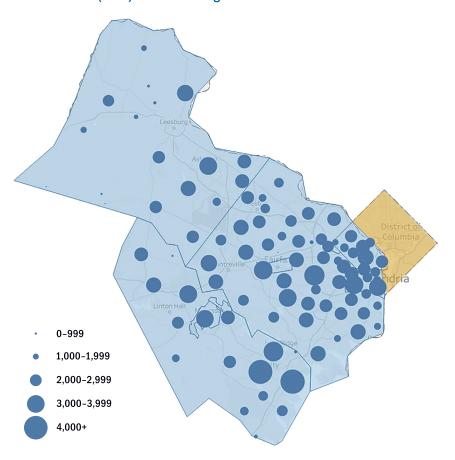
Northern Virginia's 2022

HEALTHCARE WORKFORCE

As the largest institution of public higher education in Virginia, Northern Virginia Community College (NOVA) acts as a catalyst for economic growth in the capital region by providing access to highly skilled, credentialed, and diverse talent.

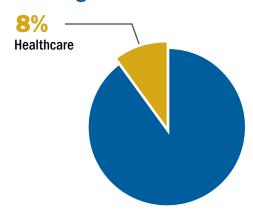
NOVA advances this mission by collaborating with employers, economic development organizations, education institutions, community-based organizations, and local governments in the northern Virginia region to address the skills gap and develop a robust talent pipeline.

Concentration of Healthcare Workers by ZIP code tabulation area (ZCTA) in Northern Virginia



Source: U.S. Census Bureau, 2017-2021 American Community Survey 5-Year Estimates. NOTE: There is one dot per ZCTA, and the size of the dot represents the number of healthcare workers in that ZCTA.

NOVA Regional Workforce





135,002 Total healthcare jobs in the NOVA region as of 2021



\$78,882 Average annual wage of healthcare workers in the NOVA region



48,892 Job postings in the NOVA region over the last 12 months



9th nationally The Washington, D.C. metropolitan area's ranking

for total healthcare employment



Total healthcare degrees & credentials awarded in the Washington, D.C. metropolitan area in 2021



Overview

Our country's population is getting older. The aging of the baby boomer generation (individuals born between 1946 and 1964) combined with rising life expectancy have led to a significant increase in population over the age of 65. By 2030, it is expected that 1 in every 5 residents will be retirement age. As the country's population continues to age, demand for healthcare services, as well as the skilled workforce necessary to deliver those services, will only continue to increase.

With this in mind, and with an eye towards better understanding NOVA's role in collaborating with employers and community partners to develop a skilled workforce, this brief examines regional labor market trends and indicators for healthcare occupations in order to determine where our region is now, and what the near future may look like.

PLEASE NOTE: Employment data in this brief includes all QCEW and non-QCEW employees, as well as the self-employed and extended proprietors, which are defined as sources of labor income for individuals who do not consider the employment a primary job.² There are approximately 10,000 extended proprietors across all healthcare occupations in the NOVA region. The inclusion of extended proprietors helps to capture the gig economy, as well as other incidental healthcare-related income. The inclusion of extended proprietors is a change from the last iteration of this workforce brief, so any year-over-year changes between briefs should be avoided. All data, unless stated otherwise, is current as of 2021.

Definitions

Washington, D.C. Metropolitan Area (D.C. MSA)—

The 25 counties (and independent cities) centered around the District of Columbia that are highly integrated economically and socially, as defined by the United States Office of Management and Budget. For the purpose of analysis, we consider four different subregions within the MSA:

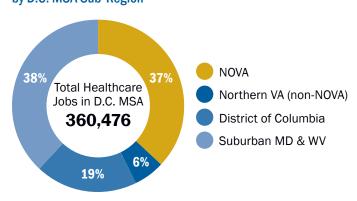
NOVA Region—The nine jurisdictions served by Northern Virginia Community College, including: Arlington County, Alexandria City, Fairfax County, Fairfax City, Falls Church City, Loudoun County, Manassas City, Manassas Park City, and Prince William County.

Suburban Maryland (MD) and West Virginia (WV)—The counties in Maryland and West Virginia that lie within the Washington, D.C. MSA, including: Calvert County, Charles County, Frederick County, Jefferson County (WV), Montgomery County, and Prince George's County.

Northern Virginia (Non-NOVA)—The outlying Virginia counties that compose the remainder of the Washington, D.C. MSA but are not included in the NOVA Region. Includes: Clarke County, Culpeper County, Fauquier County, Fredericksburg, Madison County, Rappahannock County, Spotsylvania County, Stafford County, and Warren County.

District of Columbia—The city and federal district that lies at the core of the metropolitan area.

Figure 1. Healthcare Workforce by D.C. MSA Sub-Region



Source: Lightcast Analyst (2022.4 release).

Healthcare—While the healthcare industry employs individuals in a wide range of roles, we examine the segment of the workforce with roles and responsibilities that directly involve the provision and administration of healthcare services through research, diagnosis, treatment, and care. This also includes occupations involved in animal health (such as veterinarians and veterinary technicians), and mental health (e.g., psychiatrists, counselors, and therapists).

¹ Jonathan Vespa, David M. Armstrong, and Lauren Medina, "Demographic Turning Points for the United States: Population Projections for 2020 to 2060," United States Census Bureau, February 2020, https://www.census.gov/library/publications/2020/demo/p25-1144.html.

^{2 &}quot;Class of Worker (CoW)," Lightcast, accessed January 12, 2023, https://kb.emsidata.com/glossary/class-of-worker-cow/.

The following table (Table 1) contains a selected list of the occupations we have considered in this analysis, including the codes and titles used by the Bureau of Labor Statistics' standard occupation classification (SOC) system to formally define occupational categories for data collection and analysis, as well as

total employment for the occupation in the NOVA region as of 2021. While our overall analysis included 101 occupations, for the sake of brevity we have only provided the titles of occupations with employment of over 500 (or those in roughly the upper 50% of the group).

Table 1. Healthcare Occupations in the NOVA Region (Employing Over 500)

11-9111 Medical & Health Services Managers 3,284 29-1292 Dental Hygienists 2,121 19-1042 Medical Scientists, Except Epidemiologists 1,022 29-1299 Healthcare Diagnosing or Treating Practitioners, All Other 730 19-5011 Occupational Health & Safety Specialists 1,283 29-2018 Clinical Laboratory Technologists and Technicians 3,493 21-1015 Rehabilitation Counselors 908 29-2031 Cardiovascular Technologists and Technicians 537 21-1018 Substance Abuse, Behavioral Disorder, and Mental Health Counselors 3,272 29-2032 Diagnostic Medical Sonographers 611 21-1019 Counselors, All Other 746 29-2034 Radiologic Technologists & Technicians 1,666 21-1022 Healthcare Social Workers 784 29-2042 Emergency Medical Technicians 690 21-1023 Mental Health and Substance Abuse Social Workers 1,207 29-2052 Pharmacy Technicians 2,595 29-1011 Chiropractors 570 29-2053 Psychiatric Technicians 639 29-1021 Dentists, General <td< th=""><th>SOC Code</th><th>SOC Title</th><th>Total Employment</th><th>SOC Code</th><th>SOC Title</th><th>Total Employment</th></td<>	SOC Code	SOC Title	Total Employment	SOC Code	SOC Title	Total Employment
19-1042 Except Epidemiologists 1,022 29-1299 Treating Practitioners, All Other 730	11-9111		3,284	29-1292	Dental Hygienists	2,121
19-3011 & Safety Specialists 1,283 29-2018 gists and Technicians 3,493 21-1015 Rehabilitation Counselors 908 29-2031 Cardiovascular Technologists and Technicians 537 21-1018 Substance Abuse, Behavioral Disorder, and Mental Health Counselors 3,272 29-2032 Diagnostic Medical Sonographers 611 21-1019 Counselors, All Other 746 29-2034 Radiologic Technologists & Technicians 1,666 21-1022 Healthcare Social Workers 784 29-2042 Emergency Medical Technicians 690 21-1023 Mental Health and Substance Abuse Social Workers 1,207 29-2052 Pharmacy Technologists 2,595 29-1011 Chiropractors 570 29-2053 Psychiatric Technicians 639 29-1021 Dentists, General 2,663 29-2056 Veterinary Technologists & Technicians 794 29-1031 Dietitians and Nutritionists 675 29-2061 Licensed Practical & Licensed Practical & Licensed Vocational Nurses 4,427 29-1041 Optometrists 583 29-2072 Medica	19-1042	•	1,022	29-1299		730
21-1018	19-5011		1,283	29-2018		3,493
21-1018 Behavioral Disorder, and Mental Health Counselors 3,272 29-2032 Medical Sonographers 611 21-1019 Counselors, All Other 746 29-2034 Radiologic Technologists & Technicians 1,666 21-1022 Healthcare Social Workers 784 29-2042 Emergency Medical Technicians 690 21-1023 Mental Health and Substance Abuse Social Workers 1,207 29-2052 Pharmacy Technicians 2,595 29-1011 Chiropractors 570 29-2053 Psychiatric Technicians 639 29-1021 Dentists, General 2,663 29-2056 Veterinary Technologists & Technicians 794 29-1031 Dietitians and Nutritionists 675 29-2061 Licensed Practical & Licensed Practical & Licensed Vocational Nurses 4,427 29-1041 Optometrists 583 29-2072 Medical Records Specialists 1,426 29-1051 Pharmacists 1,703 29-2081 Opticians, Dispensing 658 29-1071 Physician Assistants 1,395 29-2099 Health Technologists and Technicians, All Other	21-1015	Rehabilitation Counselors	908	29-2031		537
21-1019 Counseiors, All Other 748 29-2034 & Technicians 1,666 21-1022 Healthcare Social Workers 784 29-2042 Emergency Medical Technicians 690 21-1023 Mental Health and Substance Abuse Social Workers 1,207 29-2052 Pharmacy Technicians 2,595 29-1011 Chiropractors 570 29-2053 Psychiatric Technicians 639 29-1021 Dentists, General 2,663 29-2056 Veterinary Technologists & Tothicians 794 29-1031 Dietitians and Nutritionists 675 29-2061 Licensed Practical & Licensed Vocational Nurses 4,427 29-1041 Optometrists 583 29-2072 Medical Records Specialists 1,426 29-1051 Pharmacists 1,703 29-2081 Opticians, Dispensing 658 29-1071 Physician Assistants 1,395 29-2099 Health Technologists and Technicians, All Other 928 29-1122 Occupational Therapists 859 31-1128 Home Health and Personal Care Aides 23,090 29-1123	21-1018	Behavioral Disorder,	3,272	29-2032		611
21-1023 Mental Health and Substance Abuse Social Workers 1,207 29-2052 Pharmacy Technicians 2,595 29-1011 Chiropractors 570 29-2053 Psychiatric Technicians 639 29-1021 Dentists, General 2,663 29-2056 Veterinary Technologists & Technicians 794 29-1031 Dietitians and Nutritionists 675 29-2061 Licensed Practical & Licensed Vocational Nurses 4,427 29-1041 Optometrists 583 29-2072 Medical Records Specialists 1,426 29-1051 Pharmacists 1,703 29-2081 Opticians, Dispensing 658 29-1071 Physician Assistants 1,395 29-2099 Health Technologists and Technicians, All Other 928 29-1122 Occupational Therapists 859 31-1128 Home Health and Personal Care Aides 23,090 29-1123 Physical Therapists 1,992 31-1131 Nursing Assistants 9,574 29-1127 Speech-Language Pathologists 1,339 31-2021 Physical Therapist Assistants 752 29-112	21-1019	Counselors, All Other	746	29-2034		1,666
21-1023 Abuse Social Workers 1,207 29-2052 Pharmacy Technicians 2,595 29-1011 Chiropractors 570 29-2053 Psychiatric Technicians 639 29-1021 Dentists, General 2,663 29-2056 Veterinary Technologists & Technicians 794 29-1031 Dietitians and Nutritionists 675 29-2061 Licensed Practical & Licensed Vocational Nurses 4,427 29-1041 Optometrists 583 29-2072 Medical Records Specialists 1,426 29-1051 Pharmacists 1,703 29-2081 Opticians, Dispensing 658 29-1071 Physician Assistants 1,395 29-2099 Health Technologists and Technicians, All Other 928 29-1122 Occupational Therapists 859 31-1128 Home Health and Personal Care Aides 23,090 29-1123 Physical Therapists 1,992 31-1131 Nursing Assistants 9,574 29-1127 Speech-Language Pathologists 1,339 31-2021 Physical Therapists Assistants 752 29-1129 Therapis	21-1022	Healthcare Social Workers	784	29-2042	Emergency Medical Technicians	690
29-1021 Dentists, General 2,663 29-2056 Veterinary Technologists & Total Technicians 794 29-1031 Dietitians and Nutritionists 675 29-2061 Licensed Practical & Licensed Vocational Nurses 4,427 29-1041 Optometrists 583 29-2072 Medical Records Specialists 1,426 29-1051 Pharmacists 1,703 29-2081 Opticians, Dispensing 658 29-1071 Physician Assistants 1,395 29-2099 Health Technologists and Technicians, All Other 928 29-1122 Occupational Therapists 859 31-1128 Home Health and Personal Care Aides 23,090 29-1123 Physical Therapists 1,992 31-1131 Nursing Assistants 9,574 29-1127 Speech-Language Pathologists 1,339 31-2021 Physical Therapist Assistants 752 29-1129 Therapists, All Other 784 31-9011 Massage Therapists 3,367	21-1023		1,207	29-2052	Pharmacy Technicians	2,595
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29-1031 Dietitians and Nutritionists 675 29-2061 & Licensed Vocational Nurses 4,427 29-1041 Optometrists 583 29-2072 Medical Records Specialists 1,426 29-1051 Pharmacists 1,703 29-2081 Opticians, Dispensing 658 29-1071 Physician Assistants 1,395 29-2099 Health Technologists and Technicians, All Other 928 29-1122 Occupational Therapists 859 31-1128 Home Health and Personal Care Aides 23,090 29-1123 Physical Therapists 1,992 31-1131 Nursing Assistants 9,574 29-1127 Speech-Language Pathologists 1,339 31-2021 Physical Therapist Assistants 752 29-1129 Therapists, All Other 784 31-9011 Massage Therapists 3,367	29-1021	Dentists, General	2,663	29-2056		794
29-1051 Pharmacists 1,703 29-2081 Opticians, Dispensing 658 29-1071 Physician Assistants 1,395 29-2099 Health Technologists and Technicians, All Other 928 29-1122 Occupational Therapists 859 31-1128 Home Health and Personal Care Aides 23,090 29-1123 Physical Therapists 1,992 31-1131 Nursing Assistants 9,574 29-1127 Speech-Language Pathologists 1,339 31-2021 Physical Therapist Assistants 752 29-1129 Therapists, All Other 784 31-9011 Massage Therapists 3,367	29-1031	Dietitians and Nutritionists	675	29-2061		4,427
29-1071Physician Assistants1,39529-2099Health Technologists and Technicians, All Other92829-1122Occupational Therapists85931-1128Home Health and Personal Care Aides23,09029-1123Physical Therapists1,99231-1131Nursing Assistants9,57429-1127Speech-Language Pathologists1,33931-2021Physical Therapist Assistants75229-1129Therapists, All Other78431-9011Massage Therapists3,367	29-1041	Optometrists	583	29-2072	Medical Records Specialists	1,426
29-1071 Physician Assistants 1,395 29-2099 Technicians, All Other 928 29-1122 Occupational Therapists 859 31-1128 Home Health and Personal Care Aides 23,090 29-1123 Physical Therapists 1,992 31-1131 Nursing Assistants 9,574 29-1127 Speech-Language Pathologists 1,339 31-2021 Physical Therapist Assistants 752 29-1129 Therapists, All Other 784 31-9011 Massage Therapists 3,367	29-1051	Pharmacists	1,703	29-2081	Opticians, Dispensing	658
29-1122 Occupational Therapists 859 31-1128 Personal Care Aides 23,090 29-1123 Physical Therapists 1,992 31-1131 Nursing Assistants 9,574 29-1127 Speech-Language Pathologists 1,339 31-2021 Physical Therapist Assistants 752 29-1129 Therapists, All Other 784 31-9011 Massage Therapists 3,367	29-1071	Physician Assistants	1,395	29-2099		928
29-1127Speech-Language Pathologists1,33931-2021Physical Therapist Assistants75229-1129Therapists, All Other78431-9011Massage Therapists3,367	29-1122	Occupational Therapists	859	31-1128		23,090
29-1129 Therapists, All Other 784 31-9011 Massage Therapists 3,367	29-1123	Physical Therapists	1,992	31-1131	Nursing Assistants	9,574
	29-1127	Speech-Language Pathologists	1,339	31-2021	Physical Therapist Assistants	752
29-1131 Veterinarians 1,141 31-9091 Dental Assistants 2,955	29-1129	Therapists, All Other	784	31-9011	Massage Therapists	3,367
	29-1131	Veterinarians	1,141	31-9091	Dental Assistants	2,955

Table 1. Healthcare Occupations in the NOVA Region (Employing Over 500) (cont.)

29-1141	Registered Nurses	17,800	31-9092	Medical Assistants	5,134
29-1171	Nurse Practitioners	1,658	31-9096	Veterinary Assistants & Laboratory Animal Caretak- ers	1,277
29-1215	Family Medicine Physicians	1,343	31-9097	Phlebotomists	897
29-1229	Physicians, All Other	2,984	43-6013	Medical Secretaries & Administrative Assistants	4,895

Employment in All Other Healthcare Occupations Not Listed Above (54 total): 11,746

Occupations

Table 2. Summary - Healthcare Occupation Employment in the NOVA Region

		Current (202	21)	Last 5 Years		Next 3 Ye	ars	
	Total Employment	Average Annual Wage	Location Quo- tient (LQ)	Average Annual Growth	Total New Demand	Projected Separations*	New Growth	Average Annual Growth
NOVA Region	135,002	\$78,882	0.75	2.6%	44,359	34,522	9,838	2.4%
D.C. MSA	360,746	\$81,268	0.82	0.9%	114,863	91,281	23,582	2.1%

Source: Lightcast Analyst (2022.4 release).

As of 2021, there were over 135,000 healthcare jobs in the NOVA region, representing over a third (37%) of healthcare jobs in the entire Washington, D.C. metropolitan area (Figure 1). Healthcare jobs in the NOVA region have been growing faster on average over the last 5 years than across the MSA and are projected to continue slightly outpacing the region with almost 10,000 new jobs expected over the next 3 years (Table 2).

up a significant segment of new jobs in the near term. These local trends follow those at the national level, where home health and personal care aides, registered nurses, and medical assistants are expected to see the first, sixth, and fourteenth highest totals of job growth, respectively, among all occupations by 2031.3

In addition to projected growth, another measure of an occupation's importance and potential

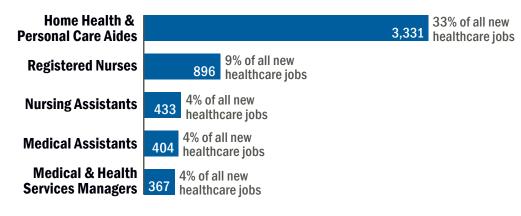
demand in the region is its concentration in the regional economy compared to its concentration nationally, also known as an occupation's Location Quotient (LQ).

An LQ of 0.8–1.2 usually means the occupation makes up a similar proportion of total regional employment as it does nationally, while an LQ higher than 1.2 means that the occupation makes

up a greater share of the regional labor market than it does at a national level (and vice-versa for an LQ below 0.8).

Overall, the healthcare workforce is less concentrated in the NOVA region than it is nationally, with an LQ of 0.75 across all healthcare occupations. Even so, a few occupations (of those employing over 500

Figure 2. Healthcare Occupations Expected to Add the Most New Jobs Over the Next 3 Years



Source: Lightcast Analyst (2022.4 release).

Home health and personal care aides are expected to see significant growth over the next three years, adding over 3,300 new jobs and accounting for, together, a third of new growth in healthcare. While registered nurses and other direct care occupations such as nursing and medical assistants are growing at a slower rate than home health and personal care aides on an annual basis, their growth will still make

^{*}Includes projected demand due to individuals exiting the workforce (due to retirements, etc.) or changing careers/occupations (i.e. transfers).

^{3 &}quot;Occupations with the most job growth, 2021 and projected 2031," Employment Projections Program, Bureau of Labor Statistics, last updated September 8, 2022, https://www.bls.gov/emp/tables/occupations-most-job-growth.htm.

individuals) are more concentrated locally including dentists, veterinary professions, and occupational health and safety specialists (Table 3).

Four out of five of these highly concentrated occupations (excluding veterinary assistants) offer average annual wages of over \$80,000. This would suggest that the NOVA region tends to employ a greater share of high-skill (thus, higher wage) healthcare professionals than the country as a whole. Indeed, high average incomes and wealth in the region— Loudoun County has the highest median household income in the country⁴—allow greater access to the sorts of specialized and preventative services provided by highwage, high-skill healthcare professionals.

In fact, wages for these high-skill positions can be two to three-and-a-half times as high as the average annual wage across all healthcare occupations in the region (\$78,882).5 Cardiologists have the highest average annual wage among healthcare occupations in the NOVA region (\$339,664); however, only 185 of these jobs exist locally. Considering just those occupations employing more than 500 people, doctors still make up the bulk of occupations with the highest wages (earning between \$185,000 and \$200,000 per year, on average); medical and health services managers also earn over \$100,000 annually (Table 4).

The lowest average annual wages in the region tend to be for low- and middle-skill support occupations such as home health and personal care aides, veterinary assistants, and nursing assistants. The fact that some of the occupations expected to see the fastest growth over the next three years (i.e., nursing assistants and home health and personal care

Highest

Table 3. Highest Concentrated Healthcare Occupations (employing over 500) in the NOVA Region

Occupation	LQ	Total Employment
Dentists, General	1.97	2,663
Healthcare Diagnosing or Treating Practitioners, All Other	1.48	730
Veterinary Assistants & Laboratory Animal Caretakers	1.37	1,277
Veterinarians	1.28	1,141
Occupational Health & Safety Specialists	1.27	1,283

Source: Lightcast Analyst (2022.4 release).

aides) are also those with the lowest wages is significant, particularly considering the cost of living in the region—for reference, average annual wages for all of these occupations falls below the roughly \$46,000 per year calculated as a living wage for a single adult in the Washington, D.C. MSA by MIT's Living Wage Calculator.6

As the population continues to age, and demand for personal and home health care services continues to grow, it will be important to continue offering the training and credentials necessary to provide low-skill workers with entry into these positions. However, it will be even more critical to develop further education and training pathways that will allow these individuals to then advance into higher-skilled, better-paying jobs.

Lowest

Table 4. Healthcare Occupations (employing over 500) with the Highest and Lowest Annual Wages in the NOVA Region

IIIBIIOSE		Lowest	
Occupation	Average Annual Wages	Occupation	Average Annual Wages
Family Medicine Physicians	\$264,862	Home Health & Personal Care Aides	\$28,768
Physicians, All Other	\$236,722	Nursing Assistants	\$34,440
Dentists, General	\$200,547	Veterinary Assistants & Laboratory Animal Caretakers	\$35,278
Medical & Health Services Managers	\$138,950	Psychiatric Technicians	\$38,380
Optometrists	\$135,214	Pharmacy Technicians	\$38,441

⁴ Steven Ross Johnson, "The 15 Richest Counties in the U.S.," U.S. News & World Report, December 23, 2022, https://www.usnews.com/news/healthiest-communities/slideshows/richest-counties-in-america.

⁵ Lightcast Analyst (2022.4 release).

^{6 &}quot;Living wage calculation for Washington-Arlington-Alexandria, DC," Massachusetts Institute of Technology, 2022, http://livingwage.mit.edu/metros/47900.

Industries

Table 5. Industry Sectors Employing Over 2% of All Healthcare Jobs

SectorTitle	Healthcare Employment	% of Healthcare Jobs Employed in Sector	Annual % Growth (Healthcare Jobs)	Annual % Growth (All Sector Jobs)
Health Care & Social Assistance	89,970	66.6%	2.9%	2.2%
Public Administration	18,791	13.9%	0.2%	0.5%
Other Services (except Public Administration)	9,634	7.1%	2.9%	0.8%
Professional, Scientific & Technical Services	7,260	5.4%	2.1%	1.2%
Retail Trade	3,353	2.5%	0.3%	-0.9%
Administrative & Support Services	2,704	2.0%	2.4%	0.9%
Total—Top 6 Sectors	131,712	97.6%	2.4%	0.8%
All Other Sectors	3,280	2.4%	2.2%	0.8%

Source: Lightcast Analyst (2022.4 release).

It may be easily assumed that the majority of healthcare jobs—that is, those primarily requiring healthcarespecific skills and knowledge—are located in the "healthcare and social assistance" industry sector. Still, any number of other businesses also employ healthcare professionals, including department stores with onsite pharmacies, public schools with school nurses, and even some private companies. While nearly twothirds of regional healthcare employment lies within the healthcare sector, almost 14% of the workforce is employed in public administration (including government-administered assistance programs and

courts) and thousands more are also employed in professional services, retail, administrative and support services, and other service sectors (*Table 5*). In total, these six sectors employ nearly all healthcare professionals in the region (97.6%).

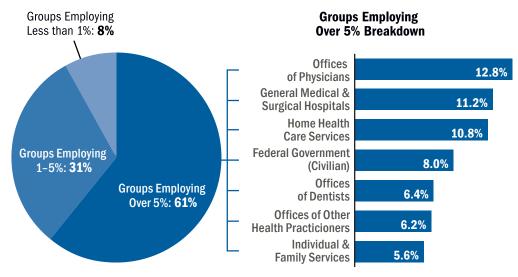
Within industry sectors, industry groups are smaller, more specific categories of businesses with similar functions. Looking at industry groups provides a better understanding of the specific types of employment healthcare workers are involved in regionally, as well

as how diverse the workforce is in terms of industry

function. As opposed to the information technology workforce, where the majority of workers are employed within a single industry group, healthcare occupations in the NOVA region are largely concentrated within groups that each employ at least 5% of the healthcare workforce (or more than 7,000 workers); many fewer groups employ less than 1,300 (or 1%) of healthcare workers (Figure 3).

Physicians' offices employ the largest share

Figure 3. Industry Groups Employing Healthcare Workers in the NOVA Region (by % of All Healthcare Employment)



of healthcare workers regionally (around 17,000). However, the expected growth rates for healthcare occupations in lower wage industry groups such as home health care services are significantly higher (over 5% annually), meaning this industry group will employ larger and larger shares of the healthcare workforce over time. "Other health practitioner" offices follow closely behind with a projected annual

growth rate of 3% (*Table 6*). Businesses in this industry group include alternative health practitioners such as acupuncturists and naturopaths, as well as other specialty healthcare practices including optometrists, podiatrists, and mental health practitioners. A slightly higher share of healthcare workers is also employed in these offices of than nationally (6.2% in the NOVA region compared to 5.3% nationally) (Figure 5).

So, although the region can anticipate significant continued growth in lower-wage services such as home health and personal care, the regional healthcare workforce also "specializes"—and is growing—in highwage, high-cost specialty and preventative services. This further reinforces the observation that, while the regional healthcare workforce reflects national trends in the rapid growth of home health and personal care, it is more heavily oriented towards specialty health areas than the nation on average.

These "other practitioner" establishments may be too small, and thus do too little hiring, to show up among employers with a high volume of job postings for healthcare occupations in the region, however. The list of those employers is heavily weighted towards the large hospitals and medical systems that employ the greatest share of healthcare professionals regionally, including Inova, Virginia Hospital Center, and HCA (*Table 7*). While job postings are a useful proxy or supplement for understanding labor demand, it is important to note that they do not provide a perfect measure; as is evident, they tend to favor employers with large workforces and the resources to conduct significant online hiring.

Table 6. Top Industry Groups Employing Healthcare Workers in the NOVA Region

Industry Group	% of Industry Employed in Healthcare Occupations	Projected Annual Growth (Healthcare Occupations)
Offices of Physicians	75.0%	2.1%
General Medical & Surgical Hospitals	74.8%	1.6%
Home Health Care Services	88.2%	5.3%
Federal Government, Civilian	10.5%	-0.2%
Offices of Dentists	76.4%	2.3%
Offices of Other Health Practitioners	63.0%	3.0%

Source: Lightcast Analyst (2022.4 release).

However, this list of top hiring healthcare employers does also reflect the diversity of industry areas employing the regional workforce. It also reflects the prominence of employers involved in home health and personal care services (such as those provided for seniors): CareInHomes ranks fourth for job postings and Sunrise Senior Living ranks fifth.

Table 7. Top Ten NOVA Healthcare Employers by Total Job Postings (Nov. 2021-Oct. 2022)

Employer	Job Postings
HCA Healthcare	1,606
Inova Health System	1,599
Virginia Hospital Center	1,158
CareInHomes	821
Sunrise Senior Living	628
ProMedica	587
Novant Health	554
CVS Health	436
Aya Healthcare	379
Kaiser Permanente	359

Source: Lightcast Analyst (2022.4 release).

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Regional Comparison

To best understand the local healthcare labor market, it is also useful to place the region in context of other similar metropolitan areas, peer cities, and nearby regions. In this case, we compare the NOVA region to the Washington, D.C. metropolitan area (MSA), other national MSAs with prominent healthcare industries, and two nearby MSAs, Baltimore and Richmond.

The D.C. MSA ranks ninth among United States metropolitan areas for the total size of its healthcare workforce, but places lower in terms of the overall concentration of healthcare occupations among the entire workforce (Table 8). The NOVA region, despite having a population nearly the size of the Baltimore metropolitan area (2.5 million and 2.8 million respectively), ranks well below the Baltimore MSA in the size of its healthcare workforce—the equivalent of 36th -and even has a lower concentration

of healthcare jobs than the larger D.C. MSA; both areas fall below the average concentration of healthcare jobs across all metropolitan and micropolitan areas (10.5%).

The comparatively small healthcare workforce in the region may be due, in part, to the fact that the regional population skews significantly younger than the country as a whole, both in terms of median age and the percentage of population aged 65 and above (Figure 4). As younger populations typically demand and utilize fewer medical services, a region with a younger population would experience a lower need for healthcare workers than other areas.

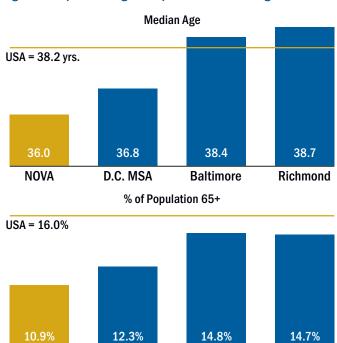
By contrast, the concentration of healthcare occupations is higher within the Baltimore and Richmond MSAs, right around the average of 10.5% across MSAs as a whole; the ages of their populations are also more in line with the national average. While the percentage of individuals 65 and older in each is slightly lower than the United States, their median ages are actually higher.

Table 8. Top MSAs by Total Healthcare Employment (in thousands) Compared to the NOVA Region and Nearby MSAs

MSA Rank	Region/ MSA	Healthcare Employment	Total Employment	Healthcare Concentration
1	New York City	1,488.2	12,068.3	12.3%
2	Los Angeles	1,034.4	8,708.6	11.9%
3	Chicago	563.8	5,757.3	9.8%
4	Philadelphia	480.8	3,672.2	13.1%
5	Boston	427.7	3,521.5	12.1%
6	Dallas-Fort Worth	426.7	5,094.0	8.4%
7	Houston	403.3	4,439.0	9.1%
8	Miami-Ft. Lauderdale	399.3	4,198.6	9.5%
9	Washington D.C.	360.5	4,253.5	8.5%
10	San Francisco	347.0	3,142.9	11.0%
18	Baltimore	190.0	1,759.6	10.8%
-	NOVA Region	135.0	1,746.8	7.7%
45	Richmond	83.9	825.6	10.2%

Source: Lightcast Analyst (2022.4 release).

Figure 4. Population Age Comparisons Across Regions



Source: U.S. Census Bureau, 2016-2020 American Community Survey 5-Year Estimates.

Baltimore

D.C. MSA

NOVA

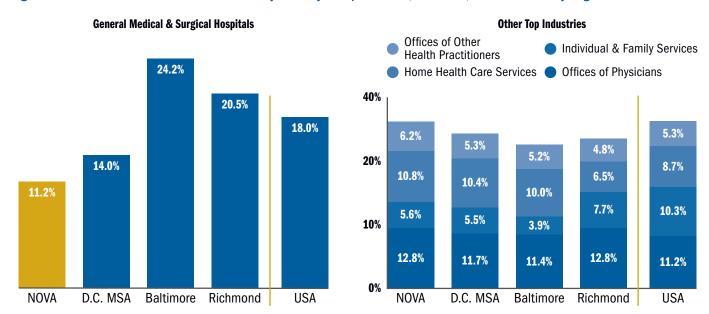
Richmond

Figure 5 indicates the extent to which healthcare occupations are concentrated across various industry groups for the NOVA region, D.C. MSA, and nearby MSAs of Baltimore and Richmond. The concentration of healthcare occupations by group at the national level is also provided for reference. General medical and surgical hospitals employ the largest share of healthcare workers in every area except NOVA, where offices of physicians employ the largest share; the other industry groups displayed are the four that employ the next largest shares at the national level.

Although hospitals employ the highest percentage of healthcare workers in the D.C. MSA and the secondhighest percentage in the NOVA region, this share is noticeably lower in both regions than in the other two nearby MSAs. Again, this may be due to differing population demographics and, thus, differing healthcare needs among the populations in each area: if hospitals are primarily involved in urgent and intensive care, and these services are more likely among older populations, there will be a greater supply of hospitals to meet this demand.

Slightly larger percentages of the healthcare workforce in the NOVA region are employed in home health care and offices of other health practitioners than in the D.C. MSA and other nearby regions. This is in keeping with the findings of the previous section, which indicate that the healthcare industry and workforce in this area are more geared towards preventative and specialized care, with a growing demand for home health and personal care services. Even within relatively close regional proximity, the nature and activities of the healthcare workforce—and thus, skill and talent needs—may differ meaningfully.

Figure 5. Concentration of Healthcare Workers by Industry Group for NOVA, D.C. MSA, and Other Nearby Regions



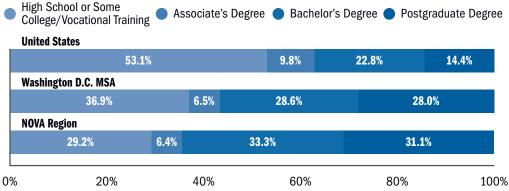
Education

In general, the NOVA region has much higher levels of educational attainment than the rest of the country, with 71% of the highschool graduate population (aged 25 and up) holding some sort of 2-year, 4-year, or post-graduate degree compared to 47% nationally. Degree holders are also slightly more concentrated in the NOVA region than across the entire D.C. MSA, where roughly 63% of the same population holds an associate's degree or higher (Figure 6).

By contrast, the minimum education requirements for healthcare jobs in the region (as indicated in online job postings) are

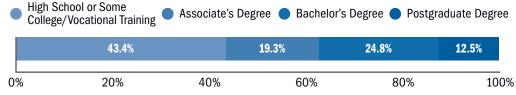
relatively evenly distributed, with opportunities available at all levels of education. In fact, most job postings required less than a bachelor's degree (62.7%). Even given the larger concentration of high-skill healthcare occupations in the region, around 2 in 5 healthcare jobs may only require a

Figure 6. Educational Attainment of Population Aged 25+, High School Degree & Above



Source: U.S. Census Bureau, 2016-2020 American Community Survey 5-Year Estimates.

Figure 7. Minimum Education Requirements Requested in NOVA Healthcare Job Postings



Source: Lightcast Analyst (2022.4 release).

high school diploma, vocational training, or post-secondary credential (Figure 7).

Among those occupations that typically require less a than bachelor's degree, but more than just a high school diploma,

Table 9. Top 10 Healthcare Occupations Typically Requiring Less Than a Bachelor's Degree, More Than a High School Diploma (by total employment)

SOC Title	Total Employment	Typical Education (via BLS EP)	Average Annual Wage	Job Postings
Nursing Assistants	9,574	Postsecondary non-degree award	\$34,440	1,822
Medical Assistants	5,134	Postsecondary non-degree award	\$45,168	1,619
Licensed Practical & Licensed Vocational Nurses	4,427	Postsecondary non-degree award	\$52,800	1,797
Massage Therapists	3,367	Postsecondary non-degree award	\$60,061	440
Dental Assistants	2,955	Postsecondary non-degree award	\$51,920	1,187
Dental Hygienists	2,121	Associate's degree	\$90,383	381
Radiologic Technologists & Technicians	1,666	Associate's degree	\$71,161	665

Table 9. Top 10 Healthcare Occupations Typically Requiring Less Than a Bachelor's Degree, More Than a High School Diploma (by total employment) (cont.)

Medical Records Specialists	1,426	Postsecondary non-degree award	\$61,073	1,073
Health Technologists & Technicians, All Other	928	Postsecondary non-degree award	\$58,629	2,046
Phlebotomists	897	Postsecondary non-degree award	\$45,127	553

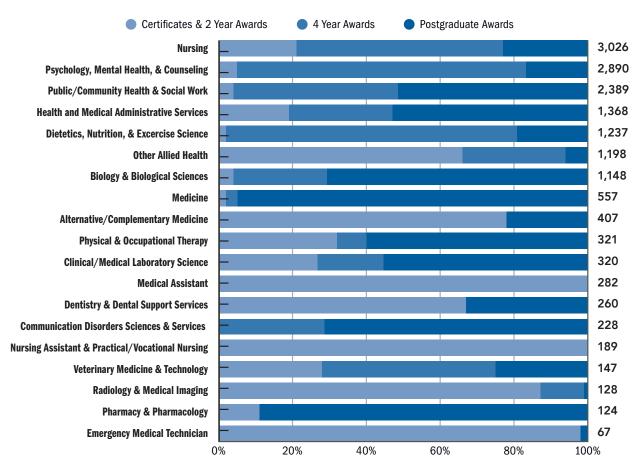
Source: Bureau of Labor Statistics, Employment Projections program (EP); Lightcast Analyst (2022.4 release).

are many that may see meaningful growth in the region over the next three years (*Table 9*). Recall that nursing assistants and medical assistants, combined, are expected to add over 800 new jobs in that period of time (Figure 2). Practical/vocational nurses, dental assistants/hygienists, and massage therapists are all expected to add between 100 and 300 new jobs apiece. As a result, there is significant opportunity for lower-skilled individuals to advance with some additional training in healthcare.

As to the outcomes of that training, in 2021, 282 certificates or two-year credentials were awarded in medical assisting and 189 were awarded for nursing assistants or licensed

practical nurses (LPNs) across the Washington, D.C. MSA (Figure 8). Comparatively, this indicates that there may be room for additional postsecondary capacity to address future labor market demand for nursing assistants and LPNs. Despite a lower number of total completers, demand (measured in terms of job postings, as well as projected job growth plus separation demand) for both nursing assistants and LPNs generally exceeds demand for medical assistants. Career prospects are particularly strong for LPNs, which have higher average wages than both nursing and medical assistants, as well as the potential for advancement, through additional training/education, into even higher paid registered nursing jobs.

Figure 8. Healthcare Credentials Awarded by Program Area and Level (D.C. MSA, 2021)



Skills and Certifications

To develop education and training opportunities that truly meet the demand among healthcare employers for wellqualified talent, however, it is critical to understand which skills they are looking for within the workforce.

Table 10 indicates the most in-demand skills for all healthcare occupations in the NOVA region based on the number of postings requesting the skills. These are also designated as either baseline/"soft" skills—those that are necessary regardless of job function—or as specialized skills—those that

Table 10. Top Skills Listed on NOVA Healthcare Job Postings

Skill	Туре	% of Job Postings
Communication Skills	Baseline	29.4%
Nursing	Specialized	21.6%
Customer Service	Baseline	16.8%
Management	Baseline	14.2%
Leadership	Baseline	10.4%
Cardiopulmonary Resuscitation (CPR)	Specialized	10.0%
Operations	Baseline	9.8%
Medical Records	Specialized	8.9%
Scheduling	Baseline	8.7%
Valid Driver's License	Baseline	8.7%

Source: Lightcast Analyst (2022.4 release).

Table 11. Top Certifications Listed on NOVA **Healthcare Job Postings**

Certification	% of Postings
Basic Life Support (BLS) Certification	14.0%
Licensed Practical Nurse (LPN)	5.5%
Advanced Cardiovascular Life Support (ACLS) Certification	5.1%
Certified Nursing Assistant (CNA)	5.0%
Board Certified/Board Eligible	3.3%
Nurse Practitioner	2.7%
Licensed Clinical Social Worker (LCSW)	1.7%
Basic Cardiac Life Support	1.6%
Board Certified Behavior Analyst	1.5%
Pediatric Advanced Life Support	1.4%

Source: Lightcast Analyst (2022.4 release).

are uniquely necessary to a particular job or set of job functions.

A mix of baseline and specialized skills are requested for healthcare positions, though baseline skills tend to be requested more frequently. Those specialized skills that are requested frequently are general healthcare skills that cut across many different occupations, such as CPR and medical records. Baseline skills such as communication, customer service, and management are also frequently requested for healthcare positions.

The most in-demand certifications across all healthcare job postings (Table 11) largely reflect the need for credentialed validation of basic, yet universal, specialized skills within healthcare (BLS, ACLS, etc.). Otherwise, the certifications most often requested are those formal credentials and licenses necessary to practice as in-demand, middle-skill healthcare occupations (e.g., LPN CNA, and LCSW).

Data Sources

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