health Clinics, partly due to a lack of public funding. The Covid-19 Pandemic led to many in the general population needing help with mental and behavioral care. Demand ramped up while worker levels declined. Some institutions do not have adequate staff to meet this new patient influx and have had to close open access services. [18]

To maintain care despite staffing shortages, workers have been working overtime and curtailing their availability to train and supervise students. Still, training has been rethought to include a combination of telehealth and in-person supervision.[18]

Similar to Assisted Living Facilities, clinics have been trying to attract candidates with higher pay and sign-on bonuses (up to $10,000 in some) to no avail. They also cannot compete with larger institutions' wages. Current staff also benefit from increased holidays and PTO, bonuses, hazard pay, etc., to ramp up retention rates. Still, burnout led vacancies to double or triple compared to the pre-Covid period.[18]

Occupations with the most acute shortage have remained stable throughout the pandemic: Mental Health Counselor is still the occupation with the longest unfilled vacancies, followed by Substance Use Disorder Professional (SUDP) and Social Worker specialized in Mental Health/SUDP.[18]

Some professionals explain the acute worker shortage by sectoral wages disproportionally low compared to the degrees required (Master's level), long work hours, and a complex patient population. .[17,18] Stakeholders report that staff burnout is at an all-time high due to the pandemic, adding to the already extremely difficult retention situation in the field. This also impacts workers' opportunities for professional development by limiting time dedicated to training and supervision availability.[17(p16)]

The Behavioral Health Washington Advisory Committee (BHWAC) confirmed the key challenges facing behavioral health are:

1. **Medicaid reimbursement rates.** Despite legislative funding increases to reimbursement rates, they remain too low to provide the compensation needed to recruit and retain a well-qualified and well-supported behavioral health workforce. Stakeholders estimate that reimbursement rates should be increased by at least 7% to cover wages efficiently.[17]
2. **Support for community behavioral health**. The pandemic has exacerbated the challenges that community behavioral health employers face in recruiting and especially retaining workers. Higher pay and less stressful or smaller caseloads at larger institutions make retention difficult, as does burnout. Similarly to other sectors, additional resources and support, including financial

support and incentives, are needed to address the burnout and professional trauma contributing to departures from the field[17(p4)].

8. Dental Care

Dental care is also experiencing acute staffing shortages, predating the pandemic. Like other sectors, the pandemic exacerbated these. The shortages are even more acute now that patients who delayed dental services during the pandemic to reduce human interactions are coming back all at once. Additional sanitation procedures also lengthen processes and mean that staff work more time per procedure/patient visit. Overqualified staff, such as Hygienists, often must fill the gaps from the lack of Dental Assistants. Some staff has opted to leave permanent positions for temporary positions with higher pay. These shortages have led facilities to decrease the number of patients, some by half. Cutting the number of patients paired with low insurance reimbursements makes for an unsustainable business model. [19]

To address this imbalance, clinics have extended financial incentives to try and retain current staff. However, unlike the previous sectors, many dental clinics have not increased wages or implemented sign-on bonuses to attract and retain employees. However, they have provided current employees with more benefits, such as more time off or higher 401(k) contributions. [19]

Dental Assistants and Dental Hygienists have consistently been the occupations with the longest vacancies. The shortage is most acute for Dental Hygienists. Like other occupations, there is a vicious cycle at play. The staffing shortage has led clinics to curb the training and supervision of in-training students and externs. This further exacerbates future staffing shortages. Proposed solutions to address the shortage of hygienists include improving the availability of training and certification programs statewide and relaxing licensure criteria by removing nitrous oxide certification and restorative certification requirements, allowing out-of-state hygienists to work in Washington, and allowing assistants to be trained for simple hygiene procedures. [19]

Technicians might earn higher wages at larger facilities or even with just unemployment benefits. [16]

	Median Annual Earnings	2021 Workers	Number of Jobs Created by 2031	% Women	% BIPOC	% Hispanic or Latino	% Black or African American	% Asian	% American Indian or Alaska Native	% Native Hawaiian or Other Pacific Islander	% Two or More Races	% Aged <25 yo	% Aged 25-54 yo	% Aged 55+
Dental Assistants	$46,626	11,193	543	95%	36%	18%	3%	10%	1%	0%	4%	18%	71%	10%
Dental Laboratory Technicians	$47,945	881	13	52%	38%	11%	2%	20%			3%	8%	64%	27%
Dental Hygienists	$99,918	7,291	368	96%	21%	7%	1%	8%	0%	0%	4%	5%	77%	18%

Table 5. Worker demographics in entry-level Dental Care occupations (requiring less than a bachelor's degree). Empty cells indicate that the number was so small that reporting it would make individuals identifiable.

Representation in entry-level dental occupations is consistent with the other healthcare sectors, reaching 38% for Dental Laboratory Technicians and 36% for Dental Assistants (occupation with the largest expected number of jobs created by 2031 (543)), before declining to 21% for Dental Hygienists, indicating here again a lack of opportunity for workers of color (particularly Hispanic or Latino) to move up the career ladder between entry-level and middle-level jobs. However, the situation improves again for more advanced occupations requiring a doctoral degree, as Asians represent between 17% (Dentists, all others) and 30% (Prosthodontists) of these. Still, overall, the representation of Black or African American workers is much lower than in other healthcare sectors.

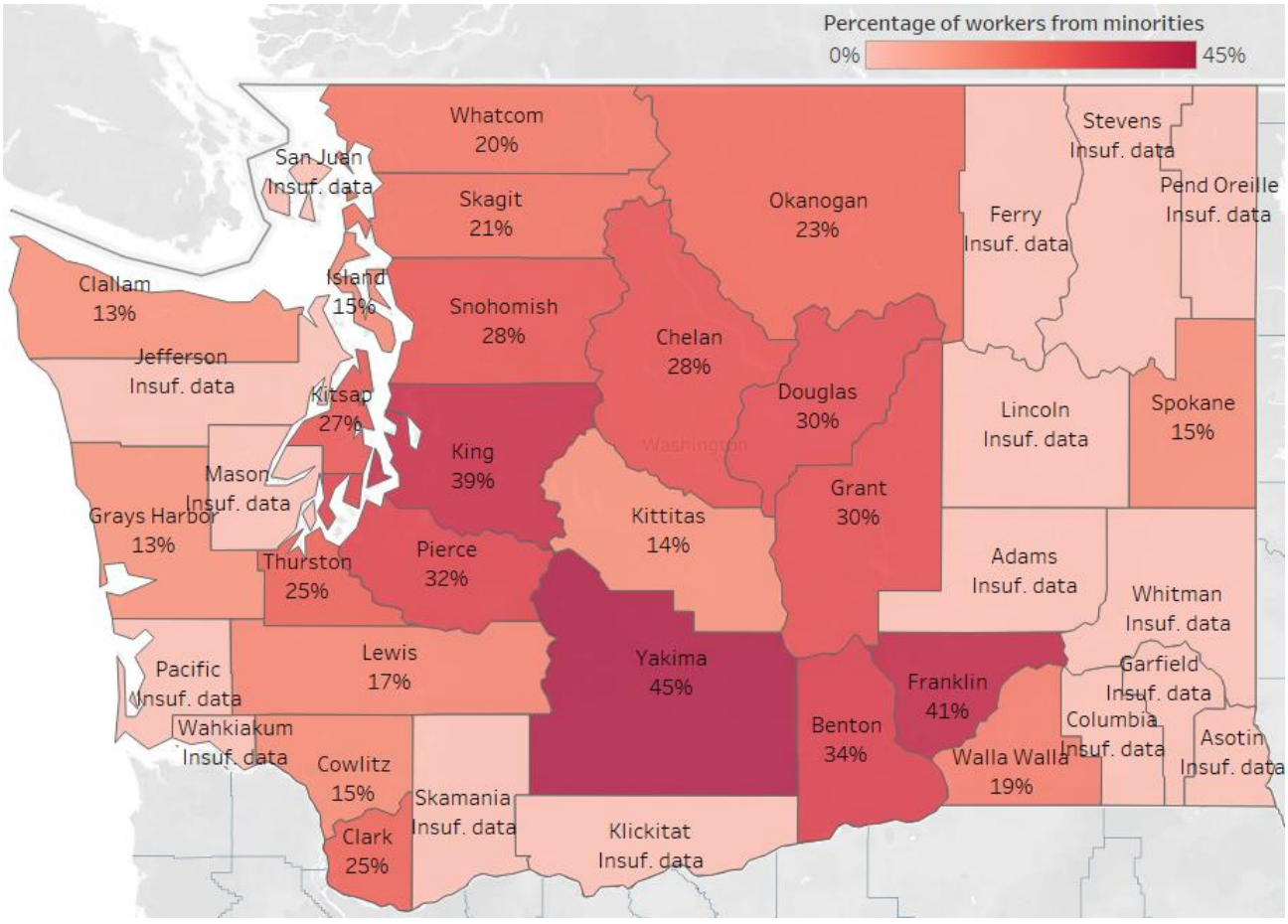

Figure 9. Percentage of workers who do not identify as White among entry-level occupations in Dental Care (requiring less than a bachelor's degree)

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Appendix A: Abbreviations

AND	Associate Degree Nursing
ARNP	Advanced Registered Nurse Practitioners
BHWAC	Behavioral Health Washington Advisory Committee
BSN-GE	Bachelor of Science Nursing-General Education
CMS	Medicare and Medicare Services
LPN	Licensed Practical Nurse
NCLE	National Council Licensure Examination
NCQAC	Nursing Care Quality Assurance Commission
RN	Registered Nurse
SIA	Survey Information Analytics
SIS	Supervised Injection Services
WHO	World Health Organization

Appendix B: Staffing Shortages by Setting from Sentinel Surveys

Most frequently cited occupations with exceptionally long vacancies in Sentinel's survey of healthcare workplaces[8,9,11–13,15,16,18,19,19]

Rank	Assisted Living Facilities	Skilled Nursing Facilities	Community Health Centers	Primary Care Medical Clinics	Small Hospitals	Large Hospital (Spring 2021)	Pharmacies (Spring 2021)	Behavioral Health	Dental Clinics
1	Nursing Assistant	Registered Nurse	Registered Nurse	Medical Assistant	Registered Nurse	Registered Nurse	Pharmacy Technician	Mental Health Counselor	Dental Assistant
			Medical Assistant						
2	Registered Nurse	Licensed Practical Nurse	Physician/ Surgeon	Physician/ Surgeon	Medical Assistant	Nursing Assistant	Pharmacist	Substance Use Disorder Professional	Dental Hygienist
		Nursing Assistant	Mental Health Counselor		Nursing Assistant	Physician/ Surgeon			
3	Home Health Aide Or Home Care Aide	Occupational Therapist	Dental Assistant	Registered Nurse	Physician/ Surgeon	Pharmacy Technician	Pharmacy Aide	Social Worker (Mental Health/SUDP)	Dentist
		Physical Therapist	Dental Hygienist						
			Nurse Practitioner						
4	Licensed Practical Nurse	Speech-Language Therapist	SUDP	Mental Health Counselor		Medical Assistant	Registered Nurse	Peer Counselor	Admin Personnel
			Social Worker (Health Care)	Nurse Practitioner		Med/Clinical Laboratory Technologist			
				Licensed Practical Nurse Assistant		Respiratory Therapist			
				Nursing Assistant		Surgical Technologist			
5	Personal Care Aid	Multiple Occupations Cited At The Same Frequency	Multiple Occupations Cited At The Same Frequency	Multiple Occupations Cited At The Same Frequency		Med/Clinical Laboratory Technician		Social Worker (Child, Family and School)	

Appendix C: Summary of Washington Center for Nursing Workforce Demographics

The Washington Center for Nursing's 2022 annual report, detailing Washington State's 2021 Nursing Workforce supply, [10] does not describe or analyze the pandemic's impact on the labor market. It does, however, provide a snapshot of the current nursing labor market.

LPNs

Overall demographics

- In Washington state, 14.3% of LPNs are male (the national average is 8.1%)
- The average age is 47 (the national average is 53)
- 20% of the Active Licensed LPNs in Washington are expected to retire by 2028 (assuming 67 is the retirement age), slightly lower than the 20.2% expected nationally
- Pierce County had the greatest concentration of Active Licensed LPNs by mailing zip code

Race/Ethnicity

- 66% are White (69.5% Nationally)
- 2 largest groups in Washington:
    - 11% are Black or African American, up from 9.2% in 2019 and (17.2% Black or African American nationally)
    - 10% are Asian, up from 8.7% in 2019 (5% nationally)
- 6% in WA are Hispanic/Latinx (10% nationally)
- In WA, Hispanic/Latino LPNs have the lowest average, and White/Caucasian LPNs have the oldest average age.
- " Nationally, LPNs younger than age 50 account for the largest proportion of minority nurses (NCSBN/Forum, 2020)."

Education (active, licensed LPNs)

- 78% with a diploma or certificate in nursing*
- 16% have an associate degree*
- 5% have a bachelor's degree*
- 53% licensed in the last 10 years (43.7% nationally)

* Rather than indicating the highest degree, participants could indicate "all that apply" on the survey, so there are some duplicates.

Location of Licensure and Practice

- 81.8% are only actively licensed in Washington, and 14.4% indicated that they have an active license in one other state
- 90.9% only actively practicing in Washington

- 8.1% practice in one other state in addition to Washington

Unemployment*

- 30% of LPNs report taking care of home and family as their reason for unemployed (43.3% nationally). This was the most frequent response.
- 38% listed "other" with reasons unspecified

Employment

- 89.4% are employed (82.4% nationally)
- 79% listed their position as "staff nurse" (72.8% nationally)
- 10% other health-related positions (15.6% nationally)
- 8% nurse manager (5.5% nationally)

Subset Analysis of LPNs Actively Employed in Nursing and Practicing in WA (pp 15-17)

Type of Facility Where Employed

- 33% in nursing homes, extended care, or assisted living (national average 27.5%), which is "slightly" than the 29.3% reported in 2019
- 20.1% "other."
- 15.1% Ambulatory Care (12.1% nationally)

Employment Specialties

- Geriatrics 24.5% down from 28.9% in 2019 (26.6% nationally)

Work hours

- 68.6% worked 32-40 hours on an average week
- 17.7% worked 41+ hours

Table 3: Race and Ethnicity of LPNs that are Actively Licensed, Employed and Working in Washington

	2021 LPN	2021 WA Population	2019 LPN	2019 WA Population
American Indian/Alaska Native	2.40%	2.00%	1.00%	1.80%
Asian	11%	10%	8.70%	8.70%
Black/African American	12.00%	4.00%	9.20%	4.10%
Native Hawaiian/ Other Pacific Islander	1.70%	1.00%	0.90%	0.80%
White/ Caucasian	72.70%	65.00%	73.20%	79.50%
Hispanic/ Latino	6.60%	13.00%	6.30%	13%
Other or Mixed Race or 2 or more	3.60%	5.00%	7.10%	5.10%

RNs

Overall Demographic

* Named options: taking care of home and family, difficulty finding position, school, disabled, inadequate salary)

- 13% male, up from 9.6% in 2018 (9.4% nationally)[20(p18)]
- Average age is 44.69 (52 nationally) [20(p20)]
- 20% of the RNs in Washington are expected to retire by 2029 (assuming 67 is the retirement age), lower than 22.1% nationally[20(p19)]
- King County had the greatest concentration of Active Licensed RNs by mailing zip code[20(p23)]

Race/Ethnicity

- 75% White (81% nationally)
- 9% Asian (7.2% nationally)
- 6% Black/African American (6.7% nationally)
- 5% Hispanic/Latinx (5.6% nationally)
- Youngest Washington RNs are Hispanic/Latinx and Native Hawaiian/Other Pacific Islander
- " Nationally, RNs between 30 and 49 account for the largest proportion of minority nurses (NCSBN/Forum, 2020)."[20(pp19-20)]

Education

- 45.5% have bachelor's degree* (43.4% nationally)
- 38.3% have associate degree* (29.6% nationally)
- 6.4% have master's degree* (17.5% nationally)
- First US nursing license obtained with a *bachelor's degree* 45.9%
- First US nursing license obtained with *associates degree* 40.5%[20(p21)]
- 62% licensed in the last 10 years (30.5% nationally)[20(p22)]

* On the survey, participants could indicate "all that apply" for their degrees, meaning there are duplicates.

Location of license and practice

- 71.1% only have an active license to practice in Washington[20(p24)]
- 82.8% of those practicing in Washington are only actively practicing in Washington
- 12.9% actively practicing in one other state[20(p26)]

Unemployment[*]

- 32% because of care of home and family (49% nationally)
- 39% "other"[20(p28)]

Employment

- 89.4% employed full-time in nursing (84.1% nationally)[20(p28)]
- 78.1% staff nurse (60.1% nationally)
- 7.1% nurse manager (7.9% nationally)
- 7.1% other health-related positions (9.7% nationally)[20(p29)]

[*] Named options: taking care of home and family, difficulty finding position, school, disabled, inadequate salary)

Subset analysis of RNs Actively Employed in Nursing and Practicing in WA

Type of Facility Where Employed

- 52.4% Hospital (56.5% 2019)
- 13.5% Other (12.7% 2019)
- 12.9% Ambulatory care (11.9% 2019)[20(p30)]

Actively Practicing Specialties

- 12.9% acute care/critical care (13.1% nationally)
- 9.7% medical/surgical (8.5% nationally)
- 7.5% other clinical specialties (13.1% nationally)[20(p31)]

Work hours

- 66.5% worked 32 to 40 hours/week (58.7% nationally)
- 12.8% worked 41+ hours/week (national rates not provided)
- 15.7% worked 20-32 hours/week (national rates not provided)
- 5% less than 20 hours/week [20(p32)]

Active Race and Ethnicity

Table 5: Race and Ethnicity of RNs that are Actively Licensed, Employed and Working in Washington

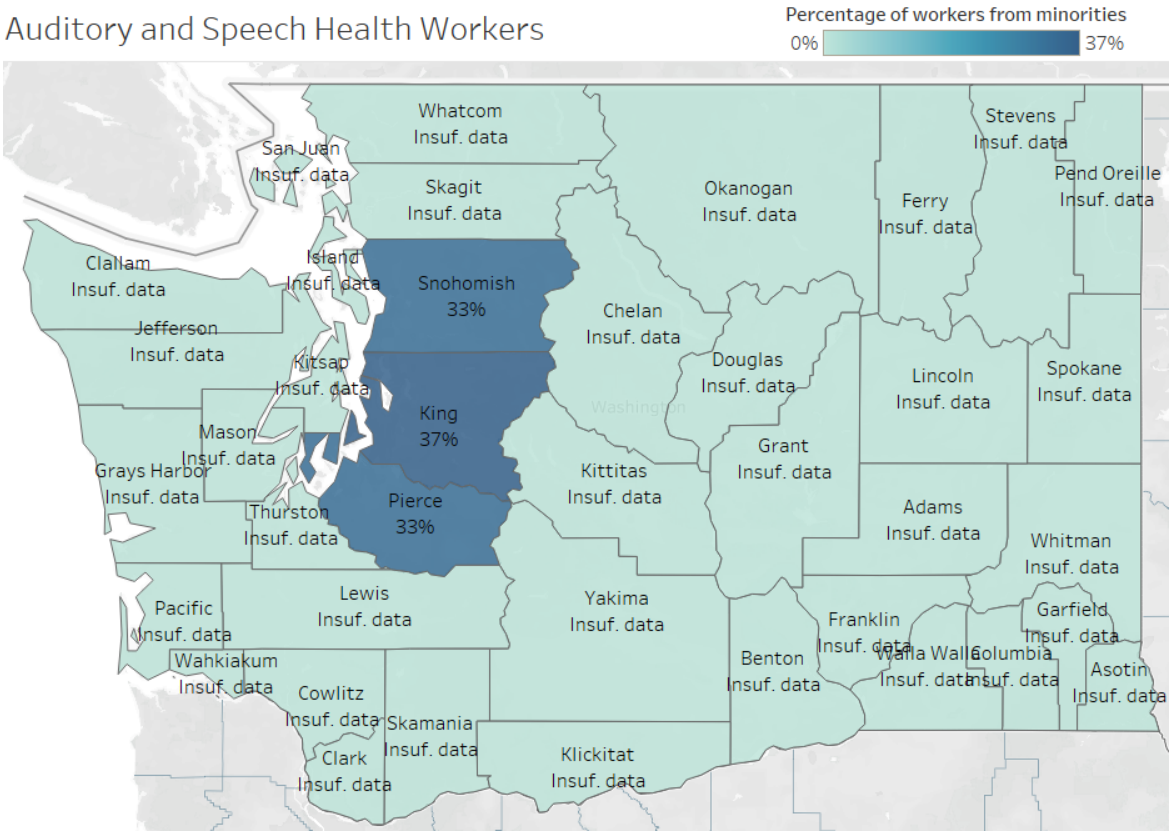
	2021 RN	2021 WA Population	2019 RN	2019 WA Population
American Indian/Alaska Native	1.50%	2%	0.50%	2%
Asian	11.60%	10%	10.20%	8%
Black/African American	3.70%	4%	2.30%	4%
Native Hawaiian/ Other Pacific Islander	1.00%	1%	0.40%	.8%
White/ Caucasian	82.70%	65%	81.40%	79%
Hispanic/ Latino	5%	13%	4.40%	13%
Other or Mixed Race or 2 or more	2.40%	5%	5.10%	5%

Education

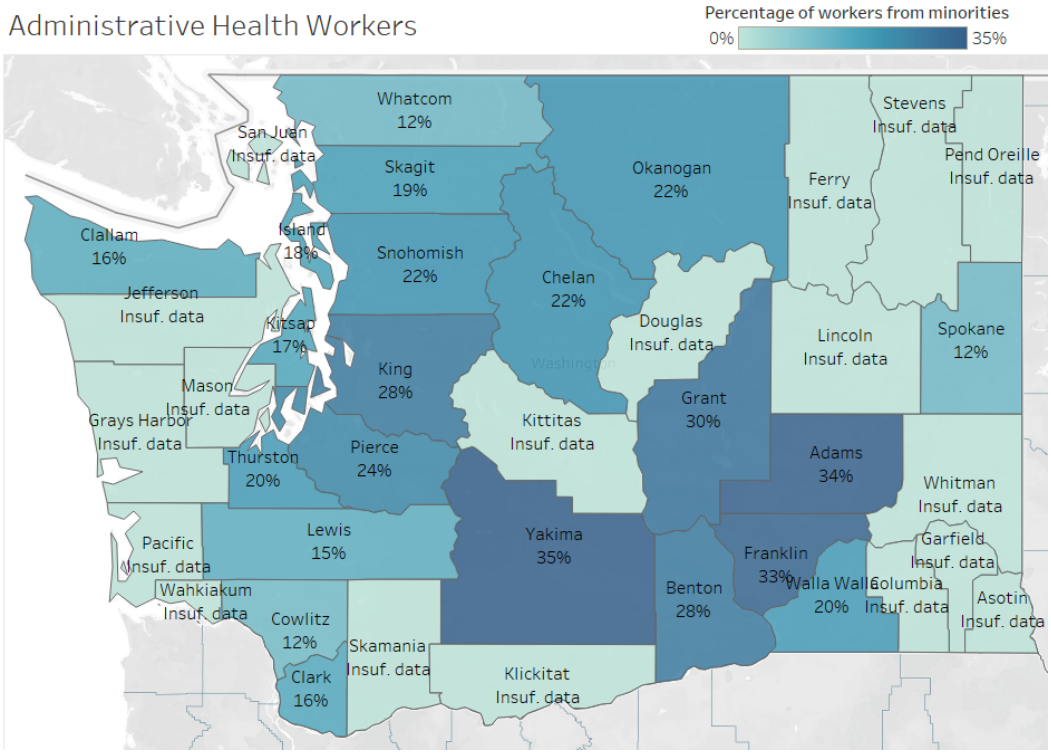
- The percentage of RNs with a BSN or higher degree has increased since 2019. 58.9% in 2019 and 64.8% in 2021
- Ages 25-29 were most likely to have a BSN degree, but all ages 30 and above saw increases[20(p33)]

Appendix D: Demographics for Other Healthcare Occupations

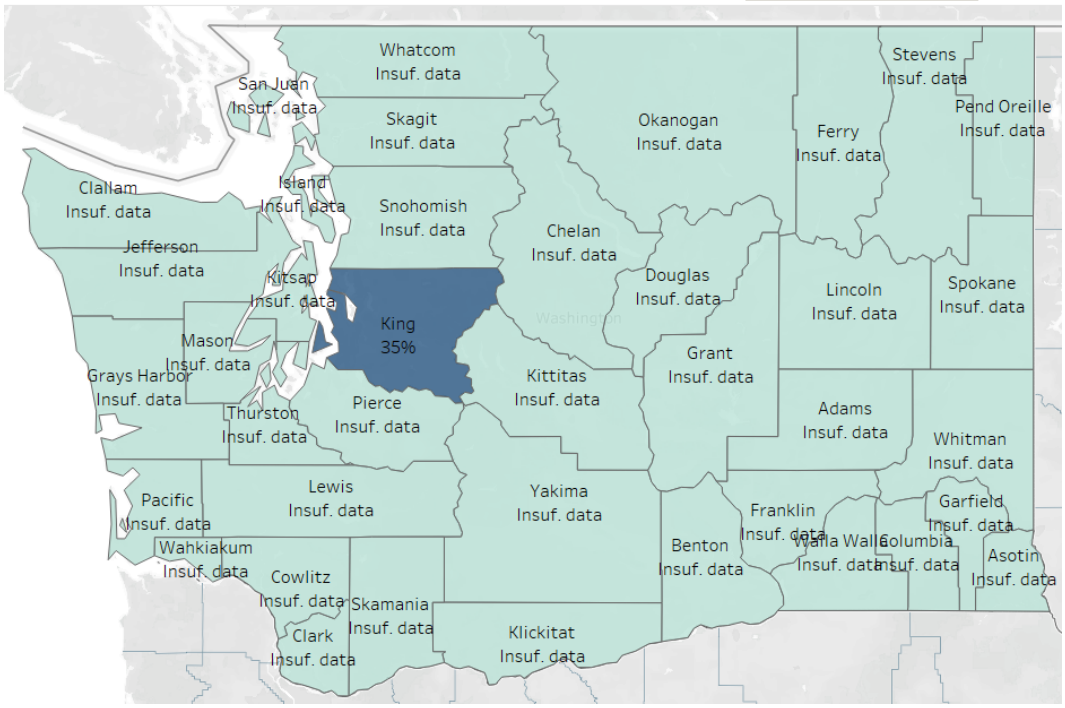
The following table presents demographic estimates for some other healthcare occupations, including Home Health and Personal Care Aides, or Occupational and Physical Therapy. The diversity rate is the highest for Home Health and Personal Care Aides (43%), but it is also the occupation with the lowest annual earnings. Interestingly, Occupational Therapy is the only sector that shows a significant progression of workers of color among total workers, as they make up 14% of Occupational Therapy Aides, but 25% of Occupational Health and Safety Specialists and 19% of Occupational Therapists.

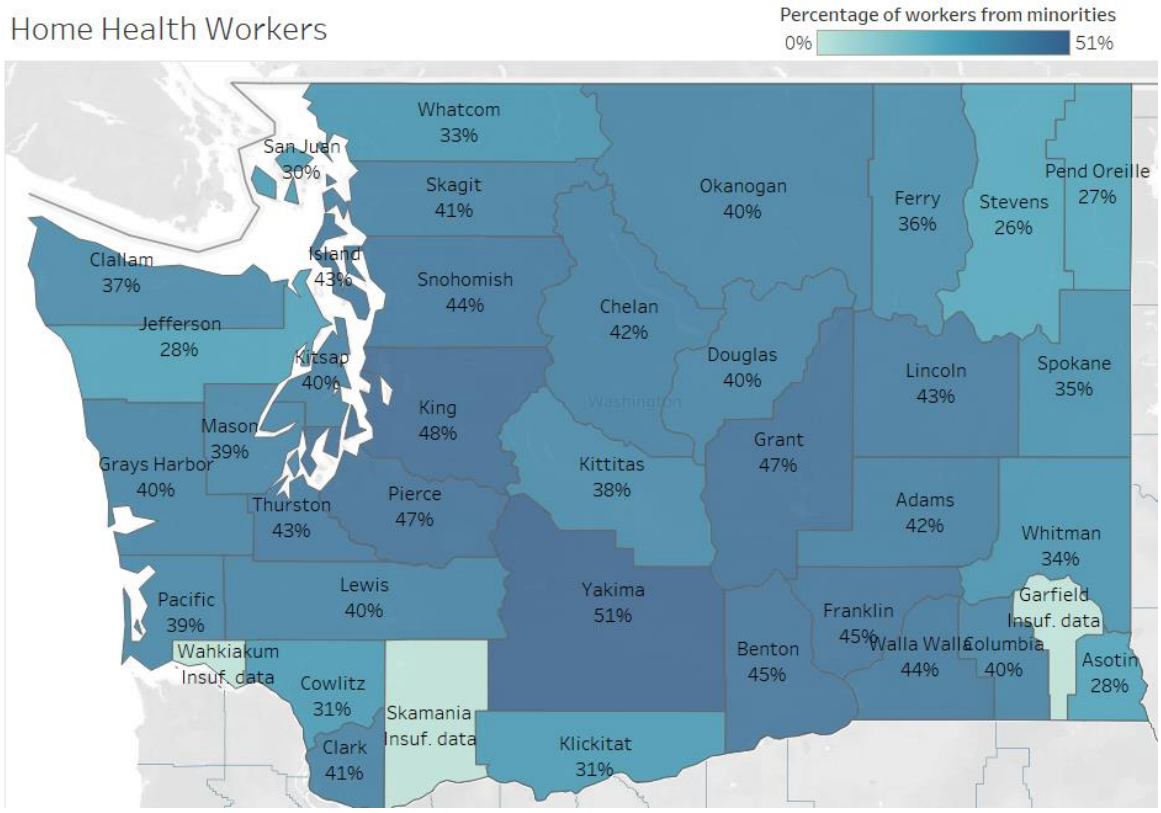


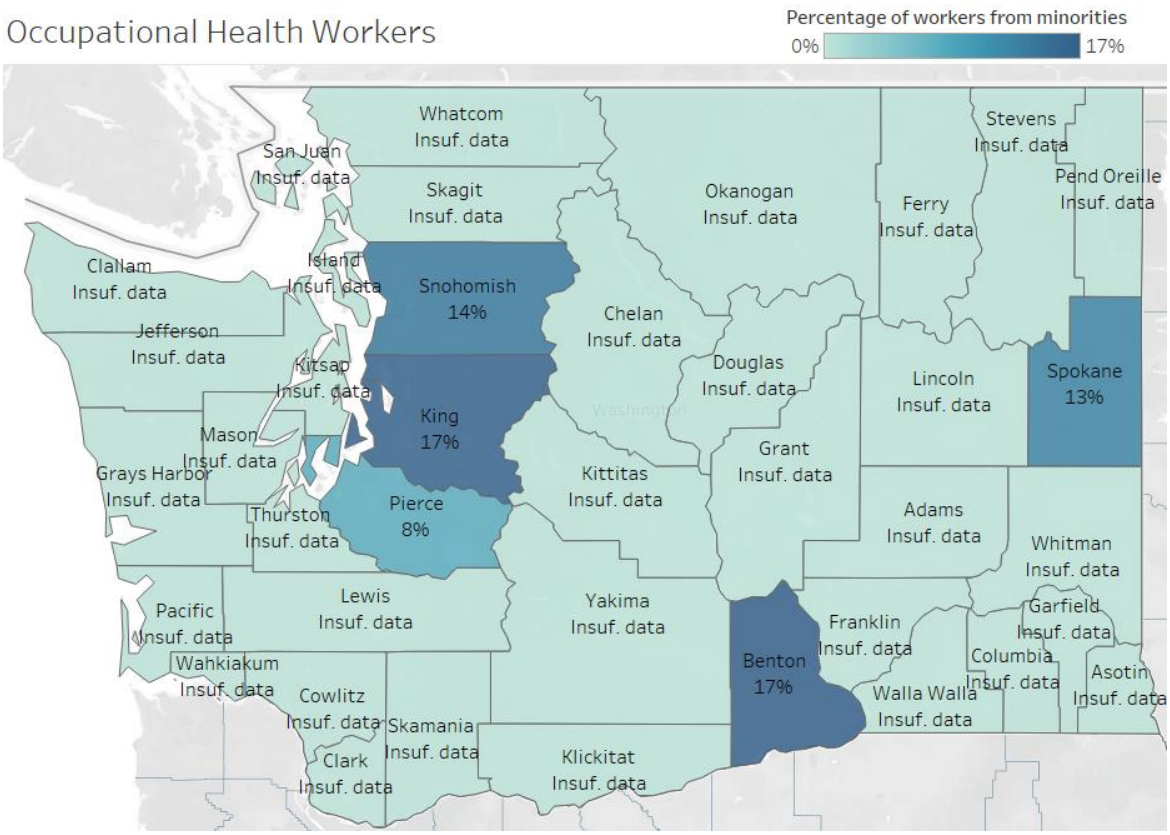
Administrative Health Workers



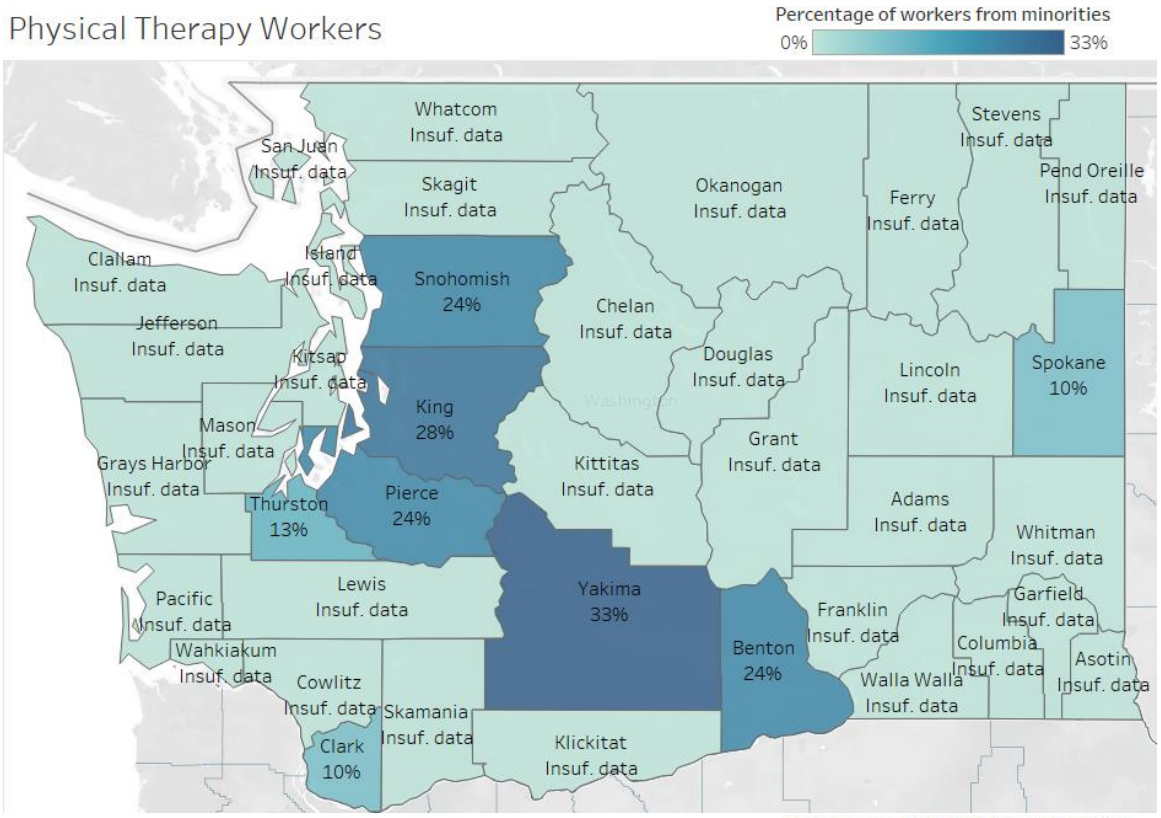
EMT Workers



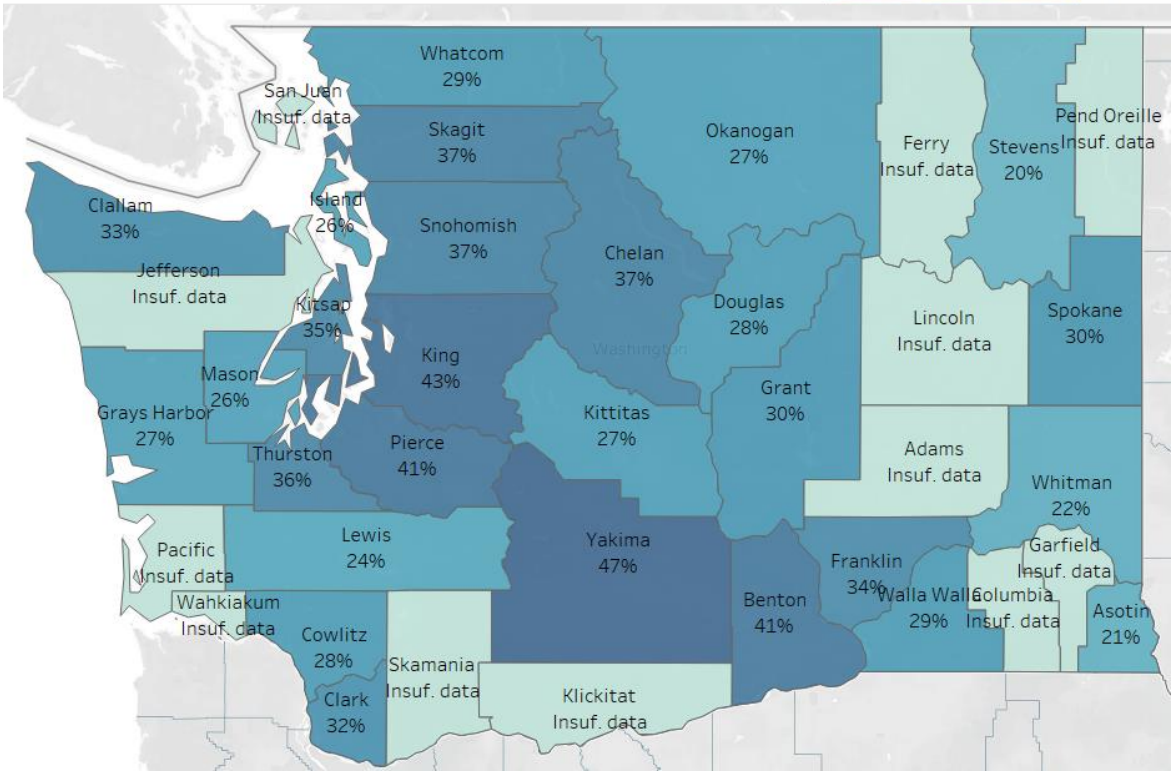

Home Health Workers
Percentage of workers from minorities
0%
51%
Whatcom 33%
San Juan 30%
Skagit 41%
Okanogan 40%
Ferry 36%
Stevens 26%
Pend Oreille 27%
Island 43%
Snohomish 44%
Clallam 37%
Chelan 42%
Jefferson 28%
Douglas 40%
Lincoln 43%
Spokane 35%
Kitsap 40%
King 48%
Mason 39%
Grant 47%
Grays Harbor 40%
Kittitas 38%
Thurston 43%
Pierce 47%
Adams 42%
Whitman 34%
Lewis 40%
Yakima 51%
Pacific 39%
Franklin 45%
Garfield Insuf. data
Wahkiakum Insuf. data
Benton 45%
Walla Walla 44%
Columbia 40%
Asotin 28%
Cowlitz 31%
Skamania Insuf. data
Clark 41%
Klickitat 31%


Occupational Health Workers
Percentage of workers from minorities
0%
17%
Whatcom
Insuf. data
San Juan
Insuf. data
Skagit
Insuf. data
Okanogan
Insuf. data
Stevens
Insuf. data
Pend Oreille
Insuf. data
Ferry
Insuf. data
Clallam
Insuf. data
Island
Insuf. data
Snohomish
14%
Chelan
Insuf. data
Jefferson
Insuf. data
Kitsap
Insuf. data
King
17%
Douglas
Insuf. data
Lincoln
Insuf. data
Spokane
13%
Mason
Insuf. data
Grays Harbor
Insuf. data
Thurston
Insuf. data
Pierce
8%
Kittitas
Insuf. data
Grant
Insuf. data
Adams
Insuf. data
Whitman
Insuf. data
Pacific
Insuf. data
Lewis
Insuf. data
Yakima
Insuf. data
Franklin
Insuf. data
Benton
17%
Garfield
Insuf. data
Columbia
Insuf. data
Asotin
Insuf. data
Wahkiakum
Insuf. data
Cowlitz
Insuf. data
Skamania
Insuf. data
Walla Walla
Insuf. data
Clark
Insuf. data
Klickitat
Insuf. data

Physical Therapy Workers



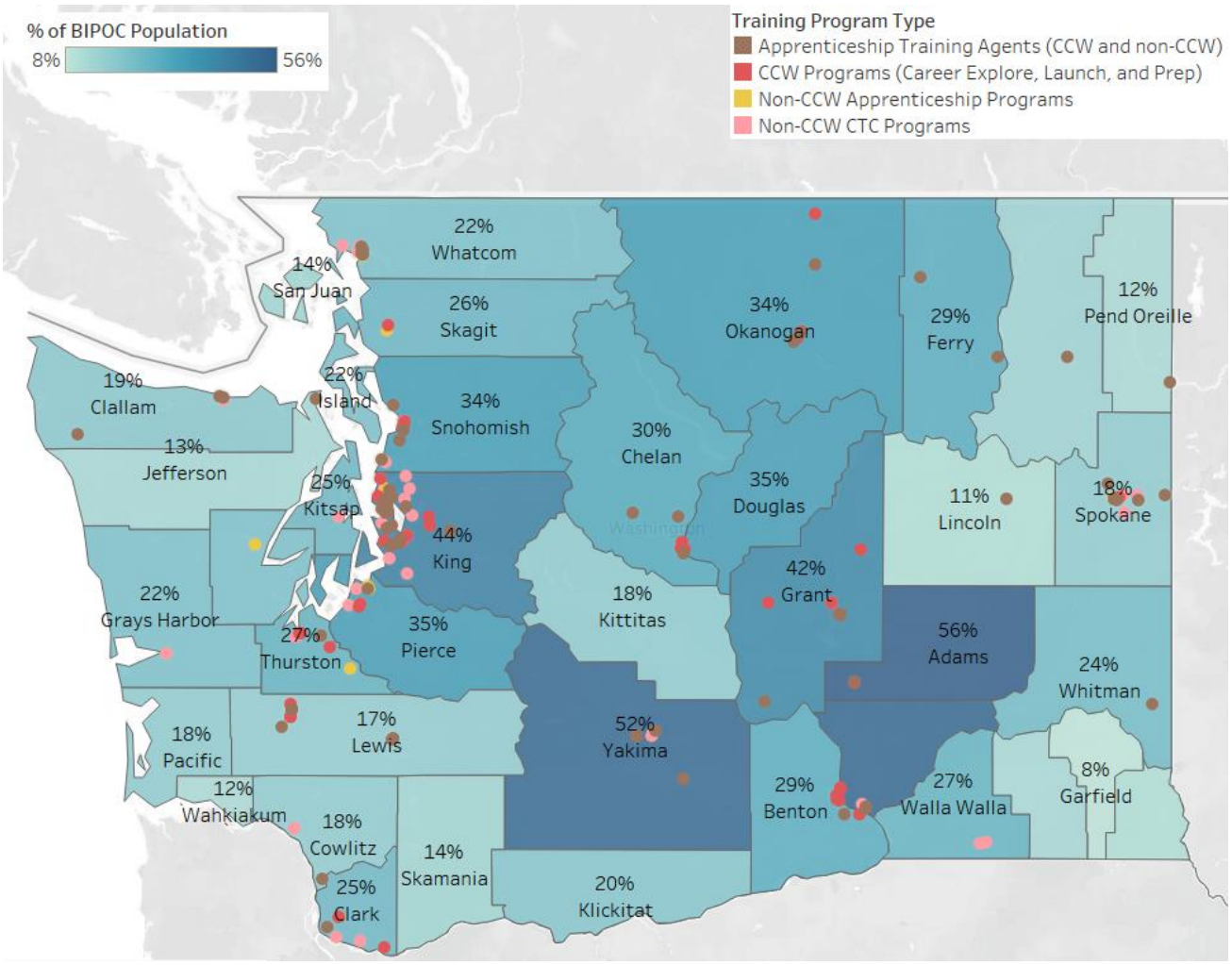
Social and Community Health Workers



	Median Annual Earnings	2021 Workers	Number of Jobs Created by 2031	% Women	% BIPOC	% Hispanic or Latino	% Black or African American	% Asian	% American Indian or Alaska Native	% Native Hawaiian or Other Pacific Islander	% Two or More Races	% Aged <25 yo	% Aged 25-54 yo	% Aged 55+
Physical Therapist Aides	$31,516	835	147	75%	21%	10%	2%	6%			2%	20%	68%	12%
Occupational Therapy Aides	$34,486	66	5	84%	24%				0%	0%		0%	78%	0%
Home Health and Personal Care Aides	$36,233	80,054	34,472	84%	45%	13%	12%	14%	1%	1%	3%	9%	56%	35%
Ophthalmic Medical Technicians	$46,196	1,355	146	80%	29%	10%	4%	8%		2%	4%	12%	74%	13%
Ophthalmic Laboratory Technicians	$47,755	561	12	59%	33%	11%	3%	14%			3%	9%	70%	21%
Exercise Physiologists	$49,244	298	60	85%	24%	5%	4%	8%		0%	6%	4%	66%	29%
Recreational Therapists	$59,093	337	35	76%	25%	5%	8%	9%			3%	6%	67%	26%
Hearing Aid Specialists	$59,485	287	11	59%	31%	7%	5%	14%			4%	6%	68%	23%
Physical Therapist Assistants	$61,165	1,563	425	74%	21%	8%	3%	8%			3%	17%	70%	13%
Occupational Therapy Assistants	$62,296	719	203	87%	20%	5%	4%	5%			5%	5%	78%	16%
Dietitians and Nutritionists	$70,105	2,179	156	90%	29%	7%	5%	12%	1%		3%	5%	70%	26%

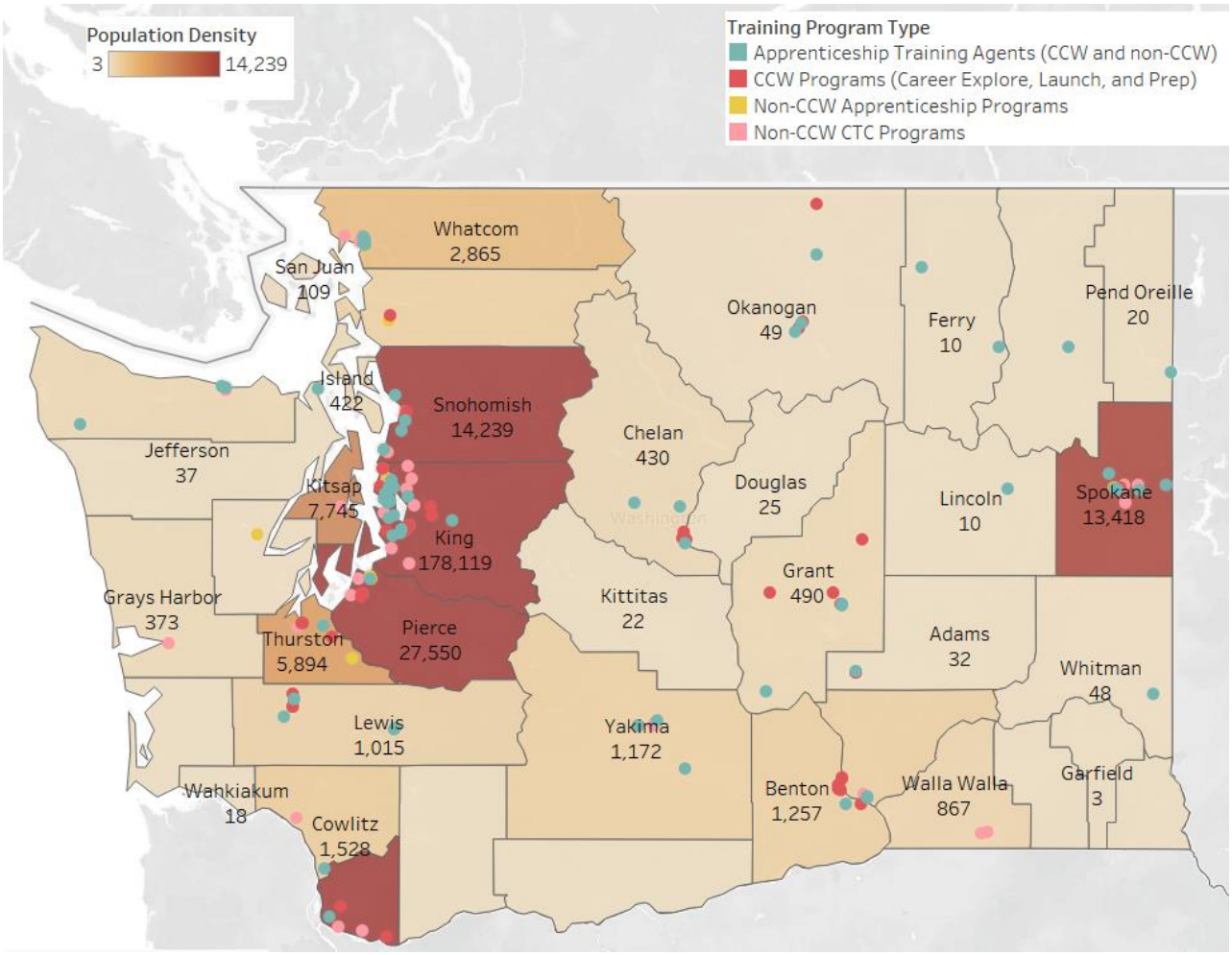
	Median Annual Earnings	2021 Workers	Number of Jobs Created by 2031	% Women	% BIPOC	% Hispanic or Latino	% Black or African American	% Asian	% American Indian or Alaska Native	% Native Hawaiian or Other Pacific Islander	% Two or More Races	% Aged <25 yo	% Aged 25-54 yo	% Aged 55+
Occupational Health and Safety Technicians	$78,053	455	28	42%	22%	8%	3%	5%			5%	4%	67%	28%
Occupational Health and Safety Specialists	$86,393	2,883	74	41%	25%	8%	4%	6%	2%		5%	5%	68%	27%
Speech-Language Pathologists	$91,728	3,178	762	96%	14%	5%	1%	3%	0%		3%	3%	77%	20%
Occupational Therapists	$97,137	3,094	360	90%	19%	4%	2%	10%			3%	2%	83%	14%
Physical Therapists	$99,248	5,331	696	68%	25%	4%	1%	15%	0%	1%	3%	2%	82%	15%

Appendix E: Healthcare-Related Training Programs in Washington State and County-Level Percentage of Non-White Population



Ramping up communications around healthcare careers and ensuring that related training programs are offered in diverse and underserved communities across the state could help improve representation among healthcare occupations. For example, the 2020 Census indicates that 52% of the Yakima County population self-identify as a race other than White. This percentage reaches 56% for Adams and 52.5% for Franklin counties. Still, few healthcare training programs (CCW or non-CCW) are available in these areas.

Appendix F: Healthcare-Related Training Programs in Washington State and County-Level Population Density



In addition to being among the most diverse counties, Yakima and Franklin counties are also among the most populous (excluding the Puget Sound area). More populated counties are more likely to need greater availability of care and creating career-connected learning opportunities for the youth could help ensure a steady pipeline of healthcare workers. Specifically, there are no healthcare CCW programs in the northeast, northwest and center areas of the state, even though the latter is both relatively diverse and populated.

Appendix G: Healthcare-Related Occupations

The following occupations were included in this report:

CATEGORY	DESCRIPTION	TYPICAL ENTRY LEVEL EDUCATION	2021-2031 JOB GROWTH	MEDIAN ANNUAL EARNINGS	% WOMEN	% NON-WHITE
BEHAVIORAL HEALTH	Social and Human Service Assistants	High school diploma or equivalent	24%	$38,752	77%	40%
	Community Health Workers	High school diploma or equivalent	15%	$45,252	72%	37%
	Psychiatric Technicians	Postsecondary nondegree award	29%	$47,466	77%	42%
	Psychiatric Aides	High school diploma or equivalent	21%	$48,234	78%	48%
	Substance Abuse, Behavioral Disorder, and Mental Health Counselors	Bachelor's degree	19%	$49,812	72%	32%
	Child, Family, and School Social Workers	Bachelor's degree	14%	$59,930	83%	34%
	Mental Health and Substance Abuse Social Workers	Master's degree	18%	$62,164	82%	30%
	Healthcare Social Workers	Master's degree	13%	$77,197	80%	31%
	Clinical and Counseling Psychologists	Doctoral or professional degree	16%	$98,259	72%	19%
	Psychiatrists	Doctoral or professional degree	15%	$259,903	37%	43%
DENTAL CARE	Dental Assistants	Postsecondary nondegree award	5%	$46,626	95%	36%
	Dental Laboratory Technicians	High school diploma or equivalent	1%	$47,945	52%	38%

CATEGORY	DESCRIPTION	TYPICAL ENTRY LEVEL EDUCATION	2021-2031 JOB GROWTH	MEDIAN ANNUAL EARNINGS	% WOMEN	% NON-WHITE
	Dental Hygienists	Associate's degree	5%	$99,918	96%	21%
HEALTHCARE FACILITIES	Ambulance Drivers and Attendants, Except Emergency Medical Technicians	High school diploma or equivalent	16%	$30,765	35%	30%
	Emergency Medical Technicians	Postsecondary nondegree award	11%	$36,127	40%	20%
	Orderlies	High school diploma or equivalent	7%	$37,168	74%	40%
	Medical Appliance Technicians	High school diploma or equivalent	0%	$38,218	52%	33%
	Phlebotomists	Postsecondary nondegree award	14%	$42,847	84%	35%
	Medical Transcriptionists	Postsecondary nondegree award	-11%	$44,318	92%	22%
	Medical Equipment Preparers	High school diploma or equivalent	5%	$46,524	76%	37%
	Healthcare Support Workers, All Other	High school diploma or equivalent	4%	$46,575	76%	39%
	Medical Secretaries and Administrative Assistants	High school diploma or equivalent	10%	$47,173	95%	24%
	Medical Assistants	Postsecondary nondegree award	11%	$47,380	92%	40%
	Health Information Technologists and Medical Registrars	Postsecondary nondegree award	5%	$48,063	60%	25%
	Health Technologists and Technicians, All Other	Postsecondary nondegree award	5%	$48,588	66%	41%
	Surgical Technologists	Postsecondary nondegree award	6%	$60,040	75%	33%

CATEGORY	DESCRIPTION	TYPICAL ENTRY LEVEL EDUCATION	2021-2031 JOB GROWTH	MEDIAN ANNUAL EARNINGS	% WOMEN	% NON-WHITE
	Healthcare Practitioners and Technical Workers, All Other	Postsecondary nondegree award	11%	$60,068	56%	27%
	Surgical Assistants	Postsecondary nondegree award	9%	$60,239	64%	26%
	Clinical Laboratory Technologists and Technicians	Bachelor's degree	6%	$61,017	72%	37%
	Radiologic Technologists and Technicians	Associate's degree	7%	$77,141	71%	24%
	Respiratory Therapists	Associate's degree	19%	$77,730	64%	25%
	Paramedics	Postsecondary nondegree award	6%	$93,642	35%	21%
	Magnetic Resonance Imaging Technologists	Associate's degree	7%	$98,139	66%	25%
	Radiation Therapists	Associate's degree	6%	$101,109	71%	23%
	Physician Assistants	Master's degree	23%	$130,159	65%	27%
	Medical Dosimetrists	Postsecondary nondegree award	2%	$152,601	67%	31%
NURSING	Nursing Assistants	Postsecondary nondegree award	4%	$37,116	87%	45%
	Licensed Practical and Licensed Vocational Nurses	Postsecondary nondegree award	8%	$61,032	90%	34%
	Registered Nurses	Bachelor's degree	6%	$96,905	90%	27%
	Nurse Midwives	Master's degree	7%	$121,005	90%	22%
	Nurse Practitioners	Master's degree	44%	$128,605	90%	20%
	Nurse Anesthetists	Master's degree	22%	$249,989	62%	15%
OTHER	Physical Therapist Aides	High school diploma or equivalent	18%	$31,516	75%	21%
	Occupational Therapy Aides	High school diploma or equivalent	7%	$34,486	84%	24%

CATEGORY	DESCRIPTION	TYPICAL ENTRY LEVEL EDUCATION	2021-2031 JOB GROWTH	MEDIAN ANNUAL EARNINGS	% WOMEN	% NON-WHITE
	Home Health and Personal Care Aides	High school diploma or equivalent	43%	$36,233	84%	45%
	Ophthalmic Medical Technicians	Postsecondary nondegree award	11%	$46,196	80%	29%
	Ophthalmic Laboratory Technicians	High school diploma or equivalent	2%	$47,755	59%	33%
	Exercise Physiologists	Bachelor's degree	20%	$49,244	85%	24%
	Recreational Therapists	Bachelor's degree	10%	$59,093	76%	25%
	Hearing Aid Specialists	High school diploma or equivalent	4%	$59,485	59%	31%
	Physical Therapist Assistants	Associate's degree	27%	$61,165	74%	21%
	Occupational Therapy Assistants	Associate's degree	28%	$62,296	87%	20%
	Dietitians and Nutritionists	Bachelor's degree	7%	$70,105	90%	29%
	Occupational Health and Safety Technicians	High school diploma or equivalent	6%	$78,053	42%	22%
	Occupational Health and Safety Specialists	Bachelor's degree	3%	$86,393	41%	25%
	Speech-Language Pathologists	Master's degree	24%	$91,728	96%	14%
	Occupational Therapists	Master's degree	12%	$97,137	90%	19%
	Physical Therapists	Doctoral or professional degree	13%	$99,248	68%	25%
PHARMACY	Pharmacy Aides	High school diploma or equivalent	1%	$36,088	78%	46%
	Pharmacy Technicians	High school diploma or equivalent	17%	$46,690	78%	38%
	Pharmacists	Doctoral or professional degree	5%	$131,077	55%	39%