

The Health Care Workforce in New York State: Trends in the Supply of and Demand for Health Care Workers



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PREFACE

This report, prepared by the Center for Health Workforce Studies (CHWS), provides information drawn from a variety of data sources to describe and analyze New York State's health workforce. The report includes primary data collected by CHWS on registered nurse (RN) education and on health workforce recruitment and retention challenges in New York State.

A key goal of this report is to assist policy makers and other stakeholders to:

- Address the most pressing health care workforce needs
- Make informed decisions on health workforce education and job training investments
- Guide health workforce policies, including decisions related to the capacity of health profession education programs
- Inform current and prospective students about profession-specific health care employment prospects and opportunities

This report was prepared by CHWS staff, Robert Martiniano, Alexandra Romero, Jinman Pang, and Matthew Allegretti. Funding for this report was provided by the 1199 Hospital League Health Care Industry Planning and Placement Fund, Inc.

Established in 1996, CHWS is an academic research center based at the School of Public Health, University at Albany, State University of New York (SUNY). The mission of CHWS is to provide timely, accurate information and conduct policy relevant research about the health workforce. The research conducted by CHWS supports and promotes health workforce planning and policymaking at local, regional, state, and national levels. CHWS is a national leader in the field of health workforce research.

The views expressed in this report are those of CHWS and do not necessarily represent positions or policies of SUNY or 1199 SEIU/Hospital League Health Care Industry Planning and Placement Fund, Inc.

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I. EXECUTIVE SUMMARY

BACKGROUND

The health workforce is a vital part of New York's health care delivery system. Efforts to expand access to care, improve the quality of care, and improve the cultural competence of the health care delivery system depend on the availability of a diverse, well-trained, and adequately sized health workforce.

The COVID-19 pandemic caused major disruptions to New York's health care delivery system as well as its workforce. While pandemic impacts on health care delivery have waned somewhat in recent months, there have been persistent challenges in assuring adequacy of the state's health workforce. It has become harder to recruit workers into health care as well as to retain them. Many health workers retired, left for better job opportunities both in and outside of health care, or reduced hours as result of the pandemic.

Health care providers used a variety of strategies to address their workforce recruitment and retention issues. Recruitment strategies include sign-on bonuses, increased outreach to potential employees through job fairs, internship and externship opportunities, and participating in health career programs at high schools and middle schools. Retention strategies include retention bonuses, upgrading programs or career ladders, and retention coordinators. Health care organizations are offering nurse residency programs to recruit and retain registered nurses, mentoring newly trained nurses and providing supervised patient care experiences. Health care providers also use state and federal incentive programs that typically provide loan repayment in return for obligated service in high need communities.

FUTURE OUTLOOK

Federal projections as outlined in this report indicate that the health care jobs will continue to grow faster than jobs in other employment sectors, especially in home health care, though at a slower pace than in the past. Health care providers are adopting new models of care, expanding the use of technology, such as telehealth. Additionally, there is an increased use of team-based models of care, including the use of health workers who assist in the delivery and management of care, such as community health workers, health coaches, and patient navigators.

Now more than ever, health care providers are in greater competition with other employment sectors for workers. Many prospective job applicants prioritize work-life balance in their employment decisions, and it is critical for health care providers to recognize this and develop strategies to minimize the stress associated with patient care jobs.

Consequently, it is critical to continually monitor the supply of and demand for health workers in the state, to understand the magnitude of shortages and their impact on access to care. In addition, it is important to assess the adequacy of production from the state's health professions education pipeline. Timely workforce data and analyses are necessary to assess current and future health care workforce needs and deficits.

KEY FINDINGS

This report presents data and information drawn from primary and secondary data sources to describe New York's health workforce and provides analysis of data at the state and regional levels. The report includes information on the health status of New Yorkers, the health care system, and the supply of and demand for health workers. It is designed to assist stakeholders in their health workforce planning efforts. Key findings include:

- The increase in employment in the health care sector in New York State continues to outpace employment in other job sectors.
- Jobs in health care in New York State have rebounded since the COVID-19 pandemic impact, though not back to the pre-pandemic levels.
- Health care jobs in Upstate New York regions have declined over the past 5 years, while health care jobs in Long Island and New York City have increased during the same time period.
- Registered nurses are among the most difficult to recruit and retain in all health care settings throughout New York State.
- Social worker graduations have increased substantially over the past five years. Registered nurse graduations have also increased over the past five years.
- The majority of deans and directors of RN educational programs indicated that acceptances to their programs were about the same between 2021 and 2022. They are also reporting many jobs for newly trained registered nurses, especially in hospitals and nursing homes.
- Home health and personal care aides are among the fastest growing health occupation in New York State, with over 90,000 projected average annual openings.
- There are more than 14,000 projected average annual openings for registered nurses and nearly 5,000 projected average annual openings for licensed practical nurses.

OBJECTIVES AND GOALS

The objectives of this report are to:

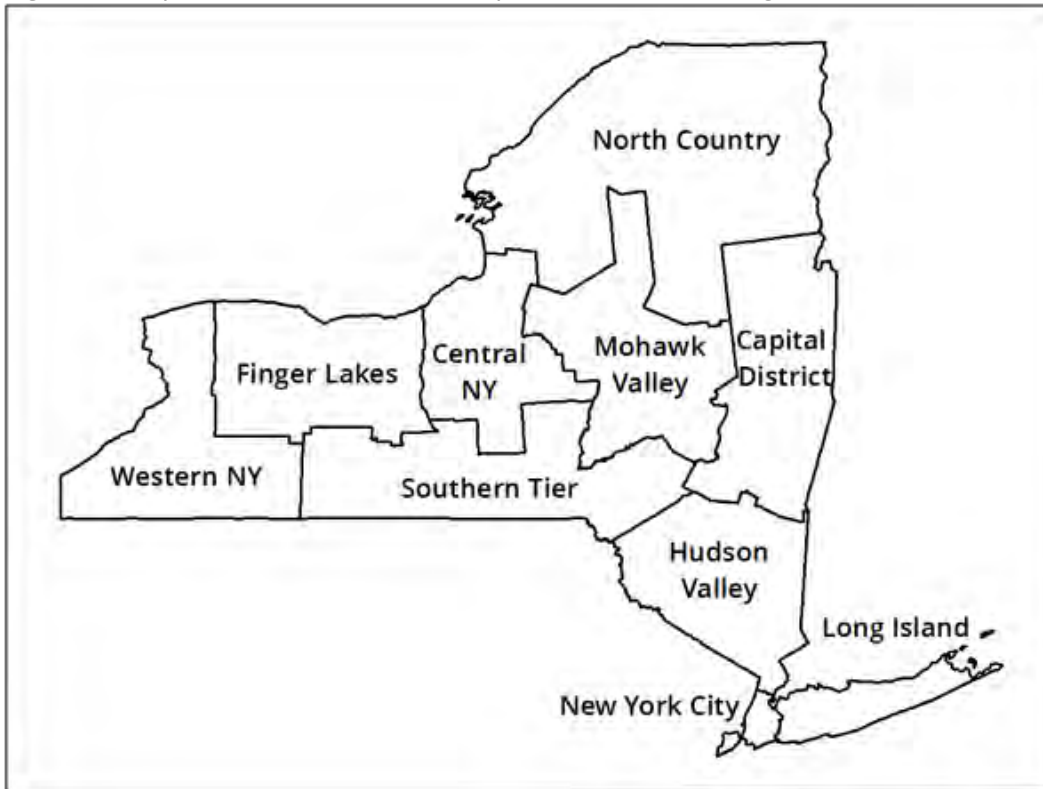
- Describe health care employment, graduation, and licensure trends in New York State statewide and regionally, and
- Identify the health care professions and occupations currently and projected to be in greatest demand.

Key goals of this report are to assist policy makers and other stakeholders to:

- Make informed decisions on health workforce education and job training investments.
- Address the most pressing health care workforce needs.
- Guide health workforce policies, including decisions related to the capacity of health profession education programs.
- Inform current and prospective students about profession-specific health care employment prospects and opportunities.

The New York State Department of Labor (NYSDOL) has divided the state into several regions. Figure 1 is a map of the NYSDOL regions used in this report. For a list of counties in each region, please see Section C (Geographic Areas) in the [Appendix](#), page 244. Each regional profile page has a list of counties profiled in that region as well.

Figure 1. Map of the New York State Department of Labor Regions



II. NEW YORK STATE HEALTH SECTOR EMPLOYMENT

KEY FINDINGS

Health Care Employment

- The increase in employment in the health care sector in New York State continues to outpace employment in other job sectors.
- Jobs in health care in New York State have rebounded since the COVID-19 pandemic impact, though not back to the pre-pandemic levels.
- Health care jobs in Upstate New York regions have declined over the past 5 years, while health care jobs in Long Island and New York City have increased during the same time period.
- Job growth is the fastest in home health care, followed by ambulatory care. Jobs in nursing homes have declined over the past five years.

Employer Demand Survey

- Registered nurses are among the most difficult to recruit and retain in all health care settings throughout New York State.
- Clinical laboratory technologists are also the hardest to recruit in hospitals followed by respiratory therapists.
- Licensed practical nurses and certified nurse aides/assistants are also among the most difficult to recruit and retain in nursing homes and in assisted living facilities.
- Home health aides and personal care aides are the most difficult to recruit and retain in home health care.
- A general shortage of workers was cited as one of the main reasons for recruitment difficulties of health care workers. Leaving for better salaries was cited across all health care settings as a main reason for retention difficulties.

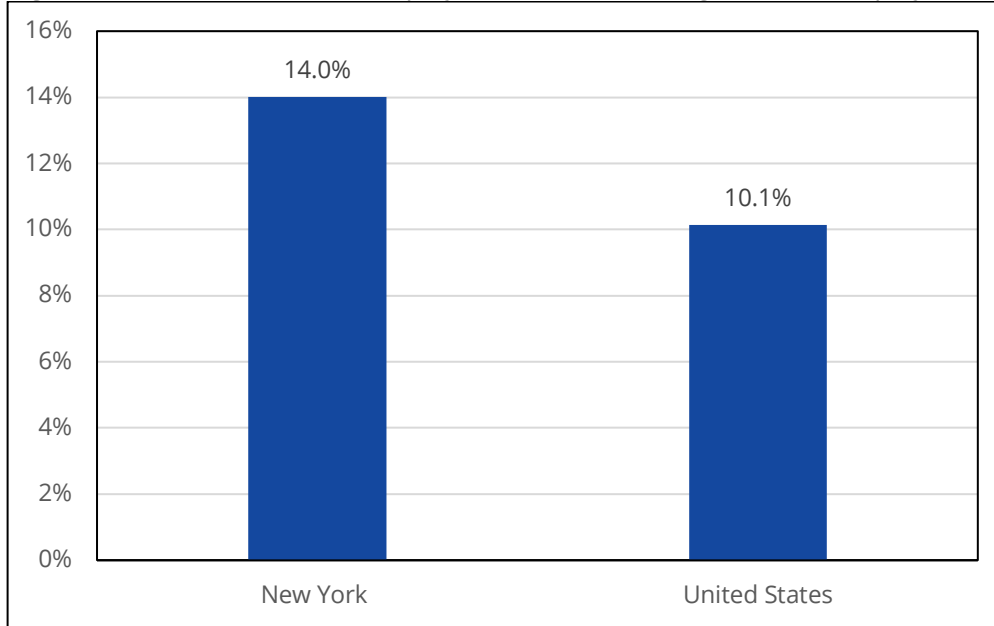
Health Care Production and Projected Workforce Need

- Social worker graduations have increased substantially over the past five years. Registered nurse graduations have also increased over the past five years.
- The majority of deans and directors of RN educational programs indicated that acceptances to their programs were about the same between 2021 and 2022. They are also reporting many jobs for newly trained registered nurses, especially in hospitals and nursing homes.
- Home health and personal care aides are among the fastest growing health occupation in New York State, with over 90,000 projected average annual openings.
- There are more than 14,000 projected average annual openings for registered nurses and nearly 5,000 projected average annual openings for licensed practical nurses.

1. Health Care Employment

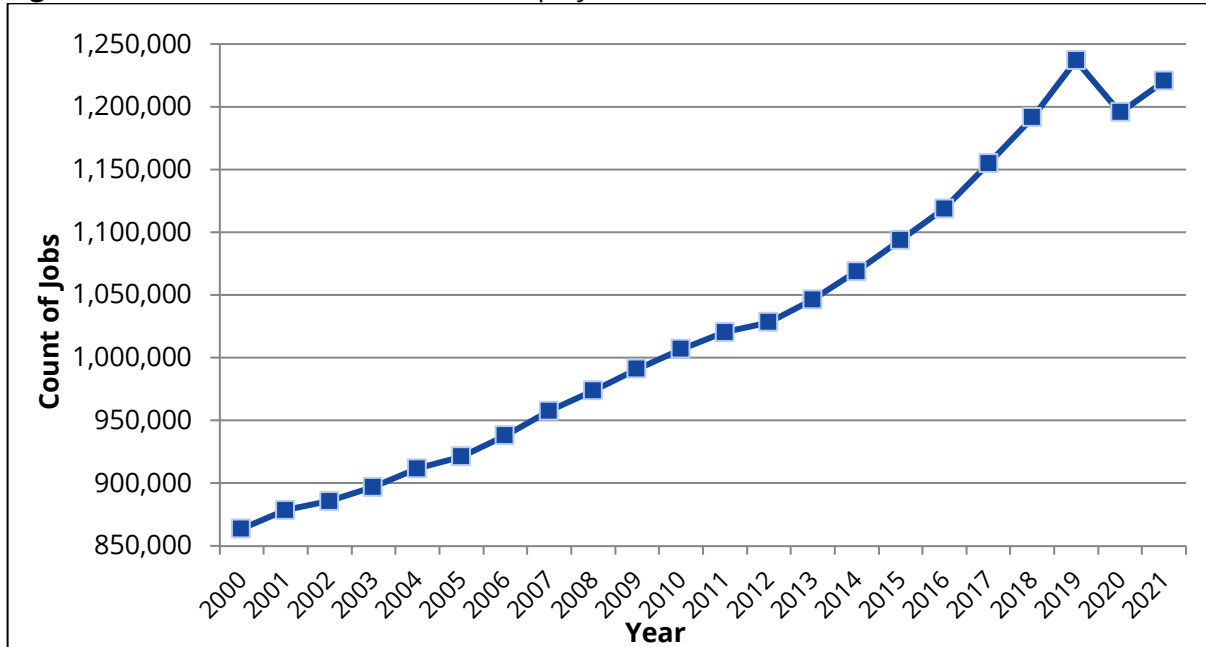
A. Overview

Figure 2. Health Care Sector Employment as a Percentage of Total Employment, 2021



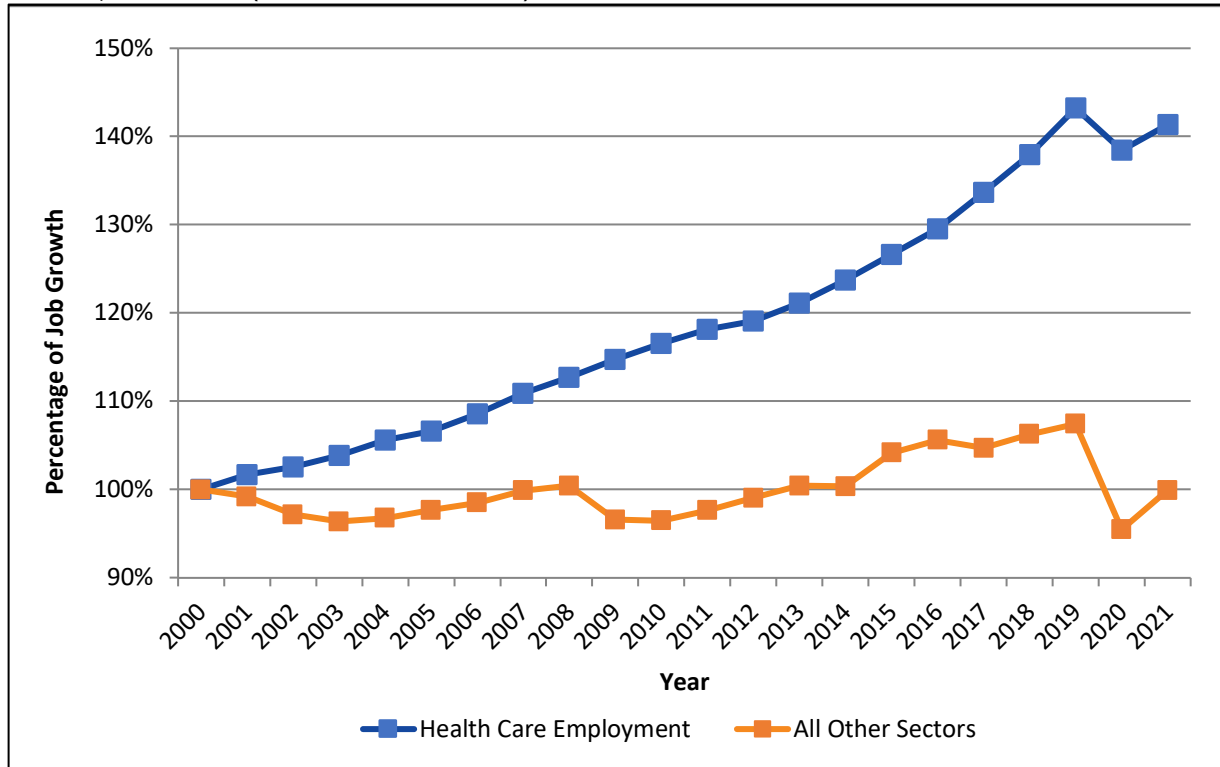
Sources: New York State Department of Labor, Quarterly Census of Employment and Wages; Bureau of Labor Statistics, 2021 - 2031 Projections, Table 2.11: Employment and output by industry; Bureau of Labor Statistics, Employment, Hours, and Earnings from the Current Employment Statistics survey, Series CEU0000000001, CEU6562000101, CEU6562100001, CEU6562200001, CEU6562300001, CEU6562320001, CEU6562390001, CEU9091622001, CEU9092262201, and CEU9093262201.

Figure 3. Growth of Health Care Sector Employment in New York State, 2000-2021



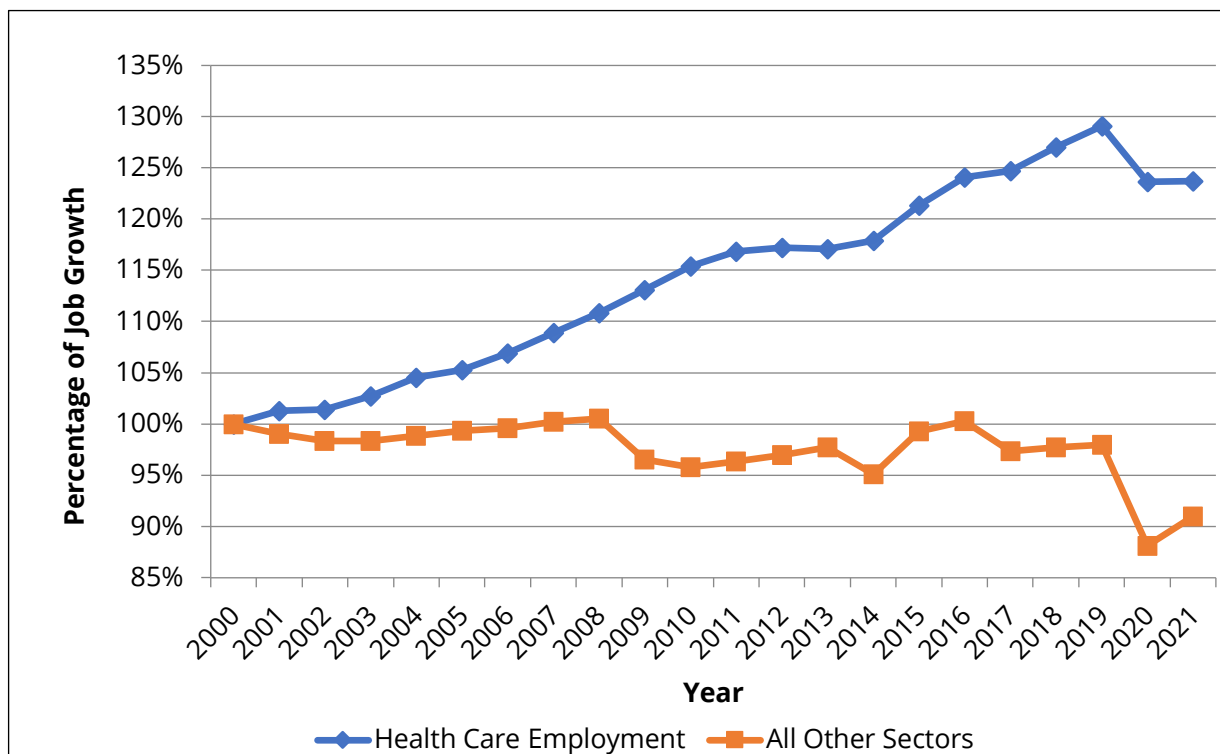
Source: NYS Department of Labor, Quarterly Census of Employment and Wages.

Figure 4. Growth of Employment in New York State, Health Care Sector and All Other Employment Sectors, 2000-2021 (Standardized to 2000)



Source: NYS Department of Labor, Quarterly Census of Employment and Wages.

Figure 5. Growth of Employment in Regions Outside of New York City, Health Care Sector and All Other Employment Sectors, 2000-2021 (Standardized to 2000)



Source: NYS Department of Labor, Quarterly Census of Employment and Wages.

2. Population and Health Care Indicators of New York State

Table 1. Selected Population Characteristics for New York State, 2016-2020

Population Characteristics	Number	% Of Total Population
Total population	19,514,849	N/A
Population under 100% FPL	2,581,048	13.6%
Population under 200% FPL	5,470,255	28.8%
Population aged birth to 17 years	4,071,142	20.9%
Population aged 65 and older	3,221,702	16.5%
Population female aged 15 to 44	3,896,815	20.0%
Women aged 15 to 19 who had a birth in past 12 mos.	4,375	1.9% ^b
Women aged 20 to 34 who had a birth in past 12 mos.	148,263	65.9% ^b
Women aged 35 to 50 who had a birth in past 12 mos.	72,505	32.2% ^b
Black/African American, non-Hispanic	2,737,471	14.0%
Hispanic/Latino	3,720,707	19.1%
Asian/Pacific Islander, non-Hispanic	1,662,821	8.5%
American Indian/Native Alaskan, non-Hispanic	42,429	0.2%
Two or more/other races	585,124	3.0%
Population with less than a high school education ^a	1,743,890	12.8%
Population with a high school diploma or equivalent ^a	5,583,778	40.9%
Population with an associate degree ^a	1,208,697	8.9%
Population with a bachelor's degree ^a	2,854,930	20.9%
Population with a master's degree or higher ^a	2,257,862	16.5%
Home ownership	4,014,516	54.1%

^aEducation levels and rates are based on individuals aged 25 years and older.

^bPercent of total births.

FPL, federal poverty level; N/A, not applicable; mos., months.

Source: US Census, American Community Survey, 5-Year Estimates, 2016-2020.

Table 2. Selected Health Indicators for New York State

Health Indicator	Statewide	
	Number	Rate
Total deaths, per 100,000	468,772	798.8
Deaths due to heart disease, per 100,000	163,285	278.3
Deaths due to all cancers, per 100,000	103,089	175.5
Deaths due to diabetes, per 100,000	13,175	22.5
Total births, per 1,000 females aged 15 to 44	674,199	57.5
Teen births, per 1,000 females aged 15 to 19	20,879	11.9
Low-birthweight births, as a percent of total births	41,103	6.3
Late/no prenatal care, as a percent of total births	35,780	5.4
Infant deaths, per 1,000 live births	2,940	4.4
Total hospitalizations, per 10,000	6,776,549	1,154.8
Total asthma hospitalizations, per 10,000	57,786	9.8
Rate of asthma hospitalizations, aged 25-44 per 10,000	7,994	5.0
Rate of asthma hospitalizations, aged 45-64 per 10,000	13,566	8.8
Pediatric asthma hospitalization, per 10,000	24,839	20.3
Diabetes hospitalizations, per 10,000	125,599	21.4
CLRD hospitalizations, per 10,000	174,084	29.7
Heart disease hospitalizations, per 10,000	616,944	105.1
Total ED visits, per 10,000	24,263,152	4,134.7

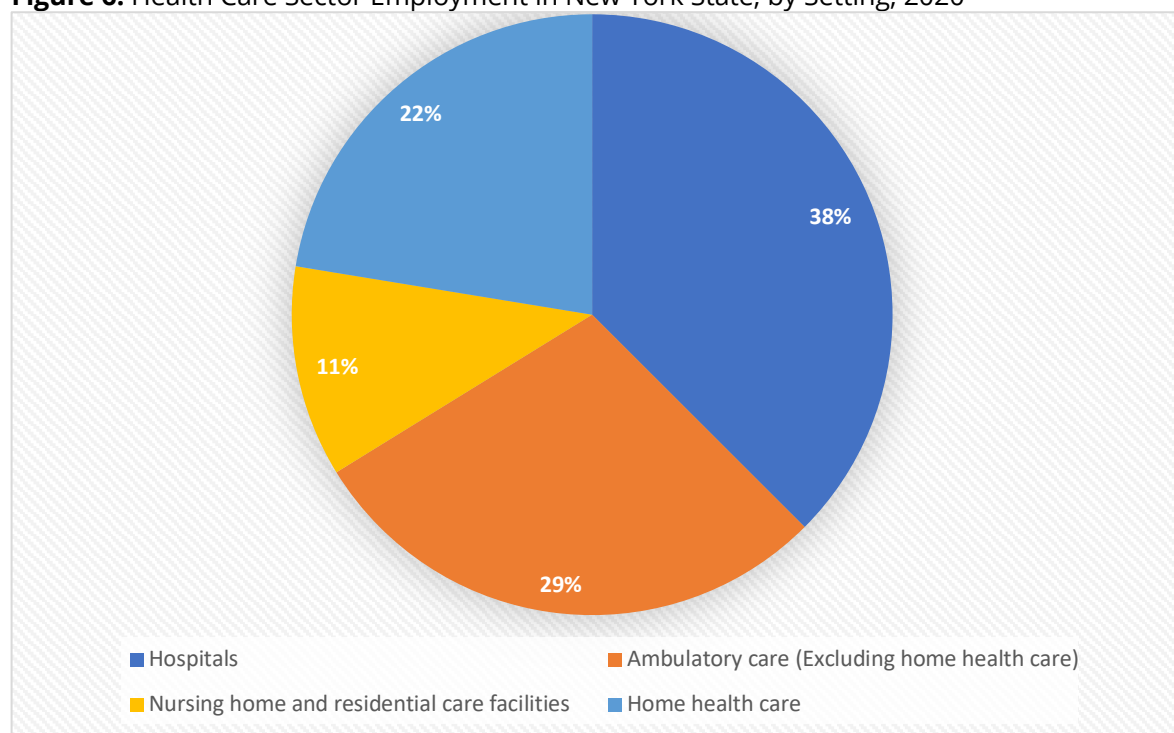
CLRD, chronic lower respiratory disease; ED, emergency department.

Source: New York State Community Health Indicator Reports.

3. Health Care Sector

A. Employment Data Statewide and By Region

Figure 6. Health Care Sector Employment in New York State, by Setting, 2020



Source: NYS Department of Labor, Quarterly Census of Employment and Wages.

Table 3. Health Care Jobs in New York State, by Setting, 2000, 2017, and 2021

Setting	2000	2017	2021	Change Between 2000–2017		Change Between 2017–2021	
				Number	Percent	Number	Percent
Hospitals	410,300	451,671	454,324	41,371	10.1%	2,653	0.6%
Ambulatory care (Excluding home health care)	245,600	339,674	347,959	94,074	38.3%	8,285	2.4%
Nursing home and residential care facilities	143,200	160,159	137,825	16,959	11.8%	-22,334	-13.9%
Home health care	64,600	203,142	271,668	138,542	214.5%	68,526	33.7%
Total	863,700	1,154,646	1,211,776	290,946	33.7%	57,130	4.9%

Source: NYS Department of Labor, Quarterly Census of Employment and Wages.

Table 4. Health Care Jobs in New York State, by Downstate and Upstate, 2017–2021

	2017	2018	2019	2020	2021	Change Between 2017 and 2021	
						Number	Number
Downstate	717,328	748,911	791,648	769,184	790,994	73,666	10.3%
Upstate	437,318	442,466	445,269	426,296	420,782	-16,536	-3.8%
Total	1,154,646	1,191,377	1,236,917	1,195,480	1,211,776	57,130	4.9%

Source: NYS Department of Labor, Quarterly Census of Employment and Wages.

Note: The downstate category includes the Department of Labor regions of New York City and Long Island. The upstate category includes the remainder of the regions.

Table 5. Health Care Jobs in New York State, by Department of Labor Region, 2017–2021

Region	2017	2018	2019	2020	2021	Change Between 2017 and 2021	
						Number	Percent
Capital Region	59,764	60,374	59,272	57,012	55,545	-4,219	-7.1%
Central NY	40,258	40,538	41,907	39,161	38,231	-2,027	-5.0%
Finger Lakes	68,200	69,298	69,772	66,607	66,092	-2,108	-3.1%
Hudson Valley	120,732	121,722	123,422	120,117	120,702	-30	0.0%
Long Island	180,436	186,482	194,047	186,101	191,796	11,360	6.3%
Mohawk Valley	27,177	26,984	26,527	25,010	23,802	-3,375	-12.4%
New York City	536,892	562,429	597,601	583,083	599,198	62,306	11.6%
North Country	18,976	19,026	19,244	18,388	18,056	-920	-4.8%
Southern Tier	28,924	29,148	29,083	27,767	27,214	-1,710	-5.9%
Western NY	73,287	75,376	76,042	72,234	71,140	-2,147	-2.9%
Total	1,154,646	1,191,377	1,236,917	1,195,480	1,211,776	57,130	4.9%

Source: NYS Department of Labor, Quarterly Census of Employment and Wages.

Table 6. Health Care Employment per 100,000 in New York State, by Department of Labor Region, 2010 and 2021

Region	2010		2021	
	Jobs per 100,000 Population	% Of Jobs in Health Care	Jobs per 100,000 Population	% Of Jobs in Health Care
Capital Region	5,052.00	11.1%	5,020.91	11.2%
Central NY	4,683.80	11.0%	4,898.45	11.9%
Finger Lakes	5,011.60	11.4%	5,430.71	12.7%
Hudson Valley	4,825.50	12.9%	5,030.40	13.8%
Long Island	5,697.20	13.6%	6,574.55	15.7%
Mohawk Valley	5,437.30	14.2%	4,949.77	13.5%
New York City	5,324.20	12.1%	7,076.43	14.7%
North Country	4,054.50	11.6%	4,295.39	12.6%
Southern Tier	4,354.40	10.9%	4,285.39	11.4%
Western NY	5,105.20	11.7%	5,039.40	12.2%
Total	5,195.50	12.3%	6,109.0	14.0%

Source: NYS Department of Labor, Quarterly Census of Employment and Wages.

B. Hospital Employment

Table 7. Hospital Employment in New York State, by Downstate and Upstate, 2017–2021

	2017	2018	2019	2020	2021	Change Between 2017 and 2021	
						Number	Number
Downstate	276,845	279,037	284,309	287,772	286,791	9,946	3.6%
Upstate	174,826	178,270	178,737	172,511	167,533	-7,293	-4.2%
Total	451,671	457,307	463,046	460,283	454,324	2,653	0.6%

Source: NYS Department of Labor, Quarterly Census of Employment and Wages.

Note: The downstate category includes the Department of Labor regions of New York City and Long Island. The upstate category includes the remainder of the regions.

Table 8. Hospital Employment in New York State, by Department of Labor Region, 2017–2021

Region	2017	2018	2019	2020	2021	Change Between 2017 and 2021	
						Number	Percent
Capital Region	24,907	25,225	24,537	23,328	21,774	-3,133	-12.6%
Central NY	13,931	14,066	14,210	13,603	13,165	-766	-5.5%
Finger Lakes	32,738	33,911	34,532	33,594	34,239	1,501	4.6%
Hudson Valley	42,007	42,156	42,400	41,898	40,720	-1,287	-3.1%
Long Island	71,183	73,929	76,005	76,195	77,308	6,125	8.6%
Mohawk Valley	11,773	11,838	11,785	10,678	9,632	-2,141	-18.2%
New York City	205,662	205,108	208,304	211,577	209,483	3,821	1.9%
North Country	9,507	9,710	9,796	9,369	9,125	-382	-4.0%
Southern Tier	13,506	13,535	13,681	13,198	12,978	-528	-3.9%
Western NY	26,457	27,829	27,796	26,843	25,900	-557	-2.1%
Total	451,671	457,307	463,046	460,283	454,324	2,653	0.6%

Source: NYS Department of Labor, Quarterly Census of Employment and Wages.

C. Nursing and Residential Care Facility Employment

Table 9. Nursing and Residential Care Facility Employment in New York State, by Downstate and Upstate, 2017–2021

	2017	2018	2019	2020	2021	Change Between 2017 and 2021	
						Number	Percent
Downstate	74,125	74,324	74,416	69,277	65,769	-8,356	-11.3%
Upstate	86,034	85,671	85,256	79,536	72,056	-13,978	-16.2%
Total	160,159	159,995	159,672	148,813	137,825	-22,334	-13.9%

Source: NYS Department of Labor, Quarterly Census of Employment and Wages.

Note: The downstate category includes the Department of Labor regions of New York City and Long Island. The upstate category includes the remainder of the regions.

Table 10. Nursing and Residential Care Facility Employment in New York State, by Department of Labor Region, 2017–2021

Region	2017	2018	2019	2020	2021	Change Between 2017 and 2021	
						Number	Percent
Capital Region	11,490	11,423	11,250	10,323	9,278	-2,212	-19.3%
Central NY	8,522	8,370	8,547	8,112	7,157	-1,365	-16.0%
Finger Lakes	13,842	13,948	13,730	12,916	12,014	-1,828	-13.2%
Hudson Valley	20,310	20,405	20,665	19,363	17,961	-2,349	-11.6%
Long Island	23,953	24,490	25,282	23,492	22,227	-1,726	-7.2%
Mohawk Valley	6,724	6,418	6,278	5,911	5,224	-1,500	-22.3%
New York City	50,172	49,834	49,134	45,785	43,542	-6,630	-13.2%
North Country	2,975	2,887	2,813	2,675	2,324	-651	-21.9%
Southern Tier	6,689	6,738	6,584	6,126	5,524	-1,165	-17.4%
Western NY	15,482	15,482	15,389	14,110	12,574	-2,908	-18.8%
Total	160,159	159,995	159,672	148,813	137,825	-22,334	-13.9%

Source: NYS Department of Labor, Quarterly Census of Employment and Wages.

D. Ambulatory Care Employment

Table 11. Ambulatory Care Settings Employment (Excluding Home Health Care) in New York State, by Downstate and Upstate, 2017–2021

	2017	2018	2019	2020	2021	Change Between 2017 and 2021	
						Number	Percent
Downstate	194,917	196,004	203,012	185,310	201,256	6,339	3.3%
Upstate	144,757	146,374	148,048	138,866	146,703	1,946	1.3%
Total	339,674	342,378	351,060	324,176	347,959	8,285	2.4%

Source: NYS Department of Labor, Quarterly Census of Employment and Wages.

Note: The downstate category includes the Department of Labor regions of New York City and Long Island. The upstate category includes the remainder of the regions.

Table 12. Ambulatory Care Settings Employment (Excluding Home Health Care) in New York State, by Department of Labor Region, 2017–2021

Region	2017	2018	2019	2020	2021	Change Between 2017 and 2021	
						Number	Percent
Capital Region	19,933	20,226	20,132	19,096	20,514	581	2.9%
Central NY	15,622	15,924	16,919	15,208	15,803	181	1.2%
Finger Lakes	16,719	16,350	16,256	15,163	15,249	-1,470	-8.8%
Hudson Valley	46,360	47,357	47,262	43,721	46,698	338	0.7%
Long Island	65,745	66,852	68,700	63,302	68,353	2,608	4.0%
Mohawk Valley	6,968	6,967	6,929	7,003	7,576	608	8.7%
New York City	129,172	129,152	134,312	122,008	132,903	3,731	2.9%
North Country	5,698	5,703	5,917	5,642	5,930	232	4.1%
Southern Tier	7,675	7,796	7,857	7,495	7,819	144	1.9%
Western NY	25,782	26,051	26,776	25,538	27,114	1,332	5.2%
Total	339,674	342,378	351,060	324,176	347,959	8,285	2.4%

Source: NYS Department of Labor, Quarterly Census of Employment and Wages.

E. Home Health Care Employment

Table 13. Home Health Care Employment in New York State, by Downstate and Upstate, 2017–2021

	2017	2018	2019	2020	2021	Change Between 2017 and 2021	
						Number	Percent
Downstate	171,441	199,546	229,911	226,825	237,178	65,737	38.3%
Upstate	31,701	32,151	33,228	35,383	34,490	2,789	8.8%
Total	203,142	231,697	263,139	262,208	271,668	68,526	33.7%

Source: NYS Department of Labor, Quarterly Census of Employment and Wages.

Note: The downstate category includes the Department of Labor regions of New York City and Long Island. The upstate category includes the remainder of the regions.

Table 14. Home Health Care Employment in New York State, by Department of Labor Region, 2017–2021

Region	2017	2018	2019	2020	2021	Change Between 2017 and 2021	
						Number	Percent
Capital Region	3,434	3,500	3,353	4,265	3,979	545	15.9%
Central NY	2,183	2,178	2,231	2,238	2,106	-77	-3.5%
Finger Lakes	4,901	5,089	5,254	4,934	4,590	-311	-6.3%
Hudson Valley	12,055	11,804	13,095	15,135	15,323	3,268	27.1%
Long Island	19,555	21,211	24,060	23,112	23,908	4,353	22.3%
Mohawk Valley	1,712	1,761	1,535	1,418	1,370	-342	-20.0%
New York City	151,886	178,335	205,851	203,713	213,270	61,384	40.4%
North Country	796	726	718	702	677	-119	-14.9%
Southern Tier	1,054	1,079	961	948	893	-161	-15.3%
Western NY	5,566	6,014	6,081	5,743	5,552	-14	-0.3%
Total	203,142	231,697	263,139	262,208	271,668	68,526	33.7%

Source: NYS Department of Labor, Quarterly Census of Employment and Wages.

F. Employment and Salaries by Occupation

Table 15. The Number of Jobs in Selected Health Care Occupations in New York State, 2017–2021

Occupational Title	2017	2018	2019	2020	2021	Change Between 2017 and 2021	
						Numbe	Percen
Audiologists	980	1,010	720	760	630	-350	-35.7%
Cardiovascular Technologists and Technicians	3,260	3,280	3,370	3,360	3,360	100	3.1%
Clinical Laboratory Technologists and Technicians	18,180	18,050	18,110	17,470	17,030	-1,150	-6.3%
Dental Assistants	20,370	19,110	19,520	14,420	19,930	-440	-2.2%
Dental Hygienists	11,050	11,300	11,620	9,190	10,020	-1,030	-9.3%
Diagnostic Medical Sonographers	4,790	5,210	5,880	5,970	6,020	1,230	25.7%
Dietetic Technicians	900	1,090	1,040	1,060	920	20	2.2%
Dietitians and Nutritionists	4,800	4,710	4,640	4,450	4,880	80	1.7%
Emergency Medical Technicians and Paramedics	15,290	17,520	18,610	19,620	17,690	2,400	15.7%
Healthcare Social Workers	12,620	13,290	15,720	18,290	21,910	9,290	73.6%
Home Health and Personal Care Aides	360,22	390,88	444,880	469,370	478,620	118,400	32.9%
Licensed Practical and Licensed Vocational Nurses	45,950	46,500	46,320	44,440	40,470	-5,480	-11.9%
Magnetic Resonance Imaging Technologists	2,140	2,300	2,410	2,140	2,230	90	4.2%
Medical Assistants	25,140	26,080	27,730	25,490	31,360	6,220	24.7%
Medical Records and Health Information	9,590	10,180	N/A	N/A	8,910	-680	-7.1%
Medical Secretaries and Administrative Assistants	10,060	8,890	8,950	9,320	44,290	34,230	340.3%
Medical Transcriptionists	1,750	1,450	2,700	2,550	3,030	1,280	73.1%
Medical and Health Services Managers	25,850	25,830	25,740	24,360	23,730	-2,120	-8.2%
Mental Health and Substance Abuse Social	10,580	11,470	11,540	11,020	11,870	1,290	12.2%
Nuclear Medicine Technologists	1,150	1,040	970	870	880	-270	-23.5%
Nurse Anesthetists	1,660	1,770	1,900	1,920	2,130	470	28.3%
Nurse Midwives	510	450	480	460	490	-20	-3.9%
Nurse Practitioners	13,450	13,710	14,060	14,850	15,190	1,740	12.9%
Nursing Assistants	94,980	91,400	85,090	81,440	85,490	-9,490	-10.0%
Occupational Therapists	9,080	9,740	12,460	10,560	8,320	-760	-8.4%
Occupational Therapy Assistants and Aides	3,010	2,640	3,140	2,770	2,380	-630	-20.9%
Orderlies	3,440	3,240	3,070	3,210	4,060	620	18.0%
Pharmacists	21,890	20,400	20,180	19,460	18,680	-3,210	-14.7%
Pharmacy Aides	2,210	2,050	1,670	1,920	2,940	730	33.0%
Pharmacy Technicians	18,260	19,320	20,360	18,970	20,650	2,390	13.1%
Phlebotomists	6,490	6,190	6,360	5,800	6,460	-30	-0.5%
Physical Therapist Assistants and Aides	7,020	7,790	8,700	8,100	6,470	-550	-7.8%
Physical Therapists	15,750	16,660	17,710	16,150	16,130	380	2.4%
Physician Assistants	12,150	12,060	13,270	13,760	13,670	1,520	12.5%
Psychiatric Aides	5,600	5,560	5,770	5,420	5,230	-370	-6.6%
Radiologic Technologists and Technicians	12,320	12,780	12,620	12,170	15,180	2,860	23.2%
Recreational Therapists	1,590	1,500	1,450	1,430	1,530	-60	-3.8%
Registered Nurses	180,17	182,49	178,320	178,550	188,300	8,130	4.5%
Respiratory Therapists	5,750	5,740	5,860	6,040	6,590	840	14.6%
Speech-Language Pathologists	12,090	12,750	13,130	12,950	13,150	1,060	8.8%
Surgical Technologists	5,740	5,750	5,620	5,510	5,720	-20	-0.3%

N/A, not available.

Source: NYS Department of Labor, Employment Statistics, Occupational Wage and Employment Estimates (OES).

Table 16. The Median Salaries for Selected Health Care Occupations in New York State, 2017–2021

Occupational Title	Median Salary						Change Between 2017 and 2021
	2017	2018	2019	2020	2021	Dollars	Percent
Audiologists	\$84,760	\$79,630	\$80,780	\$81,060	\$92,890	\$8,130	8.8%
Cardiovascular Technologists and Technicians	\$59,830	\$63,180	\$63,600	\$65,810	\$63,930	\$4,100	6.4%
Clinical Laboratory Technologists & Technicians	\$61,530	\$63,810	\$66,230	\$69,380	\$76,190	\$14,660	19.2%
Dental Assistants	\$36,410	\$38,170	\$39,510	\$42,510	\$47,250	\$10,840	22.9%
Dental Hygienists	\$77,510	\$77,210	\$77,790	\$76,950	\$78,470	\$960	1.2%
Diagnostic Medical Sonographers	\$73,930	\$74,830	\$77,380	\$80,260	\$79,810	\$5,880	7.4%
Dietetic Technicians	\$43,710	\$41,880	\$41,220	\$40,710	\$45,570	\$1,860	4.1%
Dietitians and Nutritionists	\$64,440	\$66,670	\$67,740	\$70,140	\$75,000	\$10,560	14.1%
Emergency Medical Technicians ^a	\$40,260	\$41,140	\$41,630	\$44,210	36,930	-\$3,330	-8.3%
Healthcare Social Workers	\$59,530	\$60,910	\$59,000	\$58,050	\$58,240	-\$1,290	-2.2%
Home Health Aides ^b	\$23,650	\$24,920	\$27,910	\$30,920	\$30,300	\$6,650	28.1%
Licensed Practical and Licensed Vocational Nurses	\$47,610	\$48,620	\$49,800	\$51,110	\$50,410	\$2,800	5.6%
Magnetic Resonance Imaging Technologists	\$80,030	\$82,830	\$86,130	\$90,500	\$84,890	\$4,860	5.7%
Medical Assistants	\$35,410	\$36,640	\$37,450	\$38,660	\$37,860	\$2,450	6.5%
Medical Secretaries & Administrative Assistants	\$39,140	\$39,220	\$39,530	\$40,680	\$44,150	\$5,010	11.3%
Medical Transcriptionists	\$38,630	\$40,140	\$30,840	\$31,510	\$30,640	-\$7,990	-26.1%
Medical and Health Services Managers	\$119,350	\$123,100	\$126,780	\$134,310	\$131,410	\$12,060	9.2%
Mental Health and Substance Abuse Social Workers	\$57,260	\$59,250	\$60,730	\$61,660	\$75,230	\$17,970	23.9%
Nuclear Medicine Technologists	\$83,000	\$86,990	\$87,680	\$91,400	\$98,680	\$15,680	15.9%
Nurse Anesthetists	\$164,700	\$177,100	\$185,580	\$200,090	N/A	N/A	N/A
Nurse Midwives	\$104,610	\$111,940	\$116,040	\$119,250	\$127,110	\$22,500	17.7%
Nurse Practitioners	\$115,030	\$118,550	\$119,490	\$124,020	\$128,220	\$13,190	10.3%
Nursing Assistants	\$35,110	\$36,610	\$38,580	\$40,760	\$38,130	\$3,020	7.9%
Occupational Therapists	\$82,860	\$83,530	\$81,720	\$84,760	\$92,420	\$9,560	10.3%
Occupational Therapy Aides	\$32,430	\$40,740	\$41,040	\$58,260	\$59,050	\$26,620	82.1%
Occupational Therapy Assistants	\$58,670	\$60,050	\$64,370	\$62,490	\$61,600	\$2,930	5.0%
Orderlies	\$35,190	\$35,500	\$37,970	\$41,190	\$38,690	\$3,500	9.0%
Paramedics ^a	\$40,260	\$41,140	\$41,630	\$44,210	\$57,060	\$16,800	\$41.7%
Personal Care Aides ^b	\$24,390	\$25,990	\$27,910	\$30,920	\$30,300	\$5,910	24.2%
Pharmacists	\$122,210	\$124,220	\$124,630	\$124,320	\$128,920	\$6,710	5.2%
Pharmacy Aides	\$26,140	\$27,810	\$27,960	\$30,940	\$29,910	\$3,770	12.6%
Pharmacy Technicians	\$31,210	\$32,580	\$33,550	\$35,050	\$36,790	\$5,580	15.2%
Phlebotomists	\$38,360	\$39,930	\$41,860	\$43,370	\$46,380	\$8,020	17.3%
Physical Therapy Aides	\$25,780	\$28,080	\$30,140	\$31,740	\$29,990	\$4,210	16.3%
Physical Therapy Assistants	\$55,250	\$54,100	\$55,980	\$56,200	\$61,290	\$6,040	10.9%
Physical Therapists	\$82,090	\$85,100	\$89,260	\$91,770	\$95,620	\$13,530	14.2%
Physician Assistants	\$112,020	\$117,060	\$121,690	\$124,690	\$128,940	\$16,920	13.1%
Psychiatric Aides	\$43,180	\$44,720	\$43,980	\$45,760	\$47,560	\$4,380	9.2%
Psychiatric Technicians	\$42,750	\$43,590	\$40,550	\$43,300	\$46,470	\$3,720	8.0%
Radiation Therapists	\$92,950	\$97,200	\$105,090	\$104,970	\$107,420	\$14,470	13.5%
Radiologic Technologists and Technicians	\$68,460	\$68,560	\$70,480	\$73,550	\$76,920	\$8,460	11.0%
Recreational Therapists	\$52,490	\$53,970	\$55,080	\$56,490	\$59,770	\$7,280	12.2%
Registered Nurses	\$83,680	\$85,300	\$87,330	\$89,840	\$96,170	\$12,490	13.0%
Respiratory Therapists	\$73,870	\$75,030	\$77,460	\$80,400	\$78,610	\$4,740	6.0%
Speech-Language Pathologists	\$79,530	\$82,170	\$88,910	\$89,850	\$98,990	\$19,460	19.7%
Surgical Technologists	\$51,330	\$53,410	\$55,560	\$58,080	\$59,760	\$8,430	14.1%

^aEmergency medical technicians and paramedics were reported as one occupational category through 2020.^bHome health aides and personal care aides were reported as separate occupational categories through 2018.

N/A, not available.

Sources: U.S. Bureau of Labor Statistics, Occupational Employment and Wage Statistics, May 2021 Data, May 2020 Data, May 2019 Data, May 2018 Data, and May 2017 Data.

Table 17. The Salary Range for Selected Health Care Occupations in New York State, 2021

Occupational Title	Salary Level		
	Entry	Median	Experienced
Audiologists	\$61,760	\$92,890	\$125,930
Cardiovascular Technologists and Technicians	\$45,710	\$63,930	\$100,270
Clinical Laboratory Technologists and Technicians	\$45,000	\$76,190	\$100,270
Dental Assistants	\$36,340	\$47,250	\$60,550
Dental Hygienists	\$60,900	\$78,470	\$99,440
Diagnostic Medical Sonographers	\$62,390	\$79,810	\$101,650
Dietetic Technicians	\$29,010	\$45,570	\$59,040
Dietitians and Nutritionists	\$48,000	\$75,000	\$98,540
Emergency Medical Technicians	\$29,140	\$36,930	\$59,250
Healthcare Social Workers	\$37,360	\$58,240	\$98,740
Home Health and Personal Care Aides	\$28,630	\$30,300	\$37,750
Licensed Practical and Licensed Vocational Nurses	\$38,830	\$50,410	\$61,680
Magnetic Resonance Imaging Technologists	\$73,270	\$84,890	\$101,650
Medical Assistants	\$29,990	\$37,860	\$48,510
Medical Secretaries and Administrative Assistants	\$29,040	\$44,150	\$58,650
Medical Transcriptionists	\$26,000	\$30,640	\$46,610
Medical and Health Services Managers	\$80,270	\$131,410	N/A
Mental Health and Substance Abuse Social Workers	\$46,910	\$75,230	\$114,690
Nuclear Medicine Technologists	\$76,410	\$98,680	\$121,960
Nurse Anesthetists	\$166,060	N/A	N/A
Nurse Midwives	\$96,420	\$127,110	\$153,070
Nurse Practitioners	\$96,420	\$128,220	\$167,750
Nursing Assistants	\$29,620	\$38,130	\$47,800
Occupational Therapists	\$60,730	\$92,420	\$127,350
Occupational Therapy Aides	\$30,640	\$59,050	\$96,750
Occupational Therapy Assistants	\$47,040	\$61,600	\$78,410
Orderlies	\$28,630	\$38,690	\$47,650
Paramedics	\$44,000	\$57,060	\$77,200
Pharmacists	\$100,490	\$128,920	\$164,030
Pharmacy Aides	\$28,880	\$29,910	\$38,370
Pharmacy Technicians	\$29,130	\$36,790	\$56,850
Phlebotomists	\$30,640	\$46,380	\$61,060
Physical Therapy Aides	\$28,880	\$29,990	\$45,460
Physical Therapy Assistants	\$45,260	\$61,290	\$78,240
Physical Therapists	\$62,270	\$95,620	\$121,140
Physician Assistants	\$99,760	\$128,940	\$167,140
Psychiatric Aides	\$37,400	\$47,560	\$59,330
Psychiatric Technicians	\$29,270	\$46,470	\$58,540
Radiation Therapists	\$75,810	\$107,420	N/A
Radiologic Technologists and Technicians	\$59,280	\$76,920	\$99,220
Recreational Therapists	\$38,000	\$59,770	\$78,460
Registered Nurses	\$61,260	\$96,170	\$127,080
Respiratory Therapists	\$59,540	\$78,610	\$100,990
Speech-Language Pathologists	\$60,060	\$98,990	\$131,000
Surgical Technologists	\$46,690	\$59,760	\$77,830

N/A, not available.

Source: U.S. Bureau of Labor Statistics, Occupational Employment and Wage Statistics, May 2021 Data

2. Employer Demand Survey

A. Hospitals

Table 18. Percent of Respondents Who Indicated Recruitment or Retention Difficulties at New York State Hospitals

Occupations	Percent of Respondents Indicating Difficulty	
	Recruitment	Retention
Certified Nurse Aides/Nurse Aides/Nurse Assistants/Patient Care Techs	64%	73%
Clinical Laboratory Technicians	85%	51%
Clinical Laboratory Technologists	99%	79%
Environmental (janitorial, housekeeping) Service Aides	37%	57%
Food Services/Dietary	42%	74%
Licensed Mental Health Counselors	78%	51%
Licensed Practical Nurses	83%	73%
Management/Executive Staff	54%	44%
Nurse Practitioners (Behavioral Health)	90%	75%
Nurse Practitioners (All other)	84%	63%
Pharmacists	64%	34%
Physician Assistants	83%	73%
Psychiatrists	88%	78%
Respiratory Therapists	94%	81%
Registered Nurses	95%	94%
Licensed Clinical Social Workers	82%	81%
Licensed Master's Social Workers	85%	79%
Surgical Technicians	94%	83%

Table 19. Reasons for Recruitment Difficulties at New York State Hospitals

Occupations	Reasons For Recruiting Difficulties						
	Candidates Applying Not Qualified	General Shortage of Workers	Location/ Transportation Issues	Non-Competitive Salaries	Non-Competitive Benefits	Potential Employees Not Following Up/Skipping Appointments (Ghosting)	Unknown
Certified Nurse Aides/Nurse Aides/Nurse Assistants/Patient Care Techs	14%	64%	20%	26%	7%	34%	21%
Clinical Laboratory Technicians	20%	71%	7%	30%	2%	23%	9%
Clinical Laboratory Technologists	25%	88%	11%	55%	2%	23%	3%
Environmental (janitorial, housekeeping) Service Aides	6%	40%	23%	23%	5%	30%	17%
Food Services/Dietary	6%	48%	23%	22%	5%	27%	9%
Licensed Mental Health Counselors	13%	34%	4%	13%	5%	15%	22%
Licensed Practical Nurses	9%	54%	12%	38%	5%	20%	9%
Management/Executive Staff	33%	38%	4%	22%	2%	8%	20%
Nurse Practitioners (Behavioral Health)	20%	63%	2%	30%	4%	7%	20%
Nurse Practitioners (All other)	16%	66%	2%	38%	4%	7%	17%
Pharmacists	13%	44%	5%	26%	4%	7%	13%
Physician Assistants	13%	59%	2%	41%	5%	8%	14%
Psychiatrists	14%	62%	5%	23%	5%	9%	36%
Respiratory Therapists	14%	88%	21%	69%	5%	23%	2%
Registered Nurses	45%	77%	10%	41%	11%	28%	2%
Licensed Clinical Social Workers	24%	62%	6%	20%	6%	7%	14%
Licensed Master's Social Workers	39%	45%	6%	30%	5%	23%	13%
Surgical Technicians	36%	59%	12%	34%	6%	13%	21%

Table 20. Reasons for Retention Difficulties at New York State Hospitals

Occupations	Reasons for Retention Difficulties						
	Career Change	Left for Better Benefits	Left for Better Salary	Left for Family Commitments	Left for Better Work-Life Balance	Retirement	Unknown
Certified Nurse Aides/Nurse Aides/Nurse Assistants/Patient Care Techs	55%	11%	62%	22%	23%	17%	14%
Clinical Laboratory Technicians	7%	8%	48%	9%	9%	13%	34%
Clinical Laboratory Technologists	23%	8%	71%	16%	33%	20%	13%
Environmental (janitorial, housekeeping) Service Aides	34%	9%	41%	11%	21%	20%	27%
Food Services/Dietary	51%	14%	63%	16%	22%	13%	12%
Licensed Mental Health Counselors	7%	5%	30%	3%	18%	7%	45%
Licensed Practical Nurses	41%	10%	63%	14%	26%	14%	18%
Management/Executive Staff	41%	9%	47%	6%	25%	16%	30%
Nurse Practitioners (Behavioral Health)	7%	7%	45%	6%	39%	9%	31%
Nurse Practitioners (All other)	8%	9%	59%	11%	43%	11%	25%
Pharmacists	9%	14%	43%	9%	20%	10%	45%
Physician Assistants	5%	9%	60%	10%	42%	8%	27%
Psychiatrists	3%	6%	55%	5%	21%	8%	31%
Respiratory Therapists	6%	9%	72%	12%	36%	27%	15%
Registered Nurses	41%	17%	71%	24%	64%	41%	11%
Licensed Clinical Social Workers	23%	5%	59%	12%	30%	9%	23%
Licensed Master's Social Workers	21%	7%	59%	10%	28%	8%	23%
Surgical Technicians	27%	16%	73%	5%	25%	8%	14%

B. Nursing Homes and Assisted Living Facilities

Table 21. Percent of Respondents Who Indicated Recruitment or Retention Difficulties at New York State Nursing Homes and Assisted Living Facilities

Occupation	Percent of Respondents Indicating Difficulty	
	Recruiting	Retaining
Certified Nurse Aides/Assistants	85%	71%
Dietitians/Nutritionists	36%	14%
Home Health Aides	72%	58%
Infection Preventionist Practitioners	48%	25%
Licensed Clinical Social Workers (LCSWs)	39%	24%
Licensed Master Social Workers (LMSWs)	38%	19%
Licensed Practical Nurse (LPNs)	87%	61%
MDS Coordinators	58%	24%
Nurse Directors/Managers	76%	41%
Nurse Educators	59%	34%
Occupational Therapists	44%	23%
Occupational Therapy Assistants	46%	25%
Paid Feeding Assistants	40%	60%
Personal Care Aides	76%	58%
Physical Therapists	44%	20%
Physical Therapy Assistants	46%	24%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	88%	66%
Registered Nurses Experienced (3+ years of clinical experience)	84%	57%
Respiratory Therapists	45%	31%
Speech-Language Pathologists	39%	22%
Temporary Nurse Aide/CNA Trainees	74%	75%

Table 22. Non-COVID-19 Related Reasons for Recruitment Difficulties at New York State Nursing Homes and Assisted Living Facilities

Occupation	Non-COVID-19 Related Reasons for Recruitment Difficulties			
	Shortage of Applicants	Shortage of Applicants Meeting Minimum Job Qualifications	Non-Competitive Salary	Non-Competitive Benefits
Certified Nurse Aides/Assistants	93%	34%	35%	7%
Dietitians/Nutritionists	83%	10%	12%	2%
Home Health Aides	91%	28%	26%	7%
Infection Preventionist Practitioners	78%	25%	25%	5%
Licensed Clinical Social Workers (LCSWs)	78%	19%	22%	3%
Licensed Master Social Workers (LMSWs)	67%	30%	27%	6%
Licensed Practical Nurse (LPNs)	90%	21%	31%	6%
MDS Coordinators	89%	15%	13%	3%
Nurse Directors/Managers	86%	20%	23%	8%
Nurse Educators	95%	20%	22%	7%
Occupational Therapists	78%	15%	18%	5%
Occupational Therapy Assistants	79%	13%	17%	6%
Paid Feeding Assistants	100%	50%	25%	0%
Personal Care Aides	91%	34%	34%	9%
Physical Therapists	79%	12%	23%	5%
Physical Therapy Assistants	78%	13%	17%	7%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	92%	16%	28%	8%
Registered Nurses Experienced (3+ years of clinical experience)	90%	17%	27%	7%
Respiratory Therapists	86%	14%	23%	5%
Speech-Language Pathologists	73%	14%	16%	2%
Temporary Nurse Aide/CNA Trainees	83%	36%	31%	7%

Table 23. COVID-19 Related Reasons for Recruitment Difficulties at New York State Nursing Homes and Assisted Living Facilities

Occupation	COVID-19 Related Reasons for Recruitment Difficulties				
	Family care giving commitments prevented availability	Lack of online training certification	Vaccine or booster refusal	Fear of COVID-19 exposure	COVID-19 testing of staff and required quarantine if a positive result reduced available staff
Certified Nurse Aides/Assistants	37%	13%	65%	43%	33%
Dietitians/Nutritionists	10%	5%	17%	13%	8%
Home Health Aides	26%	15%	57%	35%	32%
Infection Preventionist Practitioners	18%	15%	18%	13%	15%
Licensed Clinical Social Workers (LCSWs)	19%	3%	31%	25%	19%
Licensed Master Social Workers (LMSWs)	12%	3%	21%	15%	18%
Licensed Practical Nurse (LPNs)	28%	9%	52%	29%	26%
MDS Coordinators	15%	10%	20%	15%	11%
Nurse Directors/Managers	15%	5%	29%	15%	13%
Nurse Educators	17%	5%	20%	17%	13%
Occupational Therapists	15%	5%	29%	24%	20%
Occupational Therapy Assistants	8%	6%	25%	19%	17%
Paid Feeding Assistants	25%	25%	75%	50%	50%
Personal Care Aides	26%	9%	54%	34%	31%
Physical Therapists	12%	5%	25%	19%	16%
Physical Therapy Assistants	11%	7%	30%	24%	20%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	23%	5%	36%	25%	21%
Registered Nurses Experienced (3+ years of clinical experience)	20%	4%	34%	21%	19%
Respiratory Therapists	14%	5%	23%	9%	14%
Speech-Language Pathologists	14%	7%	20%	14%	14%
Temporary Nurse Aide/CNA Trainees	36%	22%	49%	42%	36%

Table 24. Non-COVID-19 Related Reasons for Retention Difficulties at New York State Nursing Homes and Assisted Living Facilities

Occupation	Non-COVID-19 Reasons for Retention Difficulties				
	Staff found higher pay and benefits elsewhere	Staff left for other employment sectors	Paperwork and regulatory burdens	Retirement	Scheduling challenges
Certified Nurse Aides/Assistants	75%	68%	25%	17%	40%
Dietitians/Nutritionists	43%	30%	22%	0%	9%
Home Health Aides	67%	64%	16%	4%	35%
Infection Preventionist Practitioners	48%	24%	29%	14%	10%
Licensed Clinical Social Workers (LCSWs)	50%	50%	25%	10%	15%
Licensed Master Social Workers (LMSWs)	50%	39%	22%	6%	11%
Licensed Practical Nurse (LPNs)	77%	56%	29%	16%	38%
MDS Coordinators	62%	38%	23%	15%	12%
Nurse Directors/Managers	65%	47%	33%	19%	25%
Nurse Educators	62%	38%	29%	15%	15%
Occupational Therapists	61%	36%	14%	7%	18%
Occupational Therapy Assistants	56%	32%	16%	4%	12%
Paid Feeding Assistants	83%	67%	0%	0%	50%
Personal Care Aides	68%	54%	25%	7%	40%
Physical Therapists	58%	35%	12%	4%	12%
Physical Therapy Assistants	57%	30%	13%	4%	13%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	79%	46%	29%	12%	26%
Registered Nurses Experienced (3+ years of clinical experience)	73%	39%	31%	20%	32%
Respiratory Therapists	64%	21%	21%	7%	7%
Speech-Language Pathologists	63%	33%	17%	8%	13%
Temporary Nurse Aide/CNA Trainees	71%	54%	24%	2%	37%

Table 25. COVID-19 Related Reasons for Retention Difficulties at New York State Nursing Homes and Assisted Living Facilities

Occupation	COVID-19 Related Reasons for Retention Difficulties			
	Fear of COVID-19 exposure	Family care giving commitments	Conversion to another position	Vaccine or booster refusal
Certified Nurse Aides/Assistants	42%	43%	26%	63%
Dietitians/Nutritionists	22%	13%	22%	22%
Home Health Aides	33%	27%	16%	42%
Infection Preventionist Practitioners	24%	10%	14%	24%
Licensed Clinical Social Workers (LCSWs)	25%	15%	5%	20%
Licensed Master Social Workers (LMSWs)	22%	17%	11%	28%
Licensed Practical Nurse (LPNs)	35%	32%	26%	53%
MDS Coordinators	27%	12%	15%	23%
Nurse Directors/Managers	23%	17%	23%	24%
Nurse Educators	21%	12%	24%	24%
Occupational Therapists	21%	18%	14%	25%
Occupational Therapy Assistants	20%	8%	12%	32%
Paid Feeding Assistants	33%	33%	67%	50%
Personal Care Aides	25%	33%	21%	44%
Physical Therapists	27%	12%	15%	31%
Physical Therapy Assistants	26%	9%	17%	26%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	27%	18%	29%	35%
Registered Nurses Experienced (3+ years of clinical experience)	22%	22%	23%	34%
Respiratory Therapists	14%	29%	0%	50%
Speech-Language Pathologists	25%	8%	13%	25%
Temporary Nurse Aide/CNA Trainees	31%	34%	25%	47%

C. Home Health Care

Table 26. Percent of Respondents Who Indicated Recruitment or Retention Difficulties at New York State Home Health Care Agencies

Occupation	Percent of Respondents Indicating Difficulty	
	Recruiting	Retaining
COVID-19 Compliance Officer	23%	14%
Home Health Aides	90%	72%
Homemaker	77%	75%
Intake Coordinator	38%	21%
Licensed Clinical Social Workers (LCSWs)	40%	15%
Licensed Master Social Workers (LMSWs)	47%	17%
Licensed Practical Nurse (LPNs)	69%	49%
Occupational Therapists	63%	42%
Occupational Therapy Assistants	57%	27%
Personal Care Aides	94%	79%
Physical Therapists	59%	38%
Physical Therapy Assistants	50%	9%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	85%	57%
Registered Nurses Experienced (3+ years of clinical experience)	77%	43%
Respiratory Therapists	40%	14%
Speech-Language Pathologists	72%	38%

Table 27. Non-COVID-19 Related Reasons for Recruitment Difficulties at New York State Home Health Care

Occupation	Non-COVID-19 Related Reasons for Recruitment Difficulties			
	Shortage of Applicants	Shortage of Applicants Meeting Minimum Job Qualifications	Non-Competitive Salary	Non-Competitive Benefits
COVID-19 Compliance Officer	56%	33%	33%	22%
Home Health Aides	85%	35%	27%	13%
Homemaker	83%	25%	33%	19%
Intake Coordinator	66%	32%	32%	10%
Licensed Clinical Social Workers (LCSWs)	67%	42%	42%	8%
Licensed Master Social Workers (LMSWs)	79%	21%	36%	14%
Licensed Practical Nurse (LPNs)	81%	20%	46%	22%
Occupational Therapists	75%	25%	50%	20%
Occupational Therapy Assistants	50%	25%	50%	38%
Personal Care Aides	85%	35%	29%	17%
Physical Therapists	78%	17%	43%	17%
Physical Therapy Assistants	67%	17%	50%	33%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	79%	21%	48%	17%
Registered Nurses Experienced (3+ years of clinical experience)	85%	24%	45%	23%
Respiratory Therapists	50%	0%	50%	50%
Speech-Language Pathologists	0%	0%	0%	0%

Table 28. Additional Reasons for Recruitment Difficulties at New York State Home Health Care

Occupation	COVID-19 Related Reasons for Recruitment Difficulties			
	Family Care Giving Commitments Prevented Availability	Lack of Scheduling Flexibility for the Applicant	Vaccine or Booster Refusal	Fear of COVID-19 Exposure
COVID-19 Compliance Officer	17%	33%	28%	22%
Home Health Aides	37%	35%	59%	48%
Homemaker	33%	33%	56%	44%
Intake Coordinator	20%	24%	24%	27%
Licensed Clinical Social Workers (LCSWs)	8%	17%	17%	17%
Licensed Master Social Workers (LMSWs)	7%	14%	14%	21%
Licensed Practical Nurse (LPNs)	22%	31%	37%	20%
Occupational Therapists	20%	20%	30%	15%
Occupational Therapy Assistants	13%	25%	50%	13%
Personal Care Aides	40%	38%	62%	44%
Physical Therapists	13%	22%	22%	9%
Physical Therapy Assistants	0%	33%	33%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	22%	32%	40%	29%
Registered Nurses Experienced (3+ years of clinical experience)	22%	27%	36%	22%
Respiratory Therapists	0%	50%	0%	0%
Speech-Language Pathologists	0%	0%	0%	0%

Table 29. Non-COVID-19 Related Reasons for Retention Difficulties at New York State Home Health Care

Occupation	Non-COVID-19 Related Reasons for Retention Difficulties				
	Staff Found Higher Pay and Benefits Elsewhere	Staff Left for Other Employment Sectors	Paperwork and Regulatory Burdens	Retirement	Scheduling Challenges
COVID-19 Compliance Officer	27%	9%	45%	0%	18%
Home Health Aides	56%	59%	24%	13%	49%
Homemaker	64%	45%	18%	6%	36%
Intake Coordinator	59%	45%	32%	5%	36%
Licensed Clinical Social Workers (LCSWs)	75%	0%	25%	0%	0%
Licensed Master Social Workers (LMSWs)	60%	20%	20%	0%	40%
Licensed Practical Nurse (LPNs)	83%	37%	20%	9%	14%
Occupational Therapists	62%	31%	38%	31%	8%
Occupational Therapy Assistants	67%	0%	0%	33%	0%
Personal Care Aides	60%	60%	25%	11%	53%
Physical Therapists	60%	27%	40%	13%	27%
Physical Therapy Assistants	100%	0%	0%	0%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	74%	31%	38%	5%	18%
Registered Nurses Experienced (3+ years of clinical experience)	66%	37%	36%	17%	17%
Respiratory Therapists	100%	0%	0%	0%	0%
Speech-Language Pathologists	0%	0%	0%	0%	0%

Table 30. Additional Reasons for Retention Difficulties at New York State Home Health Care

Occupation	COVID-19 Related Reasons for Retention Difficulties				Termination due to Unsatisfactory Performance
	Scheduling Challenges	Family Care Giving Commitments	Too Few Available Hours for a Full Time Position	Vaccine or booster refusal	
COVID-19 Compliance Officer	27%	36%	36%	27%	18%
Home Health Aides	51%	47%	34%	53%	23%
Homemaker	48%	48%	30%	33%	15%
Intake Coordinator	23%	23%	9%	27%	14%
Licensed Clinical Social Workers (LCSWs)	0%	0%	50%	25%	0%
Licensed Master Social Workers (LMSWs)	40%	20%	40%	40%	0%
Licensed Practical Nurse (LPNs)	37%	17%	14%	31%	6%
Occupational Therapists	31%	31%	31%	0%	0%
Occupational Therapy Assistants	33%	33%	67%	0%	0%
Personal Care Aides	56%	45%	30%	59%	27%
Physical Therapists	27%	20%	33%	13%	0%
Physical Therapy Assistants	0%	0%	100%	0%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	28%	15%	15%	36%	8%
Registered Nurses Experienced (3+ years of clinical experience)	30%	27%	16%	31%	7%
Respiratory Therapists	0%	0%	100%	0%	0%
Speech-Language Pathologists	0%	0%	0%	0%	0%

3. Health Workforce Production and Projected Need

A. Licenses

Table 31. The Number of Licensed Individuals in Selected Health Care Professions in New York State, 2018-2022

Occupation	2018	2019	2020	2021	2022	Change Between 2018 and 2022	
						Number	Percent
Clinical Laboratory Technicians	1,900	1,816	1,867	1,894	1,891	-9	-0.5%
Clinical Laboratory Technologists	14,284	13,409	13,699	13,564	13,564	-720	-5.0%
Dental Assistants	1,424	1,470	1,556	1,573	1,578	154	10.8%
Dental Hygienists	11,653	11,741	11,967	12,036	12,204	551	4.7%
Dietitians/Nutritionists	5,861	6,044	6,189	6,486	6,463	602	10.3%
Licensed Practical Nurses	69,872	67,717	69,050	68,322	67,825	-2,047	-2.9%
Nurse Practitioners	25,168	26,952	29,843	32,750	34,659	9,491	37.7%
Occupational Therapists	13,889	14,433	15,363	15,942	16,409	2,520	18.1%
Occupational Therapy Assistants	4,322	4,513	4,786	4,818	4,849	527	12.2%
Pharmacists	26,894	27,473	28,099	28,971	29,564	2,670	9.9%
Physical Therapists	23,431	23,876	24,922	25,838	26,490	3,059	13.1%
Physical Therapist Assistants	6,587	6,636	6,880	6,992	7,052	465	7.1%
Physician Assistants	15,758	16,721	18,256	19,449	20,340	4,582	29.1%
Registered Nurses	302,560	309,241	328,204	345,212	355,195	52,635	17.4%
Respiratory Therapists	6,491	6,560	6,956	7,041	7,212	721	11.1%
Social Workers ^a	56,703	56,947	59,149	61,722	63,555	6,852	12.1%
Speech-Language Pathologists	18,920	19,406	20,282	20,865	21,291	2,371	12.5%

^aSocial workers include both master's Clinical Social Workers and master's Licensed Social Workers.

Source: New York State Education Department, Office of Professions.

B. Graduations

Table 32. The Number of Graduations for Selected Health Care Occupations in New York State, 2017-2021

Occupational Program	School Year					Change Between 2017 and 2021	
	2017	2018	2019	2020	2021	Number	Percent
Audiologists & Speech Language Pathologists ^a	2,014	2,065	1,974	2,115	2,138	124	6.2%
Cardiovascular Technologists and Technicians	33	13	14	10	8	-25	-75.8%
Clinical Laboratory Technicians	129	127	102	106	82	-47	-36.4%
Clinical Laboratory Technologists	312	312	302	321	301	-11	-3.5%
Clinical Nutritionists	199	194	185	185	162	-37	-18.6%
Creative Arts Therapists ^b	253	232	242	220	211	-42	-16.6%
Dental Assistants	440	393	371	335	290	-150	-34.1%
Dental Hygienists	458	487	405	442	435	-23	-5.0%
Dietitians	364	418	420	406	402	38	10.4%
Electrocardiograph Technologists and Technicians	206	164	132	151	83	-123	-59.7%
EMTs and Paramedics	257	249	335	223	208	-49	-19.1%
Health Care Administrators	1,836	1,815	2,009	1,941	2,012	176	9.6%
License Practical Nurses	2,505	2,351	2,383	2,442	2,586	81	3.2%
Marriage and Family Therapists	158	122	118	102	114	-44	-27.8%
Medical Assistants	4,481	3,842	3,339	3,028	2,380	-2,101	-46.9%
Mental Health Counselors	884	844	925	997	1,024	140	15.8%
Nuclear Medical Technologists	28	21	30	23	30	2	7.1%
Nurse Anesthetist	42	51	50	33	40	-2	-4.8%
Nurse Midwives	15	30	38	32	26	11	73.3%
Nursing and Patient Care Aides and Assistants	654	471	422	474	470	-184	-28.1%
Occupational Therapists	998	1,005	1,071	1,106	1,080	82	8.2%
Occupational Therapy Assistants	258	316	259	327	112	-146	-56.6%
Opticians, Dispensing	57	52	51	80	52	-5	-8.8%
Optometrists	78	89	90	96	99	21	26.9%
Pharmacists	1,056	1,044	1,000	1,012	980	-76	-7.2%
Pharmacy Technicians/Assistants	335	217	186	179	60	-275	-82.1%
Phlebotomists	652	448	402	431	226	-426	-65.3%
Physical Therapists	1,424	1,407	1,446	1,373	1,171	-253	-17.8%
Physical Therapy Assistants	281	283	261	264	169	-112	-39.9%
Physician Assistants	1,215	1,222	1,281	1,299	1,260	45	3.7%
Radiation Therapists and Technologists	630	661	693	676	701	71	11.3%
Recreational Therapists	132	143	158	164	141	9	6.8%
Registered Nurses	12,414	11,946	12,314	12,691	13,195	781	6.3%
Registered Nurses with Advanced Education	1,522	1,453	1,653	1,670	2,040	518	34.0%
Respiratory Therapists	169	166	151	173	194	25	14.8%
Respiratory Therapy Assistants	78	67	69	69	40	-38	-48.7%
Social Workers	4,991	5,066	5,353	5,375	5,819	828	16.6%
Substance Abuse/Addiction Counseling	280	261	289	227	270	-10	-3.6%
Surgical Technology/Technologist	232	318	278	293	216	-16	-6.9%

^a Audiologists & speech-language pathologists include graduations in audiology, speech-language pathology, and communication sciences and disorders.

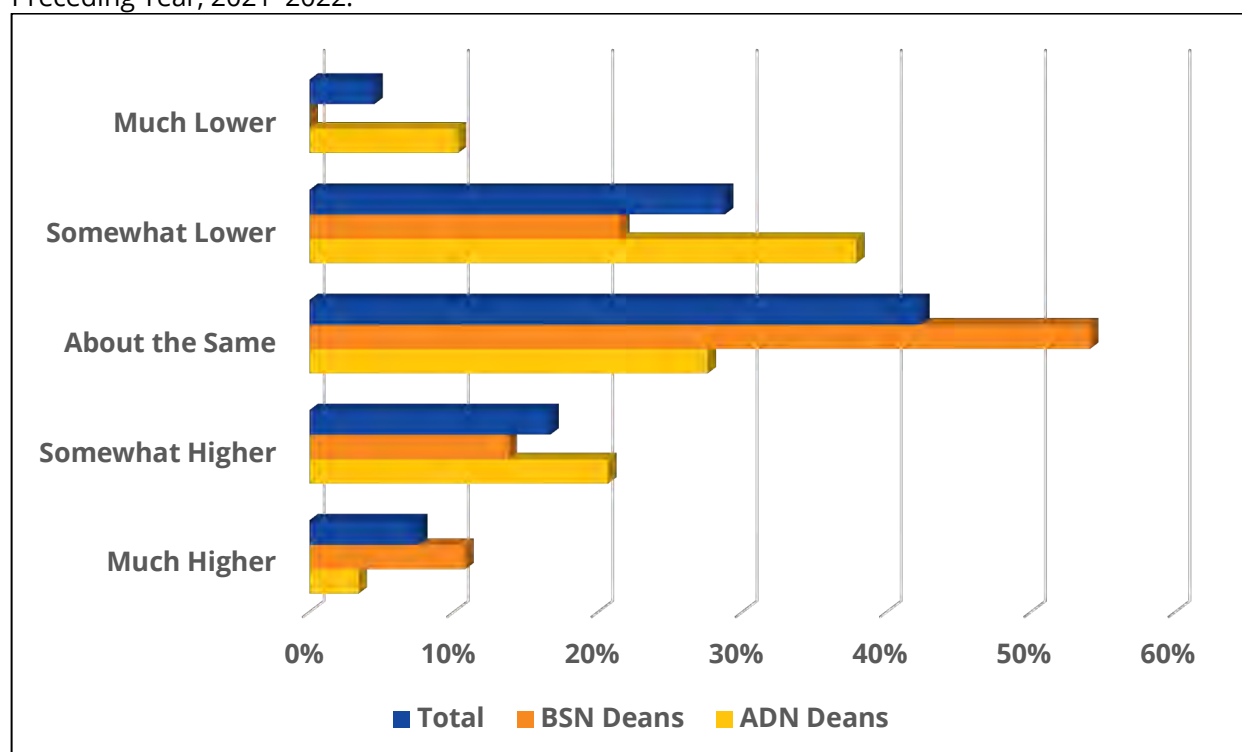
^b Creative arts therapists include graduations in art therapy, dance therapy, and music therapy.

^c Registered nurses with advanced education include graduations or certificates in adult health nursing, clinical nurse specialist, critical care nursing, family practice nursing, geriatric nursing, maternal and child health nursing, palliative care nursing, pediatric nursing, perioperative/OR nursing, public health nursing, women's health nursing, and nursing practice. Source: Integrated Postsecondary Education Data System.

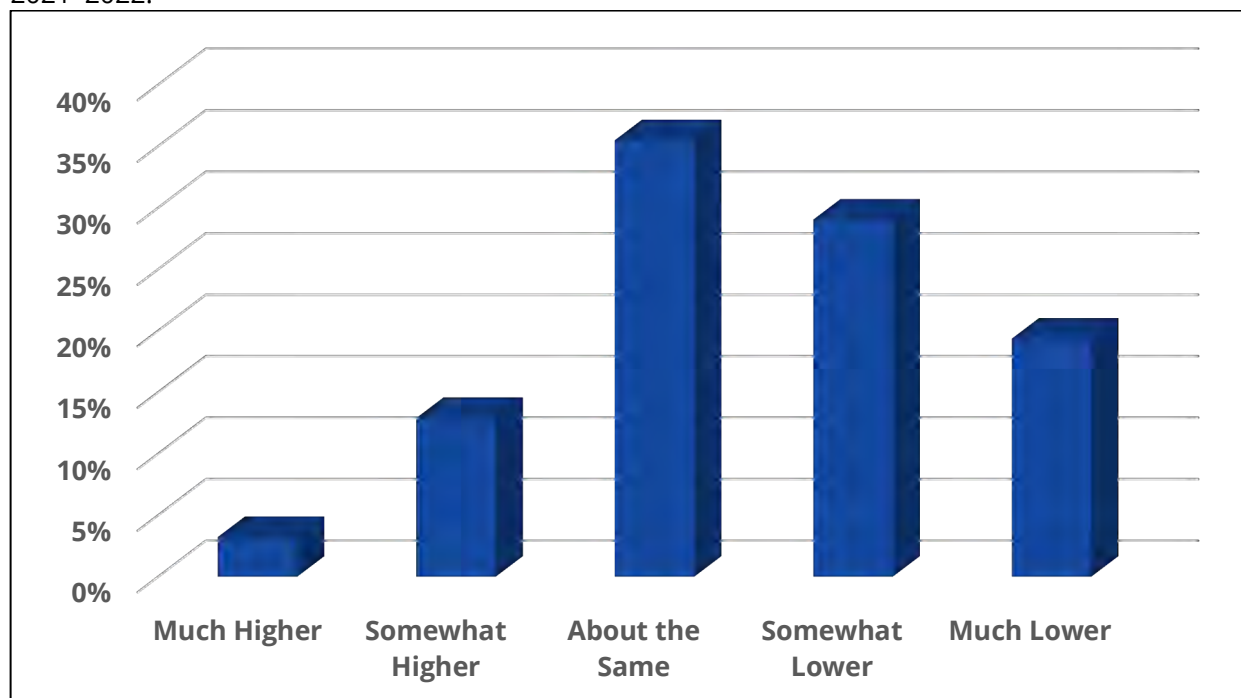
C. Registered Nurse Education Trends in New York State

Every year, CHWS surveys the state's RN education program deans and directors to monitor the production of RNs in the state. The most recent survey was conducted in the spring or summer of 2022 and included questions about applications and acceptances to the nursing program as well as perspectives on the local job market for RN graduates. The 2022 survey also included questions on faculty, including questions on retention and strategies for addressing recruitment and retention faculty issues. Of the programs eligible to participate in the survey, we received 72 responses for a 54% response rate.

Figure 7. Change in Applications Among RN Education Programs^a by Degree Type Compared to the Preceding Year, 2021–2022.



^a For RN Diploma, Associate Degree, and Pre-Licensure BSN Programs

Figure 8. Change in Applications Among BSN Completer^a Programs Compared to the Preceding Year, 2021–2022.

^aBSN Completers are those RNs already holding an RN diploma or associates who obtained a BSN.

Table 33. Change in Acceptances Among RN Education Programs by Degree Type Compared to the Preceding Year, 2021–2022

	ADN Programs	BSN Programs	
		Pre-Licensure	Completers
Much Higher	0.0%	0.0%	0.0%
Somewhat Higher	24.1%	19.4%	12.9%
About the Same	51.7%	66.7%	51.6%
Somewhat Lower	17.2%	8.3%	19.4%
Much Lower	6.9%	5.6%	16.1%

Table 34. Perception of Regional Job Market^a

	Overall	Hospitals	Nursing Homes	Home Health Care	Ambulatory Care
BSN	92.0%	100.0%	95.7%	86.4%	68.2%
ADN	92.3%	92.3%	100.0%	84.6%	76.9%

^aThe percent of respondents who indicated many jobs on the survey compared to total number of respondents to the survey.

D. Employment Projections

Table 35. Employment Projections for Selected Health Care Occupations for New York State, By Largest Percentage Increase, 2020–2030

Occupational Title	2020	2030	Change Between 2020 and 2030		Average Annual Openings ^a
			Number	Percent	
Nurse Practitioners	16,840	26,200	9,360	55.6%	2,060
Medical and Health Services Managers	27,630	39,270	11,640	42.1%	3,699
Speech-Language Pathologists	14,010	19,570	5,560	39.7%	1,549
Physician Assistants	15,500	21,630	6,130	39.5%	1,635
Home Health and Personal Care Aides	510,870	710,570	199,700	39.1%	93,648
Respiratory Therapists	6,710	8,780	2,070	30.8%	568
Audiologists	840	1,090	250	29.8%	65
Phlebotomists	6,430	8,330	1,900	29.5%	1,044
Occupational Therapy Assistants and Aides	2,850	4,040	1,190	29.5%	543
Diagnostic Medical Sonographers	6,620	8,560	1,940	29.3%	727
Physical Therapist Assistants and Aides	9,160	12,770	3,610	28.3%	1,659
Physical Therapists	18,510	23,650	5,140	27.8%	1,369
Pharmacy Technicians	19,480	24,850	5,370	27.6%	2,094
Medical Assistants	28,160	35,820	7,660	27.2%	4,469
Healthcare Social Workers	20,020	25,360	5,340	26.7%	2,604
Mental Health & Substance Abuse Social Workers	12,200	15,390	3,190	26.1%	1,578
Occupational Therapists	11,460	14,300	2,840	24.8%	982
Dietitians and Nutritionists	5,050	6,100	1,050	20.8%	480
Emergency Medical Technicians & Paramedics	21,130	25,510	4,380	20.7%	1,951
Psychiatric Technicians	2,770	3,340	570	20.6%	272
Nurse Anesthetists	2,360	2,820	460	19.5%	175
Dental Assistants	17,710	21,120	3,410	19.3%	2,588
Dental Hygienists	11,500	13,630	2,130	18.5%	979
Licensed Practical and Licensed Vocational Nurses	48,730	57,740	9,010	18.5%	4,918
Dietetic Technicians	1,140	1,350	210	18.4%	108
Medical Secretaries and Administrative Assistants	10,760	12,680	1,920	17.8%	1,442
Recreational Therapists	1,550	1,820	270	17.4%	153
Nursing Assistants	90,150	105,510	15,360	17.0%	13,338
Registered Nurses	197,160	230,580	33,420	17.0%	14,430
Clinical Laboratory Technologists and Technicians	19,980	23,350	3,370	16.9%	1,699
Radiologic Technologists and Technicians	13,590	15,820	2,230	16.4%	1,257
Radiation Therapists	1,470	1,710	240	16.3%	104
Magnetic Resonance Imaging Technologists	2,390	2,770	380	15.9%	220
Nurse Midwives	510	590	80	15.7%	36
Surgical Technologists	6,100	7,060	960	15.7%	558
Nuclear Medicine Technologists	960	1,110	150	15.6%	87
Cardiovascular Technologists and Technicians	3,760	4,340	580	15.4%	343
Orderlies	3,600	4,130	530	14.7%	520
Psychiatric Aides	5,880	6,670	790	13.4%	837
Pharmacists	20,230	22,280	2,050	10.1%	1,005
Pharmacy Aides	1,950	2,120	170	8.7%	280
Medical Transcriptionists	2,810	2,880	70	2.5%	401

^a Annual openings reflect creation of new positions or replacement for those retiring or otherwise leaving.

Source: NYS Department of Labor, Jobs in Demand/Projects, Long-Term Occupation Projections, 2020–2028.

III. Regional Profiles

A. Capital Region

The Capital Region includes the counties of Albany, Columbia, Greene, Rensselaer, Saratoga, Schenectady, Warren, and Washington.



KEY FINDINGS

Population and Health Care Indicators

- The Capital District had a higher percentage of its population 65 years of age or older than the state as a whole.
- The rates of total deaths, deaths due to heart disease, deaths due to all cancers, and deaths due to diabetes were all higher in the Capital District than the New York State rates.

Health Care Employment

- Overall, the number of health care jobs in the Capital District declined between 2017 and 2021.
- The number of health care jobs in hospitals and in nursing homes declined in the Capital District between 2017 and 2021. In contrast, the number of health care jobs in home health care grew during the same time period.

Employer Demand Survey

- Registered nurses are among the most difficult to recruit and retain in all health care settings throughout the Capital District.
- Hospitals in the Capital District also reported that clinical laboratory technicians, clinical laboratory technologists, respiratory therapists, and surgical technicians are the most difficult to recruit. Licensed practical nurses are also among the most difficult to retain in Capital District hospitals.
- Certified nurse aides/assistants and licensed practical nurses are also among the most difficult to recruit and retain in nursing homes and in assisting living facilities.
- Home health care agencies also indicated that home health aides, personal care aides, and respiratory therapists are among the most difficult to recruit and home health aides and person care aides among the most difficult to retain.

Health Care Production and Projected Workforce Need

- There are almost 2,700 projected average annual openings in the Capital District for home health and personal care aides and nearly 1,150 projected average annual openings for registered nurses.

1. Population and Health Care Indicators

Table 36. Selected Population Characteristics for the Capital Region, 2016-2020

Population Characteristics	Regional		Percent of State Population
	Number	Percent of Regional Population	
Total population	1,082,419	N/A	5.6%
Population under 100% FPL	104,880	10.0%	13.6%
Population under 200% FPL	245,754	23.5%	28.8%
Population aged birth to 17 years	208,185	19.2%	20.9%
Population aged 65 and older	198,239	18.3%	16.5%
Population female aged 15 to 44	203,569	18.8%	20.0%
Women aged 15 to 19 who had a birth in past 12 mos.	334	3.0%	1.9% ^b
Women aged 20 to 34 who had a birth in past 12 mos.	7,459	66.6% ^b	65.9% ^b
Women aged 35 to 50 who had a birth in past 12 mos.	3,406	30.4% ^b	32.2% ^b
Black/African American, non-Hispanic	70,377	6.5% ^b	14.0%
Hispanic/Latino	55,476	5.1%	19.1%
Asian/Pacific Islander, non-Hispanic	41,206	3.8%	8.5%
American Indian/Native Alaskan, non-Hispanic	1,724	0.2%	0.2%
Two or more/other races	38,614	3.6%	3.0%
Population with less than a high school education ^a	61,998	8.1%	12.8%
Population with a high school diploma or equivalent ^a	329,643	43.2%	40.9%
Population with an associate degree ^a	92,393	12.1%	8.9%
Population with a bachelor's degree ^a	151,318	19.8%	20.9%
Population with a master's degree or higher ^a	128,132	16.8%	16.5%
Home ownership	289,022	65.2%	54.1%

^aEducation levels and rates are based on individuals aged 25 years and older.

^bPercent of total births.

FPL, federal poverty level; N/A, not applicable; mos., months.

Source: US Census, American Community Survey, 5-Year Estimates, 2016-2020.

Table 37. Selected Health Indicators for the Capital Region

Health Indicator	Region		Statewide	
	Number	Rate	Number	Rate
Total deaths, per 100,000	31,466	967.1	468,772	798.8
Deaths due to heart disease, per 100,000	9,676	297.4	163,285	278.3
Deaths due to all cancers, per 100,000	6,961	214.1	103,089	175.5
Deaths due to diabetes, per 100,000	829	25.5	13,175	22.5
Total births, per 1,000 females aged 15 to 44	31,197	51.0	674,199	57.5
Teen births, per 1,000 females aged 15 to 19	1,071	10.6	20,879	11.9
Low-birthweight births, as a percent of total births	1,862	6.2	41,103	6.3
Late/no prenatal care, as a percent of total births	1,436	4.7	35,780	5.4
Infant deaths, per 1,000 live births	171	5.5	2,940	4.4
Total hospitalizations, per 10,000	361,785	1,111.9	6,776,549	1,154.8
Total asthma hospitalizations, per 10,000	1,642	5.0	57,786	9.8
Rate of asthma hospitalizations, aged 25-44 per 10,000	382	4.8	7,994	5.0
Rate of asthma hospitalizations, aged 45-64 per 10,000	403	4.5	13,566	8.8
Pediatric asthma hospitalization, per 10,000	563	9.0	24,839	20.3
Diabetes hospitalizations, per 10,000	5,968	18.3	125,599	21.4
CLRD hospitalizations, per 10,000	9,466	29.1	174,084	29.7
Heart disease hospitalizations, per 10,000	33,451	102.8	616,944	105.1
Total ED visits, per 10,000	1,135,140	3488.7	24,263,152	4134.7

CLRD, chronic lower respiratory disease; ED, emergency department.

Source: New York State Community Health Indicator Reports.

2. Health Care Sector Employment

Table 38. The Number of Health Care Jobs in the Capital Region, by Setting, 2017–2021

Setting	2017	2018	2019	2020	2021	Change Between 2017 and 2021	
						Number	Percent
Hospitals	24,907	25,225	24,537	23,328	21,774	-3,133	-12.6%
Ambulatory care (excluding home health)	19,933	20,226	20,132	19,096	20,514	581	2.9%
Nursing home and residential care facilities	11,490	11,423	11,250	10,323	9,278	-2,212	-19.3%
Home health care	3,434	3,500	3,353	4,265	3,979	545	15.9%
Total	59,764	60,374	59,272	57,012	55,545	-4,219	-7.1%

Source: NYS Department of Labor, Quarterly Census of Employment and Wages.

3. Employment by Occupations

Table 39. The Number of Jobs and Median Salary for Selected Occupations in Capital Region, 2021

Occupational Title	Number of Jobs	Median Salary
Audiologists	60	\$84,230
Cardiovascular Technologists and Technicians	270	\$49,910
Clinical Laboratory Technologists and Technicians	1,010	\$62,100
Dental Assistants	1,100	\$50,510
Dental Hygienists	710	\$80,370
Diagnostic Medical Sonographers	360	\$78,620
Dietitians and Nutritionists	290	\$67,030
Emergency Medical Technicians	870	\$31,970
Healthcare Social Workers	1,120	\$51,350
Home Health & Personal Care Aides	12,450	\$30,980
Licensed Practical and Licensed Vocational Nurses	2,780	\$48,870
Magnetic Resonance Imaging Technologists	120	\$81,880
Medical Assistants	1,470	\$39,790
Medical Secretaries and Administrative Assistants	2,230	\$38,670
Medical Transcriptionists	110	\$39,020
Medical and Health Services Managers	1,580	\$105,680
Mental Health and Substance Abuse Social Workers	620	\$64,750
Nuclear Medicine Technologists	50	\$98,690
Nurse Anesthetists	280	\$202,650
Nurse Practitioners	800	\$114,680
Nursing Assistants	4,940	\$32,390
Occupational Therapists	570	\$80,280
Occupational Therapy Assistants	130	\$52,900
Orderlies	180	\$32,390
Paramedics	590	\$49,140
Pharmacists	1,060	\$132,290
Pharmacy Aides	100	\$30,310
Pharmacy Technicians	1,310	\$36,440
Phlebotomists	210	\$40,310
Physical Therapist Aides	110	\$31,970
Physical Therapist Assistants	240	\$53,250
Physical Therapists	910	\$80,740
Physician Assistants	840	\$125,760
Psychiatric Aides	180	\$44,030
Psychiatric Technicians	60	\$40,660
Radiation Therapists	70	\$99,300
Radiologic Technologists and Technicians	780	\$64,510
Recreational Therapists	50	\$53,370
Registered Nurses	11,590	\$80,250
Respiratory Therapists	390	\$64,510
Speech-Language Pathologists	720	\$81,190
Surgical Technologists	310	\$48,870

N/A, not available.

Source: NYS Department of Labor, Employment Statistics, Occupational Wage and Employment Estimates (OES)

4. Employer Demand Survey

a. Hospitals

Table 40. Percent of Respondents Who Indicated Recruitment or Retention Difficulties at Capital Region Hospitals

Occupations	Percent of Respondents Indicating Difficulty	
	Recruitment	Retention
Certified Nurse Aides/Nurse Aides/Nurse Assistants/Patient Care Techs	75%	100%
Clinical Laboratory Technicians	100%	38%
Clinical Laboratory Technologists	100%	38%
Environmental (janitorial, housekeeping) Service Aides	75%	100%
Food Services/Dietary	75%	100%
Licensed Mental Health Counselors	38%	29%
Licensed Practical Nurses	38%	100%
Management/Executive Staff	38%	100%
Nurse Practitioners (Behavioral Health)	38%	100%
Nurse Practitioners (All other)	38%	29%
Pharmacists	38%	25%
Physician Assistants	38%	25%
Psychiatrists	38%	100%
Respiratory Therapists	100%	88%
Registered Nurses	100%	100%
Licensed Clinical Social Workers	38%	38%
Licensed Master's Social Workers	38%	38%
Surgical Technicians	100%	100%

Table 41. Reasons for Recruitment Difficulties at Capital Region Hospitals

Occupations	Reasons For Recruiting Difficulties						
	Candidates Applying Not Qualified	General Shortage of Workers	Location/ Transportation Issues	Non-competitive Salaries	Non-competitive Benefits	Potential Employees Not Following Up/Skipping Appointments (Ghosting)	Unknown
Certified Nurse Aides/Nurse Aides/Nurse Assistants/Patient Care Techs	0%	88%	88%	100%	0%	88%	0%
Clinical Laboratory Technicians	25%	100%	0%	25%	0%	25%	0%
Clinical Laboratory Technologists	25%	100%	0%	25%	0%	25%	0%
Environmental (janitorial, housekeeping) Service Aides	0%	25%	88%	100%	13%	88%	0%
Food Services/Dietary	0%	25%	88%	88%	13%	88%	0%
Licensed Mental Health Counselors	25%	38%	0%	25%	0%	25%	63%
Licensed Practical Nurses	0%	25%	25%	25%	13%	25%	63%
Management/Executive Staff	25%	38%	0%	25%	0%	25%	63%
Nurse Practitioners (Behavioral Health)	25%	38%	0%	25%	0%	25%	63%
Nurse Practitioners (All other)	25%	38%	0%	25%	0%	25%	63%
Pharmacists	25%	100%	0%	25%	0%	25%	0%
Physician Assistants	25%	38%	0%	25%	0%	25%	63%
Psychiatrists	25%	38%	0%	25%	0%	25%	63%
Respiratory Therapists	25%	100%	0%	88%	0%	25%	0%
Registered Nurses	88%	100%	0%	25%	25%	25%	0%
Licensed Clinical Social Workers	25%	100%	0%	25%	25%	25%	63%
Licensed Master's Social Workers	25%	100%	0%	25%	0%	25%	63%
Surgical Technicians	88%	100%	0%	25%	0%	25%	0%

Table 42. Reasons for Retention Difficulties at Capital Region Hospitals

Occupations	Reasons for Retention Difficulties						
	Career Change	Left for Better Benefits	Left for Better Salary	Left for Family Commitments	Left for Better Work-Life Balance	Retirement	Unknown
Certified Nurse Aides/Nurse Aides/Nurse Assistants/Patient Care Techs	100%	25%	100%	100%	38%	38%	0%
Clinical Laboratory Technicians	38%	25%	100%	100%	88%	38%	0%
Clinical Laboratory Technologists	38%	25%	100%	100%	88%	38%	0%
Environmental (janitorial, housekeeping) Service Aides	25%	25%	100%	25%	25%	25%	0%
Food Services/Dietary	25%	25%	100%	25%	25%	25%	0%
Licensed Mental Health Counselors	38%	25%	25%	25%	38%	25%	63%
Licensed Practical Nurses	25%	25%	100%	88%	100%	25%	0%
Management/Executive Staff	38%	25%	25%	25%	25%	25%	63%
Nurse Practitioners (Behavioral Health)	38%	25%	25%	25%	25%	25%	63%
Nurse Practitioners (All other)	25%	25%	38%	25%	38%	25%	63%
Pharmacists	25%	25%	100%	88%	38%	25%	0%
Physician Assistants	25%	25%	38%	25%	25%	25%	63%
Psychiatrists	25%	25%	38%	25%	25%	25%	63%
Respiratory Therapists	25%	25%	100%	88%	100%	25%	0%
Registered Nurses	88%	88%	100%	100%	100%	100%	0%
Licensed Clinical Social Workers	38%	25%	88%	38%	25%	25%	0%
Licensed Master's Social Workers	38%	25%	88%	38%	25%	25%	0%
Surgical Technicians	88%	88%	100%	25%	88%	25%	0%

b. Nursing Homes and Assisted Living Facilities**Table 43.** Percent of Respondents Who Indicated Recruitment or Retention Difficulties at Capital Region Nursing Homes and Assisted Living Facilities

Occupation	Percent of Respondents Indicating Difficulty	
	Recruiting	Retaining
Certified Nurse Aides/Assistants	83.3%	83.3%
Dietitians/Nutritionists	40.0%	14.3%
Home Health Aides	60.0%	60.0%
Infection Preventionist Practitioners	45.5%	40.0%
Licensed Clinical Social Workers (LCSWs)	57.1%	42.9%
Licensed Master Social Workers (LMSWs)	42.9%	14.3%
Licensed Practical Nurse (LPNs)	88.9%	72.2%
MDS Coordinators	40.0%	37.5%
Nurse Directors/Managers	53.8%	33.3%
Nurse Educators	54.5%	54.5%
Occupational Therapists	54.5%	30.0%
Occupational Therapy Assistants	55.6%	25.0%
Paid Feeding Assistants	0.0%	0.0%
Personal Care Aides	75.0%	62.5%
Physical Therapists	40.0%	30.0%
Physical Therapy Assistants	57.1%	42.9%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	100.0%	66.7%
Registered Nurses Experienced (3+ years of clinical experience)	92.9%	64.3%
Respiratory Therapists	42.9%	50.0%
Speech-Language Pathologists	75.0%	42.9%
Temporary Nurse Aide/CNA Trainees	77.8%	88.9%

Table 44. Non-COVID-19 Related Reasons for Recruitment Difficulties at Capital Region Nursing Homes and Assisted Living Facilities

Occupation	Non-COVID-19 Related Reasons for Recruitment Difficulties			
	Shortage of Applicants	Shortage of Applicants Meeting Minimum Job Qualifications	Non-Competitive Salary	Non-Competitive Benefits
Certified Nurse Aides/Assistants	100%	50%	60%	20%
Dietitians/Nutritionists	83%	0%	0%	0%
Home Health Aides	100%	0%	33%	0%
Infection Preventionist Practitioners	80%	20%	20%	0%
Licensed Clinical Social Workers (LCSWs)	100%	0%	25%	0%
Licensed Master Social Workers (LMSWs)	67%	33%	33%	0%
Licensed Practical Nurse (LPNs)	81%	13%	31%	13%
MDS Coordinators	100%	0%	25%	0%
Nurse Directors/Managers	86%	14%	14%	0%
Nurse Educators	100%	0%	33%	0%
Occupational Therapists	100%	17%	0%	0%
Occupational Therapy Assistants	100%	20%	0%	0%
Paid Feeding Assistants	0%	0%	0%	0%
Personal Care Aides	100%	17%	83%	33%
Physical Therapists	100%	0%	0%	0%
Physical Therapy Assistants	100%	0%	0%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	90%	20%	30%	0%
Registered Nurses Experienced (3+ years of clinical experience)	92%	15%	15%	0%
Respiratory Therapists	100%	0%	0%	0%
Speech-Language Pathologists	100%	17%	0%	0%
Temporary Nurse Aide/CNA Trainees	86%	43%	43%	0%

Table 45. COVID-19 Related Reasons for Recruitment Difficulties at Capital Region Nursing Homes and Assisted Living Facilities

Occupation	COVID-19 Related Reasons for Recruitment Difficulties				
	Family Care Giving Commitments Prevented Availability	Lack of Online Training Certification	Vaccine or Booster Refusal	Fear of COVID-19 Exposure	COVID-19 Testing of Staff and Required Quarantine if a Positive Result Reduced Available Staff
Certified Nurse Aides/Assistants	50%	40%	70%	70%	50%
Dietitians/Nutritionists	33%	0%	0%	17%	17%
Home Health Aides	67%	33%	67%	0%	67%
Infection Preventionist Practitioners	60%	0%	20%	60%	20%
Licensed Clinical Social Workers (LCSWs)	100%	0%	50%	100%	50%
Licensed Master Social Workers (LMSWs)	67%	0%	67%	67%	33%
Licensed Practical Nurse (LPNs)	44%	13%	56%	44%	38%
MDS Coordinators	50%	0%	25%	50%	0%
Nurse Directors/Managers	57%	0%	14%	43%	29%
Nurse Educators	67%	0%	17%	67%	17%
Occupational Therapists	50%	0%	17%	50%	33%
Occupational Therapy Assistants	40%	0%	20%	40%	20%
Paid Feeding Assistants	0%	0%	0%	0%	0%
Personal Care Aides	33%	0%	33%	50%	33%
Physical Therapists	50%	0%	25%	50%	25%
Physical Therapy Assistants	50%	0%	25%	50%	25%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	40%	0%	30%	60%	50%
Registered Nurses Experienced (3+ years of clinical experience)	46%	0%	31%	54%	31%
Respiratory Therapists	33%	0%	33%	33%	33%
Speech-Language Pathologists	50%	0%	17%	50%	33%
Temporary Nurse Aide/CNA Trainees	57%	43%	71%	86%	57%

Table 46. Non-COVID-19 Related Reasons for Retention Difficulties at Capital Region Nursing Homes and Assisted Living Facilities

Occupation	Non-COVID-19 Related Reasons for Retention Difficulties				
	Staff Found Higher Pay and Benefits Elsewhere	Staff Left for Other Employment Sectors	Paperwork and Regulatory Burdens	Retirement	Scheduling Challenges
Certified Nurse Aides/Assistants	90%	70%	40%	20%	20%
Dietitians/Nutritionists	50%	50%	50%	0%	0%
Home Health Aides	67%	33%	0%	0%	33%
Infection Preventionist Practitioners	75%	25%	25%	25%	25%
Licensed Clinical Social Workers (LCSWs)	67%	67%	33%	33%	0%
Licensed Master Social Workers (LMSWs)	0%	100%	0%	0%	0%
Licensed Practical Nurse (LPNs)	85%	54%	31%	15%	39%
MDS Coordinators	67%	33%	33%	33%	0%
Nurse Directors/Managers	75%	50%	25%	50%	25%
Nurse Educators	100%	50%	17%	17%	0%
Occupational Therapists	67%	33%	67%	33%	0%
Occupational Therapy Assistants	50%	50%	100%	50%	0%
Paid Feeding Assistants	0%	0%	0%	0%	0%
Personal Care Aides	60%	40%	20%	0%	40%
Physical Therapists	67%	33%	67%	33%	0%
Physical Therapy Assistants	67%	33%	67%	33%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	83%	67%	50%	33%	33%
Registered Nurses Experienced (3+ years of clinical experience)	78%	44%	56%	22%	33%
Respiratory Therapists	33%	0%	67%	0%	0%
Speech-Language Pathologists	67%	33%	67%	33%	0%
Temporary Nurse Aide/CNA Trainees	75%	78%	50%	13%	25%

Table 47. COVID-19 Related Reasons for Retention Difficulties at Capital Region Nursing Homes and Assisted Living Facilities

Occupation	COVID-19 Related Reasons for Retention Difficulties			
	Fear of COVID-19 Exposure	Family Care Giving Commitments	Conversion to Another Position	Vaccine or Booster Refusal
Certified Nurse Aides/Assistants	50%	50%	50%	90%
Dietitians/Nutritionists	100%	50%	0%	0%
Home Health Aides	33%	0%	0%	33%
Infection Preventionist Practitioners	75%	50%	25%	25%
Licensed Clinical Social Workers (LCSWs)	100%	33%	0%	0%
Licensed Master Social Workers (LMSWs)	100%	100%	0%	0%
Licensed Practical Nurse (LPNs)	54%	39%	31%	54%
MDS Coordinators	100%	67%	33%	0%
Nurse Directors/Managers	75%	50%	50%	0%
Nurse Educators	50%	33%	50%	0%
Occupational Therapists	100%	67%	0%	0%
Occupational Therapy Assistants	50%	100%	0%	50%
Paid Feeding Assistants	0%	0%	0%	0%
Personal Care Aides	40%	40%	20%	20%
Physical Therapists	100%	33%	0%	33%
Physical Therapy Assistants	100%	67%	33%	33%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	83%	67%	67%	50%
Registered Nurses Experienced (3+ years of clinical experience)	67%	56%	44%	33%
Respiratory Therapists	33%	67%	0%	67%
Speech-Language Pathologists	67%	33%	0%	33%
Temporary Nurse Aide/CNA Trainees	63%	50%	62.5%	63%

c. Home Health Care

Table 48. Percent of Respondents Who Indicated Recruitment or Retention Difficulties at Capital Region Home Health Care

Occupation	Percent of Respondents Indicating Difficulty	
	Recruiting	Retaining
COVID-19 Compliance Officer	25%	0%
Home Health Aides	95%	82%
Homemaker	78%	75%
Intake Coordinator	38%	17%
Licensed Clinical Social Workers (LCSWs)	0%	0%
Licensed Master Social Workers (LMSWs)	50%	0%
Licensed Practical Nurse (LPNs)	40%	27%
Occupational Therapists	25%	25%
Occupational Therapy Assistants	0%	0%
Personal Care Aides	100%	89%
Physical Therapists	40%	40%
Physical Therapy Assistants	0%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	88%	25%
Registered Nurses Experienced (3+ years of clinical experience)	88%	44%
Respiratory Therapists	100%	0%
Speech-Language Pathologists	75%	50%

Table 49. Non-COVID-19 Related Reasons for Recruitment Difficulties at Capital Region Home Health Care Agencies

Occupation	Non-COVID-19 Related Reasons for Recruitment Difficulties			
	Shortage of Applicants	Shortage of Applicants Meeting Minimum Job Qualifications	Non-Competitive Salary	Non-Competitive Benefits
COVID-19 Compliance Officer	0%	50%	50%	0%
Home Health Aides	90%	38%	33%	19%
Homemaker	100%	29%	29%	14%
Intake Coordinator	67%	67%	33%	33%
Licensed Clinical Social Workers (LCSWs)	0%	0%	0%	0%
Licensed Master Social Workers (LMSWs)	100%	100%	0%	0%
Licensed Practical Nurse (LPNs)	100%	0%	50%	0%
Occupational Therapists	100%	0%	100%	0%
Occupational Therapy Assistants	0%	0%	0%	0%
Personal Care Aides	84%	42%	42%	21%
Physical Therapists	100%	0%	50%	0%
Physical Therapy Assistants	0%	0%	0%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	86%	29%	14%	14%
Registered Nurses Experienced (3+ years of clinical experience)	90%	29%	38%	29%
Respiratory Therapists	100%	0%	0%	0%
Speech-Language Pathologists	0%	0%	0%	0%

Table 50. Additional Reasons for Recruitment Difficulties at Capital Region Home Health Care Agencies

Occupation	COVID-19 Related Reasons for Recruitment Difficulties			
	Family Care Giving Commitments Prevented Availability	Lack of Scheduling Flexibility for the Applicant	Vaccine or Booster Refusal	Fear of COVID-19 Exposure
COVID-19 Compliance Officer	0%	50%	50%	0%
Home Health Aides	33%	38%	62%	33%
Homemaker	29%	29%	29%	43%
Intake Coordinator	17%	17%	17%	0%
Licensed Clinical Social Workers (LCSWs)	0%	0%	0%	0%
Licensed Master Social Workers (LMSWs)	0%	0%	1%	0%
Licensed Practical Nurse (LPNs)	50%	50%	25%	25%
Occupational Therapists	0%	0%	0%	0%
Occupational Therapy Assistants	0%	0%	0%	0%
Personal Care Aides	47%	47%	68%	37%
Physical Therapists	0%	0%	0%	0%
Physical Therapy Assistants	0%	0%	0%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	14%	29%	43%	14%
Registered Nurses Experienced (3+ years of clinical experience)	24%	24%	33%	10%
Respiratory Therapists	0%	0%	0%	0%
Speech-Language Pathologists	0%	0%	0%	0%

Table 51. Non-COVID-19 Related Reasons for Retention Difficulties at Capital Region Home Health Care Agencies

Occupation	Non-COVID-19 Related Reasons for Retention Difficulties				
	Staff Found Higher Pay and Benefits Elsewhere	Staff Left for Other Employment Sectors	Paperwork and Regulatory Burdens	Retirement	Scheduling Challenges
COVID-19 Compliance Officer	0%	0%	0%	0%	0%
Home Health Aides	67%	89%	17%	11%	39%
Homemaker	50%	83%	17%	17%	50%
Intake Coordinator	67%	67%	67%	33%	0%
Licensed Clinical Social Workers (LCSWs)	0%	0%	0%	0%	0%
Licensed Master Social Workers (LMSWs)	0%	0%	0%	0%	0%
Licensed Practical Nurse (LPNs)	67%	33%	67%	33%	33%
Occupational Therapists	100%	0%	100%	0%	0%
Occupational Therapy Assistants	0%	0%	0%	0%	0%
Personal Care Aides	65%	94%	18%	18%	47%
Physical Therapists	100%	50%	100%	0%	0%
Physical Therapy Assistants	0%	0%	0%	0%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	50%	0%	50%	0%	0%
Registered Nurses Experienced (3+ years of clinical experience)	64%	36%	45%	27%	9%
Respiratory Therapists	0%	0%	0%	0%	0%
Speech-Language Pathologists	0%	0%	0%	0%	0%

Table 52. Additional Reasons for Retention Difficulties at Capital Region Home Health Care Agencies

Occupation	COVID-19 Related Reasons for Retention Difficulties				
	Scheduling Challenges	Family Care Giving Commitments	Too Few Available Hours for a Full Time Position	Vaccine or Booster Refusal	Termination Due to Unsatisfactory Performance
COVID-19 Compliance Officer	0%	0%	0%	0%	0%
Home Health Aides	33%	50%	33%	0%	0%
Homemaker	50%	50%	28%	50%	28%
Intake Coordinator	0%	0%	0%	33%	0%
Licensed Clinical Social Workers (LCSWs)	0%	0%	0%	0%	0%
Licensed Master Social Workers (LMSWs)	0%	0%	0%	0%	0%
Licensed Practical Nurse (LPNs)	33%	33%	33%	0%	0%
Occupational Therapists	0%	0%	0%	0%	0%
Occupational Therapy Assistants	0%	0%	0%	0%	0%
Personal Care Aides	65%	47%	24%	53%	35%
Physical Therapists	0%	0%	50%	0%	0%
Physical Therapy Assistants	0%	0%	0%	0%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	0%	0%	0%	0%	0%
Registered Nurses Experienced (3+ years of clinical experience)	27%	27%	18%	9%	0%
Respiratory Therapists	0%	0%	0%	0%	0%
Speech-Language Pathologists	0%	0%	0%	0%	0%

2. Health Workforce Production and Projected Need

a. Graduations

Table 53. The Number of Graduations for Selected Health Care Occupations in the Capital Region, 2017-2021

Occupational Program	School Year					Change Between 2017 and 2021	
	2017	2018	2019	2020	2021	Number	Percent
Audiologists & Speech Language Pathologists ^a	125	83	69	89	86	-39	-31.2%
Cardiovascular Technologists and Technicians	15	5	8	4	0	-15	-100.0%
Clinical Laboratory Technologists	19	21	20	22	17	-2	-10.5%
Dental Assistants	16	16	14	16	7	-9	-56.3%
Dental Hygienists	30	30	35	36	35	5	16.7%
Electrocardiograph Technologists and Technicians	8	9	7	8	9	1	12.5%
EMTs and Paramedics	55	26	53	38	36	-19	-34.5%
Health Care Administrators	21	23	41	51	75	54	257.1%
License Practical Nurses	255	283	232	233	238	-17	-6.7%
Medical Assistants	170	149	131	97	79	-91	-53.5%
Mental Health Counselors	25	30	52	47	51	26	104.0%
Nurse Anesthetist	19	25	23	18	23	4	21.1%
Occupational Therapists	34	38	36	37	42	8	23.5%
Occupational Therapy Assistants	63	44	42	65	5	-58	-92.1%
Pharmacists	200	232	225	218	210	10	5.0%
Physical Therapists	36	37	37	29	30	-6	-16.7%
Physician Assistants	40	42	40	41	40	0	0.0%
Radiation Therapists and Technologists	22	27	21	23	21	-1	-4.5%
Registered Nurses	1,960	1,817	1,787	2,050	1,925	-35	-1.8%
Registered Nurses with Advanced Education ^b	39	46	49	36	54	15	38.5%
Respiratory Therapists	17	22	18	19	12	-5	-29.4%
Social Workers	246	271	259	268	221	-25	-10.2%
Substance Abuse/Addiction Counseling	61	52	50	35	32	-29	-47.5%
Surgical Technology/Technologist	0	12	18	16	16	16	N/A

^a Audiologists & speech-language pathologists include graduations in audiology, speech-language pathology, and communication sciences and disorders.

^b Creative arts therapists include graduations in art therapy, dance therapy, and music therapy.

^c Registered nurses with advanced education include graduations or certificates in adult health nursing, clinical nurse specialist, critical care nursing, family practice nursing, geriatric nursing, maternal and child health nursing, palliative care nursing, pediatric nursing, perioperative/OR nursing, public health nursing, women's health nursing, and nursing practice.

N/A, not applicable.

Source: Integrated Postsecondary Education Data System.

b. Licenses**Table 54.** The Number of Licensed Individuals in Selected Health Care Professions in the Capital Region, 2018–2022

Occupation	2018	2019	2020	2021	2022	Change Between 2018 and 2022	
						Number	Percent
Clinical Laboratory Technicians	83	80	82	79	77	-6	-7.2%
Clinical Laboratory Technologists	768	713	731	701	667	-101	-13.2%
Dental Assistants	148	154	161	165	164	16	10.8%
Dental Hygienists	889	874	881	881	899	10	1.1%
Dietitians/Nutritionists	381	386	393	403	404	23	6.0%
Licensed Practical Nurses	5,293	5,066	5,187	5,107	5,080	-213	-4.0%
Nurse Practitioners	1,105	1,198	1,298	1,417	1,480	375	33.9%
Occupational Therapists	662	694	728	757	777	115	17.4%
Occupational Therapy Assistants	346	351	356	351	350	4	1.2%
Pharmacists	1,588	1,603	1,592	1,625	1,668	80	5.0%
Physical Therapists	1,172	1,196	1,194	1,235	1,271	99	8.4%
Physical Therapist Assistants	304	292	306	307	317	13	4.3%
Physician Assistants	857	897	967	1,003	1,030	173	20.2%
Registered Nurses	17,341	17,511	17,898	18,331	18,458	1,117	6.4%
Respiratory Therapists	436	434	453	446	446	10	2.3%
Social Workers ^a	2,625	2,628	2,712	2,786	2,869	244	9.3%
Speech-Language Pathologists	978	964	969	992	1,011	33	3.4%

^aSocial workers include both master's Clinical Social Workers and master's Licensed Social Workers.

Source: New York State Education Department, Office of Professions.

c. Employment Projections

Table 55. Employment Projections for Selected Health Care Occupations for the Capital Region, By Largest Percentage Increase, 2018–2028

Occupational Title	2018	2028	Change Between 2018 and 2028		Average Annual Openings ^a
			Number	Percent	
Home Health and Personal Care Aides	13,220	19,300	6,080	46.0%	2,693
Physical Therapist Assistants and Aides	300	430	130	43.3%	57
Occupational Therapy Assistants and Aides	190	270	80	42.1%	33
Physician Assistants	960	1,350	390	40.6%	105
Nurse Practitioners	790	1,070	280	35.4%	78
Phlebotomists	370	500	130	35.1%	60
Occupational Therapists	640	860	220	34.4%	64
Physical Therapists	1,180	1,560	380	32.2%	95
Medical Assistants	1,520	2,000	480	31.6%	242
Mental Health and Substance Abuse Social Workers	680	890	210	30.9%	97
Speech-Language Pathologists	680	890	210	30.9%	63
Healthcare Social Workers	900	1,170	270	30.0%	128
Respiratory Therapists	450	580	130	28.9%	40
Diagnostic Medical Sonographers	330	420	90	27.3%	30
Medical Secretaries and Administrative Assistants	630	800	170	27.0%	97
Nurse Anesthetists	260	330	70	26.9%	22
Dental Hygienists	900	1,130	230	25.6%	91
Dental Assistants	880	1,100	220	25.0%	133
Registered Nurses	13,750	17,020	3,270	23.8%	1,148
Medical and Health Services Managers	1,720	2,120	400	23.3%	193
Magnetic Resonance Imaging Technologists	130	160	30	23.1%	11
Surgical Technologists	330	400	70	21.2%	37
Emergency Medical Technicians and Paramedics	1,540	1,850	310	20.1%	144
Medical Records and Health Information Technicians	740	880	140	18.9%	66
Psychiatric Aides	320	380	60	18.8%	45
Radiologic Technologists and Technicians	970	1,150	180	18.6%	76
Licensed Practical and Licensed Vocational Nurses	4,020	4,740	720	17.9%	406
Clinical Laboratory Technologists and Technicians	1,500	1,750	250	16.7%	127
Nuclear Medicine Technologists	60	70	10	16.7%	5
Cardiovascular Technologists and Technicians	320	370	50	15.6%	24
Dietitians and Nutritionists	350	400	50	14.3%	29
Nursing Assistants	6,730	7,610	880	13.1%	891
Orderlies	180	200	20	11.1%	24
Pharmacy Technicians	1,120	1,190	70	6.3%	101
Medical Transcriptionists	100	100	0	0.0%	14
Pharmacists	1,480	1,480	0	0.0%	67
Pharmacy Aides	130	110	-20	-15.4%	13

^aannual openings reflect creation of new positions in the occupation and replacement for those retiring or otherwise leaving the occupation.

Source: NYS Department of Labor, Jobs in Demand/Projects, Long-Term Occupation Projections, 2018-2028.

A. Central New York

The Central New York region includes the counties of Cayuga, Cortland, Madison, Onondaga, and Oswego.



KEY FINDINGS

Population and Health Care Indicators

- The Central New York region had a slighter older population than the state as a whole.
- The rates of deaths due to all cancers and due to diabetes was higher in the Central New York region than the state as a whole.

Health Care Employment

- Overall, the number of health care jobs in the Central New York region declined between 2017 and 2021.
- The number of health care jobs in hospitals, nursing homes, and in home health care all declined in the Central New York region between 2017 and 2021. In contrast, the number of health care jobs in ambulatory care slightly grew in the same time period.

Employer Demand Survey

- Registered nurses and licensed practical nurses are among the most difficult to recruit and retain in all health care settings throughout the Central New York region.
- Hospitals in the Central New York region also reported that clinical laboratory technicians, clinical laboratory technologists, licensed clinical social workers, and licensed master's social workers are also among the most difficult to recruit and retain.
- Certified nurse aides/assistants, home health aides, nurse directors/managers, and personal care aides are also reported by nursing homes and by assisted living facilities as among the most difficult to recruit and retain.
- Home health care agencies in the Central New York region also indicated that home health aides, homemakers, and personal care aides are among the most difficult to recruit and retain.

Health Care Production and Projected Workforce Need

- The number of licensed practical nurse and registered nurse graduations both declined between 2017 and 2021.
- There are more than 1,800 projected average annual openings in the Central New York region for home health and personal care aides and over 600 projected average annual openings for registered nurses.

1. Population and Health Care Indicators

Table 56. Selected Population Characteristics for Central New York, 2016-2020

Population Characteristics	Regional		Percent of State Population
	Number	Percent of Regional Population	
Total population	774,787	4.0%	N/A
Population under 100% FPL	101,082	13.7%	13.6%
Population under 200% FPL	218,723	29.7%	28.8%
Population aged birth to 17 years	160,904	20.8%	20.9%
Population aged 65 and older	133,501	17.2%	16.5%
Population female aged 15 to 44	149,106	19.2%	20.0%
Women aged 15 to 19 who had a birth in past 12 mos.	248	2.8% ^b	1.9% ^b
Women aged 20 to 34 who had a birth in past 12 mos.	6,431	72.3% ^b	65.9% ^b
Women aged 35 to 50 who had a birth in past 12 mos.	2,218	24.9% ^b	32.2% ^b
Black/African American, non-Hispanic	54,896	7.1%	14.0%
Hispanic/Latino	32,025	4.1%	19.1%
Asian/Pacific Islander, non-Hispanic	19,934	2.6%	8.5%
American Indian/Native Alaskan, non-Hispanic	2,535	0.3%	0.2%
Two or more/other races	24,652	3.2%	3.0%
Population with less than a high school education ^a	49,319	9.3%	12.8%
Population with a high school diploma or equivalent ^a	249,089	47.0%	40.9%
Population with an associate degree ^a	68,125	12.9%	8.9%
Population with a bachelor's degree ^a	91,691	17.3%	20.9%
Population with a master's degree or higher ^a	71,781	13.5%	16.5%
Home ownership	209,971	68.0%	54.1%

^aEducation levels and rates are based on individuals aged 25 years and older.

^bPercent of total births.

FPL, federal poverty level; N/A, not applicable; mos., months.

Source: US Census, American Community Survey, 5-Year Estimates, 2016-2020.

Table 57. Selected Health Indicators for Central New York Region

Health Indicator	Region		Statewide	
	Number	Rate	Number	Rate
Total deaths, per 100,000	21,934	942.4	468,772	798.8
Deaths due to heart disease, per 100,000	6,424	276.0	163,285	278.3
Deaths due to all cancers, per 100,000	4,682	200.8	103,089	175.5
Deaths due to diabetes, per 100,000	552	23.7	13,175	22.5
Total births, per 1,000 females aged 15 to 44	24,639	55.0	674,199	57.5
Teen births, per 1,000 females aged 15 to 19	1,133	13.2	20,879	11.9
Low-birthweight births, as a percent of total births	1,434	6.1	41,103	6.3
Late/no prenatal care, as a percent of total births	904	3.7	35,780	5.4
Infant deaths, per 1,000 live births	127	5.2	2,940	4.4
Total hospitalizations, per 10,000	261,213	1122.3	6,776,549	1154.8
Total asthma hospitalizations, per 10,000	1,151	4.9	57,786	9.8
Rate of asthma hospitalizations, aged 25-44 per 10,000	220	4.0	7,994	5.0
Rate of asthma hospitalizations, aged 45-64 per 10,000	206	3.2	13,566	8.8
Pediatric asthma hospitalization, per 10,000	569	11.7	24,839	20.3
Diabetes hospitalizations, per 10,000	4,973	21.4	125,599	21.4
CLRD hospitalizations, per 10,000	7,108	30.5	174,084	29.7
Heart disease hospitalizations, per 10,000	23,610	101.4	616,944	105.1
Total ED visits, per 10,000	909,495	3907.7	24,263,152	4134.7

CLRD, chronic lower respiratory disease; ED, emergency department.

Source: New York State Community Health Indicator Reports.

2. Health Care Sector Employment

Table 58. Number of Health Care Jobs in Central New York, by Setting, 2017–2021

Setting	2017	2018	2019	2020	2021	Change Between 2017 and 2021	
						Number	Percent
Hospitals	13,931	14,066	14,210	13,603	13,165	-766	-5.5%
Ambulatory care (excluding home health)	15,622	15,924	16,919	15,208	15,803	181	1.2%
Nursing home and residential care facilities	8,522	8,370	8,547	8,112	7,157	-1,365	-16.0%
Home health care	2,183	2,178	2,231	2,238	2,106	-77	-3.5%
Total	40,258	40,538	41,907	39,161	38,231	-2,027	-5.0%

Source: NYS Department of Labor, Quarterly Census of Employment and Wages.

3. Employment by Occupations

Table 59. Number of Jobs and Median Salary for Selected Health Care Occupations in Central New York, 2021

Occupational Title	Number of Jobs	Median Salary
Audiologists	N/A	\$84,070
Cardiovascular Technologists and Technicians	100	\$53,120
Clinical Laboratory Technologists and Technicians	610	\$66,510
Dental Assistants	820	\$40,040
Dental Hygienists	470	\$79,930
Diagnostic Medical Sonographers	220	\$80,590
Dietitians and Nutritionists	230	\$62,930
Emergency Medical Technicians	430	\$30,780
Healthcare Social Workers	740	\$51,320
Home Health & Personal Care Aides	7,450	\$31,280
Licensed Practical and Licensed Vocational Nurses	2,550	\$48,870
Magnetic Resonance Imaging Technologists	70	\$84,220
Medical Assistants	890	\$39,600
Medical Secretaries and Administrative Assistants	1,880	\$38,570
Medical Transcriptionists	110	\$33,270
Medical and Health Services Managers	670	\$111,620
Mental Health and Substance Abuse Social Workers	310	\$65,300
Nuclear Medicine Technologists	N/A	\$86,050
Nurse Practitioners	780	\$109,510
Nursing Assistants	3,550	\$32,790
Occupational Therapists	390	\$80,760
Occupational Therapy Assistants	90	\$51,850
Orderlies	110	\$32,780
Paramedics	320	\$49,640
Pharmacists	670	\$132,580
Pharmacy Aides	200	\$30,990
Pharmacy Technicians	860	\$31,440
Phlebotomists	210	\$40,530
Physical Therapist Aides	60	\$30,530
Physical Therapist Assistants	200	\$53,010
Physical Therapists	700	\$81,950
Physician Assistants	560	\$112,070
Psychiatric Aides	190	\$40,660
Psychiatric Technicians	70	\$30,730
Radiation Therapists	N/A	\$80,250
Radiologic Technologists and Technicians	620	\$66,690
Recreational Therapists	90	\$49,530
Registered Nurses	8,500	\$78,090
Respiratory Therapists	280	\$68,370
Speech-Language Pathologists	490	\$81,190
Surgical Technologists	230	\$49,530

N/A, not available.

Source: NYS Department of Labor, Employment Statistics, Occupational Wage and Employment Estimates (OES).

4. Employer Demand Survey

a. Hospitals

Table 60. Percent of Respondents Who Indicated Recruitment or Retention Difficulties at Central New York Hospitals

Occupations	Percent of Respondents Indicating Difficulty	
	Recruitment	Retention
Certified Nurse Aides/Nurse Aides/Nurse Assistants/Patient Care Techs	83%	67%
Clinical Laboratory Technicians	100%	67%
Clinical Laboratory Technologists	100%	100%
Environmental (janitorial, housekeeping) Service Aides	50%	83%
Food Services/Dietary	67%	83%
Licensed Mental Health Counselors	100%	0%
Licensed Practical Nurses	100%	80%
Management/Executive Staff	33%	17%
Nurse Practitioners (Behavioral Health)	100%	67%
Nurse Practitioners (All other)	100%	60%
Pharmacists	50%	33%
Physician Assistants	80%	20%
Psychiatrists	100%	0%
Respiratory Therapists	100%	100%
Registered Nurses	100%	100%
Licensed Clinical Social Workers	100%	75%
Licensed Master's Social Workers	100%	67%
Surgical Technicians	100%	83%

Table 61. Reasons for Recruitment Difficulties at Central New York Hospitals

Occupations	Reasons For Recruiting Difficulties						
	Candidates Applying Not Qualified	General Shortage of Workers	Location/ Transportation Issues	Non-competitive Salaries	Non-competitive Benefits	Potential Employees not Following Up/Skipping Appointments (ghosting)	Unknown
Certified Nurse Aides/Nurse Aides/Nurse Assistants/Patient Care Techs	0%	83%	17%	50%	17%	33%	17%
Clinical Laboratory Technicians	17%	50%	0%	33%	17%	0%	17%
Clinical Laboratory Technologists	17%	67%	0%	33%	0%	0%	17%
Environmental (janitorial, housekeeping) Service Aides	0%	67%	33%	33%	17%	33%	17%
Food Services/Dietary	0%	67%	33%	50%	17%	0%	17%
Licensed Mental Health Counselors	17%	33%	0%	0%	0%	0%	50%
Licensed Practical Nurses	17%	83%	17%	33%	0%	0%	0%
Management/Executive Staff	0%	33%	0%	17%	0%	0%	50%
Nurse Practitioners (Behavioral Health)	17%	50%	0%	50%	17%	0%	17%
Nurse Practitioners (All other)	0%	67%	0%	67%	0%	0%	17%
Pharmacists	17%	67%	0%	33%	0%	0%	17%
Physician Assistants	0%	50%	0%	67%	17%	0%	17%
Psychiatrists	17%	33%	33%	33%	50%	0%	33%
Respiratory Therapists	0%	83%	0%	67%	17%	0%	0%
Registered Nurses	0%	100%	17%	50%	17%	0%	0%
Licensed Clinical Social Workers	17%	67%	0%	50%	0%	0%	17%
Licensed Master's Social Workers	0%	100%	0%	50%	0%	0%	0%
Surgical Technicians	0%	83%	0%	67%	0%	0%	0%

Table 62. Reasons for Retention Difficulties at Central New York Hospitals

Occupations	Reasons for Retention Difficulties						
	Career Change	Left for Better Benefits	Left for Better Salary	Left for Family Commitments	Left for Better Work-Life Balance	Retirement	Unknown
Certified Nurse Aides/Nurse Aides/Nurse Assistants/Patient Care Techs	50%	0%	50%	33%	17%	33%	17%
Clinical Laboratory Technicians	33%	0%	0%	0%	0%	0%	67%
Clinical Laboratory Technologists	33%	0%	17%	0%	17%	33%	33%
Environmental (janitorial, housekeeping) Service Aides	33%	0%	17%	33%	33%	33%	0%
Food Services/Dietary	50%	0%	50%	50%	50%	33%	0%
Licensed Mental Health Counselors	17%	0%	0%	0%	0%	17%	67%
Licensed Practical Nurses	33%	0%	17%	33%	33%	17%	33%
Management/Executive Staff	33%	0%	17%	0%	0%	50%	0%
Nurse Practitioners (Behavioral Health)	33%	0%	17%	0%	0%	17%	50%
Nurse Practitioners (All other)	33%	17%	33%	0%	0%	17%	50%
Pharmacists	33%	17%	17%	0%	0%	0%	33%
Physician Assistants	17%	17%	17%	0%	0%	0%	50%
Psychiatrists	17%	0%	33%	33%	0%	17%	33%
Respiratory Therapists	33%	17%	33%	33%	0%	33%	0%
Registered Nurses	17%	33%	67%	33%	33%	67%	0%
Licensed Clinical Social Workers	33%	0%	17%	17%	17%	0%	50%
Licensed Master's Social Workers	33%	17%	17%	17%	17%	0%	33%
Surgical Technicians	0%	17%	67%	0%	0%	0%	17%

b. Nursing Homes and Assisted Living Facilities**Table 63.** Percent of Respondents Who Indicated Recruitment or Retention Difficulties in Central New York Nursing Homes and Assisted Living Facilities

Occupation	Percent of Respondents Indicating Difficulty	
	Recruiting	Retaining
Certified Nurse Aides/Assistants	92.3%	92.3%
Dietitians/Nutritionists	18.2%	0.0%
Home Health Aides	100.0%	80.0%
Infection Preventionist Practitioners	50.0%	0.0%
Licensed Clinical Social Workers (LCSWs)	66.7%	33.3%
Licensed Master Social Workers (LMSWs)	50.0%	50.0%
Licensed Practical Nurse (LPNs)	94.7%	76.5%
MDS Coordinators	33.3%	16.7%
Nurse Directors/Managers	100.0%	50.0%
Nurse Educators	85.7%	33.3%
Occupational Therapists	37.5%	12.5%
Occupational Therapy Assistants	40.0%	20.0%
Paid Feeding Assistants	0.0%	0.0%
Personal Care Aides	92.3%	78.6%
Physical Therapists	37.5%	12.5%
Physical Therapy Assistants	50.0%	16.7%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	100.0%	50.0%
Registered Nurses Experienced (3+ years of clinical experience)	86.7%	43.8%
Respiratory Therapists	0.0%	0.0%
Speech-Language Pathologists	28.6%	14.3%
Temporary Nurse Aide/CNA Trainees	83.3%	100.0%

Table 64. Non-COVID-19 Related Reasons for Recruitment Difficulties at Central New York Nursing Homes and Assisted Living Facilities

Occupation	Non-COVID-19 Related for Recruitment Difficulties			
	Shortage of Applicants	Shortage of Applicants Meeting Minimum Job Qualifications	Non-Competitive Salary	Non-Competitive Benefits
Certified Nurse Aides/Assistants	100%	50%	33%	0%
Dietitians/Nutritionists	100%	0%	0%	0%
Home Health Aides	100%	40%	30%	0%
Infection Preventionist Practitioners	100%	0%	0%	0%
Licensed Clinical Social Workers (LCSWs)	100%	0%	50%	0%
Licensed Master Social Workers (LMSWs)	100%	0%	0%	0%
Licensed Practical Nurse (LPNs)	94%	33%	28%	0%
MDS Coordinators	100%	5%	5%	0%
Nurse Directors/Managers	92%	38%	4%	8%
Nurse Educators	100%	50%	17%	17%
Occupational Therapists	67%	0%	33%	0%
Occupational Therapy Assistants	100%	0%	0%	0%
Paid Feeding Assistants	0%	0%	0%	0%
Personal Care Aides	100%	33%	17%	8%
Physical Therapists	100%	0%	33%	0%
Physical Therapy Assistants	100%	0%	33%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	100%	20%	20%	20%
Registered Nurses Experienced (3+ years of clinical experience)	92%	46%	31%	8%
Respiratory Therapists	0%	0%	0%	0%
Speech-Language Pathologists	100%	0%	0%	0%
Temporary Nurse Aide/CNA Trainees	80%	40%	20%	0%

Table 65. COVID-19 Related Reasons for Recruitment Difficulties at Central New York Nursing Homes and Assisted Living Facilities

Occupation	COVID-19 Related Reasons for Recruitment Difficulties				
	Family Care Giving Commitments Prevented Availability	Lack of Online Training Certification	Vaccine or Booster Refusal	Fear of COVID-19 Exposure	COVID-19 Testing of Staff and Required Quarantine if a Positive Result Reduced Available Staff
Certified Nurse Aides/Assistants	50%	17%	75%	75%	50%
Dietitians/Nutritionists	50%	0%	100%	50%	0%
Home Health Aides	30%	10%	70%	50%	30%
Infection Preventionist Practitioners	0%	0%	100%	0%	0%
Licensed Clinical Social Workers (LCSWs)	50%	0%	100%	50%	0%
Licensed Master Social Workers (LMSWs)	0%	0%	100%	0%	0%
Licensed Practical Nurse (LPNs)	39%	11%	61%	50%	44%
MDS Coordinators	0%	0%	100%	50%	50%
Nurse Directors/Managers	31%	0%	46%	31%	31%
Nurse Educators	17%	0%	33%	33%	17%
Occupational Therapists	33%	0%	100%	33%	0%
Occupational Therapy Assistants	50%	0%	100%	50%	0%
Paid Feeding Assistants	0%	0%	0%	0%	0%
Personal Care Aides	42%	8%	67%	50%	33%
Physical Therapists	33%	0%	67%	33%	0%
Physical Therapy Assistants	33%	0%	100%	33%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	80%	0%	60%	40%	20%
Registered Nurses Experienced (3+ years of clinical experience)	31%	8%	46%	31%	31%
Respiratory Therapists	0%	0%	0%	0%	0%
Speech-Language Pathologists	50%	0%	100%	50%	0%
Temporary Nurse Aide/CNA Trainees	60%	40%	60%	60%	40%

Table 66. Non-COVID-19 Related Reasons for Retention Difficulties at Central New York Nursing Homes and Assisted Living Facilities

Occupation	Non-COVID-19 Related Reasons for Retention Difficulties				
	Staff Found Higher Pay and Benefits Elsewhere	Staff Left for Other Employment Sectors	Paperwork and Regulatory Burdens	Retirement	Scheduling Challenges
Certified Nurse Aides/Assistants	75%	75%	58%	0%	50%
Dietitians/Nutritionists	0%	0%	0%	0%	0%
Home Health Aides	63%	75%	38%	0%	50%
Infection Preventionist Practitioners	0%	0%	0%	0%	0%
Licensed Clinical Social Workers (LCSWs)	0%	100%	0%	0%	0%
Licensed Master Social Workers (LMSWs)	0%	100%	0%	0%	0%
Licensed Practical Nurse (LPNs)	85%	62%	54%	8%	54%
MDS Coordinators	100%	100%	0%	0%	0%
Nurse Directors/Managers	83%	50%	50%	0%	33%
Nurse Educators	100%	100%	50%	0%	50%
Occupational Therapists	100%	0%	100%	0%	0%
Occupational Therapy Assistants	100%	0%	100%	0%	0%
Paid Feeding Assistants	0%	0%	0%	0%	0%
Personal Care Aides	82%	55%	55%	0%	55%
Physical Therapists	100%	0%	100%	0%	0%
Physical Therapy Assistants	100%	0%	100%	0%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	100%	67%	67%	0%	67%
Registered Nurses Experienced (3+ years of clinical experience)	86%	43%	57%	14%	71%
Respiratory Therapists	0%	0%	0%	0%	0%
Speech-Language Pathologists	100%	0%	100%	0%	0%
Temporary Nurse Aide/CNA Trainees	100%	50%	33%	0%	50%

Table 67. COVID-19 Related Reasons for Retention Difficulties at Central New York Nursing Homes and Assisted Living Facilities

Occupation	COVID-19 Related Reasons for Retention Difficulties			
	Fear of COVID-19 Exposure	Family Care Giving Commitments	Conversion to Another Position	Vaccine or Booster Refusal
Certified Nurse Aides/Assistants	67%	42%	17%	75%
Dietitians/Nutritionists	0%	0%	0%	0%
Home Health Aides	38%	25%	25%	50%
Infection Preventionist Practitioners	0%	0%	0%	0%
Licensed Clinical Social Workers (LCSWs)	0%	0%	0%	100%
Licensed Master Social Workers (LMSWs)	0%	0%	0%	100%
Licensed Practical Nurse (LPNs)	54%	38%	15%	69%
MDS Coordinators	100%	100%	0%	100%
Nurse Directors/Managers	50%	50%	17%	67%
Nurse Educators	50%	50%	0%	50%
Occupational Therapists	100%	0%	0%	100%
Occupational Therapy Assistants	100%	0%	0%	100%
Paid Feeding Assistants	0%	0%	0%	0%
Personal Care Aides	45%	45%	36%	55%
Physical Therapists	100%	0%	0%	100%
Physical Therapy Assistants	100%	0%	0%	100%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	67%	33%	0%	67%
Registered Nurses Experienced (3+ years of clinical experience)	43%	29%	29%	43%
Respiratory Therapists	0%	0%	0%	0%
Speech-Language Pathologists	100%	0%	0%	100%
Temporary Nurse Aide/CNA Trainees	50%	33%	0%	83%

c. Home Health Care**Table 68.** Percent of Respondents Who Indicated Recruitment or Retention Difficulties at Central New York Home Health Care Agencies

Occupation	Percent of Respondents Indicating Difficulty	
	Recruiting	Retaining
COVID-19 Compliance Officer	25%	0%
Home Health Aides	92%	83%
Homemaker	100%	100%
Intake Coordinator	0%	0%
Licensed Clinical Social Workers (LCSWs)	50%	0%
Licensed Master Social Workers (LMSWs)	100%	0%
Licensed Practical Nurse (LPNs)	67%	0%
Occupational Therapists	0%	0%
Occupational Therapy Assistants	0%	0%
Personal Care Aides	100%	78%
Physical Therapists	0%	0%
Physical Therapy Assistants	0%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	75%	0%
Registered Nurses Experienced (3+ years of clinical experience)	87%	20%
Respiratory Therapists	0%	0%
Speech-Language Pathologists	0%	0%

Table 69. Non-COVID-19 Related Reasons for Recruitment Difficulties at Central New York Home Health Care Agencies

Occupation	Non-COVID-19 Related Reasons for Recruitment Difficulties			
	Shortage of Applicants	Shortage of Applicants Meeting Minimum Job Qualifications	Non-Competitive Salary	Non-Competitive Benefits
COVID-19 Compliance Officer	0%	100%	0%	0%
Home Health Aides	92%	50%	33%	25%
Homemaker	100%	33%	33%	33%
Intake Coordinator	0%	0%	0%	0%
Licensed Clinical Social Workers (LCSWs)	100%	0%	0%	0%
Licensed Master Social Workers (LMSWs)	100%	0%	0%	0%
Licensed Practical Nurse (LPNs)	100%	25%	25%	25%
Occupational Therapists	0%	0%	0%	0%
Occupational Therapy Assistants	0%	0%	0%	0%
Personal Care Aides	100%	40%	30%	20%
Physical Therapists	0%	0%	0%	0%
Physical Therapy Assistants	0%	0%	0%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	33%	33%	33%	0%
Registered Nurses Experienced (3+ years of clinical experience)	84%	38%	31%	23%
Respiratory Therapists	0%	0%	0%	0%
Speech-Language Pathologists	0%	0%	0%	0%

Table 70. Additional Reasons for Recruitment Difficulties at Central New York Home Health Care Agencies

Occupation	COVID-19 Related Reasons for Recruitment Difficulties			
	Family Care Giving Commitments Prevented Availability	Lack of Scheduling Flexibility for the Applicant	Vaccine or Booster Refusal	Fear of COVID-19 Exposure
COVID-19 Compliance Officer	0%	100%	0%	0%
Home Health Aides	17%	42%	42%	17%
Homemaker	33%	67%	33%	33%
Intake Coordinator	0%	0%	0%	0%
Licensed Clinical Social Workers (LCSWs)	100%	0%	0%	0%
Licensed Master Social Workers (LMSWs)	100%	0%	0%	0%
Licensed Practical Nurse (LPNs)	100%	25%	25%	25%
Occupational Therapists	0%	0%	0%	0%
Occupational Therapy Assistants	0%	0%	0%	0%
Personal Care Aides	100%	40%	30%	20%
Physical Therapists	0%	0%	0%	0%
Physical Therapy Assistants	0%	0%	0%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	33%	33%	33%	0%
Registered Nurses Experienced (3+ years of clinical experience)	85%	38%	31%	23%
Respiratory Therapists	0%	0%	0%	0%
Speech-Language Pathologists	0%	0%	0%	0%

Table 71. Non-COVID-19 Related Reasons for Retention Difficulties at Central New York Home Health Care Agencies

Occupation	Non-COVID-19 Related Reasons for Retention Difficulties				
	Staff Found Higher Pay and Benefits Elsewhere	Staff Left for Other Employment Sectors	Paperwork and Regulatory Burdens	Retirement	Scheduling Challenges
COVID-19 Compliance Officer	0%	0%	0%	0%	0%
Home Health Aides	20%	70%	20%	10%	60%
Homemaker	33%	100%	0%	0%	67%
Intake Coordinator	0%	0%	0%	0%	0%
Licensed Clinical Social Workers (LCSWs)	0%	0%	0%	0%	0%
Licensed Master Social Workers (LMSWs)	0%	0%	0%	0%	0%
Licensed Practical Nurse (LPNs)	0%	0%	0%	0%	0%
Occupational Therapists	0%	0%	0%	0%	0%
Occupational Therapy Assistants	0%	0%	0%	0%	0%
Personal Care Aides	29%	71%	14%	0%	71%
Physical Therapists	0%	0%	0%	0%	0%
Physical Therapy Assistants	0%	0%	0%	0%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	0%	0%	0%	0%	0%
Registered Nurses Experienced (3+ years of clinical experience)	67%	67%	0%	67%	0%
Respiratory Therapists	0%	0%	0%	0%	0%
Speech-Language Pathologists	0%	0%	0%	0%	0%

Table 72. Additional Reasons for Retention Difficulties at Central New York Home Health Care Agencies

Occupation	COVID-19 Related Reasons for Retention Difficulties				Termination Due to Unsatisfactory Performance
	Scheduling Challenges	Family Care Giving Commitments	Too Few Available Hours for a Full Time Position	Vaccine or Booster Refusal	
COVID-19 Compliance Officer	0%	0%	0%	0%	0%
Home Health Aides	60%	30%	30%	30%	50%
Homemaker	67%	33%	33%	33%	33%
Intake Coordinator	0%	0%	0%	0%	0%
Licensed Clinical Social Workers (LCSWs)	0%	0%	0%	0%	0%
Licensed Master Social Workers (LMSWs)	0%	0%	0%	0%	0%
Licensed Practical Nurse (LPNs)	0%	0%	0%	0%	0%
Occupational Therapists	0%	0%	0%	0%	0%
Occupational Therapy Assistants	0%	0%	0%	0%	0%
Personal Care Aides	71%	43%	29%	43%	57%
Physical Therapists	0%	0%	0%	0%	0%
Physical Therapy Assistants	0%	0%	0%	0%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	0%	0%	0%	0%	0%
Registered Nurses Experienced (3+ years of clinical experience)	0%	33%	0%	0%	0%
Respiratory Therapists	0%	0%	0%	0%	0%
Speech-Language Pathologists	0%	0%	0%	0%	0%

5. Health Workforce Production and Projected Need

a. Graduations

Table 73. The Number of Graduations for Selected Health Care Occupations in Central New York, 2017–2021

Occupational Program	School Year					Change Between 2017 and 2021	
	2017	2018	2019	2020	2021	Number	Percent
Audiologists & Speech Language Pathologists ^a	112	119	95	99	96	-16	-14.3%
Clinical Laboratory Technologists	23	20	15	15	32	9	39.1%
Dental Assistants	56	49	56	46	48	-8	-14.3%
Health Care Administrators	37	46	49	29	29	-8	-21.6%
License Practical Nurses	186	125	143	174	124	-62	-33.3%
Marriage and Family Therapists	22	18	37	29	34	12	54.5%
Medical Assistants	160	116	123	113	146	-14	-8.8%
Mental Health Counselors	41	35	32	26	34	-7	-17.1%
Nursing and Patient Care Aides and Assistants	47	20	0	0	0	-47	-100.0%
Occupational Therapists	0	29	35	39	38	38	N/A
Occupational Therapy Assistants	0	30	25	40	16	16	N/A
Pharmacy Technicians/Assistants	21	12	3	0	0	-21	-100.0%
Physical Therapists	38	41	38	40	18	-20	-52.6%
Physical Therapy Assistants	20	16	22	28	19	-1	-5.0%
Physician Assistants	89	87	107	102	107	18	20.2%
Radiation Therapists and Technologists	10	11	10	14	11	1	10.0%
Recreational Therapists	33	37	38	30	26	-7	-21.2%
Registered Nurses	603	453	529	578	538	-65	-10.8%
Registered Nurses with Advanced Education ^b	55	67	87	55	104	49	89.1%
Respiratory Therapists	8	10	11	9	15	7	87.5%
Social Workers	136	153	108	129	134	-2	-1.5%
Substance Abuse/Addiction Counseling	7	23	28	18	26	19	271.4%
Surgical Technology/Technologist	15	15	11	9	10	-5	-33.3%

^aAudiologists & speech-language pathologists include graduations in audiology, speech-language pathology, and communication sciences and disorders.

^bRegistered nurses with advanced education include graduations or certificates in adult health nursing, clinical nurse specialist, critical care nursing, family practice nursing, geriatric nursing, maternal and child health nursing, palliative care nursing, pediatric nursing, perioperative/OR nursing, public health nursing, women's health nursing, and nursing practice.

N/A, not applicable.

Source: Integrated Postsecondary Education Data System.

b. Licenses

Table 74. Number of Licensed Individuals in Selected Health Care Professions in Central New York, 2018–2022

Occupation	2018	2019	2020	2021	2022	Change Between 2018 and 2022	
						Number	Percent
Clinical Laboratory Technicians	101	97	100	102	106	5	5.0%
Clinical Laboratory Technologists	537	497	508	497	479	-58	-10.8%
Dental Assistants	252	236	232	226	228	-24	-9.5%
Dental Hygienists	553	551	555	544	543	-10	-1.8%
Dietitians/Nutritionists	214	214	214	218	220	6	2.8%
Licensed Practical Nurses	4,839	4,672	4,699	4,558	4,520	-319	-6.6%
Nurse Practitioners	1,267	1,322	1,434	1,525	1,552	285	22.5%
Occupational Therapists	448	461	481	506	524	76	17.0%
Occupational Therapy Assistants	113	123	142	154	156	43	38.1%
Pharmacists	822	844	834	862	881	59	7.2%
Physical Therapists	899	922	920	945	976	77	8.6%
Physical Therapist Assistants	297	314	314	320	327	30	10.1%
Physician Assistants	568	595	627	659	694	126	22.2%
Registered Nurses	12,428	12,581	12,788	13,175	13,235	807	6.5%
Respiratory Therapists	388	382	395	368	364	-24	-6.2%
Social Workers ^a	1,504	1,491	1,522	1,611	1,644	140	9.3%
Speech-Language Pathologists	576	593	602	611	622	46	8.0%

^aSocial workers include both master's Clinical Social Workers and master's Licensed Social Workers.

Source: New York State Education Department, Office of Professions.

c. Employment Projections

Table 75. Employment Projections for Selected Health Care Occupations for Central New York, by Largest Percentage Increase, 2018–2028

Occupational Title	2018	2028	Change Between 2018 and 2028		Average Annual Openings ^a
			Number	Percent	
Home Health and Personal Care Aides	8,030	12,470	4,440	55.3%	1,811
Physician Assistants	500	720	220	44.0%	56
Nurse Practitioners	640	910	270	42.2%	68
Physical Therapists	830	1,170	340	41.0%	75
Medical Assistants	760	1,070	310	40.8%	131
Speech-Language Pathologists	470	650	180	38.3%	48
Physical Therapist Assistants and Aides	380	520	140	36.8%	69
Nurse Anesthetists	90	120	30	33.3%	8
Respiratory Therapists	270	360	90	33.3%	26
Mental Health and Substance Abuse Social Workers	490	650	160	32.7%	72
Medical Secretaries and Administrative Assistants	460	610	150	32.6%	74
Healthcare Social Workers	400	530	130	32.5%	58
Phlebotomists	380	500	120	31.6%	59
Medical and Health Services Managers	820	1,070	250	30.5%	100
Magnetic Resonance Imaging Technologists	70	90	20	28.6%	6
Dental Assistants	1,060	1,350	290	27.4%	164
Dental Hygienists	870	1,100	230	26.4%	89
Occupational Therapists	420	530	110	26.2%	38
Emergency Medical Technicians and Paramedics	700	880	180	25.7%	71
Cardiovascular Technologists and Technicians	120	150	30	25.0%	11
Diagnostic Medical Sonographers	160	200	40	25.0%	14
Clinical Laboratory Technologists and Technicians	570	710	140	24.6%	54
Radiologic Technologists and Technicians	620	770	150	24.2%	53
Medical Records and Health Information Technicians	460	570	110	23.9%	43
Registered Nurses	7,380	9,130	1,750	23.7%	616
Licensed Practical and Licensed Vocational Nurses	3,350	4,130	780	23.3%	363
Psychiatric Aides	180	220	40	22.2%	27
Surgical Technologists	230	280	50	21.7%	26
Dietitians and Nutritionists	260	310	50	19.2%	23
Recreational Therapists	60	70	10	16.7%	4
Nursing Assistants	3,680	4,190	510	13.9%	493
Orderlies	100	110	10	10.0%	13
Pharmacy Technicians	580	610	30	5.2%	50
Medical Transcriptionists	110	110	0	0.0%	16
Pharmacists	640	630	-10	-1.6%	27
Pharmacy Aides	180	160	-20	-11.1%	19

^aAnnual openings reflect creation of new positions in the occupation and replacement for those retiring or otherwise leaving the occupation.
Source: NYS Department of Labor, Jobs in Demand/Projects, Long-Term Occupation Projections, 2018 - 2028.

B. Finger Lakes

The Finger Lakes region includes the counties of Genesee, Livingston, Monroe, Ontario, Orleans, Seneca, Wayne, Wyoming, and Yates.



KEY FINDINGS

Population and Health Care Indicators

- The Finger Lakes region had a slighter older population than the state as a whole.
- The rate of deaths due to all cancers was higher in the Finger Lakes region than the state rate.

Health Care Employment

- Overall, the number of health care jobs in the Finger Lakes region declined between 2017 and 2021.
- The number of health care jobs in hospitals in the Finger Lakes region increased between 2017 and 2021. In contrast, the number of health care jobs in ambulatory care, in nursing homes, and in home health care all declined during the same time period.

Employer Demand Survey

- Registered nurses and licensed practical nurses are among the most difficult to recruit and retain in all health care settings throughout the Finger Lakes region.
- Hospitals in the Finger Lakes region also reported that clinical laboratory technologists and surgical technicians are also among the most difficult to recruit and retain.
- Certified nurse aides/assistants, nurse directors/managers, and personal care aides are also reported by nursing homes and by assisted living facilities as among the most difficult to recruit and retain.
- Home health care agencies in the Finger Lakes region also indicated that home health aides, occupational therapy assistants, and physician therapy assistants are the most difficult to recruit. Homemakers and personal care aides were also among the most difficult to retain.

Health Care Production and Projected Workforce Need

- The number of licensed practical nurse graduations increased in the Finger Lakes between 2017 and 2021. The number of registered nurse graduations declined slightly during the same time period.
- There are nearly 3,300 projected average annual openings in the Finger Lakes for home health and personal care aides and almost 1,200 projected average annual openings for registered nurses.

1. Population and Health Care Indicators

Table 76. Selected Population Characteristics for the Finger Lakes, 2016-2020

Population Characteristics	Regional		Percent of State Population
	Number	Percent of Regional Population	
Total population	1,203,660	6.2%	N/A
Population under 100% FPL	149,469	12.9%	13.6%
Population under 200% FPL	331,100	28.6%	28.8%
Population aged birth to 17 years	246,880	20.5%	20.9%
Population aged 65 and older	215,926	17.9%	16.5%
Population female aged 15 to 44	225,901	18.8% ^b	20.0% ^b
Women aged 15 to 19 who had a birth in past 12 mos.	248	1.8% ^b	1.9% ^b
Women aged 20 to 34 who had a birth in past 12 mos.	10,216	75.7% ^b	65.9% ^b
Women aged 35 to 50 who had a birth in past 12 mos.	3,026	22.4% ^b	32.2% ^b
Black/African American, non-Hispanic	118,772	9.9%	14.0%
Hispanic/Latino	86,648	7.2%	19.1%
Asian/Pacific Islander, non-Hispanic	31,337	2.6%	8.5%
American Indian/Native Alaskan, non-Hispanic	2,193	0.2%	0.2%
Two or more/other races	32,615	2.7%	3.0%
Population with less than a high school education ^a	78,046	9.3%	12.8%
Population with a high school diploma or equivalent ^a	374,476	44.5%	40.9%
Population with an associate degree ^a	103,124	12.3%	8.9%
Population with a bachelor's degree ^a	158,274	18.8%	20.9%
Population with a master's degree or higher ^a	126,867	15.1%	16.5%
Home ownership	333,457	67.7%	54.1%

^aEducation levels and rates are based on individuals aged 25 years and older.

^bPercent of total births.

FPL, federal poverty level; N/A, not applicable; mos., months.

Source: US Census, American Community Survey, 5-Year Estimates, 2016-2020.

Table 77. Selected Health Indicators for the Finger Lakes

Health Indicator	Region		Statewide	
	Number	Rate	Number	Rate
Total deaths, per 100,000	34,687	959.4	468,772	798.8
Deaths due to heart disease, per 100,000	9,454	261.5	163,285	278.3
Deaths due to all cancers, per 100,000	7,678	212.4	103,089	175.5
Deaths due to diabetes, per 100,000	805	22.3	13,175	22.5
Total births, per 1,000 females aged 15 to 44	36,886	54.3	674,199	57.5
Teen births, per 1,000 females aged 15 to 19	1,476	12.5	20,879	11.9
Low-birthweight births, as a percent of total births	2,273	6.4	41,103	6.3
Late/no prenatal care, as a percent of total births	1,478	4.2	35,780	5.4
Infant deaths, per 1,000 live births	256	6.9	2,940	4.4
Total hospitalizations, per 10,000	411,392	1137.8	6,776,549	1154.8
Total asthma hospitalizations, per 10,000	2,354	6.5	57,786	9.8
Rate of asthma hospitalizations, aged 25-44 per 10,000	398	4.5	7,994	5.0
Rate of asthma hospitalizations, aged 45-64 per 10,000	576	5.8	13,566	8.8
Pediatric asthma hospitalization, per 10,000	1,018	13.7	24,839	20.3
Diabetes hospitalizations, per 10,000	7,533	20.8	125,599	21.4
CLRD hospitalizations, per 10,000	10,565	29.2	174,084	29.7
Heart disease hospitalizations, per 10,000	39,434	109.1	616,944	105.1
Total ED visits, per 10,000	1,453,210	4019.3	24,263,152	4134.7

CLRD, chronic lower respiratory disease; ED, emergency department.

Source: New York State Community Health Indicator Reports.

2. Health Care Sector Employment

Table 78. Number of Health Care Jobs in the Finger Lakes, by Setting, 2017–2021

Setting	2017	2018	2019	2020	2021	Change Between 2017 and 2021	
						Number	Percent
Hospitals	32,738	33,911	34,532	33,594	34,239	1,501	4.6%
Ambulatory care (excluding home health)	16,719	16,350	16,256	15,163	15,249	-1,470	-8.8%
Nursing home and residential care facilities	13,842	13,948	13,730	12,916	12,014	-1,828	-13.2%
Home health care	4,901	5,089	5,254	4,934	4,590	-311	-6.3%
Total	68,200	69,298	69,772	66,607	66,092	-2,108	-3.1%

Source: NYS Department of Labor, Quarterly Census of Employment and Wages.

3. Employment by Occupations

Table 79. Number of Jobs and Median Salary for Selected Health Care Occupations in the Finger Lakes, 2021

Occupational Title	Number of Jobs	Median Salary
Audiologists	50	\$80,760
Cardiovascular Technologists and Technicians	180	\$63,820
Clinical Laboratory Technologists and Technicians	910	\$65,550
Dental Assistants	1,060	\$40,920
Dental Hygienists	1,150	\$64,660
Diagnostic Medical Sonographers	360	\$78,090
Dietitians and Nutritionists	290	\$62,940
Emergency Medical Technicians	870	\$31,020
Healthcare Social Workers	1,390	\$51,320
Home Health & Personal Care Aides	15,960	\$31,190
Licensed Practical and Licensed Vocational Nurses	3,580	\$48,870
Magnetic Resonance Imaging Technologists	140	\$80,250
Medical Assistants	950	\$38,730
Medical Secretaries and Administrative Assistants	N/A	\$39,070
Medical Transcriptionists	70	\$40,390
Medical and Health Services Managers	1,120	\$122,590
Mental Health and Substance Abuse Social Workers	600	\$63,850
Nuclear Medicine Technologists	50	\$81,880
Nurse Anesthetists	90	\$214,070
Nurse Midwives	N/A	\$125,760
Nurse Practitioners	980	\$108,030
Nursing Assistants	5,610	\$32,390
Occupational Therapists	670	\$80,540
Occupational Therapy Assistants	100	\$61,250
Orderlies	220	\$32,390
Paramedics	450	\$48,880
Pharmacists	970	\$131,120
Pharmacy Aides	510	\$31,600
Pharmacy Technicians	1,200	\$37,920
Phlebotomists	400	\$40,120
Physical Therapist Assistants	240	\$56,570
Physical Therapists	960	\$80,540
Physician Assistants	1,090	\$111,430
Psychiatric Aides	160	\$51,290
Radiation Therapists	70	\$81,880
Radiologic Technologists and Technicians	780	\$63,480
Recreational Therapists	100	\$49,010
Registered Nurses	11,490	\$78,090
Respiratory Therapists	410	\$63,820
Speech-Language Pathologists	880	\$79,520
Surgical Technologists	340	\$48,580

N/A, not available.

Source: NYS Department of Labor, Employment Statistics, Occupational Wage and Employment Estimates (OES)

4. Employer Demand Survey

a. Hospitals

Table 80. Percent of Respondents Who Indicated Recruitment or Retention Difficulties at Finger Lakes and Western New York Hospitals

Occupations	Percent of Respondents Indicating Difficulty	
	Recruitment	Retention
Certified Nurse Aides/Nurse Aides/Nurse Assistants/Patient Care Techs	86%	100%
Clinical Laboratory Technicians	64%	57%
Clinical Laboratory Technologists	100%	93%
Environmental (janitorial, housekeeping) Service Aides	64%	86%
Food Services/Dietary	57%	79%
Licensed Mental Health Counselors	57%	57%
Licensed Practical Nurses	93%	86%
Management/Executive Staff	64%	50%
Nurse Practitioners (Behavioral Health)	43%	43%
Nurse Practitioners (All other)	64%	79%
Pharmacists	50%	50%
Physician Assistants	71%	71%
Psychiatrists	50%	57%
Respiratory Therapists	100%	93%
Registered Nurses	100%	100%
Licensed Clinical Social Workers	64%	57%
Licensed Master's Social Workers	71%	50%
Surgical Technicians	93%	86%

Table 81. Reasons for Recruitment Difficulties at Finger Lakes and Western New York Hospitals

Occupations	Reasons For Recruiting Difficulties						
	Candidates Applying Not Qualified	General Shortage of Workers	Location/ Transportation Issues	Non-Competitive Salaries	Non-Competitive Benefits	Potential Employees Not Following Up/Skipping Appointments (ghosting)	Unknown
Certified Nurse Aides/Nurse Aides/Nurse Assistants/Patient Care Techs	0%	93%	36%	14%	14%	36%	0%
Clinical Laboratory Technicians	7%	64%	0%	14%	7%	0%	21%
Clinical Laboratory Technologists	7%	100%	21%	29%	14%	0%	0%
Environmental (janitorial, housekeeping) Service Aides	0%	79%	29%	36%	14%	50%	0%
Food Services/Dietary	0%	86%	29%	43%	14%	36%	7%
Licensed Mental Health Counselors	21%	57%	14%	29%	21%	0%	21%
Licensed Practical Nurses	14%	86%	21%	43%	21%	29%	0%
Management/Executive Staff	36%	57%	14%	21%	14%	7%	21%
Nurse Practitioners (Behavioral Health)	7%	57%	0%	14%	7%	0%	29%
Nurse Practitioners (All other)	7%	64%	0%	29%	14%	0%	21%
Pharmacists	0%	57%	0%	21%	14%	0%	36%
Physician Assistants	0%	71%	0%	29%	14%	0%	21%
Psychiatrists	0%	57%	14%	21%	7%	14%	36%
Respiratory Therapists	0%	100%	7%	29%	14%	14%	0%
Registered Nurses	0%	100%	29%	43%	29%	21%	0%
Licensed Clinical Social Workers	0%	64%	0%	29%	21%	0%	14%
Licensed Master's Social Workers	0%	64%	0%	29%	14%	0%	14%
Surgical Technicians	7%	100%	0%	29%	21%	21%	0%

Table 82. Reasons for Retention Difficulties at Finger Lakes and Western New York Hospitals

Occupations	Reasons for Retention Difficulties						
	Career Change	Left for Better Benefits	Left for Better Salary	Left for Family Commitments	Left for Better Work-Life Balance	Retirement	Unknown
Certified Nurse Aides/Nurse Aides/Nurse Assistants/Patient Care Techs	43%	7%	71%	29%	43%	29%	14%
Clinical Laboratory Technicians	0%	14%	43%	0%	7%	0%	43%
Clinical Laboratory Technologists	7%	14%	71%	29%	36%	14%	14%
Environmental (janitorial, housekeeping) Service Aides	29%	14%	71%	36%	43%	14%	14%
Food Services/Dietary	29%	14%	86%	29%	36%	21%	14%
Licensed Mental Health Counselors	0%	7%	57%	0%	21%	0%	36%
Licensed Practical Nurses	14%	14%	79%	21%	71%	21%	21%
Management/Executive Staff	29%	14%	71%	0%	50%	21%	14%
Nurse Practitioners (Behavioral Health)	0%	7%	43%	0%	43%	0%	50%
Nurse Practitioners (All other)	7%	14%	57%	21%	64%	21%	21%
Pharmacists	0%	14%	50%	7%	50%	7%	43%
Physician Assistants	0%	14%	57%	21%	64%	14%	21%
Psychiatrists	0%	21%	57%	0%	57%	0%	36%
Respiratory Therapists	7%	14%	71%	21%	79%	14%	14%
Registered Nurses	36%	21%	79%	43%	86%	36%	14%
Licensed Clinical Social Workers	14%	14%	57%	14%	64%	7%	21%
Licensed Master's Social Workers	0%	21%	50%	0%	43%	0%	36%
Surgical Technicians	0%	14%	50%	14%	79%	7%	21%

b. Nursing Homes and Assisted Living Facilities**Table 83.** Percent of Respondents Who Indicated Recruitment or Retention Difficulties at Finger Lakes Nursing Homes and Assisted Living Facilities

Occupation	Percent of Respondents Indicating Difficulty	
	Recruiting	Retaining
Certified Nurse Aides/Assistants	82.6%	87.0%
Dietitians/Nutritionists	24.0%	17.4%
Home Health Aides	61.5%	61.5%
Infection Preventionist Practitioners	54.5%	45.5%
Licensed Clinical Social Workers (LCSWs)	33.3%	14.3%
Licensed Master Social Workers (LMSWs)	20.0%	16.7%
Licensed Practical Nurse (LPNs)	86.8%	52.6%
MDS Coordinators	69.2%	40.0%
Nurse Directors/Managers	75.9%	41.9%
Nurse Educators	50.0%	42.9%
Occupational Therapists	26.7%	29.4%
Occupational Therapy Assistants	38.5%	26.7%
Paid Feeding Assistants	33.3%	66.7%
Personal Care Aides	71.4%	47.6%
Physical Therapists	25.0%	26.3%
Physical Therapy Assistants	30.8%	30.8%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	92.9%	60.0%
Registered Nurses Experienced (3+ years of clinical experience)	90.0%	70.0%
Respiratory Therapists	25.0%	50.0%
Speech-Language Pathologists	28.6%	28.6%
Temporary Nurse Aide/CNA Trainees	64.3%	92.9%

Table 84. Non-COVID-19 Related Reasons for Recruitment Difficulties at Finger Lakes Nursing Homes and Assisted Living Facilities

Occupation	Non-COVID-19 Related Reasons for Recruitment Difficulties			
	Shortage of Applicants	Shortage of Applicants Meeting Minimum Job Qualifications	Non-Competitive Salary	Non-Competitive Benefits
Certified Nurse Aides/Assistants	89%	47%	37%	5%
Dietitians/Nutritionists	83%	17%	17%	0%
Home Health Aides	75%	75%	25%	0%
Infection Preventionist Practitioners	83%	33%	33%	17%
Licensed Clinical Social Workers (LCSWs)	50%	50%	0%	0%
Licensed Master Social Workers (LMSWs)	100%	0%	0%	0%
Licensed Practical Nurse (LPNs)	85%	30%	24%	3%
MDS Coordinators	89%	33%	22%	0%
Nurse Directors/Managers	91%	27%	32%	5%
Nurse Educators	83%	33%	17%	0%
Occupational Therapists	75%	25%	0%	0%
Occupational Therapy Assistants	80%	20%	0%	0%
Paid Feeding Assistants	100%	100%	0%	0%
Personal Care Aides	100%	53%	27%	0%
Physical Therapists	100%	0%	0%	0%
Physical Therapy Assistants	100%	0%	0%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	85%	15%	23%	0%
Registered Nurses Experienced (3+ years of clinical experience)	81%	15%	30%	4%
Respiratory Therapists	100%	0%	0%	0%
Speech-Language Pathologists	50%	25%	0%	0%
Temporary Nurse Aide/CNA Trainees	100%	44%	33%	11%

Table 85. COVID-19 Related Reasons for Recruitment Difficulties at Finger Lakes Nursing Homes and Assisted Living Facilities

Occupation	COVID-19 Related Reasons for Recruitment Difficulties				
	Family Care Giving Commitments Prevented Availability	Lack of Online Training Certification	Vaccine or Booster Refusal	Fear of COVID-19 Exposure	COVID-19 Testing of Staff and Required Quarantine if a Positive Result Reduced Available Staff
Certified Nurse Aides/Assistants	37%	16%	74%	42%	37%
Dietitians/Nutritionists	0%	0%	50%	17%	17%
Home Health Aides	63%	25%	50%	25%	38%
Infection Preventionist Practitioners	17%	17%	33%	17%	17%
Licensed Clinical Social Workers (LCSWs)	0%	0%	5%	0%	0%
Licensed Master Social Workers (LMSWs)	50%	0%	0%	50%	0%
Licensed Practical Nurse (LPNs)	24%	9%	45%	21%	24%
MDS Coordinators	33%	11%	33%	22%	11%
Nurse Directors/Managers	23%	5%	45%	14%	14%
Nurse Educators	0%	0%	50%	17%	17%
Occupational Therapists	25%	0%	25%	50%	25%
Occupational Therapy Assistants	0%	0%	20%	40%	20%
Paid Feeding Assistants	0%	100%	100%	0%	0%
Personal Care Aides	20%	13%	47%	33%	27%
Physical Therapists	0%	0%	0%	50%	25%
Physical Therapy Assistants	0%	0%	0%	50%	25%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	15%	0%	46%	15%	23%
Registered Nurses Experienced (3+ years of clinical experience)	19%	4%	30%	15%	19%
Respiratory Therapists	100%	0%	100%	0%	0%
Speech-Language Pathologists	25%	0%	50%	25%	0%
Temporary Nurse Aide/CNA Trainees	33%	11%	67%	33%	22%

Table 86. Non-COVID-19 Related Reasons for Retention Difficulties at Finger Lakes Nursing Homes and Assisted Living Facilities

Occupation	Non-COVID-19 Related Reasons for Retention Difficulties				
	Staff Found Higher Pay and Benefits Elsewhere	Staff Left for Other Employment Sectors	Paperwork and Regulatory Burdens	Retirement	Scheduling Challenges
Certified Nurse Aides/Assistants	75%	60%	20%	10%	35%
Dietitians/Nutritionists	75%	25%	0%	0%	25%
Home Health Aides	50%	50%	25%	0%	63%
Infection Preventionist Practitioners	60%	20%	20%	0%	0%
Licensed Clinical Social Workers (LCSWs)	100%	100%	0%	0%	0%
Licensed Master Social Workers (LMSWs)	100%	50%	0%	0%	0%
Licensed Practical Nurse (LPNs)	75%	40%	20%	10%	35%
MDS Coordinators	67%	33%	33%	17%	17%
Nurse Directors/Managers	77%	31%	38%	8%	31%
Nurse Educators	67%	50%	33%	17%	17%
Occupational Therapists	60%	60%	0%	0%	20%
Occupational Therapy Assistants	75%	50%	0%	0%	25%
Paid Feeding Assistants	50%	50%	0%	0%	50%
Personal Care Aides	80%	60%	30%	10%	50%
Physical Therapists	60%	60%	0%	0%	20%
Physical Therapy Assistants	75%	50%	0%	0%	25%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	89%	44%	11%	22%	11%
Registered Nurses Experienced (3+ years of clinical experience)	76%	29%	29%	19%	29%
Respiratory Therapists	50%	50%	0%	0%	0%
Speech-Language Pathologists	100%	25%	0%	0%	25%
Temporary Nurse Aide/CNA Trainees	85%	69%	15%	0%	31%

Table 87. COVID-19 Related Reasons for Retention Difficulties at Insert Region Nursing Homes and Assisted Living Facilities

Occupation	COVID-19 Related Reasons for Retention Difficulties			
	Fear of COVID-19 Exposure	Family Care Giving Commitments	Conversion to Another Position	Vaccine or Booster Refusal
Certified Nurse Aides/Assistants	40%	45%	25%	60%
Dietitians/Nutritionists	25%	0%	50%	50%
Home Health Aides	25%	50%	25%	50%
Infection Preventionist Practitioners	20%	0%	20%	40%
Licensed Clinical Social Workers (LCSWs)	0%	0%	0%	0%
Licensed Master Social Workers (LMSWs)	0%	50%	50%	0%
Licensed Practical Nurse (LPNs)	25%	35%	25%	40%
MDS Coordinators	17%	0%	33%	50%
Nurse Directors/Managers	15%	15%	31%	38%
Nurse Educators	17%	0%	33%	50%
Occupational Therapists	20%	0%	40%	40%
Occupational Therapy Assistants	25%	0%	50%	25%
Paid Feeding Assistants	0%	0%	0%	50%
Personal Care Aides	30%	40%	30%	70%
Physical Therapists	20%	0%	40%	40%
Physical Therapy Assistants	25%	0%	50%	25%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	22%	0%	44%	44%
Registered Nurses Experienced (3+ years of clinical experience)	10%	19%	33%	24%
Respiratory Therapists	0%	0%	0%	50%
Speech-Language Pathologists	25%	0%	50%	25%
Temporary Nurse Aide/CNA Trainees	15%	31%	23%	16%

c. Home Health Care**Table 88.** Percent of Respondents Who Indicated Recruitment or Retention Difficulties at Finger Lakes Home Health Care Agencies

Occupation	Percent of Respondents Indicating Difficulty	
	Recruiting	Retaining
COVID-19 Compliance Officer	20%	0%
Home Health Aides	100%	100%
Homemaker	72%	82%
Intake Coordinator	25%	17%
Licensed Clinical Social Workers (LCSWs)	67%	33%
Licensed Master Social Workers (LMSWs)	33%	33%
Licensed Practical Nurse (LPNs)	67%	70%
Occupational Therapists	67%	0%
Occupational Therapy Assistants	100%	0%
Personal Care Aides	93%	93%
Physical Therapists	67%	50%
Physical Therapy Assistants	100%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	90%	56%
Registered Nurses Experienced (3+ years of clinical experience)	74%	59%
Respiratory Therapists	0%	0%
Speech-Language Pathologists	50%	0%

Table 89. Non-COVID-19 Related Reasons for Recruitment Difficulties at Finger Lakes Home Health Care Agencies

Occupation	Non-COVID-19 Related Reasons for Recruitment Difficulties			
	Shortage of Applicants	Shortage of Applicants Meeting Minimum Job Qualifications	Non-Competitive Salary	Non-Competitive Benefits
COVID-19 Compliance Officer	0%	100%	0%	0%
Home Health Aides	86%	43%	50%	21%
Homemaker	88%	38%	50%	25%
Intake Coordinator	67%	67%	0%	0%
Licensed Clinical Social Workers (LCSWs)	50%	100%	50%	0%
Licensed Master Social Workers (LMSWs)	100%	0%	0%	0%
Licensed Practical Nurse (LPNs)	75%	50%	63%	38%
Occupational Therapists	50%	50%	50%	50%
Occupational Therapy Assistants	100%	100%	100%	100%
Personal Care Aides	93%	43%	50%	21%
Physical Therapists	50%	50%	50%	50%
Physical Therapy Assistants	100%	100%	100%	100%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	67%	44%	56%	22%
Registered Nurses Experienced (3+ years of clinical experience)	88%	41%	41%	24%
Respiratory Therapists	0%	0%	0%	0%
Speech-Language Pathologists	0%	0%	0%	0%

Table 90. Additional Reasons for Recruitment Difficulties at Finger Lakes Home Health Care Agencies

Occupation	COVID-19 Related Reasons for Recruitment Difficulties			
	Family Care Giving Commitments Prevented Availability	Lack of Scheduling Flexibility for the Applicant	Vaccine or Booster Refusal	Fear of COVID-19 Exposure
COVID-19 Compliance Officer	50%	50%	0%	0%
Home Health Aides	36%	29%	79%	14%
Homemaker	25%	38%	75%	13%
Intake Coordinator	33%	0%	33%	0%
Licensed Clinical Social Workers (LCSWs)	0%	50%	0%	0%
Licensed Master Social Workers (LMSWs)	0%	0%	0%	100%
Licensed Practical Nurse (LPNs)	38%	50%	88%	13%
Occupational Therapists	0%	0%	50%	0%
Occupational Therapy Assistants	0%	0%	100%	0%
Personal Care Aides	36%	36%	79%	21%
Physical Therapists	0%	0%	50%	0%
Physical Therapy Assistants	0%	0%	100%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	33%	44%	67%	22%
Registered Nurses Experienced (3+ years of clinical experience)	24%	29%	53%	6%
Respiratory Therapists	0%	0%	0%	0%
Speech-Language Pathologists	0%	0%	0%	0%

Table 91. Non-COVID-19 Related Reasons for Retention Difficulties at Finger Lakes Home Health Care Agencies

Occupation	Non-COVID-19 Related Reasons for Retention Difficulties				
	Staff Found Higher Pay and Benefits Elsewhere	Staff Left for Other Employment Sectors	Paperwork and Regulatory Burdens	Retirement	Scheduling Challenges
COVID-19 Compliance Officer	0%	0%	0%	0%	0%
Home Health Aides	65%	50%	29%	0%	64%
Homemaker	67%	44%	22%	0%	67%
Intake Coordinator	0%	50%	0%	0%	50%
Licensed Clinical Social Workers (LCSWs)	100%	0%	0%	0%	0%
Licensed Master Social Workers (LMSWs)	0%	0%	0%	0%	100%
Licensed Practical Nurse (LPNs)	86%	43%	14%	14%	29%
Occupational Therapists	0%	0%	0%	0%	0%
Occupational Therapy Assistants	0%	0%	0%	0%	0%
Personal Care Aides	71%	50%	21%	0%	64%
Physical Therapists	0%	0%	0%	0%	100%
Physical Therapy Assistants	0%	0%	0%	0%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	80%	40%	20%	20%	0%
Registered Nurses Experienced (3+ years of clinical experience)	62%	31%	31%	8%	8%
Respiratory Therapists	0%	0%	0%	0%	0%
Speech-Language Pathologists	0%	0%	0%	0%	0%

Table 92. Additional Reasons for Retention Difficulties at Finger Lakes Home Health Care Agencies

Occupation	COVID-19 Related Reasons for Retention Difficulties				Termination Due to Unsatisfactory Performance
	Scheduling Challenges	Family Care Giving Commitments	Too Few Available Hours for a Full Time Position	Vaccine or Booster Refusal	
COVID-19 Compliance Officer	0%	0%	0%	0%	0%
Home Health Aides	50%	36%	21%	57%	36%
Homemaker	67%	22%	33%	33%	22%
Intake Coordinator	50%	50%	0%	50%	0%
Licensed Clinical Social Workers (LCSWs)	0%	0%	0%	0%	0%
Licensed Master Social Workers (LMSWs)	100%	100%	0%	100%	0%
Licensed Practical Nurse (LPNs)	57%	29%	0%	57%	14%
Occupational Therapists	0%	0%	0%	0%	0%
Occupational Therapy Assistants	0%	0%	0%	0%	0%
Personal Care Aides	64%	36%	21%	64%	43%
Physical Therapists	0%	0%	0%	100%	0%
Physical Therapy Assistants	0%	0%	0%	0%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	20%	0%	20%	60%	0%
Registered Nurses Experienced (3+ years of clinical experience)	15%	8%	15%	38%	15%
Respiratory Therapists	0%	0%	0%	0%	0%
Speech-Language Pathologists	0%	0%	0%	0%	0%

5. Health Workforce Production and Projected Need

a. Graduations

Table 93. The Number of Graduations for Selected Health Care Occupations in the Finger Lakes, 2017-2021

Occupational Program	School Year					Change Between 2017 and 2021	
	2017	2018	2019	2020	2021	Number	Percent
Audiologists & Speech Language Pathologists ^a	66	64	67	69	75	9	13.6%
Clinical Laboratory Technicians	17	12	9	7	9	-8	-47.1%
Clinical Laboratory Technologists	10	12	20	29	23	13	130.0%
Clinical Nutritionists	64	68	66	78	72	8	12.5%
Creative Arts Therapists ^b	38	35	18	34	29	-9	-23.7%
Dental Assistants	71	67	66	62	54	-17	-23.9%
Dental Hygienists	31	29	26	28	29	-2	-6.5%
Electrocardiograph Technologists and Technicians	5	12	10	12	22	17	340.0%
EMTs and Paramedics	42	47	31	37	18	-24	-57.1%
Health Care Administrators	78	74	82	89	78	0	0.0%
License Practical Nurses	270	269	213	277	379	109	40.4%
Marriage and Family Therapists	13	9	14	9	10	-3	-23.1%
Medical Assistants	67	68	46	35	28	-39	-58.2%
Mental Health Counselors	40	63	46	54	51	11	27.5%
Nursing and Patient Care Aides and Assistants	12	10	8	0	0	-12	-100.0%
Occupational Therapists	82	92	89	90	99	17	20.7%
Occupational Therapy Assistants	0	7	19	13	11	11	N/A
Pharmacists	82	80	82	79	76	-6	-7.3%
Phlebotomists	60	48	31	30	112	52	86.7%
Physical Therapists	54	55	47	53	54	0	0.0%
Physical Therapy Assistants	28	18	25	29	22	-6	-21.4%
Physician Assistants	60	58	68	72	14	-46	-76.7%
Radiation Therapists	27	25	33	28	25	-2	-7.4%
Recreational Therapists and Technologists	9	7	8	2	0	-9	-100.0%
Registered Nurses	1,217	1,269	1,198	1,207	1,212	-5	-0.4%
Registered Nurses with Advanced Education ^c	83	70	155	121	180	97	116.9%
Respiratory Therapy Assistants	19	24	19	19	16	-3	-15.8%
Social Workers	391	355	450	430	380	-11	-2.8%
Substance Abuse/Addiction Counseling	44	32	40	35	47	3	6.8%
Surgical Technology/Technologist	4	18	24	28	16	12	300.0%

^a Audiologists & speech-language pathologists include graduations in audiology, speech-language pathology, and communication sciences and disorders.

^b Creative arts therapists include graduations in art therapy, dance therapy, and music therapy.

^c Registered nurses with advanced education include graduations or certificates in adult health nursing, clinical nurse specialist, critical care nursing, family practice nursing, geriatric nursing, maternal and child health nursing, palliative care nursing, pediatric nursing, perioperative/OR nursing, public health nursing, women's health nursing, and nursing practice.

N/A, not applicable.

Source: Integrated Postsecondary Education Data System.

b. Licenses**Table 94.** Number of Licensed Individuals in Selected Health Care Professions in the Finger Lakes, 2018-2022

Occupation	2018	2019	2020	2021	2022	Change Between 2018 and 2022	
						Number	Percent
Clinical Laboratory Technicians	102	107	114	122	121	19	18.6%
Clinical Laboratory Technologists	910	814	824	830	815	-95	-10.4%
Dental Assistants	283	292	308	312	315	32	11.3%
Dental Hygienists	1,082	1,084	1,065	1,068	1,071	-11	-1.0%
Dietitians/Nutritionists	284	286	284	319	303	19	6.7%
Licensed Practical Nurses	6,367	6,242	6,443	6,482	6,491	124	1.9%
Nurse Practitioners	1,773	1,871	2,072	2,238	2,322	549	31.0%
Occupational Therapists	796	827	852	877	906	110	13.8%
Occupational Therapy Assistants	183	195	204	210	220	37	20.2%
Pharmacists	1,260	1,289	1,336	1,394	1,439	179	14.2%
Physical Therapists	1,231	1,286	1,347	1,421	1,477	246	20.0%
Physical Therapist Assistants	381	389	393	401	408	27	7.1%
Physician Assistants	934	997	1,065	1,128	1,186	252	27.0%
Registered Nurses	18,317	18,565	18,932	19,563	19,702	1,385	7.6%
Respiratory Therapists	374	384	401	400	407	33	8.8%
Social Workers ^a	2,515	2,569	2,670	2,760	2,846	331	13.2%
Speech-Language Pathologists	1,143	1,164	1,168	1,176	1,186	43	3.8%

^aSocial workers include both master's Clinical Social Workers and master's Licensed Social Workers.

Source: New York State Education Department, Office of Professions.

c. Employment Projections

Table 95. Employment Projections for Selected Health Care Occupations for the Finger Lakes, by Largest Percentage Increase, 2018–2028

Occupational Title	2018	2028	Change Between 2018 and 2028		Average Annual Openings ^a
			Number	Percent	
Home Health and Personal Care Aides	15,060	23,210	8,150	54.1%	3,276
Occupational Therapy Assistants and Aides	100	140	40	40.0%	16
Physical Therapists	1,200	1,670	470	39.2%	106
Speech-Language Pathologists	900	1,250	350	38.9%	92
Physician Assistants	930	1,290	360	38.7%	100
Nurse Practitioners	1,280	1,760	480	37.5%	129
Physical Therapist Assistants and Aides	300	410	110	36.7%	56
Phlebotomists	720	980	260	36.1%	115
Medical Assistants	730	980	250	34.2%	119
Respiratory Therapists	500	660	160	32.0%	46
Diagnostic Medical Sonographers	470	620	150	31.9%	45
Dental Hygienists	1,160	1,530	370	31.9%	127
Mental Health and Substance Abuse Social	890	1,170	280	31.5%	128
Dental Assistants	1,380	1,810	430	31.2%	221
Healthcare Social Workers	910	1,190	280	30.8%	130
Emergency Medical Technicians and Paramedics	1,510	1,970	460	30.5%	161
Medical Secretaries and Administrative Assistants	720	930	210	29.2%	114
Cardiovascular Technologists and Technicians	150	190	40	26.7%	13
Medical Records and Health Information	640	800	160	25.0%	61
Occupational Therapists	760	950	190	25.0%	67
Medical and Health Services Managers	1,440	1,790	350	24.3%	162
Registered Nurses	14,080	17,430	3,350	23.8%	1,176
Magnetic Resonance Imaging Technologists	130	160	30	23.1%	10
Nurse Anesthetists	130	160	30	23.1%	11
Nuclear Medicine Technologists	90	110	20	22.2%	7
Surgical Technologists	360	440	80	22.2%	41
Clinical Laboratory Technologists and Technicians	2,170	2,650	480	22.1%	199
Audiologists	140	170	30	21.4%	10
Radiologic Technologists and Technicians	990	1,200	210	21.2%	81
Psychiatric Technicians	190	230	40	21.1%	20
Radiation Therapists	150	180	30	20.0%	11
Psychiatric Aides	160	190	30	18.8%	23
Orderlies	270	320	50	18.5%	39
Dietetic Technicians	110	130	20	18.2%	11
Dietitians and Nutritionists	370	430	60	16.2%	31
Licensed Practical and Licensed Vocational Nurses	4,530	5,230	700	15.5%	442
Recreational Therapists	150	170	20	13.3%	10
Nursing Assistants	6,940	7,830	890	12.8%	917
Pharmacy Technicians	1,200	1,300	100	8.3%	111
Pharmacists	1,000	1,000	0	0.0%	45
Medical Transcriptionists	210	190	-20	-9.5%	26
Pharmacy Aides	80	70	-10	-12.5%	9

^aAnnual openings reflect creation of new positions in the occupation and replacement for those retiring or otherwise leaving the occupation.

Source: NYS Department of Labor, Jobs in Demand/Projects, Long-Term Occupation Projections, 2018-2028

C. Hudson Valley

The Hudson Valley region includes the counties of Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster, and Westchester.



KEY FINDINGS

Population and Health Care Indicators

- The Hudson Valley region had less poverty and had a higher percent of its population with a bachelor's degree or master's degree or higher, than the state as a whole.

Health Care Employment

- Overall, the number of health care jobs in the Hudson Valley region remained stable between 2017 and 2021.
- The number of health care jobs in home health care in the Hudson Valley region increased between 2017 and 2021. In contrast, the number of health care jobs in hospitals and in nursing homes declined during the same time period.

Employer Demand Survey

- Registered nurses and licensed practical nurses are among the most difficult to recruit and retain in all health care settings throughout the Hudson Valley region.
- Hospitals in the Hudson Valley region also reported that clinical laboratory technologists, nurse practitioners, pharmacists, physician assistants, social workers, and surgical technicians are also among the most difficult to recruit and retain.
- Certified nurse aides/assistants, nurse directors/managers, home health aides, and personal care aides are also reported by nursing homes and by assisted living facilities as among the most difficult to recruit and retain.
- Home health care agencies in the Hudson Valley region also indicated that home health aides, personal care aides, and speech-language pathologists are the most difficult to recruit and retain.

Health Care Production and Projected Workforce Need

- The number of registered nurse graduations increased in the Hudson Valley region between 2017 and 2021. In contrast, the number of licensed practical nurse graduations decreased during the same time period. The number of mental health counselor graduations also decreased between 2017 and 2021.
- There are more than 6,700 projected average annual openings in the Hudson Valley region for home health and personal care aides, over 1,900 projected average annual openings for registered nurses, and more than 1,500 projected average annual openings for nursing assistants.

1. Population and Health Care Indicators

Table 96. Selected Population Characteristics for the Hudson Valley, 2016-2020

Population Characteristics	Regional		Percent of State Population
	Number	Percent of Regional Population	
Total population	2,321,966	11.9%	N/A
Population under 100% FPL	231,103	10.2%	13.6%
Population under 200% FPL	507,326	22.5%	28.8%
Population aged birth to 17 years	524,832	22.6%	20.9%
Population aged 65 and older	388,835	16.7%	16.5%
Population female aged 15 to 44	423,715	18.2%	20.0%
Women aged 15 to 19 who had a birth in past 12 mos.	470	1.7% ^b	1.9% ^b
Women aged 20 to 34 who had a birth in past 12 mos.	16,812	62.3% ^b	65.9% ^b
Women aged 35 to 50 who had a birth in past 12 mos.	9,689	35.9% ^b	32.2% ^b
Black/African American, non-Hispanic	252,348	10.9%	14.0%
Hispanic/Latino	463,200	19.9%	19.1%
Asian/Pacific Islander, non-Hispanic	105,697	4.6%	8.5%
American Indian/Native Alaskan, non-Hispanic	3,313	0.1%	0.2%
Two or more/other races	66,740	2.9%	3.0%
Population with less than a high school education ^a	166,343	10.5%	12.8%
Population with a high school diploma or equivalent ^a	624,888	39.5%	40.9%
Population with an associate degree ^a	133,260	8.4%	8.9%
Population with a bachelor's degree ^a	341,859	21.6%	20.9%
Population with a master's degree or higher ^a	313,812	19.9%	16.5%
Home ownership	546,060	65.9%	54.1%

^aEducation levels and rates are based on individuals aged 25 years and older.

^bPercent of total births.

FPL, federal poverty level; N/A, not applicable; mos., months.

Source: US Census, American Community Survey, 5-Year Estimates, 2016-2020.

Table 97. Selected Health Indicators for the Hudson Valley

Health Indicator	Region		Statewide	
	Number	Rate	Number	Rate
Total deaths, per 100,000	54,291	779.2	468,772	798.8
Deaths due to heart disease, per 100,000	17,766	255.0	163,285	278.3
Deaths due to all cancers, per 100,000	11,310	162.5	103,089	175.5
Deaths due to diabetes, per 100,000	1,194	17.1	13,175	22.5
Total births, per 1,000 females aged 15 to 44	80,053	63.0	674,199	57.5
Teen births, per 1,000 females aged 15 to 19	2,116	9.1	20,879	11.9
Low-birthweight births, as a percent of total births	4,194	5.4	41,103	6.3
Late/no prenatal care, as a percent of total births	3,263	4.2	35,780	5.4
Infant deaths, per 1,000 live births	286	3.6	2,940	4.4
Total hospitalizations, per 10,000	766,470	1100.0	6,776,549	1154.8
Total asthma hospitalizations, per 10,000	5,314	7.6	57,786	9.8
Rate of asthma hospitalizations, aged 25-44 per 10,000	800	4.9	7,994	5.0
Rate of asthma hospitalizations, aged 45-64 per 10,000	1,285	6.6	13,566	8.8
Pediatric asthma hospitalization, per 10,000	2,279	14.5	24,839	20.3
Diabetes hospitalizations, per 10,000	11,304	16.2	125,599	21.4
CLRD hospitalizations, per 10,000	18,961	27.2	174,084	29.7
Heart disease hospitalizations, per 10,000	66,525	95.5	616,944	105.1
Total ED visits, per 10,000	2,444,537	3508.4	24,263,152	4134.7

CLRD, chronic lower respiratory disease; ED, emergency department.

Source: New York State Community Health Indicator Reports.

2. Health Care Sector Employment

Table 98. Number of Health Care Jobs in the Hudson, by Setting, 2017–2021

Setting	2017	2018	2019	2020	2021	Change Between 2017 and 2021	
						Number	Percent
Hospitals	42,007	42,156	42,400	41,898	40,720	-1,287	-3.1%
Ambulatory care (excluding home health)	46,360	47,357	47,262	43,721	46,698	338	0.7%
Nursing home and residential care facilities	20,310	20,405	20,665	19,363	17,961	-2,349	-11.6%
Home health	12,055	11,804	13,095	15,135	15,323	3,268	27.1%
Total	120,732	121,722	123,422	120,117	120,702	-30	0.0%

Source: NYS Department of Labor, Quarterly Census of Employment and Wages.

3. Employment by Occupations

Table 99. Number of Jobs and Median Salary for Selected Health Care Occupations in the Hudson Valley, 2021

Occupational Title	Number of Jobs	Median Salary
Audiologists	N/A	\$96,050
Cardiovascular Technologists and Technicians	320	\$81,360
Clinical Laboratory Technologists and Technicians	1,440	\$81,210
Dental Assistants	2,640	\$50,110
Dental Hygienists	1,120	\$101,500
Diagnostic Medical Sonographers	760	\$85,080
Dietitians and Nutritionists	570	\$79,750
Emergency Medical Technicians	1,540	\$37,660
Healthcare Social Workers	2,180	\$62,550
Home Health & Personal Care Aides	38,750	\$32,390
Licensed Practical and Licensed Vocational Nurses	4,700	\$61,550
Magnetic Resonance Imaging Technologists	260	\$98,620
Medical Assistants	3,940	\$40,480
Medical Secretaries and Administrative Assistants	N/A	\$39,450
Medical Transcriptionists	990	\$30,970
Medical and Health Services Managers	2,640	\$132,030
Mental Health and Substance Abuse Social Workers	1,340	\$79,490
Nuclear Medicine Technologists	110	\$103,740
Nurse Practitioners	1,580	\$134,290
Nursing Assistants	8,660	\$41,310
Occupational Therapists	1,110	\$97,500
Occupational Therapy Assistants	330	\$66,420
Orderlies	290	\$39,860
Paramedics	740	\$58,220
Pharmacists	1,890	\$133,600
Pharmacy Aides	250	\$31,970
Pharmacy Technicians	1,900	\$38,110
Phlebotomists	830	\$49,280
Physical Therapist Aides	440	\$34,960
Physical Therapist Assistants	470	\$65,660
Physical Therapists	2,020	\$101,670
Physician Assistants	960	\$133,240
Psychiatric Aides	880	\$51,290
Psychiatric Technicians	330	\$48,120
Radiation Therapists	140	\$134,460
Radiologic Technologists and Technicians	1,450	\$81,180
Recreational Therapists	220	\$56,790
Registered Nurses	18,150	\$102,580
Respiratory Therapists	750	\$81,360
Speech-Language Pathologists	1,760	\$102,980
Surgical Technologists	530	\$62,390

N/A, not available.

Source: NYS Department of Labor, Employment Statistics, Occupational Wage and Employment Estimates (OES)

4. Employer Demand Survey

a. Hospitals

Table 100. Percent of Respondents Who Indicated Recruitment or Retention Difficulties at Hudson Valley Hospitals

Occupations	Percent of Respondents Indicating Difficulty	
	Recruitment	Retention
Certified Nurse Aides/Nurse Aides/Nurse Assistants/Patient Care Techs	72%	67%
Clinical Laboratory Technicians	69%	69%
Clinical Laboratory Technologists	100%	88%
Environmental (janitorial, housekeeping) Service Aides	53%	35%
Food Services/Dietary	61%	61%
Licensed Mental Health Counselors	93%	86%
Licensed Practical Nurses	100%	47%
Management/Executive Staff	78%	56%
Nurse Practitioners (Behavioral Health)	100%	100%
Nurse Practitioners (All other)	88%	69%
Pharmacists	89%	28%
Physician Assistants	85%	100%
Psychiatrists	100%	100%
Respiratory Therapists	89%	89%
Registered Nurses	94%	100%
Licensed Clinical Social Workers	94%	100%
Licensed Master's Social Workers	100%	100%
Surgical Technicians	100%	100%

Table 101. Reasons for Recruitment Difficulties at Hudson Valley Hospitals

Occupations	Reasons For Recruiting Difficulties						
	Candidates Applying not Qualified	General Shortage of Workers	Location/ Transportation Issues	Non-Competitive Salaries	Non-Competitive Benefits	Potential Employees Not Following Up/Skipping Appointments (Ghosting)	Unknown
Certified Nurse Aides/Nurse Aides/Nurse Assistants/Patient Care Techs	17%	50%	28%	17%	17%	44%	17%
Clinical Laboratory Technicians	11%	89%	11%	44%	0%	11%	11%
Clinical Laboratory Technologists	11%	94%	11%	72%	0%	11%	6%
Environmental (janitorial, housekeeping) Service Aides	17%	33%	28%	28%	0%	33%	39%
Food Services/Dietary	0%	61%	28%	0%	0%	39%	6%
Licensed Mental Health Counselors	11%	44%	0%	17%	17%	22%	22%
Licensed Practical Nurses	0%	56%	0%	28%	17%	22%	11%
Management/Executive Staff	39%	50%	0%	56%	0%	0%	11%
Nurse Practitioners (Behavioral Health)	0%	78%	0%	50%	17%	0%	22%
Nurse Practitioners (All other)	0%	83%	0%	56%	17%	0%	11%
Pharmacists	0%	56%	0%	44%	17%	0%	6%
Physician Assistants	0%	61%	0%	61%	17%	0%	11%
Psychiatrists	0%	83%	0%	33%	17%	0%	28%
Respiratory Therapists	0%	89%	11%	67%	17%	11%	0%
Registered Nurses	56%	83%	0%	56%	33%	17%	0%
Licensed Clinical Social Workers	28%	39%	0%	17%	17%	0%	17%
Licensed Master's Social Workers	39%	33%	0%	28%	22%	11%	6%
Surgical Technicians	39%	56%	6%	56%	28%	0%	17%

Table 102. Reasons for Retention Difficulties at Hudson Valley Hospitals

Occupations	Reasons for Retention Difficulties						
	Career Change	Left for Better Benefits	Left for Better Salary	Left for Family Commitments	Left for Better Work-Life Balance	Retirement	Unknown
Certified Nurse Aides/Nurse Aides/Nurse Assistants/Patient Care Techs	56%	17%	28%	17%	33%	11%	17%
Clinical Laboratory Technicians	0%	28%	72%	11%	11%	17%	22%
Clinical Laboratory Technologists	11%	28%	89%	11%	28%	17%	11%
Environmental (janitorial, housekeeping) Service Aides	50%	28%	33%	11%	28%	22%	17%
Food Services/Dietary	61%	28%	44%	17%	11%	17%	6%
Licensed Mental Health Counselors	11%	11%	28%	11%	33%	11%	39%
Licensed Practical Nurses	83%	33%	44%	17%	33%	11%	6%
Management/Executive Staff	33%	28%	50%	17%	61%	28%	17%
Nurse Practitioners (Behavioral Health)	17%	28%	56%	11%	61%	22%	17%
Nurse Practitioners (All other)	17%	28%	83%	17%	67%	11%	11%
Pharmacists	0%	28%	44%	17%	28%	17%	44%
Physician Assistants	11%	28%	78%	17%	61%	17%	11%
Psychiatrists	0%	11%	61%	17%	39%	17%	28%
Respiratory Therapists	0%	28%	83%	11%	56%	28%	6%
Registered Nurses	50%	33%	78%	22%	78%	28%	0%
Licensed Clinical Social Workers	11%	11%	61%	17%	39%	17%	28%
Licensed Master's Social Workers	17%	11%	61%	17%	39%	17%	22%
Surgical Technicians	11%	28%	89%	11%	28%	11%	11%

b. Nursing Homes and Assisted Living Facilities**Table 103.** Percent of Respondents Who Indicated Recruitment or Retention Difficulties at Hudson Valley Nursing Homes and Assisted Living Facilities

Occupation	Percent of Respondents Indicating Difficulty	
	Recruiting	Retaining
Certified Nurse Aides/Assistants	95.7%	52.2%
Dietitians/Nutritionists	39.1%	4.5%
Home Health Aides	78.6%	60.0%
Infection Preventionist Practitioners	50.0%	9.1%
Licensed Clinical Social Workers (LCSWs)	57.1%	25.0%
Licensed Master Social Workers (LMSWs)	35.7%	15.4%
Licensed Practical Nurse (LPNs)	96.6%	55.6%
MDS Coordinators	56.3%	13.3%
Nurse Directors/Managers	77.8%	30.8%
Nurse Educators	53.8%	30.0%
Occupational Therapists	42.9%	27.8%
Occupational Therapy Assistants	41.2%	28.6%
Paid Feeding Assistants	0.0%	0.0%
Personal Care Aides	71.4%	33.3%
Physical Therapists	54.5%	30.0%
Physical Therapy Assistants	50.0%	38.5%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	89.5%	73.3%
Registered Nurses Experienced (3+ years of clinical experience)	88.9%	53.8%
Respiratory Therapists	33.3%	33.3%
Speech-Language Pathologists	47.4%	35.3%
Temporary Nurse Aide/CNA Trainees	54.5%	60.0%

Table 104. Non-COVID-19 Related Reasons for Recruitment Difficulties at Hudson Valley Nursing Homes and Assisted Living Facilities

Occupation	Non-COVID-19 Related for Recruitment Difficulties			
	Shortage of Applicants	Shortage of Applicants Meeting Minimum job Qualifications	Non-Competitive Salary	Non-Competitive Benefits
Certified Nurse Aides/Assistants	100%	23%	27%	0%
Dietitians/Nutritionists	67%	0%	0%	0%
Home Health Aides	82%	27%	18%	9%
Infection Preventionist Practitioners	67%	17%	17%	0%
Licensed Clinical Social Workers (LCSWs)	75%	25%	13%	0%
Licensed Master Social Workers (LMSWs)	60%	40%	40%	0%
Licensed Practical Nurse (LPNs)	93%	11%	32%	0%
MDS Coordinators	89%	0%	22%	0%
Nurse Directors/Managers	71%	10%	10%	0%
Nurse Educators	86%	14%	29%	0%
Occupational Therapists	78%	11%	22%	0%
Occupational Therapy Assistants	71%	14%	29%	0%
Paid Feeding Assistants	0%	0%	0%	0%
Personal Care Aides	100%	0%	20%	20%
Physical Therapists	75%	8%	25%	0%
Physical Therapy Assistants	71%	14%	29%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	88%	18%	29%	0%
Registered Nurses Experienced (3+ years of clinical experience)	100%	13%	21%	0%
Respiratory Therapists	100%	50%	100%	0%
Speech-Language Pathologists	67%	11%	22%	0%
Temporary Nurse Aide/CNA Trainees	67%	33%	17%	0%

Table 105. COVID-19 Related Reasons for Recruitment Difficulties at Hudson Valley Nursing Homes and Assisted Living Facilities

Occupation	COVID-19 Related Reasons for Recruitment Difficulties				
	Family Care Giving Commitments Prevented Availability	Lack of Online Training Certification	Vaccine or Booster Refusal	Fear of COVID-19 Exposure	COVID-19 Testing of Staff and Required Quarantine if a Positive Result Reduced Available Staff
Certified Nurse Aides/Assistants	36%	5%	55%	32%	18%
Dietitians/Nutritionists	0%	0%	11%	0%	11%
Home Health Aides	27%	18%	36%	27%	36%
Infection Preventionist Practitioners	17%	0%	0%	17%	0%
Licensed Clinical Social Workers (LCSWs)	25%	0%	13%	13%	13%
Licensed Master Social Workers (LMSWs)	0%	0%	20%	0%	20%
Licensed Practical Nurse (LPNs)	36%	7%	43%	25%	18%
MDS Coordinators	11%	11%	11%	11%	0%
Nurse Directors/Managers	5%	0%	14%	10%	5%
Nurse Educators	14%	0%	0%	14%	0%
Occupational Therapists	22%	0%	33%	22%	11%
Occupational Therapy Assistants	14%	0%	29%	14%	14%
Paid Feeding Assistants	0%	0%	0%	0%	0%
Personal Care Aides	20%	20%	40%	0%	20%
Physical Therapists	17%	0%	25%	17%	8%
Physical Therapy Assistants	14%	0%	43%	29%	14%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	29%	0%	18%	29%	12%
Registered Nurses Experienced (3+ years of clinical experience)	29%	4%	38%	25%	13%
Respiratory Therapists	0%	0%	0%	0%	0%
Speech-Language Pathologists	11%	0%	22%	11%	11%
Temporary Nurse Aide/CNA Trainees	33%	0%	17%	17%	0%

Table 106. Non-COVID-19 Related Reasons for Retention Difficulties at Hudson Valley Nursing Homes and Assisted Living Facilities

Occupation	Non-COVID-19 Related Reasons for Retention Difficulties				
	Staff Found Higher Pay and Benefits Elsewhere	Staff Left for Other Employment Sectors	Paperwork and Regulatory Burdens	Retirement	Scheduling Challenges
Certified Nurse Aides/Assistants	67%	58%	17%	25%	25%
Dietitians/Nutritionists	100%	100%	0%	0%	0%
Home Health Aides	67%	44%	11%	0%	22%
Infection Preventionist Practitioners	100%	100%	100%	100%	0%
Licensed Clinical Social Workers (LCSWs)	67%	100%	33%	33%	0%
Licensed Master Social Workers (LMSWs)	100%	50%	0%	0%	0%
Licensed Practical Nurse (LPNs)	53%	67%	20%	27%	33%
MDS Coordinators	100%	100%	50%	100%	0%
Nurse Directors/Managers	50%	50%	50%	25%	38%
Nurse Educators	67%	33%	67%	33%	0%
Occupational Therapists	60%	60%	20%	20%	20%
Occupational Therapy Assistants	75%	50%	25%	25%	0%
Paid Feeding Assistants	0%	0%	0%	0%	0%
Personal Care Aides	100%	33%	0%	0%	0%
Physical Therapists	67%	67%	17%	17%	0%
Physical Therapy Assistants	60%	60%	20%	20%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	82%	64%	18%	18%	27%
Registered Nurses Experienced (3+ years of clinical experience)	64%	36%	36%	36%	36%
Respiratory Therapists	50%	0%	50%	0%	0%
Speech-Language Pathologists	67%	83%	33%	33%	0%
Temporary Nurse Aide/CNA Trainees	67%	50%	50%	17%	0%

Table 107. COVID-19 Related Reasons for Retention Difficulties at Hudson Valley Nursing Homes and Assisted Living Facilities

Occupation	COVID-19 Related Reasons for Retention Difficulties			
	Fear of COVID-19 Exposure	Family Care Giving Commitments	Conversion to Another Position	Vaccine or Booster Refusal
Certified Nurse Aides/Assistants	33%	58%	17%	50%
Dietitians/Nutritionists	0%	0%	100%	100%
Home Health Aides	33%	22%	22%	33%
Infection Preventionist Practitioners	100%	100%	100%	100%
Licensed Clinical Social Workers (LCSWs)	33%	33%	33%	33%
Licensed Master Social Workers (LMSWs)	0%	0%	50%	50%
Licensed Practical Nurse (LPNs)	47%	53%	27%	40%
MDS Coordinators	100%	50%	50%	0%
Nurse Directors/Managers	38%	13%	13%	25%
Nurse Educators	33%	33%	100%	0%
Occupational Therapists	20%	40%	40%	20%
Occupational Therapy Assistants	25%	25%	25%	25%
Paid Feeding Assistants	0%	0%	0%	0%
Personal Care Aides	0%	33%	67%	33%
Physical Therapists	17%	17%	33%	17%
Physical Therapy Assistants	20%	20%	40%	20%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	27%	18%	18%	18%
Registered Nurses Experienced (3+ years of clinical experience)	29%	21%	14%	21%
Respiratory Therapists	0%	0%	0%	0%
Speech-Language Pathologists	17%	0%	17%	33%
Temporary Nurse Aide/CNA Trainees	33%	50%	17%	50%

c. Home Health Care

Table 108. Percent of Respondents Who Indicated Recruitment or Retention Difficulties at Hudson Valley Home Health Care Agencies

Occupation	Percent of Respondents Indicating Difficulty	
	Recruiting	Retaining
COVID-19 Compliance Officer	26%	0%
Home Health Aides	95%	71%
Homemaker	77%	83%
Intake Coordinator	34%	11%
Licensed Clinical Social Workers (LCSWs)	60%	0%
Licensed Master Social Workers (LMSWs)	40%	0%
Licensed Practical Nurse (LPNs)	92%	73%
Occupational Therapists	60%	50%
Occupational Therapy Assistants	67%	0%
Personal Care Aides	97%	74%
Physical Therapists	71%	43%
Physical Therapy Assistants	67%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	88%	45%
Registered Nurses Experienced (3+ years of clinical experience)	80%	31%
Respiratory Therapists	0%	0%
Speech-Language Pathologists	100%	67%

Table 109. Non-COVID-19 Related Reasons for Recruitment Difficulties at Hudson Valley Home Health Care Agencies

Occupation	Non-COVID-19 Related Reasons for Recruitment Difficulties			
	Shortage of Applicants	Shortage of Applicants Meeting Minimum Job Qualifications	Non-Competitive Salary	Non-Competitive Benefits
COVID-19 Compliance Officer	60%	60%	0%	0%
Home Health Aides	90%	30%	40%	0%
Homemaker	89%	28%	25%	3%
Intake Coordinator	80%	10%	20%	0%
Licensed Clinical Social Workers (LCSWs)	33%	33%	33%	0%
Licensed Master Social Workers (LMSWs)	50%	0%	50%	0%
Licensed Practical Nurse (LPNs)	75%	17%	33%	8%
Occupational Therapists	67%	0%	67%	0%
Occupational Therapy Assistants	50%	0%	50%	0%
Personal Care Aides	86%	29%	21%	4%
Physical Therapists	100%	0%	20%	0%
Physical Therapy Assistants	50%	0%	50%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	81%	14%	33%	5%
Registered Nurses Experienced (3+ years of clinical experience)	84%	19%	34%	9%
Respiratory Therapists	0%	0%	0%	0%
Speech-Language Pathologists	0%	0%	0%	0%

Table 110. Additional Reasons for Recruitment Difficulties at Hudson Valley Home Health Care Agencies

Occupation	COVID-19 Related Reasons for Recruitment Difficulties			
	Family Care Giving Commitments Prevented Availability	Lack of Scheduling Flexibility for the Applicant	Vaccine or Booster Refusal	Fear of COVID-19 Exposure
COVID-19 Compliance Officer	20%	20%	0%	0%
Home Health Aides	42%	47%	50%	36%
Homemaker	50%	60%	60%	40%
Intake Coordinator	20%	30%	10%	10%
Licensed Clinical Social Workers (LCSWs)	0%	33%	0%	0%
Licensed Master Social Workers (LMSWs)	0%	50%	0%	0%
Licensed Practical Nurse (LPNs)	25%	42%	17%	17%
Occupational Therapists	0%	0%	0%	0%
Occupational Therapy Assistants	50%	0%	0%	0%
Personal Care Aides	54%	50%	46%	32%
Physical Therapists	0%	0%	0%	0%
Physical Therapy Assistants	0%	50%	0%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	29%	38%	24%	24%
Registered Nurses Experienced (3+ years of clinical experience)	25%	28%	28%	16%
Respiratory Therapists	0%	0%	0%	0%
Speech-Language Pathologists	0%	0%	0%	0%

Table 111. Non-COVID-19 Related Reasons for Retention Difficulties at Hudson Valley Home Health Care Agencies

Occupation	Non-COVID-19 Related Reasons for Retention Difficulties				
	Staff Found Higher Pay and Benefits Elsewhere	Staff Left for Other Employment Sectors	Paperwork and Regulatory Burdens	Retirement	Scheduling Challenges
COVID-19 Compliance Officer	0%	0%	0%	0%	0%
Home Health Aides	56%	64%	20%	12%	56%
Homemaker	70%	50%	0%	0%	60%
Intake Coordinator	67%	33%	0%	0%	0%
Licensed Clinical Social Workers (LCSWs)	0%	0%	0%	0%	0%
Licensed Master Social Workers (LMSWs)	0%	0%	0%	0%	0%
Licensed Practical Nurse (LPNs)	75%	25%	25%	0%	13%
Occupational Therapists	50%	0%	50%	50%	0%
Occupational Therapy Assistants	0%	0%	0%	0%	0%
Personal Care Aides	60%	60%	25%	10%	60%
Physical Therapists	67%	0%	33%	0%	0%
Physical Therapy Assistants	0%	0%	0%	0%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	80%	20%	20%	0%	10%
Registered Nurses Experienced (3+ years of clinical experience)	75%	25%	25%	8%	17%
Respiratory Therapists	0%	0%	0%	0%	0%
Speech-Language Pathologists	0%	0%	0%	0%	0%

Table 112. Additional Reasons for Retention Difficulties at Hudson Valley Home Health Care Agencies

Occupation	COVID-19 Related Reasons for Retention Difficulties				Termination Due to Unsatisfactory Performance
	Scheduling Challenges	Family Care Giving Commitments	Too Few Available Hours for a Full Time Position	Vaccine or Booster Refusal	
COVID-19 Compliance Officer	0%	0%	0%	0%	0%
Home Health Aides	70%	40%	40%	10%	10%
Homemaker	60%	44%	44%	36%	20%
Intake Coordinator	0%	33%	0%	0%	0%
Licensed Clinical Social Workers (LCSWs)	0%	0%	0%	0%	0%
Licensed Master Social Workers (LMSWs)	0%	0%	0%	0%	0%
Licensed Practical Nurse (LPNs)	63%	0%	13%	0%	0%
Occupational Therapists	50%	0%	0%	0%	0%
Occupational Therapy Assistants	0%	0%	0%	0%	0%
Personal Care Aides	65%	45%	35%	35%	15%
Physical Therapists	0%	0%	33%	0%	0%
Physical Therapy Assistants	0%	0%	0%	0%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	30%	10%	10%	10%	0%
Registered Nurses Experienced (3+ years of clinical experience)	25%	0%	17%	8%	0%
Respiratory Therapists	0%	0%	0%	0%	0%
Speech-Language Pathologists	0%	0%	0%	0%	0%

5. Health Workforce Production and Projected Need

a. Graduations

Table 113. The Number of Graduations for Selected Health Care Occupations in the Hudson Valley, 2017-2021

Occupational Program	School Year					Change Between 2017 and 2021	
	2017	2018	2019	2020	2021	Number	Percent
Audiologists & Speech Language Pathologists ^a	244	265	288	288	246	2	0.8%
Clinical Laboratory Technicians	22	26	15	20	15	-7	-31.8%
Clinical Laboratory Technologists	28	25	34	34	35	7	25.0%
Creative Arts Therapists ^b	44	35	44	39	38	-6	-13.6%
Dental Assistants	73	53	61	43	88	15	20.5%
Dental Hygienists	14	17	17	16	20	6	42.9%
EMTs and Paramedics	40	50	55	23	46	6	15.0%
Health Care Administrators	148	161	134	121	111	-37	-25.0%
License Practical Nurses	325	259	250	245	210	-115	-35.4%
Marriage and Family Therapists	60	41	38	31	26	-34	-56.7%
Medical Assistants	165	180	112	74	82	-83	-50.3%
Mental Health Counselors	151	140	138	75	89	-62	-41.1%
Occupational Therapists	94	83	134	97	105	11	11.7%
Occupational Therapy Assistants	85	87	70	81	37	-48	-56.5%
Phlebotomists	18	24	20	22	22	4	22.2%
Physical Therapists	184	172	179	175	159	-25	-13.6%
Physical Therapy Assistants	21	20	16	16	15	-6	-28.6%
Physician Assistants	59	62	95	112	103	44	74.6%
Radiation Therapists and Technologists	59	49	51	61	65	6	10.2%
Recreational Therapists	10	8	13	6	5	-5	-50.0%
Registered Nurses	863	842	956	765	1,117	254	29.4%
Registered Nurses with Advanced Education ^c	63	81	98	83	119	56	88.9%
Respiratory Therapists	26	12	13	33	24	-2	-7.7%
Social Workers	139	151	150	150	131	-8	-5.8%
Substance Abuse/Addiction Counseling	18	27	38	17	16	-2	-11.1%
Surgical Technology/Technologist	21	18	17	16	0	-21	-100.0%

^a Audiologists & speech-language pathologists include graduations in audiology, speech-language pathology, and communication sciences and disorders.

^b Creative arts therapists include graduations in art therapy, dance therapy, and music therapy.

^c Registered nurses with advanced education include graduations or certificates in adult health nursing, clinical nurse specialist, critical care nursing, family practice nursing, geriatric nursing, maternal and child health nursing, palliative care nursing, pediatric nursing, perioperative/OR nursing, public health nursing, women's health nursing, and nursing practice.

Source: Integrated Postsecondary Education Data System.

b. Licenses

Table 114. Number of Licensed Individuals in Selected Health Care Professions in the Hudson Valley, 2018-2022

Occupation	2018	2019	2020	2021	2022	Change Between 2018 and 2022	
						Number	Percent
Clinical Laboratory Technicians	234	235	237	244	245	11	4.7%
Clinical Laboratory Technologists	1,346	1,257	1,269	1,240	1,217	-129	-9.6%
Dental Assistants	135	137	136	135	131	-4	-3.0%
Dental Hygienists	1,248	1,263	1,284	1,271	1,281	33	2.6%
Dietitians/Nutritionists	821	820	800	844	845	24	2.9%
Licensed Practical Nurses	7,861	7,606	7,681	7,493	7,431	-430	-5.5%
Nurse Practitioners	2,931	3,084	3,317	3,589	3,719	788	26.9%
Occupational Therapists	1,680	1,743	1,828	1,889	1,933	253	15.1%
Occupational Therapy Assistants	882	913	952	970	992	110	12.5%
Pharmacists	2,166	2,166	2,148	2,191	2,208	42	1.9%
Physical Therapists	2,703	2,749	2,821	2,914	2,995	292	10.8%
Physical Therapist Assistants	597	597	608	620	630	33	5.5%
Physician Assistants	1,248	1,305	1,416	1,508	1,580	332	26.6%
Registered Nurses	34,408	34,669	35,119	36,398	36,885	2,477	7.2%
Respiratory Therapists	732	744	769	746	756	24	3.3%
Social Workers ^a	7,692	7,670	7,907	8,287	8,540	848	11.0%
Speech-Language Pathologists	2,596	2,654	2,757	2,817	2,866	270	10.4%

^aSocial workers include both master's Clinical Social Workers and master's Licensed Social Workers.

Source: New York State Education Department, Office of Professions.

c. Employment Projections

Table 115. Employment Projections for Selected Health Care Occupational Programs for the Hudson Valley, by Largest Percentage Increase, 2018-2028

Occupational Title	2018	2028	Change Between 2018 and 2028		Average Annual Openings ^a
			Number	Percent	
Home Health and Personal Care Aides	30,760	47,620	16,860	54.8%	6,739
Physician Assistants	1,330	1,950	620	46.6%	155
Nurse Practitioners	1,490	2,150	660	44.3%	164
Medical Assistants	3,100	4,390	1,290	41.6%	541
Speech-Language Pathologists	1,790	2,500	710	39.7%	186
Occupational Therapy Assistants and Aides	510	700	190	37.3%	85
Mental Health and Substance Abuse Social	1,570	2,120	550	35.0%	236
Phlebotomists	810	1,090	280	34.6%	128
Physical Therapists	2,250	2,970	720	32.0%	181
Physical Therapist Assistants and Aides	910	1,200	290	31.9%	160
Respiratory Therapists	570	750	180	31.6%	53
Medical Secretaries and Administrative Assistants	670	880	210	31.3%	108
Radiation Therapists	100	130	30	30.0%	9
Diagnostic Medical Sonographers	550	710	160	29.1%	51
Medical and Health Services Managers	3,360	4,310	950	28.3%	399
Occupational Therapists	1,590	2,030	440	27.7%	145
Magnetic Resonance Imaging Technologists	190	240	50	26.3%	17
Registered Nurses	22,120	27,830	5,710	25.8%	1,906
Emergency Medical Technicians and Paramedics	2,170	2,720	550	25.3%	218
Healthcare Social Workers	1,840	2,290	450	24.5%	247
Radiologic Technologists and Technicians	1,850	2,300	450	24.3%	158
Medical Records and Health Information	1,110	1,360	250	22.5%	103
Dental Assistants	2,850	3,490	640	22.5%	419
Clinical Laboratory Technologists and Technicians	1,730	2,110	380	22.0%	160
Cardiovascular Technologists and Technicians	510	620	110	21.6%	42
Dental Hygienists	1,530	1,860	330	21.6%	147
Psychiatric Aides	1,140	1,370	230	20.2%	164
Surgical Technologists	790	940	150	19.0%	85
Psychiatric Technicians	320	380	60	18.8%	35
Nuclear Medicine Technologists	110	130	20	18.2%	8
Orderlies	220	260	40	18.2%	31
Licensed Practical and Licensed Vocational Nurses	6,370	7,460	1,090	17.1%	636
Dietitians and Nutritionists	710	810	100	14.1%	58
Dietetic Technicians	150	170	20	13.3%	15
Recreational Therapists	240	270	30	12.5%	15
Nursing Assistants	11,800	13,130	1,330	11.3%	1,530
Pharmacy Technicians	1,610	1,720	110	6.8%	145
Pharmacists	1,870	1,870	0	0.0%	84
Pharmacy Aides	210	200	-10	-4.8%	25
Medical Transcriptionists	190	180	-10	-5.3%	25

^aAnnual openings reflect creation of new positions in the occupation and replacement for those retiring or otherwise leaving the occupation.
Source: NYS Department of Labor, Jobs in Demand/Projects, Long-Term Occupation Projections, 2018-2028.

D. Long Island

The Long Island region includes the counties of Nassau and Suffolk.



KEY FINDINGS

Population and Health Care Indicators

- The Long Island region had significantly less poverty than the state as a whole.
- The Long Island region has a slighter older population than the state as a whole, and the rates of heart disease deaths and of heart disease hospitalizations are higher in the Long Island region than the state as a whole.

Health Care Employment

- Overall, the number of health care jobs in the Long Island region increased between 2017 and 2021.
- The number of health care jobs in hospitals, ambulatory care, and home health care in the Long Island region increased between 2017 and 2021. In contrast, the number of health care jobs in nursing homes declined during the same time period.

Employer Demand Survey

- Registered nurses are among the most difficult to recruit and retain in all health care settings throughout the Long Island region.
- Hospitals in the Long Island region also reported that clinical laboratory technologists, nurse practitioners, physician assistants, psychiatrists, and respiratory therapists are also among the most difficult to recruit and retain.
- Certified nurse aides/assistants, licensed practical nurses, and nurse directors/managers were also reported by nursing homes and by assisted living facilities as among the most difficult to recruit and retain.
- Home health care agencies in the Long Island region also indicated that home health aides, homemakers, and personal care aides are among the most difficult to recruit and retain.

Health Care Production and Projected Workforce Need

- The number of both registered nurse and social worker graduations increased in the Long Island region between 2017 and 2021.
- There are almost 9,900 projected average annual openings in the Long Island region for home health and personal care aides, nearly 2,700 projected average annual openings for registered nurses, and over 2,000 projected average annual openings for nursing assistants.

1. Population and Health Care Indicators

Table 116. Selected Population Characteristics for Long Island, 2016-2020

Population Characteristics	Regional		Percent of State Population
	Number	Percent of Regional Population	
Total population	2,837,047	14.5%	N/A
Population under 100% FPL	166,202	6.0%	13.6%
Population under 200% FPL	418,189	15.0%	28.8%
Population aged birth to 17 years	606,282	21.4%	20.9%
Population aged 65 and older	492,247	17.4%	16.5%
Population female aged 15 to 44	510,697	18.0%	20.0%
Women aged 15 to 19 who had a birth in past 12 mos.	515	1.7% ^b	1.9% ^b
Women aged 20 to 34 who had a birth in past 12 mos.	18,185	61.2% ^b	65.9% ^b
Women aged 35 to 50 who had a birth in past 12 mos.	11,028	37.1% ^b	32.2% ^b
Black/African American, non-Hispanic	256,218	9.0%	14.0%
Hispanic/Latino	521,001	18.4%	19.1%
Asian/Pacific Islander, non-Hispanic	199,175	7.0%	8.5%
American Indian/Native Alaskan, non-Hispanic	3,762	0.1%	0.2%
Two or more/other races	65,482	2.3%	3.0%
Population with less than a high school education ^a	179,587	9.1%	12.8%
Population with a high school diploma or equivalent ^a	795,873	40.2%	40.9%
Population with an associate degree ^a	175,861	8.9%	8.9%
Population with a bachelor's degree ^a	452,737	22.9%	20.9%
Population with a master's degree or higher ^a	374,928	18.9%	16.5%
Home ownership	768,759	81.3%	54.1%

^aEducation levels and rates are based on individuals aged 25 years and older.

^bPercent of total births.

FPL, federal poverty level; N/A, not applicable; mos., months.

Source: US Census, American Community Survey, 5-Year Estimates, 2016-2020.

Table 117. Selected Health Indicators for Long Island

Health Indicator	Region		Statewide	
	Number	Rate	Number	Rate
Total deaths, per 100,000	70,367	825.9	468,772	798.8
Deaths due to heart disease, per 100,000	26,609	312.3	163,285	278.3
Deaths due to all cancers, per 100,000	14,953	175.5	103,089	175.5
Deaths due to diabetes, per 100,000	1,393	16.3	13,175	22.5
Total births, per 1,000 females aged 15 to 44	87,810	57.2	674,199	57.5
Teen births, per 1,000 females aged 15 to 19	2,114	7.9	20,879	11.9
Low-birthweight births, as a percent of total births	5,141	6.1	41,103	6.3
Late/no prenatal care, as a percent of total births	2,999	3.5	35,780	5.4
Infant deaths, per 1,000 live births	309	3.5	2,940	4.4
Total hospitalizations, per 10,000	1,063,091	1247.7	6,776,549	1154.8
Total asthma hospitalizations, per 10,000	6,210	7.3	57,786	9.8
Rate of asthma hospitalizations, aged 25-44 per 10,000	827	4.1	7,994	5.0
Rate of asthma hospitalizations, aged 45-64 per 10,000	1,507	6.1	13,566	8.8
Pediatric asthma hospitalization, per 10,000	2,476	13.6	24,839	20.3
Diabetes hospitalizations, per 10,000	15,860	18.6	125,599	21.4
CLRD hospitalizations, per 10,000	22,533	26.4	174,084	29.7
Heart disease hospitalizations, per 10,000	111,991	131.4	616,944	105.1
Total ED visits, per 10,000	2,921,470	3428.8	24,263,152	4134.7

CLRD, chronic lower respiratory disease; ED, emergency department.

Source: New York State Community Health Indicator Reports.

2. Health Care Sector Employment

Table 118. Number of Health Care Jobs on Long Island, by Setting, 2017–2021

Setting	2017	2018	2019	2020	2021	Change Between 2017 and 2021	
						Number	Percent
Hospitals	71,183	73,929	76,005	76,195	77,308	6,125	8.6%
Ambulatory care (excluding home health)	65,745	66,852	68,700	63,302	68,353	2,608	4.0%
Nursing home and residential care facilities	23,953	24,490	25,282	23,492	22,227	-1,726	-7.2%
Home health care	19,555	21,211	24,060	23,112	23,908	4,353	22.3%
Total	180,436	186,482	194,047	186,101	191,796	11,360	6.3%

Source: NYS Department of Labor, Quarterly Census of Employment and Wages.

3. Employment by Occupations

Table 119. Number of Jobs and Median Salary for Selected Health Care Occupations on Long Island, 2021

Occupational Title	Number of Jobs	Median Salary
Audiologists	100	\$96,060
Cardiovascular Technologists and Technicians	710	\$81,360
Clinical Laboratory Technologists and Technicians	3,480	\$81,210
Dental Assistants	4,270	\$50,050
Dental Hygienists	1,750	\$101,500
Diagnostic Medical Sonographers	1,090	\$98,620
Dietitians and Nutritionists	800	\$80,210
Emergency Medical Technicians	1,650	\$38,120
Healthcare Social Workers	2,380	\$64,300
Home Health & Personal Care Aides	40,140	\$31,890
Licensed Practical and Licensed Vocational Nurses	5,370	\$62,340
Magnetic Resonance Imaging Technologists	490	\$98,620
Medical Assistants	7,250	\$40,740
Medical Secretaries and Administrative Assistants	7,840	\$48,120
Medical Transcriptionists	510	\$39,020
Medical and Health Services Managers	3,600	\$155,240
Mental Health and Substance Abuse Social Workers	1,540	\$78,690
Nuclear Medicine Technologists	180	\$105,390
Nurse Practitioners	2,570	\$133,450
Nursing Assistants	13,880	\$49,680
Occupational Therapists	1,520	\$102,890
Occupational Therapy Assistants	300	\$67,220
Orderlies	910	\$48,450
Paramedics	860	\$59,890
Pharmacists	2,930	\$134,350
Pharmacy Aides	290	\$31,890
Pharmacy Technicians	2,910	\$38,530
Phlebotomists	1,640	\$51,650
Physical Therapist Aides	1,030	\$38,440
Physical Therapist Assistants	660	\$66,860
Physical Therapists	3,300	\$102,910
Physician Assistants	2,850	\$137,240
Psychiatric Aides	580	\$50,390
Psychiatric Technicians	170	\$46,680
Radiation Therapists	270	\$130,150
Radiologic Technologists and Technicians	2,700	\$81,460
Recreational Therapists	210	\$61,930
Registered Nurses	30,850	\$103,490
Respiratory Therapists	1,170	\$98,200
Speech-Language Pathologists	2,410	\$103,960
Surgical Technologists	1,010	\$63,410

N/A, not available.

Source: NYS Department of Labor, Employment Statistics, Occupational Wage and Employment Estimates (OES)

4. Employer Demand Survey

a. Hospitals

Table 120. Percent of Respondents Who Indicated Recruitment or Retention Difficulties at Long Island Hospitals

Occupations	Percent of Respondents Indicating Difficulty	
	Recruitment	Retention
Certified Nurse Aides/Nurse Aides/Nurse Assistants/Patient Care Techs	53%	84%
Clinical Laboratory Technicians	100%	38%
Clinical Laboratory Technologists	100%	100%
Environmental (janitorial, housekeeping) Service Aides	11%	42%
Food Services/Dietary	11%	83%
Licensed Mental Health Counselors	60%	38%
Licensed Practical Nurses	63%	89%
Management/Executive Staff	42%	42%
Nurse Practitioners (Behavioral Health)	94%	82%
Nurse Practitioners (All other)	100%	83%
Pharmacists	42%	37%
Physician Assistants	94%	94%
Psychiatrists	100%	94%
Respiratory Therapists	95%	95%
Registered Nurses	95%	100%
Licensed Clinical Social Workers	58%	94%
Licensed Master's Social Workers	58%	100%
Surgical Technicians	89%	89%

Table 121. Reasons for Recruitment Difficulties at Long Island Hospitals

Occupations	Reasons For Recruiting Difficulties						
	Candidates Applying not Qualified	General Shortage of Workers	Location/ Transportation Issues	Non-Competitive Salaries	Non-Competitive Benefits	Potential Employees Not Following Up/Skipping Appointments (Ghosting)	Unknown
Certified Nurse Aides/Nurse Aides/Nurse Assistants/Patient Care Techs	11%	47%	5%	16%	0%	42%	47%
Clinical Laboratory Technicians	37%	53%	0%	47%	0%	74%	5%
Clinical Laboratory Technologists	47%	100%	0%	95%	0%	74%	0%
Environmental (janitorial, housekeeping) Service Aides	5%	11%	11%	11%	0%	42%	5%
Food Services/Dietary	0%	11%	11%	5%	0%	42%	5%
Licensed Mental Health Counselors	0%	5%	0%	0%	0%	32%	16%
Licensed Practical Nurses	5%	16%	0%	58%	0%	32%	5%
Management/Executive Staff	42%	5%	0%	0%	0%	32%	11%
Nurse Practitioners (Behavioral Health)	42%	89%	0%	37%	0%	32%	11%
Nurse Practitioners (All other)	37%	89%	5%	42%	0%	32%	11%
Pharmacists	11%	5%	5%	5%	0%	32%	11%
Physician Assistants	37%	89%	5%	53%	0%	32%	0%
Psychiatrists	37%	89%	0%	37%	0%	32%	47%
Respiratory Therapists	42%	95%	42%	95%	0%	74%	0%
Registered Nurses	84%	47%	5%	47%	0%	74%	5%
Licensed Clinical Social Workers	11%	58%	5%	5%	0%	32%	5%
Licensed Master's Social Workers	53%	11%	5%	47%	0%	74%	5%
Surgical Technicians	42%	16%	37%	42%	0%	37%	53%

Table 122. Reasons for Retention Difficulties at Long Island Hospitals

Occupations	Reasons for Retention Difficulties						
	Career Change	Left for Better Benefits	Left for Better Salary	Left for Family Commitments	Left for Better Work-Life Balance	Retirement	Unknown
Certified Nurse Aides/Nurse Aides/Nurse Assistants/Patient Care Techs	47%	32%	89%	11%	32%	42%	5%
Clinical Laboratory Technicians	0%	0%	5%	0%	0%	37%	53%
Clinical Laboratory Technologists	42%	0%	53%	5%	47%	42%	11%
Environmental (janitorial, housekeeping) Service Aides	5%	0%	5%	0%	5%	42%	53%
Food Services/Dietary	47%	32%	79%	5%	32%	5%	11%
Licensed Mental Health Counselors	0%	0%	0%	0%	0%	11%	84%
Licensed Practical Nurses	47%	0%	58%	5%	0%	11%	37%
Management/Executive Staff	53%	0%	37%	0%	5%	11%	47%
Nurse Practitioners (Behavioral Health)	0%	0%	42%	5%	42%	11%	42%
Nurse Practitioners (All other)	0%	0%	42%	5%	42%	11%	42%
Pharmacists	5%	32%	37%	0%	5%	11%	53%
Physician Assistants	0%	0%	47%	5%	47%	11%	37%
Psychiatrists	0%	0%	42%	0%	0%	11%	42%
Respiratory Therapists	0%	0%	58%	0%	11%	47%	37%
Registered Nurses	47%	0%	63%	11%	53%	58%	32%
Licensed Clinical Social Workers	42%	0%	53%	11%	11%	11%	37%
Licensed Master's Social Workers	42%	0%	53%	11%	11%	11%	37%
Surgical Technicians	47%	32%	79%	0%	5%	11%	11%

b. Nursing Homes and Assisted Living Facilities**Table 123.** Percent of Respondents Who Indicated Recruitment or Retention Difficulties at Long Island Nursing Homes and Assisted Living Facilities

Occupation	Percent of Respondents Indicating Difficulty	
	Recruiting	Retaining
Certified Nurse Aides/Assistants	77.8%	55.6%
Dietitians/Nutritionists	32.0%	28.0%
Home Health Aides	69.2%	45.5%
Infection Preventionist Practitioners	33.3%	26.3%
Licensed Clinical Social Workers (LCSWs)	12.5%	22.2%
Licensed Master Social Workers (LMSWs)	23.8%	16.0%
Licensed Practical Nurse (LPNs)	77.4%	64.5%
MDS Coordinators	47.6%	22.7%
Nurse Directors/Managers	77.8%	46.4%
Nurse Educators	57.9%	36.8%
Occupational Therapists	43.5%	13.6%
Occupational Therapy Assistants	42.9%	20.0%
Paid Feeding Assistants	0.0%	0.0%
Personal Care Aides	57.1%	37.5%
Physical Therapists	37.5%	13.0%
Physical Therapy Assistants	40.0%	15.8%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	71.4%	60.9%
Registered Nurses Experienced (3+ years of clinical experience)	75.0%	53.3%
Respiratory Therapists	28.6%	15.4%
Speech-Language Pathologists	15.0%	15.0%
Temporary Nurse Aide/CNA Trainees	60.0%	60.0%

Table 124. Non-COVID-19 Related Reasons for Recruitment Difficulties at Long Island Nursing Homes and Assisted Living Facilities

Occupation	Non-COVID-19 Related for Recruitment Difficulties			
	Shortage of Applicants	Shortage of Applicants Meeting Minimum Job Qualifications	Non-competitive Salary	Non-competitive Benefits
Certified Nurse Aides/Assistants	95%	5%	48%	5%
Dietitians/Nutritionists	75%	0%	25%	0%
Home Health Aides	100%	11%	11%	0%
Infection Preventionist Practitioners	83%	17%	17%	0%
Licensed Clinical Social Workers (LCSWs)	100%	50%	100%	50%
Licensed Master Social Workers (LMSWs)	60%	20%	40%	20%
Licensed Practical Nurse (LPNs)	96%	8%	29%	0%
MDS Coordinators	90%	0%	0%	0%
Nurse Directors/Managers	95%	10%	10%	5%
Nurse Educators	91%	9%	18%	9%
Occupational Therapists	80%	20%	20%	0%
Occupational Therapy Assistants	78%	11%	11%	0%
Paid Feeding Assistants	0%	0%	0%	0%
Personal Care Aides	75%	25%	25%	0%
Physical Therapists	78%	22%	22%	0%
Physical Therapy Assistants	75%	13%	13%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	93%	13%	40%	7%
Registered Nurses Experienced (3+ years of clinical experience)	90%	10%	29%	10%
Respiratory Therapists	75%	0%	0%	0%
Speech-Language Pathologists	67%	0%	0%	0%
Temporary Nurse Aide/CNA Trainees	100%	33%	33%	0%

Table 125. COVID-19 Related Reasons for Recruitment Difficulties at Long Island Nursing Homes and Assisted Living Facilities

Occupation	COVID-19 Related Reasons for Recruitment Difficulties				
	Family Care Giving Commitments Prevented Availability	Lack of Online Training Certification	Vaccine or Booster Refusal	Fear of COVID-19 Exposure	COVID-19 Testing of Staff and Required Quarantine if a Positive Result Reduced Available Staff
Certified Nurse Aides/Assistants	24%	14%	62%	24%	29%
Dietitians/Nutritionists	0%	0%	13%	25%	0%
Home Health Aides	22%	11%	44%	11%	22%
Infection Preventionist Practitioners	0%	33%	0%	0%	0%
Licensed Clinical Social Workers (LCSWs)	0%	0%	50%	50%	50%
Licensed Master Social Workers (LMSWs)	0%	0%	20%	20%	20%
Licensed Practical Nurse (LPNs)	17%	8%	50%	13%	25%
MDS Coordinators	0%	10%	20%	10%	10%
Nurse Directors/Managers	5%	5%	33%	14%	14%
Nurse Educators	9%	9%	27%	18%	9%
Occupational Therapists	10%	10%	30%	30%	20%
Occupational Therapy Assistants	0%	11%	22%	22%	11%
Paid Feeding Assistants	0%	0%	0%	0%	0%
Personal Care Aides	25%	0%	25%	0%	50%
Physical Therapists	11%	11%	33%	22%	22%
Physical Therapy Assistants	0%	13%	25%	13%	13%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	13%	7%	40%	20%	20%
Registered Nurses Experienced (3+ years of clinical experience)	10%	0%	38%	14%	19%
Respiratory Therapists	0%	0%	25%	25%	25%
Speech-Language Pathologists	0%	33%	0%	0%	0%
Temporary Nurse Aide/CNA Trainees	33%	33%	67%	67%	33%

Table 126. Non-COVID-19 Related Reasons for Retention Difficulties at Long Island Nursing Homes and Assisted Living Facilities

Occupation	Reasons for Difficulty Retaining: Non-COVID-19 Related				
	Staff Found Higher Pay and Benefits Elsewhere	Staff Left for Other Employment Sectors	Paperwork and Regulatory Burdens	Retirement	Scheduling Challenges
Certified Nurse Aides/Assistants	67%	60%	27%	27%	40%
Dietitians/Nutritionists	29%	29%	29%	0%	14%
Home Health Aides	60%	60%	0%	0%	40%
Infection Preventionist Practitioners	40%	20%	20%	20%	0%
Licensed Clinical Social Workers (LCSWs)	50%	25%	50%	0%	0%
Licensed Master Social Workers (LMSWs)	75%	25%	50%	0%	0%
Licensed Practical Nurse (LPNs)	75%	55%	35%	20%	30%
MDS Coordinators	80%	20%	20%	0%	0%
Nurse Directors/Managers	77%	23%	31%	15%	15%
Nurse Educators	71%	14%	29%	14%	0%
Occupational Therapists	67%	33%	0%	0%	0%
Occupational Therapy Assistants	50%	25%	25%	0%	0%
Paid Feeding Assistants	0%	0%	0%	0%	0%
Personal Care Aides	33%	33%	0%	0%	33%
Physical Therapists	67%	33%	0%	0%	0%
Physical Therapy Assistants	67%	33%	0%	0%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	93%	36%	29%	14%	21%
Registered Nurses Experienced (3+ years of clinical experience)	81%	31%	31%	19%	31%
Respiratory Therapists	100%	0%	0%	0%	0%
Speech-Language Pathologists	67%	67%	0%	0%	0%
Temporary Nurse Aide/CNA Trainees	67%	33%	0%	0%	33%

Table 127. COVID-19 Related Reasons for Retention Difficulties at Long Island Nursing Homes and Assisted Living Facilities

Occupation	COVID-19 Related Reasons for Retention Difficulties			
	Fear of COVID-19 Exposure	Family Care Giving Commitments	Conversion to Another Position	Vaccine or Booster Refusal
Certified Nurse Aides/Assistants	40%	27%	27%	67%
Dietitians/Nutritionists	14%	0%	14%	29%
Home Health Aides	20%	20%	20%	80%
Infection Preventionist Practitioners	0%	0%	0%	20%
Licensed Clinical Social Workers (LCSWs)	0%	0%	0%	25%
Licensed Master Social Workers (LMSWs)	0%	0%	0%	25%
Licensed Practical Nurse (LPNs)	20%	10%	30%	60%
MDS Coordinators	0%	0%	0%	20%
Nurse Directors/Managers	8%	15%	8%	31%
Nurse Educators	14%	0%	0%	29%
Occupational Therapists	0%	0%	0%	33%
Occupational Therapy Assistants	0%	0%	0%	50%
Paid Feeding Assistants	0%	0%	0%	0%
Personal Care Aides	0%	33%	0%	33%
Physical Therapists	0%	0%	0%	33%
Physical Therapy Assistants	0%	0%	0%	33%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	14%	14%	29%	36%
Registered Nurses Experienced (3+ years of clinical experience)	13%	13%	19%	50%
Respiratory Therapists	0%	0%	0%	50%
Speech-Language Pathologists	0%	0%	0%	33%
Temporary Nurse Aide/CNA Trainees	0%	0%	0%	67%

c. Home Health Care**Table 128.** Percent of Respondents Who Indicated Recruitment or Retention Difficulties at Long Island Home Health Care Agencies

Occupation	Percent of Respondents Indicating Difficulty	
	Recruiting	Retaining
COVID-19 Compliance Officer	38%	20%
Home Health Aides	90%	69%
Homemaker	100%	76%
Intake Coordinator	38%	22%
Licensed Clinical Social Workers (LCSWs)	50%	22%
Licensed Master Social Workers (LMSWs)	45%	20%
Licensed Practical Nurse (LPNs)	73%	67%
Occupational Therapists	73%	50%
Occupational Therapy Assistants	60%	50%
Personal Care Aides	94%	77%
Physical Therapists	67%	55%
Physical Therapy Assistants	50%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	90%	56%
Registered Nurses Experienced (3+ years of clinical experience)	78%	45%
Respiratory Therapists	0%	0%
Speech-Language Pathologists	67%	38%

Table 129. Non-COVID-19 Related Reasons for Recruitment Difficulties at Long Island Home Health Care Agencies

Occupation	Non-COVID-19 Related Reasons for Recruitment Difficulties			
	Shortage of Applicants	Shortage of Applicants Meeting Minimum Job Qualifications	Non-Competitive Salary	Non-Competitive Benefits
COVID-19 Compliance Officer	36%	36%	18%	9%
Home Health Aides	87%	25%	23%	2%
Homemaker	81%	25%	38%	0%
Intake Coordinator	67%	22%	28%	6%
Licensed Clinical Social Workers (LCSWs)	40%	40%	60%	20%
Licensed Master Social Workers (LMSWs)	60%	20%	60%	20%
Licensed Practical Nurse (LPNs)	82%	18%	45%	27%
Occupational Therapists	75%	25%	25%	13%
Occupational Therapy Assistants	33%	33%	67%	33%
Personal Care Aides	84%	27%	20%	4%
Physical Therapists	75%	25%	25%	13%
Physical Therapy Assistants	0%	0%	100%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	78%	22%	39%	17%
Registered Nurses Experienced (3+ years of clinical experience)	88%	19%	37%	21%
Respiratory Therapists	0%	0%	0%	0%
Speech-Language Pathologists	0%	0%	0%	0%

Table 130. Additional Reasons for Recruitment Difficulties at Long Island Home Health Care Agencies

Occupation	COVID-19 Related Reasons for Recruitment Difficulties			
	Family Care Giving Commitments Prevented Availability	Lack of Scheduling Flexibility for the Applicant	Vaccine or Booster Refusal	Fear of COVID-19 Exposure
COVID-19 Compliance Officer	18%	36%	18%	27%
Home Health Aides	30%	42%	58%	62%
Homemaker	38%	44%	50%	50%
Intake Coordinator	22%	33%	22%	33%
Licensed Clinical Social Workers (LCSWs)	0%	40%	40%	40%
Licensed Master Social Workers (LMSWs)	0%	20%	20%	40%
Licensed Practical Nurse (LPNs)	18%	36%	36%	27%
Occupational Therapists	13%	38%	38%	38%
Occupational Therapy Assistants	33%	33%	67%	33%
Personal Care Aides	33%	42%	56%	51%
Physical Therapists	13%	38%	25%	25%
Physical Therapy Assistants	0%	100%	0%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	33%	44%	33%	39%
Registered Nurses Experienced (3+ years of clinical experience)	26%	37%	30%	35%
Respiratory Therapists	0%	0%	0%	0%
Speech-Language Pathologists	0%	0%	0%	0%

Table 131. Non-COVID-19 Related Reasons for Retention Difficulties at Long Island Home Health Care Agencies

Occupation	Non-COVID-19 Related Reasons for Retention Difficulties				
	Staff Found Higher Pay and Benefits Elsewhere	Staff Left for Other Employment Sectors	Paperwork and Regulatory Burdens	Retirement	Scheduling Challenges
COVID-19 Compliance Officer	0%	0%	83%	0%	17%
Home Health Aides	58%	48%	33%	5%	63%
Homemaker	62%	38%	15%	8%	46%
Intake Coordinator	50%	30%	30%	0%	40%
Licensed Clinical Social Workers (LCSWs)	50%	0%	50%	0%	0%
Licensed Master Social Workers (LMSWs)	50%	0%	50%	0%	0%
Licensed Practical Nurse (LPNs)	88%	25%	25%	0%	0%
Occupational Therapists	60%	20%	40%	20%	20%
Occupational Therapy Assistants	50%	0%	0%	50%	0%
Personal Care Aides	58%	50%	31%	3%	61%
Physical Therapists	33%	17%	33%	17%	33%
Physical Therapy Assistants	0%	0%	0%	0%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	60%	40%	40%	10%	30%
Registered Nurses Experienced (3+ years of clinical experience)	63%	25%	46%	29%	29%
Respiratory Therapists	0%	0%	0%	0%	0%
Speech-Language Pathologists	0%	0%	0%	0%	0%

Table 132. Additional Reasons for Retention Difficulties at Long Island Home Health Care Agencies

Occupation	COVID-19 Related Reasons for Retention Difficulties				Termination Due to Unsatisfactory Performance
	Scheduling Challenges	Family Care Giving Commitments	Too Few Available Hours for a Full Time Position	Vaccine or Booster Refusal	
COVID-19 Compliance Officer	33%	50%	50%	33%	33%
Home Health Aides	65%	43%	38%	55%	13%
Homemaker	62%	46%	31%	23%	0%
Intake Coordinator	30%	40%	10%	10%	30%
Licensed Clinical Social Workers (LCSWs)	0%	0%	50%	50%	0%
Licensed Master Social Workers (LMSWs)	0%	0%	50%	50%	0%
Licensed Practical Nurse (LPNs)	50%	0%	13%	25%	0%
Occupational Therapists	40%	40%	60%	0%	0%
Occupational Therapy Assistants	50%	50%	50%	0%	0%
Personal Care Aides	64%	39%	28%	47%	11%
Physical Therapists	50%	33%	33%	0%	0%
Physical Therapy Assistants	0%	0%	0%	0%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	60%	30%	30%	30%	10%
Registered Nurses Experienced (3+ years of clinical experience)	50%	33%	21%	25%	8%
Respiratory Therapists	0%	0%	0%	0%	0%
Speech-Language Pathologists	0%	0%	0%	0%	0%

5. Health Workforce Production and Projected Need

a. Graduations

Table 133. The Number of Graduations for Selected Health Care Occupations on Long Island, 2017–2021

Occupational Program	School Year					Change Between 2017 and 2021	
	2017	2018	2019	2020	2021	Number	Percent
Audiologists & Speech Language Pathologists ^a	328	322	350	373	365	37	11.3%
Cardiovascular Technologists and Technicians	18	8	6	6	8	-10	-55.6%
Clinical Laboratory Technicians	18	24	18	19	9	-9	-50.0%
Clinical Laboratory Technologists	55	83	93	79	65	10	18.2%
Clinical Nutritionists	79	76	57	52	46	-33	-41.8%
Creative Arts Therapists ^b	92	83	86	66	52	-40	-43.5%
Dental Assistants	0	0	0	0	2	2	N/A
Dental Hygienists	87	126	45	49	55	-32	-36.8%
Dietitians	0	20	20	20	20	20	N/A
EMTs and Paramedics	11	8	9	8	6	-5	-45.5%
Health Care Administrators	295	250	319	293	236	-59	-20.0%
License Practical Nurses	474	419	402	403	493	19	4.0%
Marriage and Family Therapists	19	13	22	18	17	-2	-10.5%
Medical Assistants	1,197	683	587	496	311	-886	-74.0%
Mental Health Counselors	100	75	134	144	153	53	53.0%
Nuclear Medical Technologists	10	6	15	15	14	4	40.0%
Nurse Midwives	0	9	12	11	11	11	N/A
Nursing and Patient Care Aides and Assistants	99	48	54	109	200	101	102.0%
Occupational Therapists	86	102	145	174	183	97	112.8%
Occupational Therapy Assistants	18	26	26	28	2	-16	-88.9%
Pharmacists	0	0	199	187	187	187	N/A
Pharmacy Technicians/Assistants	39	18	31	25	44	5	12.8%
Physical Therapists	138	116	166	156	104	-34	-24.6%
Physical Therapy Assistants	42	54	51	42	21	-21	-50.0%
Physician Assistants	177	161	213	198	245	68	38.4%
Radiation Therapists and Technologists	56	56	61	61	62	6	10.7%
Recreational Therapists	20	22	20	13	0	-20	-100.0%
Registered Nurses	1,510	1,493	1,783	1,919	1,971	461	30.5%
Registered Nurses with Advanced Education ^c	347	321	428	508	497	150	43.2%
Respiratory Therapists	49	55	69	70	64	15	30.6%
Social Workers	614	656	770	813	748	134	21.8%
Substance Abuse/Addiction Counseling	23	18	26	16	15	-8	-34.8%
Surgical Technology/Technologist	34	46	40	43	38	4	11.8%

^a Audiologists & speech-language pathologists include graduations in audiology, speech-language pathology, and communication sciences and disorders.

^b Creative arts therapists include graduations in art therapy, dance therapy, and music therapy.

^c Registered nurses with advanced education include graduations or certificates in adult health nursing, clinical nurse specialist, critical care nursing, family practice nursing, geriatric nursing, maternal and child health nursing, palliative care nursing, pediatric nursing, perioperative/OR nursing, public health nursing, women's health nursing, and nursing practice.

N/A, not applicable.

Source: Integrated Postsecondary Education Data System.

b. Licenses

Table 134. Number of Licensed Individuals in Selected Health Care Professions on Long Island, 2018–2022

Occupation	2018	2019	2020	2021	2022	Change Between 2018 and 2022	
						Number	Percent
Clinical Laboratory Technicians	290	272	279	278	280	-10	-3.4%
Clinical Laboratory Technologists	2,467	2,361	2,465	2,476	2,413	-54	-2.2%
Dental Assistants	80	77	80	82	86	6	7.5%
Dental Hygienists	1,954	1,954	1,983	2,009	2,032	78	4.0%
Dietitians/Nutritionists	1,137	1,160	1,193	1,232	1,248	111	9.8%
Licensed Practical Nurses	8,949	8,604	8,936	8,843	8,758	-191	-2.1%
Nurse Practitioners	4,249	4,496	5,027	5,435	5,758	1,509	35.5%
Occupational Therapists	2,518	2,604	2,751	2,878	2,962	444	17.6%
Occupational Therapy Assistants	486	491	509	522	527	41	8.4%
Pharmacists	4,432	4,385	4,509	4,690	4,794	362	8.2%
Physical Therapists	4,054	4,121	4,279	4,513	4,651	597	14.7%
Physical Therapist Assistants	1,089	1,095	1,131	1,177	1,194	105	9.6%
Physician Assistants	3,240	3,383	3,698	3,914	4,072	832	25.7%
Registered Nurses	45,719	46,157	48,153	50,085	51,132	5,413	11.8%
Respiratory Therapists	1,130	1,125	1,211	1,199	1,223	93	8.2%
Social Workers ^a	9,751	9,732	10,105	10,495	10,750	999	10.2%
Speech-Language Pathologists	4,356	4,498	4,736	4,869	4,984	628	14.4%

^aSocial workers include both master's Clinical Social Workers and master's Licensed Social Workers.

Source: New York State Education Department, Office of Professions.

c. Employment Projections

Table 135. Employment Projections for Selected Health Care Occupations on Long Island, by Largest Percentage Increase, 2018–2028

Occupational Title	2018	2028	Change Between 2018 and 2028		Average Annual Openings ^a
			Number	Percent	
Home Health and Personal Care Aides	42,230	69,340	27,110	64.2%	9,870
Occupational Therapy Assistants and Aides	320	440	120	37.5%	52
Physical Therapist Assistants and Aides	2,410	3,300	890	36.9%	443
Physician Assistants	2,710	3,680	970	35.8%	279
Nurse Practitioners	2,520	3,400	880	34.9%	246
Medical Assistants	5,470	7,360	1,890	34.6%	896
Physical Therapists	4,030	5,420	1,390	34.5%	336
Phlebotomists	1,750	2,330	580	33.1%	274
Mental Health and Substance Abuse Social Workers	1,280	1,700	420	32.8%	187
Speech-Language Pathologists	2,190	2,870	680	31.1%	204
Respiratory Therapists	1,300	1,700	400	30.8%	119
Diagnostic Medical Sonographers	1,330	1,730	400	30.1%	124
Healthcare Social Workers	2,100	2,720	620	29.5%	297
Occupational Therapists	1,540	1,990	450	29.2%	144
Medical Secretaries and Administrative Assistants	1,600	2,000	400	25.0%	241
Magnetic Resonance Imaging Technologists	410	510	100	24.4%	35
Dental Assistants	3,640	4,500	860	23.6%	543
Dental Hygienists	2,780	3,430	650	23.4%	273
Licensed Practical and Licensed Vocational Nurses	6,080	7,470	1,390	22.9%	655
Medical and Health Services Managers	4,550	5,540	990	21.8%	499
Medical Records and Health Information Technicians	1,890	2,300	410	21.7%	174
Registered Nurses	33,050	40,170	7,120	21.5%	2,668
Clinical Laboratory Technologists and Technicians	3,730	4,510	780	20.9%	338
Radiation Therapists	160	190	30	18.8%	12
Emergency Medical Technicians and Paramedics	3,220	3,790	570	17.7%	290
Surgical Technologists	1,080	1,270	190	17.6%	113
Cardiovascular Technologists and Technicians	740	870	130	17.6%	57
Radiologic Technologists and Technicians	2,300	2,700	400	17.4%	177
Dietitians and Nutritionists	750	880	130	17.3%	65
Orderlies	1,050	1,220	170	16.2%	144
Psychiatric Aides	720	830	110	15.3%	98
Nursing Assistants	15,500	17,480	1,980	12.8%	2,046
Recreational Therapists	320	360	40	12.5%	21
Dietetic Technicians	190	210	20	10.5%	18
Nuclear Medicine Technologists	200	220	20	10.0%	14
Pharmacy Technicians	3,050	3,230	180	5.9%	271
Pharmacists	2,760	2,760	0	0.0%	125
Medical Transcriptionists	240	230	-10	-4.2%	32
Pharmacy Aides	250	220	-30	-12.0%	28

^aAnnual openings reflect creation of new positions in the occupation and replacement for those retiring or otherwise leaving the occupation.
Source: NYS Department of Labor, Jobs in Demand/Projects, Long-Term Occupation Projections, 2018-2028.

E. Mohawk Valley

The Mohawk Valley region includes the counties of Fulton, Herkimer, Montgomery, Oneida, Otsego, and Schoharie.



KEY FINDINGS

Population and Health Care Indicators

- The Mohawk Valley region had a higher level of poverty and a higher percent of the population 65 years of age or older than the state as a whole.
- The rates of deaths due to heart disease and hospitalizations due to heart disease were higher in the Mohawk Valley than in the state as a whole. Additionally, the rate of deaths due to diabetes and hospitalizations due to diabetes were higher in the Mohawk Valley region than throughout New York State.

Health Care Employment

- Overall, the number of health care jobs in the Mohawk Valley region declined between 2017 and 2021.
- The number of health care jobs in ambulatory care in the Mohawk Valley region increased between 2017 and 2021. In contrast, the number of health care jobs in hospitals, in nursing homes, and in home health care all declined during the same time period.

Employer Demand Survey

- Registered nurses are among the most difficult to recruit and retain in all health care settings throughout the Mohawk Valley region.
- Hospitals in the Mohawk Valley region also reported that clinical laboratory technologists, licensed mental health counselors, and social workers are also among the most difficult to recruit and retain. Environmental service aides (janitorial and housekeeping) and food services/dietary are among the most difficult to retain.
- Certified nurse aides/assistants, home health aides, and personal care aides were also reported by nursing homes and by assisted living facilities as among the most difficult to recruit and retain.
- Home health care agencies in the Mohawk Valley region also indicated that home health aides, homemakers, licensed master's social workers, personal care aides, and respiratory therapists are among the most difficult to recruit and retain.

Health Care Production and Projected Workforce Need

- The number of registered nurse graduations increased in the Mohawk Valley region between 2017 and 2021. In contrast, the number of licensed practical nurse graduations decreased during the same time period.
- There are almost 1,600 projected average annual openings in the Mohawk Valley region for home health and personal care aides.

1. Population and Health Care Indicators

Table 136. Selected Population Characteristics for the Mohawk Valley, 2016–2020

Population Characteristics	Regional		Percent of State Population
	Number	Percent of Regional Population	
Total population	484,340	2.5%	N/A
Population under 100% FPL	66,330	14.3%	13.6%
Population under 200% FPL	149,847	32.4%	28.8%
Population aged birth to 17 years	98,508	20.3%	20.9%
Population aged 65 and older	94,677	19.5%	16.5%
Population female aged 15 to 44	85,929	17.7%	20.0%
Women aged 15 to 19 who had a birth in past 12 mos.	200	3.2% ^b	1.9% ^b
Women aged 20 to 34 who had a birth in past 12 mos.	4,588	73.2% ^b	65.9% ^b
Women aged 35 to 50 who had a birth in past 12 mos.	1,477	23.6% ^b	32.2% ^b
Black/African American, non-Hispanic	17,224	3.6%	14.0%
Hispanic/Latino	27,639	5.7%	19.1%
Asian/Pacific Islander, non-Hispanic	11,615	2.4%	8.5%
American Indian/Native Alaskan, non-Hispanic	826	0.2%	0.2%
Two or more/other races	11,435	2.4%	3.0%
Population with less than a high school education ^a	35,148	10.4%	12.8%
Population with a high school diploma or equivalent ^a	175,060	51.8%	40.9%
Population with an associate degree ^a	43,891	13.0%	8.9%
Population with a bachelor's degree ^a	46,986	13.9%	20.9%
Population with a master's degree or higher ^a	36,593	10.8%	16.5%
Home ownership	136,605	70.3%	54.1%

^aEducation levels and rates are based on individuals aged 25 years and older.

^bPercent of total births.

FPL, federal poverty level; N/A, not applicable; mos., months.

Source: US Census, American Community Survey, 5-Year Estimates, 2016–2020.

Table 137. Selected Health Indicators for the Mohawk Valley

Health Indicator	Region		Statewide	
	Number	Rate	Number	Rate
Total deaths, per 100,000	16,280	1117.3	468,772	798.8
Deaths due to heart disease, per 100,000	5,041	346.0	163,285	278.3
Deaths due to all cancers, per 100,000	3,343	229.2	103,089	175.5
Deaths due to diabetes, per 100,000	514	35.3	13,175	22.5
Total births, per 1,000 females aged 15 to 44	14,962	58.0	674,199	57.5
Teen births, per 1,000 females aged 15 to 19	796	16.6	20,879	11.9
Low-birthweight births, as a percent of total births	767	5.4	41,103	6.3
Late/no prenatal care, as a percent of total births	929	6.3	35,780	5.4
Infant deaths, per 1,000 live births	88	5.9	2,940	4.4
Total hospitalizations, per 10,000	176,298	1209.9	6,776,549	1154.8
Total asthma hospitalizations, per 10,000	521	3.6	57,786	9.8
Rate of asthma hospitalizations, aged 25-44 per 10,000	132	4.0	7,994	5.0
Rate of asthma hospitalizations, aged 45-64 per 10,000	105	2.6	13,566	8.8
Pediatric asthma hospitalization, per 10,000	187	6.3	24,839	20.3
Diabetes hospitalizations, per 10,000	3,520	24.2	125,599	21.4
CLRD hospitalizations, per 10,000	5,050	34.7	174,084	29.7
Heart disease hospitalizations, per 10,000	18,444	126.6	616,944	105.1
Total ED visits, per 10,000	726,189	4983.7	24,263,152	4134.7

CLRD, chronic lower respiratory disease; ED, emergency department.

Source: New York State Community Health Indicator Reports.

2. Health Care Sector Employment

Table 138. Number of Health Care Jobs in the Mohawk Valley, by Setting, 2017–2021

Setting	2017	2018	2019	2020	2021	Change Between 2017 and 2021	
						Number	Percent
Hospitals	11,773	11,838	11,785	10,678	9,632	-2,141	-18.2%
Ambulatory care (excluding home health)	6,968	6,967	6,929	7,003	7,576	608	8.7%
Nursing home and residential care facilities	6,724	6,418	6,278	5,911	5,224	-1,500	-22.3%
Home health care	1,712	1,761	1,535	1,418	1,370	-342	-20.0%
Total	27,177	26,984	26,527	25,010	23,802	-3,375	-12.4%

Source: NYS Department of Labor, Quarterly Census of Employment and Wages.

3. Employment by Occupations

Table 139. Number of Jobs and Median Salary for Selected Health Care Occupations in the Mohawk Valley, 2021

Occupational Title	Number of Jobs	Median Salary
Audiologists	N/A	\$81,960
Cardiovascular Technologists and Technicians	80	\$63,520
Clinical Laboratory Technologists and Technicians	270	\$64,210
Dental Assistants	360	\$39,970
Dental Hygienists	270	\$81,080
Diagnostic Medical Sonographers	140	\$80,450
Dietitians and Nutritionists	120	\$64,230
Emergency Medical Technicians	220	\$30,320
Healthcare Social Workers	330	\$51,350
Home Health & Personal Care Aides	9,610	\$30,990
Licensed Practical and Licensed Vocational Nurses	1,670	\$48,640
Magnetic Resonance Imaging Technologists	50	\$77,670
Medical Assistants	480	\$38,770
Medical Secretaries and Administrative Assistants	1,010	\$38,390
Medical Transcriptionists	140	\$31,980
Medical and Health Services Managers	450	\$105,620
Mental Health and Substance Abuse Social Workers	230	\$80,020
Nuclear Medicine Technologists	N/A	\$84,170
Nurse Practitioners	310	\$109,350
Nursing Assistants	2,320	\$32,210
Occupational Therapists	250	\$80,550
Occupational Therapy Assistants	70	\$52,250
Orderlies	50	\$31,750
Paramedics	190	\$39,210
Pharmacists	410	\$131,360
Pharmacy Aides	70	\$30,660
Pharmacy Technicians	540	\$31,410
Phlebotomists	130	\$40,750
Physical Therapist Aides	N/A	\$32,210
Physical Therapist Assistants	130	\$52,340
Physical Therapists	360	\$81,230
Physician Assistants	260	\$125,340
Psychiatric Aides	420	\$51,290
Psychiatric Technicians	80	\$60,200
Radiation Therapists	N/A	\$79,280
Radiologic Technologists and Technicians	310	\$63,520
Recreational Therapists	N/A	\$61,040
Registered Nurses	4,260	\$79,500
Respiratory Therapists	150	\$67,010
Speech-Language Pathologists	210	\$78,140
Surgical Technologists	90	\$48,330

N/A, not available.

Source: NYS Department of Labor, Employment Statistics, Occupational Wage and Employment Estimates (OES)

4. Employer Demand Survey

a. Hospitals

Table 140. Percent of Respondents Who Indicated Recruitment or Retention Difficulties at Mohawk Valley Hospitals

Occupations	Percent of Respondents Indicating Difficulty	
	Recruitment	Retention
Certified Nurse Aides/Nurse Aides/Nurse Assistants/Patient Care Techs	50%	25%
Clinical Laboratory Technicians	67%	0%
Clinical Laboratory Technologists	100%	0%
Environmental (janitorial, housekeeping) Service Aides	25%	75%
Food Services/Dietary	13%	75%
Licensed Mental Health Counselors	100%	0%
Licensed Practical Nurses	63%	63%
Management/Executive Staff	38%	13%
Nurse Practitioners (Behavioral Health)	67%	0%
Nurse Practitioners (All other)	75%	0%
Pharmacists	86%	0%
Physician Assistants	29%	67%
Psychiatrists	0%	0%
Respiratory Therapists	75%	13%
Registered Nurses	100%	75%
Licensed Clinical Social Workers	100%	0%
Licensed Master's Social Workers	100%	0%
Surgical Technicians	71%	0%

Table 141. Reasons for Recruitment Difficulties at Mohawk Valley Hospitals

Occupations	Reasons For Recruiting Difficulties						
	Candidates Applying Not Qualified	General Shortage of Workers	Location/ Transportation Issues	Non-Competitive Salaries	Non-Competitive Benefits	Potential Employees Not Following Up/Skipping Appointments (Ghosting)	Unknown
Certified Nurse Aides/Nurse Aides/Nurse Assistants/Patient Care Techs	50%	50%	0%	25%	0%	25%	0%
Clinical Laboratory Technicians	75%	50%	50%	0%	0%	0%	25%
Clinical Laboratory Technologists	75%	63%	50%	13%	0%	0%	13%
Environmental (janitorial, housekeeping) Service Aides	0%	63%	0%	38%	0%	25%	0%
Food Services/Dietary	50%	50%	0%	38%	0%	13%	13%
Licensed Mental Health Counselors	50%	13%	0%	25%	0%	0%	13%
Licensed Practical Nurses	50%	63%	50%	25%	0%	13%	13%
Management/Executive Staff	13%	50%	0%	25%	0%	0%	13%
Nurse Practitioners (Behavioral Health)	50%	0%	0%	25%	0%	0%	25%
Nurse Practitioners (All other)	50%	0%	0%	25%	0%	0%	25%
Pharmacists	50%	50%	50%	25%	0%	0%	25%
Physician Assistants	50%	0%	0%	25%	0%	0%	25%
Psychiatrists	50%	0%	0%	25%	0%	0%	25%
Respiratory Therapists	50%	63%	50%	100%	0%	0%	13%
Registered Nurses	50%	75%	50%	50%	13%	0%	0%
Licensed Clinical Social Workers	75%	63%	50%	0%	0%	0%	13%
Licensed Master's Social Workers	75%	63%	50%	0%	0%	0%	13%
Surgical Technicians	75%	50%	50%	0%	0%	0%	25%

Table 142. Reasons for Retention Difficulties at Mohawk Valley Hospitals

Occupations	Reasons for Retention Difficulties						
	Career Change	Left for Better Benefits	Left for Better Salary	Left for Family Commitments	Left for Better Work-Life Balance	Retirement	Unknown
Certified Nurse Aides/Nurse Aides/Nurse Assistants/Patient Care Techs	88%	25%	100%	13%	25%	0%	0%
Clinical Laboratory Technicians	13%	0%	75%	0%	0%	0%	13%
Clinical Laboratory Technologists	13%	0%	75%	0%	13%	0%	0%
Environmental (janitorial, housekeeping) Service Aides	100%	13%	100%	0%	75%	0%	0%
Food Services/Dietary	100%	25%	100%	13%	75%	0%	0%
Licensed Mental Health Counselors	0%	0%	75%	0%	0%	13%	13%
Licensed Practical Nurses	25%	13%	88%	0%	13%	25%	0%
Management/Executive Staff	38%	13%	88%	13%	0%	25%	13%
Nurse Practitioners (Behavioral Health)	0%	0%	75%	0%	0%	13%	13%
Nurse Practitioners (All other)	0%	0%	75%	0%	0%	13%	13%
Pharmacists	25%	0%	75%	0%	0%	13%	13%
Physician Assistants	0%	0%	75%	0%	0%	13%	13%
Psychiatrists	0%	0%	75%	0%	0%	13%	13%
Respiratory Therapists	0%	13%	100%	0%	0%	13%	0%
Registered Nurses	50%	25%	100%	13%	75%	25%	0%
Licensed Clinical Social Workers	0%	0%	75%	0%	0%	13%	13%
Licensed Master's Social Workers	0%	0%	75%	0%	0%	13%	13%
Surgical Technicians	0%	0%	75%	0%	0%	13%	13%

b. Nursing Homes and Assisted Living Facilities**Table 143.** Percent of Respondents Who Indicated Recruitment or Retention Difficulties at Mohawk Valley Nursing Homes and Assisted Living Facilities

Occupation	Percent of Respondents Indicating Difficulty	
	Recruiting	Retaining
Certified Nurse Aides/Assistants	100.0%	85.7%
Dietitians/Nutritionists	30.0%	33.3%
Home Health Aides	100.0%	75.0%
Infection Preventionist Practitioners	66.7%	50.0%
Licensed Clinical Social Workers (LCSWs)	50.0%	25.0%
Licensed Master Social Workers (LMSWs)	66.7%	33.3%
Licensed Practical Nurse (LPNs)	66.7%	54.5%
MDS Coordinators	83.3%	33.3%
Nurse Directors/Managers	66.7%	50.0%
Nurse Educators	80.0%	66.7%
Occupational Therapists	57.1%	50.0%
Occupational Therapy Assistants	66.7%	50.0%
Paid Feeding Assistants	100.0%	100.0%
Personal Care Aides	100.0%	100.0%
Physical Therapists	62.5%	50.0%
Physical Therapy Assistants	66.7%	20.0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	83.3%	66.7%
Registered Nurses Experienced (3+ years of clinical experience)	75.0%	50.0%
Respiratory Therapists	50.0%	50.0%
Speech-Language Pathologists	40.0%	33.3%
Temporary Nurse Aide/CNA Trainees	83.3%	83.3%

Table 144. Non-COVID-19 Related Reasons for Recruitment Difficulties at Mohawk Valley Nursing Homes and Assisted Living Facilities

Occupation	Non-COVID-19 Related for Recruitment Difficulties			
	Shortage of Applicants	Shortage of Applicants Meeting Minimum Job Qualifications	Non-Competitive Salary	Non-Competitive Benefits
Certified Nurse Aides/Assistants	86%	43%	43%	0%
Dietitians/Nutritionists	100%	0%	0%	0%
Home Health Aides	80%	60%	20%	20%
Infection Preventionist Practitioners	50%	50%	50%	0%
Licensed Clinical Social Workers (LCSWs)	100%	0%	0%	0%
Licensed Master Social Workers (LMSWs)	50%	50%	0%	0%
Licensed Practical Nurse (LPNs)	100%	25%	50%	13%
MDS Coordinators	100%	20%	0%	0%
Nurse Directors/Managers	88%	25%	13%	13%
Nurse Educators	100%	25%	0%	0%
Occupational Therapists	100%	0%	25%	0%
Occupational Therapy Assistants	100%	0%	0%	0%
Paid Feeding Assistants	100%	0%	0%	0%
Personal Care Aides	100%	63%	25%	0%
Physical Therapists	100%	20%	20%	0%
Physical Therapy Assistants	100%	25%	0%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	100%	0%	0%	0%
Registered Nurses Experienced (3+ years of clinical experience)	89%	0%	22%	0%
Respiratory Therapists	100%	0%	0%	0%
Speech-Language Pathologists	100%	0%	0%	0%
Temporary Nurse Aide/CNA Trainees	80%	20%	20%	0%

Table 145. COVID-19 Related Reasons for Recruitment Difficulties at Mohawk Valley Nursing Homes and Assisted Living Facilities

Occupation	COVID-19 Related Reasons for Recruitment Difficulties				
	Family Care Giving Commitments Prevented Availability	Lack of Online Training Certification	Vaccine or Booster Refusal	Fear of COVID-19 Exposure	COVID-19 Testing of Staff and Required Quarantine if a Positive Result Reduced Available Staff
Certified Nurse Aides/Assistants	43%	57%	86%	71%	71%
Dietitians/Nutritionists	0%	33%	33%	0%	33%
Home Health Aides	20%	40%	100%	20%	40%
Infection Preventionist Practitioners	50%	50%	50%	0%	50%
Licensed Clinical Social Workers (LCSWs)	0%	50%	50%	0%	50%
Licensed Master Social Workers (LMSWs)	0%	50%	50%	0%	50%
Licensed Practical Nurse (LPNs)	25%	38%	75%	50%	50%
MDS Coordinators	40%	20%	40%	40%	40%
Nurse Directors/Managers	13%	13%	38%	25%	25%
Nurse Educators	25%	25%	25%	0%	25%
Occupational Therapists	0%	25%	75%	25%	75%
Occupational Therapy Assistants	25%	25%	75%	25%	50%
Paid Feeding Assistants	0%	0%	100%	100%	100%
Personal Care Aides	25%	25%	75%	25%	25%
Physical Therapists	40%	20%	60%	20%	40%
Physical Therapy Assistants	50%	0%	75%	50%	50%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	20%	20%	60%	40%	60%
Registered Nurses Experienced (3+ years of clinical experience)	22%	11%	44%	44%	33%
Respiratory Therapists	0%	0%	0%	0%	0%
Speech-Language Pathologists	0%	50%	50%	0%	50%
Temporary Nurse Aide/CNA Trainees	40%	40%	80%	60%	80%

Table 146. Non-COVID-19 Related Reasons for Retention Difficulties at Mohawk Valley Nursing Homes and Assisted Living Facilities

Occupation	Non-COVID-19 Related Reasons for Retention Difficulties				
	Staff Found Higher Pay and Benefits Elsewhere	Staff Left for Other Employment Sectors	Paperwork and Regulatory Burdens	Retirement	Scheduling Challenges
Certified Nurse Aides/Assistants	67%	100%	50%	0%	83%
Dietitians/Nutritionists	67%	0%	33%	0%	0%
Home Health Aides	33%	100%	67%	0%	33%
Infection Preventionist Practitioners	50%	50%	50%	0%	50%
Licensed Clinical Social Workers (LCSWs)	0%	0%	0%	0%	0%
Licensed Master Social Workers (LMSWs)	0%	0%	0%	0%	0%
Licensed Practical Nurse (LPNs)	83%	67%	33%	0%	67%
MDS Coordinators	50%	50%	50%	0%	0%
Nurse Directors/Managers	50%	83%	67%	33%	67%
Nurse Educators	50%	100%	75%	50%	50%
Occupational Therapists	67%	0%	0%	33%	0%
Occupational Therapy Assistants	67%	0%	0%	0%	33%
Paid Feeding Assistants	100%	100%	0%	0%	100%
Personal Care Aides	67%	67%	33%	17%	50%
Physical Therapists	67%	0%	0%	0%	33%
Physical Therapy Assistants	100%	0%	0%	0%	100%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	75%	75%	75%	0%	50%
Registered Nurses Experienced (3+ years of clinical experience)	60%	60%	80%	20%	60%
Respiratory Therapists	0%	0%	0%	0%	0%
Speech-Language Pathologists	50%	0%	0%	0%	0%
Temporary Nurse Aide/CNA Trainees	80%	60%	0%	0%	40%

Table 147. COVID-19 Related Reasons for Retention Difficulties at Mohawk Valley Nursing Homes and Assisted Living Facilities

Occupation	COVID-19 Related Reasons for Retention Difficulties			
	Fear of COVID-19 Exposure	Family Care Giving Commitments	Conversion to Another Position	Vaccine or Booster Refusal
Certified Nurse Aides/Assistants	83%	17%	33%	100%
Dietitians/Nutritionists	0%	33%	33%	0%
Home Health Aides	33%	33%	0%	33%
Infection Preventionist Practitioners	50%	0%	0%	50%
Licensed Clinical Social Workers (LCSWs)	0%	0%	0%	0%
Licensed Master Social Workers (LMSWs)	0%	0%	0%	0%
Licensed Practical Nurse (LPNs)	83%	17%	50%	67%
MDS Coordinators	0%	0%	0%	0%
Nurse Directors/Managers	50%	17%	50%	33%
Nurse Educators	25%	25%	75%	25%
Occupational Therapists	0%	33%	0%	33%
Occupational Therapy Assistants	33%	0%	0%	33%
Paid Feeding Assistants	0%	0%	100%	0%
Personal Care Aides	33%	33%	0%	33%
Physical Therapists	33%	33%	0%	67%
Physical Therapy Assistants	0%	0%	0%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	50%	0%	75%	50%
Registered Nurses Experienced (3+ years of clinical experience)	40%	20%	60%	40%
Respiratory Therapists	0%	100%	0%	100%
Speech-Language Pathologists	0%	0%	0%	0%
Temporary Nurse Aide/CNA Trainees	40%	20%	40%	40%

c. Home Health Care**Table 148.** Percent of Respondents Who Indicated Recruitment or Retention Difficulties at Mohawk Valley Home Health Care Agencies

Occupation	Percent of Respondents Indicating Difficulty	
	Recruiting	Retaining
COVID-19 Compliance Officer	50%	0%
Home Health Aides	95%	94%
Homemaker	83%	100%
Intake Coordinator	36%	9%
Licensed Clinical Social Workers (LCSWs)	50%	0%
Licensed Master Social Workers (LMSWs)	100%	0%
Licensed Practical Nurse (LPNs)	73%	36%
Occupational Therapists	33%	0%
Occupational Therapy Assistants	0%	0%
Personal Care Aides	100%	80%
Physical Therapists	67%	33%
Physical Therapy Assistants	33%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	88%	29%
Registered Nurses Experienced (3+ years of clinical experience)	88%	26%
Respiratory Therapists	100%	0%
Speech-Language Pathologists	67%	33%

Table 149. Non-COVID-19 Related Reasons for Recruitment Difficulties at Mohawk Valley Home Health Care Agencies

Occupation	Non-COVID-19 Related Reasons for Recruitment Difficulties			
	Shortage of Applicants	Shortage of Applicants Meeting Minimum Job Qualifications	Non-Competitive Salary	Non-Competitive Benefits
COVID-19 Compliance Officer	0%	50%	50%	0%
Home Health Aides	83%	39%	28%	17%
Homemaker	80%	20%	20%	20%
Intake Coordinator	50%	25%	0%	0%
Licensed Clinical Social Workers (LCSWs)	100%	0%	0%	0%
Licensed Master Social Workers (LMSWs)	100%	0%	0%	0%
Licensed Practical Nurse (LPNs)	75%	13%	38%	25%
Occupational Therapists	100%	0%	100%	0%
Occupational Therapy Assistants	0%	0%	0%	0%
Personal Care Aides	76%	35%	35%	18%
Physical Therapists	100%	0%	50%	0%
Physical Therapy Assistants	100%	0%	0%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	57%	14%	43%	14%
Registered Nurses Experienced (3+ years of clinical experience)	76%	29%	48%	19%
Respiratory Therapists	100%	0%	0%	0%
Speech-Language Pathologists	0%	0%	0%	0%

Table 150. Additional Reasons for Recruitment Difficulties at Mohawk Valley Home Health Care Agencies

Occupation	COVID-19 Related Reasons for Recruitment Difficulties			
	Family Care Giving Commitments Prevented Availability	Lack of Scheduling Flexibility for the Applicant	Vaccine or Booster Refusal	Fear of COVID-19 Exposure
COVID-19 Compliance Officer	0%	50%	50%	0%
Home Health Aides	28%	33%	50%	22%
Homemaker	20%	20%	20%	20%
Intake Coordinator	0%	0%	25%	0%
Licensed Clinical Social Workers (LCSWs)	100%	0%	0%	0%
Licensed Master Social Workers (LMSWs)	50%	0%	0%	0%
Licensed Practical Nurse (LPNs)	25%	25%	13%	0%
Occupational Therapists	100%	0%	0%	0%
Occupational Therapy Assistants	0%	0%	0%	0%
Personal Care Aides	29%	41%	65%	24%
Physical Therapists	50%	0%	0%	0%
Physical Therapy Assistants	0%	0%	0%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	29%	14%	43%	14%
Registered Nurses Experienced (3+ years of clinical experience)	29%	19%	29%	5%
Respiratory Therapists	0%	0%	0%	0%
Speech-Language Pathologists	0%	0%	0%	0%

Table 151. Non-COVID-19 Related Reasons for Retention Difficulties at Mohawk Valley Home Health Care Agencies

Occupation	Non-COVID-19 Related Reasons for Retention Difficulties				
	Staff Found Higher Pay and Benefits Elsewhere	Staff Left for Other Employment Sectors	Paperwork and Regulatory Burdens	Retirement	Scheduling Challenges
COVID-19 Compliance Officer	0%	0%	0%	0%	0%
Home Health Aides	63%	81%	19%	13%	44%
Homemaker	50%	50%	0%	25%	25%
Intake Coordinator	0%	0%	0%	0%	0%
Licensed Clinical Social Workers (LCSWs)	0%	0%	0%	0%	0%
Licensed Master Social Workers (LMSWs)	0%	0%	0%	0%	0%
Licensed Practical Nurse (LPNs)	75%	75%	25%	25%	25%
Occupational Therapists	0%	0%	0%	0%	0%
Occupational Therapy Assistants	0%	0%	0%	0%	0%
Personal Care Aides	67%	83%	17%	8%	50%
Physical Therapists	100%	100%	100%	0%	0%
Physical Therapy Assistants	0%	0%	0%	0%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	50%	50%	100%	0%	0%
Registered Nurses Experienced (3+ years of clinical experience)	67%	67%	50%	33%	0%
Respiratory Therapists	0%	0%	0%	0%	0%
Speech-Language Pathologists	0%	0%	0%	0%	0%

Table 152. Additional Reasons for Retention Difficulties at Mohawk Valley Home Health Care Agencies

Occupation	COVID-19 Related Reasons for Retention Difficulties				Termination due to Unsatisfactory Performance
	Scheduling Challenges	Family Care Giving Commitments	Too Few Available Hours for a Full Time Position	Vaccine or Booster Refusal	
COVID-19 Compliance Officer	0%	0%	0%	0%	0%
Home Health Aides	44%	63%	31%	56%	31%
Homemaker	25%	25%	25%	0%	0%
Intake Coordinator	0%	0%	0%	0%	0%
Licensed Clinical Social Workers (LCSWs)	0%	0%	0%	0%	0%
Licensed Master Social Workers (LMSWs)	0%	0%	0%	0%	0%
Licensed Practical Nurse (LPNs)	25%	50%	25%	25%	0%
Occupational Therapists	0%	0%	0%	0%	0%
Occupational Therapy Assistants	0%	0%	0%	0%	0%
Personal Care Aides	67%	67%	33%	58%	50%
Physical Therapists	0%	0%	100%	0%	0%
Physical Therapy Assistants	0%	0%	0%	0%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	0%	50%	0%	50%	0%
Registered Nurses Experienced (3+ years of clinical experience)	17%	33%	33%	17%	0%
Respiratory Therapists	0%	0%	0%	0%	0%
Speech-Language Pathologists	0%	0%	0%	0%	0%

5. Health Workforce Production and Projected Need

a. Graduations

Table 153. The Number of Graduations for Selected Health Care Occupations in the Mohawk Valley, 2017–2021

Occupational Program	School Year					Change Between 2017 and 2021	
	2017	2018	2019	2020	2021	Number	Percent
Clinical Nutritionists	21	16	18	12	10	-11	-52.4%
Dietitians	47	46	41	31	27	-20	-42.6%
EMTs and Paramedics	10	29	21	20	16	6	60.0%
Health Care Administrators	74	70	104	103	97	23	31.1%
License Practical Nurses	142	115	100	92	118	-24	-16.9%
Medical Assistants	9	13	2	0	0	-9	-100.0%
Occupational Therapists	62	59	59	53	61	-1	-1.6%
Physical Therapists	283	299	312	248	191	-92	-32.5%
Physical Therapy Assistants	26	20	15	21	16	-10	-38.5%
Radiation Therapists and Technologists	34	35	36	33	28	-6	-17.6%
Recreational Therapists	5	7	16	21	12	7	140.0%
Registered Nurses	519	546	599	595	609	90	17.3%
Registered Nurses with Advanced Education ^a	54	42	51	68	51	-3	-5.6%
Respiratory Therapists	22	18	15	14	15	-7	-31.8%
Social Workers	14	8	4	8	3	-11	-78.6%
Substance Abuse/Addiction Counseling	26	21	10	16	18	-8	-30.8%
Surgical Technology/Technologist	10	13	16	10	7	-3	-30.0%

^aRegistered nurses with advanced education include graduations or certificates in adult health nursing, clinical nurse specialist, critical care nursing, family practice nursing, geriatric nursing, maternal and child health nursing, palliative care nursing, pediatric nursing, perioperative/OR nursing, public health nursing, women's health nursing, and nursing practice.

Source: Integrated Postsecondary Education Data System.

b. Licenses**Table 154.** Number of Licensed Individuals in Selected Health Care Professions in the Mohawk Valley, 2018–2022

Occupation	2018	2019	2020	2021	2022	Change Between 2018 and 2022	
						Number	Percent
Clinical Laboratory Technicians	58	52	52	52	48	-10	-17.2%
Clinical Laboratory Technologists	312	297	289	285	281	-31	-9.9%
Dental Assistants	42	42	43	45	45	3	7.1%
Dental Hygienists	297	292	297	290	288	-9	-3.0%
Dietitians/Nutritionists	96	106	106	107	108	12	12.5%
Licensed Practical Nurses	3,385	3,236	3,243	3,122	3,109	-276	-8.2%
Nurse Practitioners	527	563	595	617	653	126	23.9%
Occupational Therapists	387	388	405	422	433	46	11.9%
Occupational Therapy Assistants	128	123	121	125	126	-2	-1.6%
Pharmacists	494	491	481	490	492	-2	-0.4%
Physical Therapists	439	443	452	471	487	48	10.9%
Physical Therapist Assistants	244	241	243	253	260	16	6.6%
Physician Assistants	238	245	251	271	283	45	18.9%
Registered Nurses	7,186	7,213	7,236	7,456	7,522	336	4.7%
Respiratory Therapists	238	245	247	252	251	13	5.5%
Social Workers	722	724	762	777	796	74	10.2%
Speech-Language Pathologists	238	237	259	256	257	19	8.0%

^aSocial workers include both master's Clinical Social Workers and master's Licensed Social Workers.

Source: New York State Education Department, Office of Professions.

Notes: Nurse practitioners are registered nurses and are certified in 1 or more of 16 specialties. Social workers include master's Clinical Social Workers and master's Licensed Social Workers.

c. Employment Projections

Table 155. Employment Projections for Selected Health Care Occupations for the Mohawk Valley, by Largest Percentage Increase, 2018–2028

Occupational Title	2018	2028	Change Between 2018 and 2028		Average Annual Openings ^a
			Number	Percent	
Home Health and Personal Care Aides	7,550	10,950	3,400	45.0%	1,595
Physician Assistants	190	260	70	36.8%	20
Respiratory Therapists	180	240	60	33.3%	16
Physical Therapist Assistants and Aides	180	240	60	33.3%	32
Nurse Practitioners	400	530	130	32.5%	39
Speech-Language Pathologists	260	340	80	30.8%	24
Magnetic Resonance Imaging Technologists	70	90	20	28.6%	6
Healthcare Social Workers	300	380	80	26.7%	41
Mental Health and Substance Abuse Social Workers	380	480	100	26.3%	51
Physical Therapists	390	490	100	25.6%	28
Diagnostic Medical Sonographers	200	250	50	25.0%	17
Medical Assistants	290	360	70	24.1%	43
Emergency Medical Technicians and Paramedics	520	640	120	23.1%	51
Medical and Health Services Managers	530	640	110	20.8%	57
Phlebotomists	100	120	20	20.0%	13
Medical Secretaries and Administrative Assistants	250	300	50	20.0%	35
Dental Assistants	360	430	70	19.4%	52
Occupational Therapists	310	370	60	19.4%	26
Registered Nurses	5,180	6,170	990	19.1%	402
Dental Hygienists	290	340	50	17.2%	27
Psychiatric Technicians	60	70	10	16.7%	6
Psychiatric Aides	500	580	80	16.0%	69
Surgical Technologists	130	150	20	15.4%	14
Medical Records and Health Information Technicians	440	500	60	13.6%	36
Licensed Practical and Licensed Vocational Nurses	2,450	2,780	330	13.5%	232
Radiologic Technologists and Technicians	380	430	50	13.2%	27
Cardiovascular Technologists and Technicians	90	100	10	11.1%	7
Nursing Assistants	3,040	3,360	320	10.5%	390
Clinical Laboratory Technologists and Technicians	410	450	40	9.8%	32
Dietitians and Nutritionists	130	140	10	7.7%	10
Pharmacy Technicians	420	450	30	7.1%	38
Medical Transcriptionists	60	60	0	0.0%	8
Pharmacists	560	550	-10	-1.8%	24
Pharmacy Aides	100	90	-10	-10.0%	12

^aAnnual openings reflect creation of new positions in the occupation and replacement for those retiring or otherwise leaving the occupation.

Source: NYS Department of Labor, Jobs in Demand/Projects, Long-Term Occupation Projections, 2018-2028.

F. New York City

The NYSDOL New York City region includes the 5 counties in New York City: Bronx, New York (Manhattan), Kings (Brooklyn), Queens, and Richmond (Staten Island).



KEY FINDINGS

Population and Health Care Indicators

- New York City had a higher level of poverty than the state as a whole.
- There were higher rates of asthma and of diabetes hospitalizations in New York City compared to the state as a whole.

Health Care Employment

- Overall, the number of health care jobs in New York City increased between 2017 and 2021.
- The number of health care jobs in hospitals, ambulatory care, and home health care in New York City increased between 2017 and 2021. In contrast, the number of health care jobs in nursing homes declined during the same time period.

Employer Demand Survey

- Registered nurses are among the most difficult to recruit and retain in all health care settings throughout New York City.
- Hospitals in New York City also reported that clinical laboratory technologists, licensed practical nurses, nurse practitioners, physician assistants, psychiatrists, respiratory therapists, social workers, and surgical technicians are among the most difficult to recruit and retain.
- Certified nurse aides/assistants, licensed practical nurses, and nurse directors/managers were also reported by nursing homes and by assisted living facilities as among the most difficult to recruit and retain.
- Home health care agencies in New York City also indicated that home health aides, homemakers, personal care aides, speech-language pathologists are among the most difficult to recruit and retain.

Health Care Production and Projected Workforce Need

- The number of both licensed practical nurse and social worker graduations increased in New York City between 2017 and 2021. The number of registered nurse graduations declined slightly during the same time period.
- There are more than 69,000 projected average annual openings in New York City for home health and personal care aides, over 6,600 projected average annual openings for registered nurses, almost 5,400 projected average annual openings for nursing assistants, and more than 1,700 projected average annual openings for licensed practical nurses.

1. Population and Health Care Indicators

Table 156. Selected Population Characteristics for New York City, 2016-2020

Population Characteristics	Regional		Percent of State Population
	Number	Percent of Regional Population	
Total population	8,379,552	42.9%	N/A
Population under 100% FPL	1,423,230	17.3%	13.6%
Population under 200% FPL	2,858,510	34.7%	28.8%
Population aged birth to 17 years	1,737,469	20.7%	20.9%
Population aged 65 and older	1,252,513	14.9%	16.5%
Population female aged 15 to 44	1,846,594	22.0%	20.0%
Women aged 15 to 19 who had a birth in past 12 mos.	1,721	1.7% ^b	1.9% ^b
Women aged 20 to 34 who had a birth in past 12 mos.	63,789	63.1% ^b	65.9% ^b
Women aged 35 to 50 who had a birth in past 12 mos.	35,568	35.2% ^b	32.2% ^b
Black/African American, non-Hispanic	1,795,055	21.4%	14.0%
Hispanic/Latino	2,423,869	28.9%	19.1%
Asian/Pacific Islander, non-Hispanic	1,188,123	14.2%	8.5%
American Indian/Native Alaskan, non-Hispanic	13,971	0.2%	0.2%
Two or more/other races	281,802	3.4%	3.0%
Population with less than a high school education ^a	1,022,072	17.2%	12.8%
Population with a high school diploma or equivalent ^a	2,206,882	37.2%	40.9%
Population with an associate degree ^a	382,261	6.4%	8.9%
Population with a bachelor's degree ^a	1,340,776	22.6%	20.9%
Population with a master's degree or higher ^a	981,435	16.5%	16.5%
Home ownership	1,048,262	32.8%	54.1%

^aEducation levels and rates are based on individuals aged 25 years and older.

^bPercent of total births.

FPL, federal poverty level; N/A, not applicable; mos., months.

Source: US Census, American Community Survey, 5-Year Estimates, 2016-2020.

Table 157. Selected Health Indicators for New York City

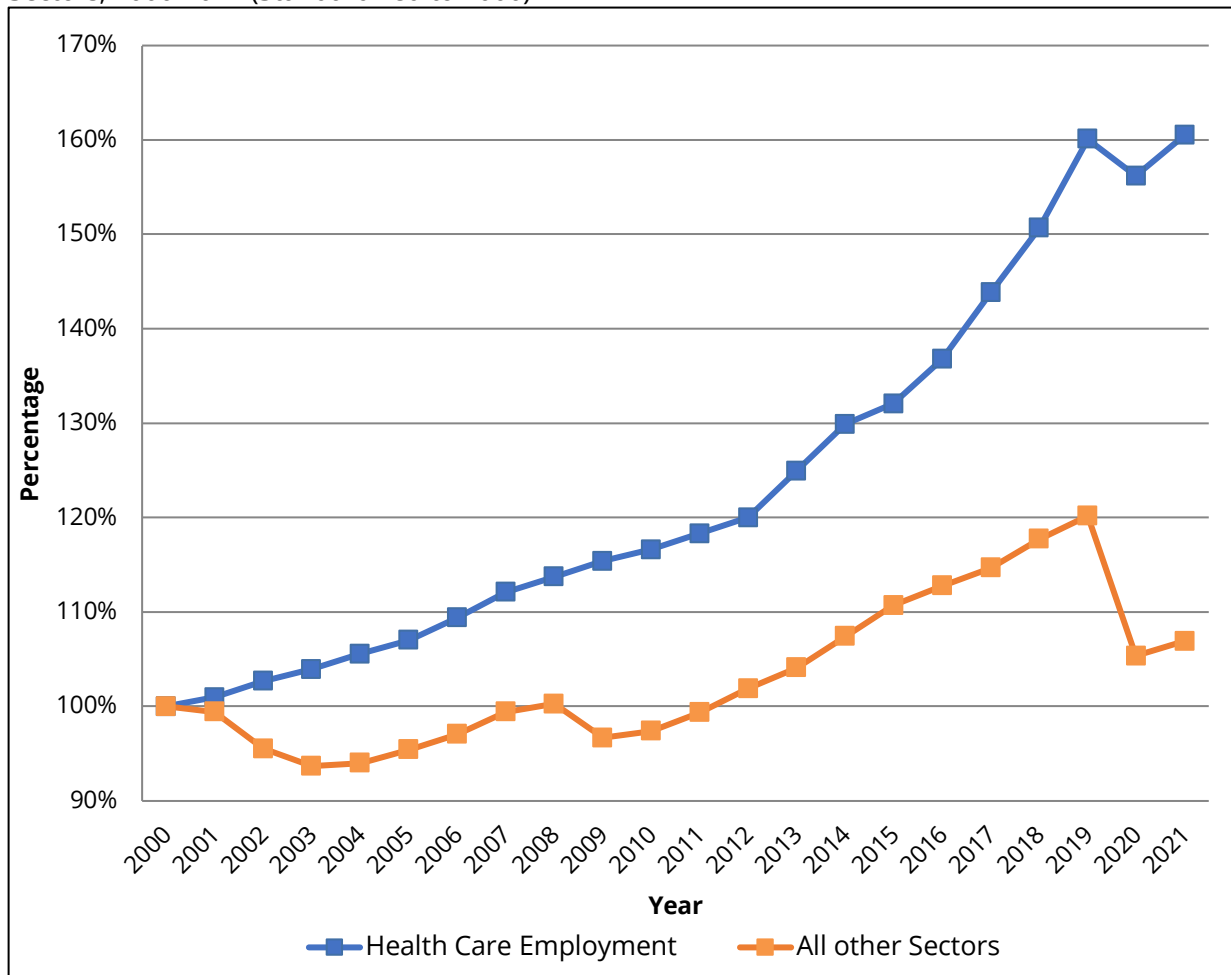
Health Indicator	Region		Statewide	
	Number	Rate	Number	Rate
Total deaths, per 100,000	162,286	643.2	468,772	798.8
Deaths due to heart disease, per 100,000	64,296	254.8	163,285	278.3
Deaths due to all cancers, per 100,000	37,955	150.0	103,089	175.5
Deaths due to diabetes, per 100,000	5,637	22.3	13,175	22.5
Total births, per 1,000 females aged 15 to 44	322,797	58.0	674,199	57.5
Teen births, per 1,000 females aged 15 to 19	8,484	12.8	20,879	11.9
Low-birthweight births, as a percent of total births	20,984	6.7	41,103	6.3
Late/no prenatal care, as a percent of total births	21,065	6.6	35,780	5.4
Infant deaths, per 1,000 live births	1,263	3.9	2,940	4.4
Total hospitalizations, per 10,000	2,949,132	1168.9	6,776,549	1154.8
Total asthma hospitalizations, per 10,000	37,084	14.7	57,786	9.8
Rate of asthma hospitalizations, aged 25-44 per 10,000	4,641	5.8	7,994	5.0
Rate of asthma hospitalizations, aged 45-64 per 10,000	8,724	14.1	13,566	8.8
Pediatric asthma hospitalization, per 10,000	16,144	30.8	24,839	20.3
Diabetes hospitalizations, per 10,000	62,318	24.7	125,599	21.4
CLRD hospitalizations, per 10,000	78,134	31.0	174,084	29.7
Heart disease hospitalizations, per 10,000	244,938	97.1	616,944	105.1
Total ED visits, per 10,000	11,407,913	4521.4	24,263,152	4134.7

CLRD, chronic lower respiratory disease; ED, emergency department.

Source: New York State Community Health Indicator Reports.

2. Health Care Sector Employment

Figure 9. Growth of Employment in New York City, Health Care Sector and All Other Employment Sectors, 2000-2021 (Standardized to 2000)



Source: NYS Department of Labor, Quarterly Census of Employment and Wages.

Table 158. Number of Health Care Jobs in New York City, by Setting, 2017-2021

Setting	2017	2018	2019	2020	2021	Change Between 2017 and 2021	
						Number	Percent
Hospitals	205,662	205,108	208,304	211,577	209,483	3,821	1.9%
Ambulatory care (excluding home health)	129,172	129,152	134,312	122,008	132,903	3,731	2.9%
Nursing home and residential care facilities	50,172	49,834	49,134	45,785	43,542	-6,630	-13.2%
Home health care	151,886	178,335	205,851	203,713	213,270	61,384	40.4%
Total	536,892	562,429	597,601	583,083	599,198	62,306	11.6%

Source: NYS Department of Labor, Quarterly Census of Employment and Wages.

3. Employment by Occupations

Table 159. Number of Jobs and Median Salary for Selected Health Care Occupations in New York City, 2021

Occupational Title	Number of Jobs	Median Salary
Audiologists	N/A	\$98,620
Cardiovascular Technologists and Technicians	1,350	\$78,800
Clinical Laboratory Technologists and Technicians	7,410	\$79,230
Dental Assistants	7,680	\$50,110
Dental Hygienists	2,750	\$101,730
Diagnostic Medical Sonographers	2,330	\$98,620
Dietitians and Nutritionists	1,990	\$79,750
Emergency Medical Technicians	5,180	\$45,310
Healthcare Social Workers	11,580	\$63,030
Home Health & Personal Care Aides	324,600	\$32,390
Licensed Practical and Licensed Vocational Nurses	13,860	\$62,220
Magnetic Resonance Imaging Technologists	1,000	\$102,110
Medical Assistants	13,440	\$40,920
Medical Secretaries and Administrative Assistants	16,130	\$48,340
Medical Transcriptionists	1,190	\$39,010
Medical and Health Services Managers	11,650	\$164,700
Mental Health and Substance Abuse Social Workers	5,870	\$79,350
Nuclear Medicine Technologists	320	\$103,450
Nurse Practitioners	5,810	\$134,310
Nursing Assistants	35,460	\$49,660
Occupational Therapists	3,090	\$102,530
Occupational Therapy Assistants	610	\$67,210
Orderlies	1,940	\$49,620
Paramedics	1,810	\$63,890
Pharmacists	8,440	\$134,490
Pharmacy Aides	670	\$39,860
Pharmacy Technicians	8,430	\$38,400
Phlebotomists	2,060	\$50,650
Physical Therapist Aides	1,180	\$38,830
Physical Therapist Assistants	1,000	\$67,160
Physical Therapists	5,580	\$103,140
Physician Assistants	5,850	\$134,530
Psychiatric Aides	1,830	\$50,700
Psychiatric Technicians	960	\$48,730
Radiation Therapists	440	\$131,220
Radiologic Technologists and Technicians	5,340	\$81,360
Recreational Therapists	690	\$62,870
Registered Nurses	78,400	\$102,860
Respiratory Therapists	2,640	\$98,200
Speech-Language Pathologists	5,150	\$103,070
Surgical Technologists	2,550	\$62,190

N/A, not available.

Source: NYS Department of Labor, Employment Statistics, Occupational Wage and Employment Estimates (OES)

4. Employer Demand Survey

a. Hospitals

Table 160. Percent of Respondents Who Indicated Recruitment or Retention Difficulties at New York City Hospitals

Occupations	Percent of Respondents Indicating Difficulty	
	Recruitment	Retention
Certified Nurse Aides/Nurse Aides/Nurse Assistants/Patient Care Techs	45%	62%
Clinical Laboratory Technicians	71%	49%
Clinical Laboratory Technologists	97%	86%
Environmental (janitorial, housekeeping) Service Aides	20%	35%
Food Services/Dietary	28%	58%
Licensed Mental Health Counselors	79%	48%
Licensed Practical Nurses	94%	69%
Management/Executive Staff	53%	49%
Nurse Practitioners (Behavioral Health)	94%	77%
Nurse Practitioners (All other)	85%	69%
Pharmacists	65%	38%
Physician Assistants	95%	86%
Psychiatrists	100%	81%
Respiratory Therapists	98%	78%
Registered Nurses	90%	90%
Licensed Clinical Social Workers	89%	91%
Licensed Master's Social Workers	92%	89%
Surgical Technicians	98%	86%

Table 161. Reasons for Recruitment Difficulties at New York City Hospitals

Occupations	Reasons For Recruiting Difficulties						
	Candidates Applying Not Qualified	General Shortage of Workers	Location/ Transportation Issues	Non-Competitive Salaries	Non-Competitive Benefits	Potential Employees Not Following Up/Skipping Appointments (Ghosting)	Unknown
Certified Nurse Aides/Nurse Aides/Nurse Assistants/Patient Care Techs	13%	55%	3%	13%	8%	13%	35%
Clinical Laboratory Technicians	10%	68%	0%	33%	0%	25%	5%
Clinical Laboratory Technologists	20%	78%	5%	70%	0%	28%	3%
Environmental (janitorial, housekeeping) Service Aides	5%	25%	8%	8%	8%	3%	30%
Food Services/Dietary	5%	40%	8%	8%	8%	3%	15%
Licensed Mental Health Counselors	5%	33%	3%	10%	0%	18%	8%
Licensed Practical Nurses	3%	48%	5%	48%	0%	18%	5%
Management/Executive Staff	38%	40%	0%	20%	0%	3%	15%
Nurse Practitioners (Behavioral Health)	20%	75%	0%	30%	0%	3%	5%
Nurse Practitioners (All other)	15%	75%	0%	40%	0%	3%	5%
Pharmacists	15%	30%	0%	35%	0%	3%	3%
Physician Assistants	5%	60%	0%	45%	0%	5%	0%
Psychiatrists	8%	68%	0%	18%	0%	3%	30%
Respiratory Therapists	5%	85%	23%	68%	0%	25%	3%
Registered Nurses	43%	65%	0%	35%	0%	25%	3%
Licensed Clinical Social Workers	35%	60%	0%	20%	0%	3%	5%
Licensed Master's Social Workers	60%	33%	0%	35%	0%	28%	3%
Surgical Technicians	35%	48%	0%	35%	0%	10%	28%

Table 162. Reasons for Retention Difficulties at New York City Hospitals

Occupations	Reasons for Retention Difficulties						
	Career Change	Left for Better Benefits	Left for Better Salary	Left for Family Commitments	Left for Better Work-Life Balance	Retirement	Unknown
Certified Nurse Aides/Nurse Aides/Nurse Assistants/Patient Care Techs	0%	45%	13%	3%	5%	18%	0%
Clinical Laboratory Technicians	5%	3%	50%	3%	0%	8%	33%
Clinical Laboratory Technologists	28%	3%	80%	10%	30%	15%	5%
Environmental (janitorial, housekeeping) Service Aides	35%	5%	23%	3%	3%	15%	38%
Food Services/Dietary	60%	3%	43%	10%	0%	13%	15%
Licensed Mental Health Counselors	5%	5%	25%	0%	25%	3%	33%
Licensed Practical Nurses	43%	3%	65%	0%	3%	13%	15%
Management/Executive Staff	55%	3%	43%	0%	20%	5%	33%
Nurse Practitioners (Behavioral Health)	3%	3%	48%	8%	48%	3%	13%
Nurse Practitioners (All other)	5%	3%	68%	8%	48%	5%	13%
Pharmacists	13%	5%	30%	0%	13%	8%	58%
Physician Assistants	3%	3%	73%	8%	48%	0%	18%
Psychiatrists	3%	3%	65%	0%	15%	3%	18%
Respiratory Therapists	5%	3%	73%	0%	23%	33%	10%
Registered Nurses	35%	5%	60%	13%	53%	35%	5%
Licensed Clinical Social Workers	28%	3%	65%	8%	33%	3%	13%
Licensed Master's Social Workers	25%	3%	68%	8%	33%	5%	10%
Surgical Technicians	35%	0%	78%	0%	10%	5%	8%

b. Nursing Homes and Assisted Living Facilities**Table 163.** Percent of Respondents Who Indicated Recruitment or Retention Difficulties at New York City Nursing Homes and Assisted Living Facilities

Occupation	Percent of Respondents Indicating Difficulty	
	Recruiting	Retaining
Certified Nurse Aides/Assistants	81.8%	61.9%
Dietitians/Nutritionists	37.0%	14.3%
Home Health Aides	63.6%	54.2%
Infection Preventionist Practitioners	37.5%	26.7%
Licensed Clinical Social Workers (LCSWs)	36.8%	30.0%
Licensed Master Social Workers (LMSWs)	66.7%	17.6%
Licensed Practical Nurse (LPNs)	96.0%	64.0%
MDS Coordinators	70.6%	16.7%
Nurse Directors/Managers	88.0%	40.0%
Nurse Educators	52.9%	29.4%
Occupational Therapists	45.8%	20.8%
Occupational Therapy Assistants	52.6%	23.5%
Paid Feeding Assistants	100.0%	0.0%
Personal Care Aides	66.7%	50.0%
Physical Therapists	41.7%	13.0%
Physical Therapy Assistants	45.0%	17.6%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	95.5%	77.3%
Registered Nurses Experienced (3+ years of clinical experience)	93.1%	62.1%
Respiratory Therapists	70.0%	44.4%
Speech-Language Pathologists	42.9%	15.8%
Temporary Nurse Aide/CNA Trainees	81.8%	45.5%

Table 164. Non-COVID-19 Related Reasons for Recruitment Difficulties at New York City Nursing Homes and Assisted Living Facilities

Occupation	Non-COVID-19 Related Reasons for Recruitment Difficulties			
	Shortage of Applicants	Shortage of Applicants Meeting Minimum Job Qualifications	Non-Competitive Salary	Non-Competitive Benefits
Certified Nurse Aides/Assistants	94%	17%	22%	6%
Dietitians/Nutritionists	90%	30%	10%	0%
Home Health Aides	93%	7%	21%	7%
Infection Preventionist Practitioners	67%	17%	50%	17%
Licensed Clinical Social Workers (LCSWs)	71%	43%	29%	0%
Licensed Master Social Workers (LMSWs)	60%	40%	40%	0%
Licensed Practical Nurse (LPNs)	88%	17%	29%	13%
MDS Coordinators	92%	8%	8%	8%
Nurse Directors/Managers	86%	23%	23%	14%
Nurse Educators	100%	11%	22%	11%
Occupational Therapists	64%	18%	27%	9%
Occupational Therapy Assistants	50%	20%	30%	10%
Paid Feeding Assistants	100%	0%	0%	0%
Personal Care Aides	75%	0%	50%	0%
Physical Therapists	60%	20%	30%	10%
Physical Therapy Assistants	56%	22%	22%	11%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	91%	14%	33%	14%
Registered Nurses Experienced (3+ years of clinical experience)	89%	19%	26%	11%
Respiratory Therapists	71%	14%	29%	14%
Speech-Language Pathologists	56%	22%	11%	0%
Temporary Nurse Aide/CNA Trainees	78%	33%	33%	11%

Table 165. COVID-19 Related Reasons for Recruitment Difficulties at New York City Nursing Homes and Assisted Living Facilities

Occupation	COVID-19 Related Reasons for Recruitment Difficulties				
	Family Care Giving Commitments Prevented Availability	Lack of Online Training Certification	Vaccine or Booster Refusal	Fear of COVID-19 Exposure	COVID-19 Testing of Staff and Required Quarantine if a Positive Result Reduced Available Staff
Certified Nurse Aides/Assistants	17%	6%	50%	11%	11%
Dietitians/Nutritionists	10%	10%	30%	10%	10%
Home Health Aides	7%	14%	57%	43%	29%
Infection Preventionist Practitioners	0%	33%	0%	0%	0%
Licensed Clinical Social Workers (LCSWs)	0%	0%	43%	14%	14%
Licensed Master Social Workers (LMSWs)	10%	0%	20%	0%	10%
Licensed Practical Nurse (LPNs)	17%	4%	46%	17%	17%
MDS Coordinators	8%	8%	0%	0%	0%
Nurse Directors/Managers	9%	5%	14%	5%	14%
Nurse Educators	0%	11%	0%	0%	0%
Occupational Therapists	9%	9%	18%	0%	9%
Occupational Therapy Assistants	0%	10%	20%	0%	10%
Paid Feeding Assistants	0%	0%	0%	0%	0%
Personal Care Aides	25%	0%	75%	50%	50%
Physical Therapists	0%	10%	20%	0%	10%
Physical Therapy Assistants	0%	11%	22%	0%	11%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	5%	5%	33%	14%	19%
Registered Nurses Experienced (3+ years of clinical experience)	7%	4%	26%	7%	15%
Respiratory Therapists	0%	14%	14%	0%	0%
Speech-Language Pathologists	0%	11%	22%	0%	11%
Temporary Nurse Aide/CNA Trainees	0%	33%	11%	11%	22%

Table 166. Non-COVID-19 Related Reasons for Retention Difficulties at New York City Nursing Homes and Assisted Living Facilities

Occupation	Non-COVID-19 Reasons for Retention Difficulties				
	Staff Found Higher Pay and Benefits Elsewhere	Staff Left for Other Employment Sectors	Paperwork and Regulatory Burdens	Retirement	Scheduling Challenges
Certified Nurse Aides/Assistants	85%	62%	0%	31%	15%
Dietitians/Nutritionists	50%	25%	25%	0%	0%
Home Health Aides	77%	62%	0%	8%	15%
Infection Preventionist Practitioners	75%	25%	50%	0%	0%
Licensed Clinical Social Workers (LCSWs)	67%	50%	50%	17%	17%
Licensed Master Social Workers (LMSWs)	100%	67%	33%	33%	33%
Licensed Practical Nurse (LPNs)	81%	50%	44%	13%	19%
MDS Coordinators	67%	33%	33%	0%	0%
Nurse Directors/Managers	60%	50%	30%	20%	10%
Nurse Educators	60%	20%	20%	20%	20%
Occupational Therapists	60%	40%	20%	0%	20%
Occupational Therapy Assistants	50%	50%	0%	0%	0%
Paid Feeding Assistants	0%	0%	0%	0%	0%
Personal Care Aides	100%	33%	0%	33%	33%
Physical Therapists	33%	33%	0%	0%	0%
Physical Therapy Assistants	33%	33%	0%	0%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	71%	47%	29%	6%	12%
Registered Nurses Experienced (3+ years of clinical experience)	67%	33%	22%	11%	22%
Respiratory Therapists	75%	50%	25%	25%	25%
Speech-Language Pathologists	33%	33%	0%	0%	0%
Temporary Nurse Aide/CNA Trainees	20%	40%	0%	0%	0%

Table 167. COVID-19 Related Reasons for Retention Difficulties at New York City Nursing Homes and Assisted Living Facilities

Occupation	COVID-19 Related Reasons for Retention Difficulties			
	Fear of COVID-19 Exposure	Family Care Giving Commitments	Conversion to Another Position	Vaccine or Booster Refusal
Certified Nurse Aides/Assistants	15%	8%	31%	39%
Dietitians/Nutritionists	0%	0%	25%	25%
Home Health Aides	39%	8%	23%	39%
Infection Preventionist Practitioners	0%	0%	0%	0%
Licensed Clinical Social Workers (LCSWs)	17%	17%	17%	33%
Licensed Master Social Workers (LMSWs)	33%	33%	33%	33%
Licensed Practical Nurse (LPNs)	13%	6%	19%	31%
MDS Coordinators	0%	0%	0%	0%
Nurse Directors/Managers	0%	0%	20%	10%
Nurse Educators	0%	0%	0%	0%
Occupational Therapists	0%	20%	20%	20%
Occupational Therapy Assistants	0%	0%		
Paid Feeding Assistants	0%	0%	0%	0%
Personal Care Aides	0%	0%	33%	33%
Physical Therapists	0%	0%	33%	33%
Physical Therapy Assistants	0%	0%	33%	33%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	12%	12%	29%	18%
Registered Nurses Experienced (3+ years of clinical experience)	11%	11%	17%	28%
Respiratory Therapists	0%	25%	0%	25%
Speech-Language Pathologists	0%	0%	33%	33%
Temporary Nurse Aide/CNA Trainees	0%	0%	20%	0%

c. Home Health Care**Table 168.** Percent of Respondents Who Indicated Recruitment or Retention Difficulties at New York City Home Health Care Agencies

Occupation	Percent of Respondents Indicating Difficulty	
	Recruiting	Retaining
COVID-19 Compliance Officer	26%	20%
Home Health Aides	89%	68%
Homemaker	80%	70%
Intake Coordinator	38%	25%
Licensed Clinical Social Workers (LCSWs)	35%	13%
Licensed Master Social Workers (LMSWs)	47%	17%
Licensed Practical Nurse (LPNs)	69%	46%
Occupational Therapists	69%	56%
Occupational Therapy Assistants	80%	75%
Personal Care Aides	93%	75%
Physical Therapists	68%	50%
Physical Therapy Assistants	67%	50%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	81%	58%
Registered Nurses Experienced (3+ years of clinical experience)	77%	46%
Respiratory Therapists	50%	25%
Speech-Language Pathologists	82%	55%

Table 169. Non-COVID-19 Related Reasons for Recruitment Difficulties at New York City Home Health Care Agencies

Occupation	Non-COVID-19 Related Reasons for Recruitment Difficulties			
	Shortage of Applicants	Shortage of Applicants Meeting Minimum Job Qualifications	Non-Competitive Salary	Non-Competitive Benefits
COVID-19 Compliance Officer	54%	46%	31%	23%
Home Health Aides	87%	25%	25%	9%
Homemaker	94%	13%	38%	6%
Intake Coordinator	68%	25%	39%	7%
Licensed Clinical Social Workers (LCSWs)	33%	50%	67%	17%
Licensed Master Social Workers (LMSWs)	67%	11%	56%	22%
Licensed Practical Nurse (LPNs)	86%	9%	41%	23%
Occupational Therapists	73%	18%	36%	18%
Occupational Therapy Assistants	25%	25%	75%	50%
Personal Care Aides	91%	23%	20%	11%
Physical Therapists	69%	15%	38%	15%
Physical Therapy Assistants	0%	0%	100%	50%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	82%	21%	42%	16%
Registered Nurses Experienced (3+ years of clinical experience)	83%	17%	40%	21%
Respiratory Therapists	0%	0%	100%	100%
Speech-Language Pathologists	0%	0%	0%	0%

Table 170. Additional Reasons for Recruitment Difficulties at New York City Home Health Care Agencies

Occupation	COVID-19 Related Reasons for Recruitment Difficulties			
	Family Care Giving Commitments Prevented Availability	Lack of Scheduling Flexibility for the Applicant	Vaccine or Booster Refusal	Fear of COVID-19 Exposure
COVID-19 Compliance Officer	23%	46%	31%	23%
Home Health Aides	31%	50%	56%	44%
Homemaker	42%	44%	58%	56%
Intake Coordinator	21%	25%	29%	36%
Licensed Clinical Social Workers (LCSWs)	0%	33%	17%	33%
Licensed Master Social Workers (LMSWs)	0%	22%	0%	22%
Licensed Practical Nurse (LPNs)	14%	32%	18%	23%
Occupational Therapists	18%	27%	36%	27%
Occupational Therapy Assistants	25%	50%	50%	25%
Personal Care Aides	44%	42%	55%	52%
Physical Therapists	15%	31%	23%	15%
Physical Therapy Assistants	0%	100%	0%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	26%	39%	39%	37%
Registered Nurses Experienced (3+ years of clinical experience)	24%	33%	36%	32%
Respiratory Therapists	0%	100%	0%	0%
Speech-Language Pathologists	0%	0%	0%	0%

Table 171. Non-COVID-19 Related Reasons for Retention Difficulties at New York City Home Health Care Agencies

Occupation	Non-COVID-19 Related Reasons for Retention Difficulties				
	Staff found Higher Pay and Benefits Elsewhere	Staff Left for Other Employment Sectors	Paperwork and Regulatory Burdens	Retirement	Scheduling Challenges
COVID-19 Compliance Officer	20%	10%	50%	0%	20%
Home Health Aides	50%	52%	26%	15%	55%
Homemaker	64%	36%	7%	0%	36%
Intake Coordinator	65%	41%	29%	0%	41%
Licensed Clinical Social Workers (LCSWs)	100%	0%	0%	0%	0%
Licensed Master Social Workers (LMSWs)	100%	33%	0%	0%	33%
Licensed Practical Nurse (LPNs)	85%	23%	15%	0%	8%
Occupational Therapists	56%	44%	22%	44%	11%
Occupational Therapy Assistants	67%	0%	0%	33%	0%
Personal Care Aides	51%	55%	28%	9%	60%
Physical Therapists	60%	30%	20%	20%	30%
Physical Therapy Assistants	100%	0%	0%	0%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	73%	27%	35%	4%	23%
Registered Nurses Experienced (3+ years of clinical experience)	64%	33%	33%	12%	31%
Respiratory Therapists	100%	0%	0%	0%	0%
Speech-Language Pathologists	0%	0%	0%	0%	0%

Table 172. Additional Reasons for Retention Difficulties at New York City Home Health Care Agencies

Occupation	COVID-19 Related Reasons for Retention Difficulties				Termination due to Unsatisfactory Performance
	Scheduling Challenges	Family Care Giving Commitments	Too Few Available Hours for a Full Time Position	Vaccine or Booster Refusal	
COVID-19 Compliance Officer	30%	30%	40%	30%	20%
Home Health Aides	53%	48%	44%	53%	13%
Homemaker	43%	50%	43%	36%	0%
Intake Coordinator	24%	24%	12%	24%	18%
Licensed Clinical Social Workers (LCSWs)	0%	0%	100%	0%	0%
Licensed Master Social Workers (LMSWs)	33%	0%	67%	0%	0%
Licensed Practical Nurse (LPNs)	38%	0%	15%	15%	0%
Occupational Therapists	44%	33%	33%	0%	0%
Occupational Therapy Assistants	33%	33%	67%	0%	0%
Personal Care Aides	55%	43%	43%	49%	13%
Physical Therapists	30%	30%	40%	10%	0%
Physical Therapy Assistants	0%	0%	100%	0%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	38%	19%	19%	31%	4%
Registered Nurses Experienced (3+ years of clinical experience)	40%	24%	19%	36%	7%
Respiratory Therapists	0%	0%	100%	0%	0%
Speech-Language Pathologists	0%	0%	0%	0%	0%

5. Health Workforce Production and Projected Need

a. Graduations

Table 173. The Number of Graduations for Selected Health Care Occupations in New York City, 2017-2021

Occupational Program	School Year					Change Between 2017 and 2021	
	2017	2018	2019	2020	2021	Number	Percent
Audiologists & Speech Language Pathologists ^a	822	877	797	883	1,011	189	23.0%
Clinical Laboratory Technicians	34	32	26	24	26	-8	-23.5%
Clinical Laboratory Technologists	136	113	88	102	85	-51	-37.5%
Creative Arts Therapists ^b	69	68	84	64	75	6	8.7%
Dental Assistants	202	186	154	148	91	-111	-55.0%
Dental Hygienists	185	182	177	212	215	30	16.2%
Dietitians	231	285	279	267	275	44	19.0%
Electrocardiograph Technologists and Technicians	193	143	115	131	52	-141	-73.1%
EMTs and Paramedics	63	64	86	46	61	-2	-3.2%
Health Care Administrators	1,000	1,004	1,052	1,004	1,109	109	10.9%
License Practical Nurses	208	243	334	287	347	139	66.8%
Marriage and Family Therapists	39	28	0	9	22	-17	-43.6%
Medical Assistants	2,486	2,420	2,175	2,067	1,659	-827	-33.3%
Mental Health Counselors	346	357	359	411	353	7	2.0%
Nurse Anesthetist	11	13	10	0	0	-11	-100.0%
Nurse Midwives	15	21	26	21	15	0	0.0%
Nursing and Patient Care Aides and Assistants	496	393	360	365	200	-296	-59.7%
Occupational Therapists	336	288	227	257	249	-87	-25.9%
Occupational Therapy Assistants	57	68	35	46	35	-22	-38.6%
Opticians, Dispensing	37	31	28	50	34	-3	-8.1%
Optometrists	78	89	90	96	99	21	26.9%
Pharmacists	602	546	298	328	325	-277	-46.0%
Pharmacy Technicians/Assistants	275	187	152	154	16	-259	-94.2%
Phlebotomists	539	340	321	361	52	-487	-90.4%
Physical Therapists	288	327	298	306	265	-23	-8.0%
Physical Therapy Assistants	60	64	44	56	47	-13	-21.7%
Physician Assistants	637	665	610	608	602	-35	-5.5%
Radiation Therapists	205	239	227	231	225	20	9.8%
Radiologic Technologists and Therapists	115	120	135	151	204	89	77.4%
Registered Nurses	3,612	3,322	3,197	3,376	3,532	-80	-2.2%
Registered Nurses with Advanced Education ^c	721	654	588	608	804	83	11.5%
Respiratory Therapists	23	28	0	0	43	20	87.0%
Respiratory Therapy Assistants	59	43	50	50	24	-35	-59.3%
Social Workers	3,014	2,980	3,109	3,112	3,664	650	21.6%
Substance Abuse/Addiction Counseling	25	31	20	12	23	-2	-8.0%
Surgical Technology/Technologist	113	146	104	138	94	-19	-16.8%

^a Audiologists & speech-language pathologists include graduations in audiology, speech-language pathology, and communication sciences and disorders.

^b Creative arts therapists include graduations in art therapy, dance therapy, and music therapy.

^c Registered nurses with advanced education include graduations or certificates in adult health nursing, clinical nurse specialist, critical care nursing, family practice nursing, geriatric nursing, maternal and child health nursing, palliative care nursing, pediatric nursing, perioperative/OR nursing, public health nursing, women's health nursing, and nursing practice.

Source: Integrated Postsecondary Education Data System.

b. Licenses

Table 174. Number of Licensed Individuals in Selected Health Care Professions in New York City, 2018–2022

Occupation	2018	2019	2020	2021	2022	Change Between 2018 and 2022	
						Number	Percent
Clinical Laboratory Technicians	446	421	424	420	423	-23	-5.2%
Clinical Laboratory Technologists	4,398	4,104	4,121	3,997	3,886	-512	-11.6%
Dental Assistants	83	101	133	149	148	65	78.3%
Dental Hygienists	2,325	2,378	2,440	2,490	2,554	229	9.8%
Dietitians/Nutritionists	1,749	1,837	1,879	1,911	1,929	180	10.3%
Licensed Practical Nurses	14,943	14,213	14,086	13,950	13,421	-1,522	-10.2%
Nurse Practitioners	6,543	7,007	7,519	8,098	8,470	1,927	29.5%
Occupational Therapists	3,892	4,017	4,199	4,238	4,313	421	10.8%
Occupational Therapy Assistants	1,067	1,066	1,085	1,087	1,084	17	1.6%
Pharmacists	7,257	7,603	7,685	7,841	7,979	722	9.9%
Physical Therapists	5,726	5,859	5,948	6,020	6,085	359	6.3%
Physical Therapist Assistants	1,506	1,513	1,529	1,539	1,525	19	1.3%
Physician Assistants	4,333	4,554	4,738	4,823	4,989	656	15.1%
Registered Nurses	69,306	70,942	72,103	73,956	75,128	5,822	8.4%
Respiratory Therapists	1,635	1,674	1,685	1,645	1,673	38	2.3%
Social Workers	22,379	22,461	23,055	23,528	23,906	1,527	6.8%
Speech-Language Pathologists	5,422	5,558	5,757	5,872	5,944	522	9.6%

Source: New York State Education Department, Office of Professions.

Notes: Nurse practitioners are registered nurses and are certified in 1 or more of 16 specialties. Social workers include master's Clinical Social Workers and master's Licensed Social Workers.

c. Employment Projections

Table 175. Employment Projections for Selected Health Care Occupations for New York City, by Largest Percentage Increase, 2018–2028

Occupational Title	2018	2028	Change Between 2018 and 2028		Average Annual Openings ^a
			Number	Percent	
Home Health and Personal Care Aides	292,530	495,390	202,860	69.3%	69,040
Occupational Therapy Assistants and Aides	870	1,250	380	43.7%	153
Speech-Language Pathologists	5,680	8,050	2,370	41.7%	604
Physician Assistants	5,770	8,140	2,370	41.1%	632
Medical Assistants	13,670	19,220	5,550	40.6%	2,367
Nurse Practitioners	6,480	8,990	2,510	38.7%	664
Physical Therapist Assistants and Aides	2,890	4,000	1,110	38.4%	538
Mental Health and Substance Abuse Social Workers	5,650	7,810	2,160	38.2%	872
Diagnostic Medical Sonographers	2,160	2,980	820	38.0%	223
Healthcare Social Workers	7,040	9,600	2,560	36.4%	1,069
Physical Therapists	6,640	8,940	2,300	34.6%	555
Occupational Therapists	3,830	5,100	1,270	33.2%	378
Medical Secretaries and Administrative Assistants	4,820	6,370	1,550	32.2%	782
Audiologists	290	380	90	31.0%	22
Phlebotomists	1,920	2,500	580	30.2%	291
Respiratory Therapists	2,260	2,940	680	30.1%	205
Nurse Anesthetists	650	840	190	29.2%	56
Magnetic Resonance Imaging Technologists	1,310	1,670	360	27.5%	117
Dental Assistants	8,450	10,750	2,300	27.2%	1,305
Dental Hygienists	2,790	3,540	750	26.9%	287
Licensed Practical and Licensed Vocational Nurses	15,380	19,360	3,980	25.9%	1,722
Registered Nurses	78,470	97,570	19,100	24.3%	6,610
Medical and Health Services Managers	14,440	17,920	3,480	24.1%	1,630
Radiologic Technologists and Technicians	5,200	6,440	1,240	23.8%	443
Medical Records and Health Information	3,950	4,840	890	22.5%	369
Psychiatric Technicians	810	970	160	19.8%	88
Dietitians and Nutritionists	2,170	2,590	420	19.4%	192
Psychiatric Aides	1,880	2,230	350	18.6%	264
Clinical Laboratory Technologists and Technicians	7,900	9,370	1,470	18.6%	691
Radiation Therapists	440	520	80	18.2%	31
Cardiovascular Technologists and Technicians	1,250	1,470	220	17.6%	96
Nuclear Medicine Technologists	460	540	80	17.4%	36
Emergency Medical Technicians and Paramedics	7,650	8,910	1,260	16.5%	677
Recreational Therapists	610	710	100	16.4%	42
Orderlies	1,530	1,770	240	15.7%	209
Surgical Technologists	2,530	2,910	380	15.0%	258
Nursing Assistants	39,790	45,570	5,780	14.5%	5,361
Dietetic Technicians	410	450	40	9.8%	39
Pharmacy Technicians	8,960	9,530	570	6.4%	802
Medical Transcriptionists	430	440	10	2.3%	61
Pharmacists	10,000	9,710	-290	-2.9%	414
Pharmacy Aides	740	620	-120	-16.2%	74

^aAnnual openings reflect creation of new positions in the occupation and replacement for those retiring or otherwise leaving the occupation.

Source: NYS Department of Labor, Jobs in Demand/Projects, Long-Term Occupation Projections, 2018–2028.

G. North Country

The North Country includes the counties of Clinton, Essex, Franklin, Hamilton, Jefferson, Lewis, and Saint Lawrence.



KEY FINDINGS

Population and Health Care Indicators

- The North Country region had a higher level of poverty and a slightly higher percent of the population 65 years of age or older than the state as a whole.
- The rates of deaths due to heart disease, all cancers, and diabetes were higher in the North Country region than throughout New York State.

Health Care Employment

- Overall, the number of health care jobs in the North Country region declined between 2017 and 2021.
- The number of health care jobs in ambulatory care in the North Country region increased between 2017 and 2021. In contrast, the number of health care jobs in hospitals, in nursing homes, and in home health care all declined during the same time period.

Employer Demand Survey

- Hospitals in the North Country region reported that clinical laboratory technicians, clinical laboratory technologists, behavioral health nurse practitioners, physician assistants, and psychiatrists are among the most difficult to recruit and retain.
- Certified nurse aides/assistants, home health aides, occupational therapists, and speech-language pathologists were reported by nursing homes and by assisted living facilities as among the most difficult to recruit. Certified nurse aides/assistants and newly trained registered nurses were among the most difficult to retain.
- Home health care agencies in the North Country region also indicated that home health aides, licensed master's social workers, personal care aides, registered nurses, respiratory therapists, and speech-language pathologists as among the most difficult to recruit. Home health aides, homemakers, and personal care aides are among the most difficult to retain.

Health Care Production and Projected Workforce Need

- The number of registered nurse graduations increased in the North Country region between 2017 and 2021. In contrast, the number of licensed practical nurse graduations decreased during the same time period.
- There are almost 1,600 projected average annual openings in the North Country region for home health and personal care aides.

1. Population and Health Care Indicators

Table 176. Selected Population Characteristics for North Country, 2016-2020

Population Characteristics	Regional		Percent of State Population
	Number	Percent of Regional Population	
Total population	418,706	2.1%	N/A
Population under 100% FPL	56,308	14.7%	13.6%
Population under 200% FPL	129,917	33.8%	28.8%
Population aged birth to 17 years	85,396	20.4%	20.9%
Population aged 65 and older	71,238	17.0%	16.5%
Population female aged 15 to 44	74,660	17.8%	20.0%
Women aged 15 to 19 who had a birth in past 12 mos.	71	1.4% ^b	1.9% ^b
Women aged 20 to 34 who had a birth in past 12 mos.	3,633	73.1% ^b	65.9% ^b
Women aged 35 to 50 who had a birth in past 12 mos.	1,267	25.5% ^b	32.2% ^b
Black/African American, non-Hispanic	16,005	3.8%	14.0%
Hispanic/Latino	17,026	4.1%	19.1%
Asian/Pacific Islander, non-Hispanic	4,987	1.2%	8.5%
American Indian/Native Alaskan, non-Hispanic	4,534	1.1%	0.2%
Two or more/other races	9,489	2.3%	3.0%
Population with less than a high school education ^a	30,603	10.8%	12.8%
Population with a high school diploma or equivalent ^a	152,855	53.8%	40.9%
Population with an associate degree ^a	34,181	12.0%	8.9%
Population with a bachelor's degree ^a	36,049	12.7%	20.9%
Population with a master's degree or higher ^a	30,258	10.7%	16.5%
Home ownership	111,373	68.2%	54.1%

^aEducation levels and rates are based on individuals aged 25 years and older.

^bPercent of total births.

FPL, federal poverty level; N/A, not applicable; mos., months.

Source: US Census, American Community Survey, 5-Year Estimates, 2016 - 2020.

Table 177. Selected Health Indicators for the North Country

Health Indicator	Region		Statewide	
	Number	Rate	Number	Rate
Total deaths, per 100,000	11,927	945.0	468,772	798.8
Deaths due to heart disease, per 100,000	3,635	288.0	163,285	278.3
Deaths due to all cancers, per 100,000	2,606	206.2	103,089	175.5
Deaths due to diabetes, per 100,000	376	29.8	13,175	22.5
Total births, per 1,000 females aged 15 to 44	14,201	63.2	674,199	57.5
Teen births, per 1,000 females aged 15 to 19	707	17.7	20,879	11.9
Low-birthweight births, as a percent of total births	744	5.5	41,103	6.3
Late/no prenatal care, as a percent of total births	749	5.4	35,780	5.4
Infant deaths, per 1,000 live births	93	6.5	2,940	4.4
Total hospitalizations, per 10,000	128,913	1021.5	6,776,549	1154.8
Total asthma hospitalizations, per 10,000	371	2.9	57,786	9.8
Rate of asthma hospitalizations, aged 25-44 per 10,000	87	2.8	7,994	5.0
Rate of asthma hospitalizations, aged 45-64 per 10,000	83	2.5	13,566	8.8
Pediatric asthma hospitalization, per 10,000	122	4.7	24,839	20.3
Diabetes hospitalizations, per 10,000	2,210	17.5	125,599	21.4
CLRD hospitalizations, per 10,000	4,186	33.2	174,084	29.7
Heart disease hospitalizations, per 10,000	12,284	97.3	616,944	105.1
Total ED visits, per 10,000	669,783	5307.1	24,263,152	4134.7

CLRD, chronic lower respiratory disease; ED, emergency department.

Source: New York State Community Health Indicator Reports.

2. Health Care Sector Employment

Table 178. Number of Health Care Jobs in the North Country, by Setting, 2017–2021

Setting	2017	2018	2019	2020	2021	Change Between 2017 and 2021	
						Number	Percent
Hospitals	9,507	9,710	9,796	9,369	9,125	-382	-4.0%
Ambulatory care (excluding home health)	5,698	5,703	5,917	5,642	5,930	232	4.1%
Nursing home and residential care facilities	2,975	2,887	2,813	2,675	2,324	-651	-21.9%
Home health care	796	726	718	702	677	-119	-14.9%
Total	18,976	19,026	19,244	18,388	18,056	-920	-4.8%

Source: NYS Department of Labor, Quarterly Census of Employment and Wages

3. Employment by Occupations

Table 179. Number of Jobs and Median Salary for Selected Health Care Occupations in the North Country, 2021

Occupational Title	Number of Jobs	Median Salary
Audiologists	20	\$81,950
Cardiovascular Technologists and Technicians	60	\$63,520
Clinical Laboratory Technologists and Technicians	300	\$64,910
Dental Assistants	320	\$39,660
Dental Hygienists	250	\$80,020
Diagnostic Medical Sonographers	80	\$81,430
Dietitians and Nutritionists	80	\$63,520
Emergency Medical Technicians	390	\$35,770
Healthcare Social Workers	280	\$44,190
Home Health & Personal Care Aides	4,700	\$31,700
Licensed Practical and Licensed Vocational Nurses	1,120	\$48,330
Magnetic Resonance Imaging Technologists	30	\$81,430
Medical Assistants	200	\$38,770
Medical Secretaries and Administrative Assistants	570	\$38,030
Medical Transcriptionists	50	\$47,340
Medical and Health Services Managers	380	\$107,580
Mental Health and Substance Abuse Social Workers	230	\$62,210
Nuclear Medicine Technologists	N/A	\$98,140
Nurse Practitioners	280	\$125,340
Nursing Assistants	1,450	\$38,430
Occupational Therapists	150	\$79,520
Occupational Therapy Assistants	50	\$53,690
Orderlies	40	\$32,210
Paramedics	190	\$48,330
Pharmacists	330	\$132,750
Pharmacy Aides	60	\$32,830
Pharmacy Technicians	500	\$30,920
Phlebotomists	130	\$39,690
Physical Therapist Aides	N/A	\$32,210
Physical Therapist Assistants	100	\$52,320
Physical Therapists	280	\$80,700
Physician Assistants	230	\$134,630
Psychiatric Aides	510	\$50,070
Psychiatric Technicians	N/A	\$41,610
Radiation Therapists	20	\$82,280
Radiologic Technologists and Technicians	280	\$63,940
Recreational Therapists	20	\$61,300
Registered Nurses	3,390	\$79,580
Respiratory Therapists	90	\$64,730
Speech-Language Pathologists	200	\$66,360
Surgical Technologists	80	\$48,640

N/A, not available.

Source: NYS Department of Labor, Employment Statistics, Occupational Wage and Employment Estimates (OES)

4. Employer Demand Survey

a. Hospitals

Table 180. Percent of Respondents Who Indicated Recruitment or Retention Difficulties at North Country Hospitals

Occupations	Percent of Respondents Indicating Difficulty	
	Recruitment	Retention
Certified Nurse Aides/Nurse Aides/Nurse Assistants/Patient Care Techs	89%	78%
Clinical Laboratory Technicians	100%	78%
Clinical Laboratory Technologists	100%	78%
Environmental (janitorial, housekeeping) Service Aides	56%	78%
Food Services/Dietary	67%	78%
Licensed Mental Health Counselors	86%	67%
Licensed Practical Nurses	89%	67%
Management/Executive Staff	56%	50%
Nurse Practitioners (Behavioral Health)	100%	67%
Nurse Practitioners (All other)	89%	50%
Pharmacists	57%	57%
Physician Assistants	100%	43%
Psychiatrists	100%	67%
Respiratory Therapists	88%	75%
Registered Nurses	89%	89%
Licensed Clinical Social Workers	75%	71%
Licensed Master's Social Workers	75%	71%
Surgical Technicians	88%	63%

Table 181. Reasons for Recruitment Difficulties at North Country Hospitals

Occupations	Reasons For Recruiting Difficulties						
	Candidates Applying not Qualified	General Shortage of Workers	Location/ Transportation Issues	Non-Competitive Salaries	Non-Competitive Benefits	Potential Employees not Following Up/Skipping Appointments (Ghosting)	Unknown
Certified Nurse Aides/Nurse Aides/Nurse Assistants/Patient Care Techs	22%	89%	44%	33%	0%	33%	0%
Clinical Laboratory Technicians	11%	89%	22%	22%	11%	0%	11%
Clinical Laboratory Technologists	22%	100%	22%	22%	11%	11%	0%
Environmental (janitorial, housekeeping) Service Aides	22%	56%	22%	11%	0%	22%	11%
Food Services/Dietary	11%	56%	22%	11%	0%	33%	11%
Licensed Mental Health Counselors	11%	67%	22%	11%	11%	0%	22%
Licensed Practical Nurses	11%	89%	22%	11%	0%	11%	0%
Management/Executive Staff	11%	44%	33%	11%	0%	0%	22%
Nurse Practitioners (Behavioral Health)	0%	56%	22%	11%	0%	0%	22%
Nurse Practitioners (All other)	0%	67%	22%	22%	0%	0%	11%
Pharmacists	0%	44%	11%	11%	0%	0%	33%
Physician Assistants	0%	67%	22%	22%	0%	0%	11%
Psychiatrists	0%	67%	22%	11%	0%	0%	22%
Respiratory Therapists	11%	78%	22%	33%	0%	0%	11%
Registered Nurses	11%	89%	22%	22%	0%	11%	0%
Licensed Clinical Social Workers	0%	67%	22%	22%	0%	0%	22%
Licensed Master's Social Workers	0%	67%	22%	22%	0%	0%	22%
Surgical Technicians	11%	78%	22%	11%	0%	0%	11%

Table 182. Reasons for Retention Difficulties at North Country Hospitals

Occupations	Reasons for Retention Difficulties						
	Career Change	Left for Better Benefits	Left for Better Salary	Left for Family Commitments	Left for Better Work-Life Balance	Retirement	Unknown
Certified Nurse Aides/Nurse Aides/Nurse Assistants/Patient Care Techs	33%	0%	89%	33%	44%	0%	11%
Clinical Laboratory Technicians	0%	0%	67%	11%	22%	0%	33%
Clinical Laboratory Technologists	0%	0%	67%	11%	22%	0%	33%
Environmental (janitorial, housekeeping) Service Aides	11%	0%	89%	22%	22%	11%	11%
Food Services/Dietary	22%	0%	78%	22%	22%	0%	11%
Licensed Mental Health Counselors	0%	0%	67%	0%	11%	0%	33%
Licensed Practical Nurses	22%	11%	89%	11%	56%	11%	11%
Management/Executive Staff	22%	0%	56%	22%	33%	11%	22%
Nurse Practitioners (Behavioral Health)	0%	0%	56%	0%	33%	0%	44%
Nurse Practitioners (All other)	0%	0%	67%	22%	33%	0%	22%
Pharmacists	0%	0%	56%	0%	44%	0%	44%
Physician Assistants	0%	0%	67%	11%	33%	0%	33%
Psychiatrists	0%	0%	67%	0%	33%	0%	33%
Respiratory Therapists	0%	0%	78%	11%	67%	0%	22%
Registered Nurses	11%	0%	78%	22%	78%	11%	11%
Licensed Clinical Social Workers	11%	0%	67%	11%	44%	11%	11%
Licensed Master's Social Workers	11%	0%	67%	11%	44%	0%	22%
Surgical Technicians	11%	0%	67%	11%	44%	0%	33%

b. Nursing Homes and Assisted Living Facilities**Table 183.** Percent of Respondents Who Indicated Recruitment or Retention Difficulties at North County Nursing Homes and Assisted Living Facilities

Occupation	Percent of Respondents Indicating Difficulty	
	Recruiting	Retaining
Certified Nurse Aides/Assistants	100.0%	50.0%
Dietitians/Nutritionists	40.0%	0.0%
Home Health Aides	100.0%	0.0%
Infection Preventionist Practitioners	0.0%	0.0%
Licensed Clinical Social Workers (LCSWs)	0.0%	0.0%
Licensed Master Social Workers (LMSWs)	50.0%	0.0%
Licensed Practical Nurse (LPNs)	80.0%	40.0%
MDS Coordinators	0.0%	0.0%
Nurse Directors/Managers	75.0%	25.0%
Nurse Educators	0.0%	0.0%
Occupational Therapists	100.0%	0.0%
Occupational Therapy Assistants	0.0%	0.0%
Paid Feeding Assistants	0.0%	0.0%
Personal Care Aides	66.7%	33.3%
Physical Therapists	50.0%	0.0%
Physical Therapy Assistants	50.0%	0.0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	0.0%	100.0%
Registered Nurses Experienced (3+ years of clinical experience)	66.7%	0.0%
Respiratory Therapists	0.0%	0.0%
Speech-Language Pathologists	100.0%	0.0%
Temporary Nurse Aide/CNA Trainees	100.0%	0.0%

Table 184. Non-COVID-19 Related Reasons for Recruitment Difficulties at North County Nursing Homes and Assisted Living Facilities

Occupation	Non-COVID-19 Related Reasons for Recruitment Difficulties			
	Shortage of Applicants	Shortage of Applicants Meeting Minimum Job Qualifications	Non-Competitive Salary	Non-Competitive Benefits
Certified Nurse Aides/Assistants	50%	50%	0%	0%
Dietitians/Nutritionists	100%	0%	0%	0%
Home Health Aides	100%	0%	0%	0%
Infection Preventionist Practitioners	0%	0%	0%	0%
Licensed Clinical Social Workers (LCSWs)	0%	0%	0%	0%
Licensed Master Social Workers (LMSWs)	0%	100%	0%	0%
Licensed Practical Nurse (LPNs)	75%	25%	25%	0%
MDS Coordinators	0%	0%	0%	0%
Nurse Directors/Managers	67%	33%	0%	0%
Nurse Educators	0%	0%	0%	0%
Occupational Therapists	0%	100%	0%	0%
Occupational Therapy Assistants	0%	0%	0%	0%
Paid Feeding Assistants	0%	0%	0%	0%
Personal Care Aides	100%	0%	50%	0%
Physical Therapists	0%	100%	0%	0%
Physical Therapy Assistants	0%	100%	0%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	0%	0%	0%	0%
Registered Nurses Experienced (3+ years of clinical experience)	50%	50%	0%	0%
Respiratory Therapists	0%	0%	0%	0%
Speech-Language Pathologists	0%	100%	0%	0%
Temporary Nurse Aide/CNA Trainees	0%	100%	0%	0%

Table 185. COVID-19 Related Reasons for Recruitment Difficulties at North Country Nursing Homes and Assisted Living Facilities

Occupation	COVID-19 Related Reasons for Recruitment Difficulties				
	Family Care Giving Commitments Prevented Availability	Lack of Online Training Certification	Vaccine or Booster Refusal	Fear of COVID-19 Exposure	COVID-19 Testing of Staff and Required Quarantine if a Positive Result Reduced Available Staff
Certified Nurse Aides/Assistants	0%	50%	100%	100%	100%
Dietitians/Nutritionists	0%	0%	0%	50%	0%
Home Health Aides	0%	0%	0%	0%	0%
Infection Preventionist Practitioners	0%	0%	0%	0%	0%
Licensed Clinical Social Workers (LCSWs)	0%	0%	0%	0%	0%
Licensed Master Social Workers (LMSWs)	0%	0%	0%	0%	0%
Licensed Practical Nurse (LPNs)	0%	25%	50%	100%	50%
MDS Coordinators	0%	0%	0%	0%	0%
Nurse Directors/Managers	0%	33%	67%	67%	33%
Nurse Educators	0%	0%	0%	0%	0%
Occupational Therapists	0%	0%	0%	0%	0%
Occupational Therapy Assistants	0%	0%	0%	0%	0%
Paid Feeding Assistants	0%	0%	0%	0%	0%
Personal Care Aides	0%	0%	50%	0%	0%
Physical Therapists	0%	0%	0%	0%	0%
Physical Therapy Assistants	0%	100%	100%	100%	100%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	0%	0%	0%	0%	0%
Registered Nurses Experienced (3+ years of clinical experience)	0%	50%	50%	50%	50%
Respiratory Therapists	0%	0%	0%	0%	0%
Speech-Language Pathologists	0%	0%	0%	0%	0%
Temporary Nurse Aide/can Trainees	0%	100%	100%	100%	100%

Table 186. Non-COVID-19 Related Reasons for Retention Difficulties at North Country Nursing Homes and Assisted Living Facilities

Occupation	Non-COVID-19 Reasons for Retention Difficulties				
	Staff Found Higher Pay and Benefits Elsewhere	Staff Left for Other Employment Sectors	Paperwork and Regulatory Burdens	Retirement	Scheduling Challenges
Certified Nurse Aides/Assistants	0%	100%	0%	0%	0%
Dietitians/Nutritionists	0%	0%	0%	0%	0%
Home Health Aides	0%	0%	0%	0%	0%
Infection Preventionist Practitioners	0%	0%	0%	0%	0%
Licensed Clinical Social Workers (LCSWs)	0%	0%	0%	0%	0%
Licensed Master Social Workers (LMSWs)	0%	0%	0%	0%	0%
Licensed Practical Nurse (LPNs)	50%	50%	0%	0%	0%
MDS Coordinators	0%	0%	0%	0%	0%
Nurse Directors/Managers	100%	0%	0%	0%	0%
Nurse Educators	0%				
Occupational Therapists	0%	0%	0%	0%	0%
Occupational Therapy Assistants	0%	0%	0%	0%	0%
Paid Feeding Assistants	0%	0%	0%	0%	0%
Personal Care Aides	0%	100%	0%	0%	100%
Physical Therapists	0%	0%	0%	0%	0%
Physical Therapy Assistants	0%	0%	0%	0%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	0%	0%	100%	100%	0%
Registered Nurses Experienced (3+ years of clinical experience)	0%	0%	0%	0%	0%
Respiratory Therapists	0%	0%	0%	0%	0%
Speech-Language Pathologists	0%	0%	0%	0%	0%
Temporary Nurse Aide/CNA Trainees	0%	0%	0%	0%	0%

Table 187. COVID-19 Related Reasons for Retention Difficulties at North Country Nursing Homes and Assisted Living Facilities

Occupation	COVID-19 Related Reasons for Retention Difficulties			
	Fear of COVID-19 Exposure	Family Care Giving Commitments	Conversion to Another Position	Vaccine or Booster Refusal
Certified Nurse Aides/Assistants	100%	100%	0%	0%
Dietitians/Nutritionists	0%	0%	0%	0%
Home Health Aides	0%	0%	0%	0%
Infection Preventionist Practitioners	0%	0%	0%	0%
Licensed Clinical Social Workers (LCSWs)	0%	0%	0%	0%
Licensed Master Social Workers (LMSWs)	0%	0%	0%	0%
Licensed Practical Nurse (LPNs)	0%	0%	50%	50%
MDS Coordinators	0%	0%	0%	0%
Nurse Directors/Managers	0%	0%	100%	0%
Nurse Educators	0%	0%	0%	0%
Occupational Therapists	0%	0%	0%	0%
Occupational Therapy Assistants	0%	0%	0%	0%
Paid Feeding Assistants	0%	0%	0%	0%
Personal Care Aides	0%	0%	0%	100%
Physical Therapists	0%	0%	0%	0%
Physical Therapy Assistants	0%	0%	0%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	0%	0%	100%	0%
Registered Nurses Experienced (3+ years of clinical experience)	0%	0%	0%	0%
Respiratory Therapists	0%	0%	0%	0%
Speech-Language Pathologists	0%	0%	0%	0%
Temporary Nurse Aide/CNA Trainees	0%	0%	0%	0%

c. Home Health Care**Table 188.** Percent of Respondents Who Indicated Recruitment or Retention Difficulties at North Country Home Health Care Agencies

Occupation	Percent of Respondents Indicating Difficulty	
	Recruiting	Retaining
COVID-19 Compliance Officer	33%	0%
Home Health Aides	87%	80%
Homemaker	75%	100%
Intake Coordinator	33%	14%
Licensed Clinical Social Workers (LCSWs)	33%	0%
Licensed Master Social Workers (LMSWs)	100%	0%
Licensed Practical Nurse (LPNs)	38%	33%
Occupational Therapists	75%	25%
Occupational Therapy Assistants	100%	0%
Personal Care Aides	92%	85%
Physical Therapists	50%	17%
Physical Therapy Assistants	33%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	83%	33%
Registered Nurses Experienced (3+ years of clinical experience)	76%	32%
Respiratory Therapists	100%	0%
Speech-Language Pathologists	100%	33%

Table 189. Non-COVID-19 Related Reasons for Recruitment Difficulties at North Country Home Health Care Agencies

Occupation	Non-COVID-19 Related Reasons for Recruitment Difficulties			
	Shortage of Applicants	Shortage of Applicants Meeting Minimum Job Qualifications	Non-Competitive Salary	Non-Competitive Benefits
COVID-19 Compliance Officer	33%	33%	67%	33%
Home Health Aides	100%	0%	33%	0%
Homemaker	92%	23%	31%	15%
Intake Coordinator	75%	75%	50%	25%
Licensed Clinical Social Workers (LCSWs)	100%	0%	0%	0%
Licensed Master Social Workers (LMSWs)	100%	100%	0%	0%
Licensed Practical Nurse (LPNs)	100%	33%	33%	33%
Occupational Therapists	67%	33%	67%	33%
Occupational Therapy Assistants	50%	0%	0%	0%
Personal Care Aides	92%	25%	33%	17%
Physical Therapists	100%	0%	33%	33%
Physical Therapy Assistants	100%	0%	0%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	80%	40%	20%	0%
Registered Nurses Experienced (3+ years of clinical experience)	94%	31%	50%	25%
Respiratory Therapists	100%	0%	0%	0%
Speech-Language Pathologists	0%	0%	0%	0%

Table 190. Additional Reasons for Recruitment Difficulties at North Country Home Health Care Agencies

Occupation	COVID-19 Related Reasons for Recruitment Difficulties			
	Family Care Giving Commitments Prevented Availability	Lack of Scheduling Flexibility for the Applicant	Vaccine or Booster Refusal	Fear of COVID-19 Exposure
COVID-19 Compliance Officer	0%	33%	33%	0%
Home Health Aides	33%	33%	0%	33%
Homemaker	38%	38%	85%	38%
Intake Coordinator	25%	25%	25%	0%
Licensed Clinical Social Workers (LCSWs)	0%	0%	0%	0%
Licensed Master Social Workers (LMSWs)	0%	0%	100%	0%
Licensed Practical Nurse (LPNs)	67%	67%	67%	33%
Occupational Therapists	33%	0%	33%	0%
Occupational Therapy Assistants	0%	0%	50%	0%
Personal Care Aides	50%	42%	83%	42%
Physical Therapists	0%	0%	33%	0%
Physical Therapy Assistants	0%	0%	100%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	20%	20%	80%	40%
Registered Nurses Experienced (3+ years of clinical experience)	38%	31%	63%	13%
Respiratory Therapists	0%	0%	0%	0%
Speech-Language Pathologists	0%	0%	0%	0%

Table 191. Additional Reasons for Retention Difficulties at North Country Home Health Care Agencies

Occupation	Non-COVID-19 Related Reasons for Retention Difficulties				
	Staff Found Higher Pay and Benefits Elsewhere	Staff Left for Other Employment Sectors	Paperwork and Regulatory Burdens	Retirement	Scheduling Challenges
COVID-19 Compliance Officer	0%	0%	0%	0%	0%
Home Health Aides	33%	100%	33%	33%	67%
Homemaker	67%	83%	17%	8%	50%
Intake Coordinator	50%	50%	50%	0%	0%
Licensed Clinical Social Workers (LCSWs)	0%	0%	0%	0%	0%
Licensed Master Social Workers (LMSWs)	0%	0%	0%	0%	0%
Licensed Practical Nurse (LPNs)	67%	67%	67%	33%	33%
Occupational Therapists	100%	0%	0%	0%	0%
Occupational Therapy Assistants	0%	0%	0%	0%	0%
Personal Care Aides	64%	82%	18%	18%	55%
Physical Therapists	100%	100%	100%	0%	0%
Physical Therapy Assistants	0%	0%	0%	0%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	50%	50%	100%	0%	0%
Registered Nurses Experienced (3+ years of clinical experience)	71%	57%	71%	29%	0%
Respiratory Therapists	0%	0%	0%	0%	0%
Speech-Language Pathologists	0%	0%	0%	0%	0%

Table 192. Additional Reasons for Retention Difficulties at North Country Home Health Care Agencies

Occupation	COVID-19 Related Reasons for Retention Difficulties				Termination Due to Unsatisfactory Performance
	Scheduling Challenges	Family Care Giving Commitments	Too Few Available Hours for a Full Time Position	Vaccine or Booster Refusal	
COVID-19 Compliance Officer	0%	0%	0%	0%	0%
Home Health Aides	50%	58%	25%	58%	33%
Homemaker	33%	33%	33%	0%	0%
Intake Coordinator	0%	0%	0%	0%	0%
Licensed Clinical Social Workers (LCSWs)	0%	0%	0%	0%	0%
Licensed Master Social Workers (LMSWs)	0%	0%	0%	0%	0%
Licensed Practical Nurse (LPNs)	67%	100%	33%	33%	0%
Occupational Therapists	0%	100%	0%	0%	0%
Occupational Therapy Assistants	0%	0%	0%	0%	0%
Personal Care Aides	64%	55%	18%	55%	36%
Physical Therapists	0%	0%	100%	0%	0%
Physical Therapy Assistants	0%	0%	0%	0%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	0%	0%	0%	50%	50%
Registered Nurses Experienced (3+ years of clinical experience)	43%	57%	29%	29%	0%
Respiratory Therapists	0%	0%	0%	0%	0%
Speech-Language Pathologists	0%	0%	0%	0%	0%

5. Health Workforce Production and Projected Need

a. Graduations

Table 193. The Number of Graduations for Selected Health Care Occupations in the North Country, 2017-2021

Occupational Program	School Year					Change Between 2017 and 2021	
	2017	2018	2019	2020	2021	Number	Percent
Audiologists & Speech Language Pathologists ^a	52	57	40	47	44	-8	-15.4%
Clinical Laboratory Technologists	10	11	5	9	8	-2	-20.0%
Clinical Nutritionists	18	15	23	23	15	-3	-16.7%
Dental Hygienists	29	22	27	25	3	-26	-89.7%
EMTs and Paramedics	11	7	2	6	0	-11	-100.0%
Health Care Administrators	61	82	82	92	109	48	78.7%
License Practical Nurses	207	170	192	146	147	-60	-29.0%
Mental Health Counselors	40	28	26	28	19	-21	-52.5%
Occupational Therapists	0	0	18	17	17	17	N/A
Physical Therapists	25	24	22	20	20	-5	-20.0%
Physical Therapy Assistants	14	17	22	11	9	-5	-35.7%
Physician Assistants	19	19	25	28	29	10	52.6%
Radiation Therapists and Technologists	11	18	10	8	12	1	9.1%
Radiologic Technologists	12	11	8	13	6	-6	-50.0%
Registered Nurses	327	355	329	333	359	32	9.8%
Social Workers	32	32	37	30	30	-2	-6.3%
Substance Abuse/Addiction Counseling	11	6	13	8	24	13	118.2%

^a Audiologists & speech-language pathologists include graduations in audiology, speech-language pathology, and communication sciences and disorders.

N/A, not applicable.

Source: Integrated Postsecondary Education Data System.

b. Licenses

Table 194. Number of Licensed Individuals in Selected Health Care Professions in the North Country, 2018–2022

Occupation	2018	2019	2020	2021	2022	Change Between 2018 and 2022	
						Number	Percent
Clinical Laboratory Technicians	61	57	57	55	52	-9	-14.8%
Clinical Laboratory Technologists	241	228	226	226	221	-20	-8.3%
Dental Assistants	59	55	57	58	57	-2	-3.4%
Dental Hygienists	238	237	240	234	233	-5	-2.1%
Dietitians/Nutritionists	81	79	79	82	83	2	2.5%
Licensed Practical Nurses	2,578	2,502	2,517	2,514	2,371	-207	-8.0%
Nurse Practitioners	324	341	363	378	386	62	19.1%
Occupational Therapists	191	194	205	213	215	24	12.6%
Occupational Therapy Assistants	78	78	84	82	83	5	6.4%
Pharmacists	382	376	379	380	386	4	1.0%
Physical Therapists	352	363	377	395	398	46	13.1%
Physical Therapist Assistants	180	170	171	176	177	-3	-1.7%
Physician Assistants	278	286	295	303	319	41	14.7%
Registered Nurses	5,491	5,502	5,570	5,725	5,765	274	5.0%
Respiratory Therapists	83	83	83	85	86	3	3.6%
Social Workers	461	474	516	546	561	100	21.7%
Speech-Language Pathologists	273	279	281	279	285	12	4.4%

Source: New York State Education Department, Office of Professions.

Notes: Nurse practitioners are registered nurses and are certified in 1 or more of 16 specialties. Social workers include master's Clinical Social Workers and master's Licensed Social Workers.

c. Employment Projections

Table 195. Employment Projections for Selected Health Care Occupations for the North Country, by Largest Percentage Increase, 2018–2028

Occupational Title	2018	2028	Change Between 2018 and 2028		Average Annual Openings ^a
			Number	Percent	
Nurse Practitioners	260	360	100	38.5%	26
Physician Assistants	200	270	70	35.0%	21
Home Health and Personal Care Aides	5,260	6,800	1,540	29.3%	967
Medical Assistants	240	310	70	29.2%	37
Emergency Medical Technicians and Paramedics	460	580	120	26.1%	45
Speech-Language Pathologists	250	310	60	24.0%	21
Dental Assistants	310	380	70	22.6%	45
Dental Hygienists	310	380	70	22.6%	31
Diagnostic Medical Sonographers	90	110	20	22.2%	7
Respiratory Therapists	90	110	20	22.2%	8
Medical Secretaries and Administrative Assistants	90	110	20	22.2%	13
Occupational Therapy Assistants and Aides	50	60	10	20.0%	6
Mental Health and Substance Abuse Social Workers	310	370	60	19.4%	40
Physical Therapist Assistants and Aides	160	190	30	18.8%	25
Healthcare Social Workers	230	270	40	17.4%	28
Phlebotomists	180	210	30	16.7%	23
Physical Therapists	380	440	60	15.8%	26
Medical and Health Services Managers	420	480	60	14.3%	41
Registered Nurses	3,930	4,440	510	13.0%	274
Surgical Technologists	80	90	10	12.5%	8
Radiologic Technologists and Technicians	260	290	30	11.5%	17
Medical Records and Health Information Technicians	280	310	30	10.7%	22
Clinical Laboratory Technologists and Technicians	380	420	40	10.5%	28
Cardiovascular Technologists and Technicians	110	120	10	9.1%	7
Occupational Therapists	220	240	20	9.1%	15
Licensed Practical and Licensed Vocational Nurses	1,520	1,640	120	7.9%	133
Nursing Assistants	2,030	2,180	150	7.4%	251
Pharmacy Technicians	360	380	20	5.6%	32
Dietetic Technicians	30	30	0	0.0%	2
Dietitians and Nutritionists	80	80	0	0.0%	6
Magnetic Resonance Imaging Technologists	40	40	0	0.0%	3
Medical Transcriptionists	30	30	0	0.0%	4
Recreational Therapists	20	20	0	0.0%	1
Pharmacists	410	400	-10	-2.4%	17
Pharmacy Aides	130	110	-20	-15.4%	13

^aAnnual openings reflect creation of new positions in the occupation and replacement for those retiring or otherwise leaving the occupation.

Source: NYS Department of Labor, Jobs in Demand/Projects, Long-Term Occupation Projections, 2018–2028

H. Southern Tier

The Southern Tier region includes the counties of Broome, Chemung, Chenango, Delaware, Schuyler, Steuben, Tioga, and Tompkins.



KEY FINDINGS

Population and Health Care Indicators

- The Southern Tier region had a higher level of poverty as well as a higher percent of the population 65 years of age or older than the state as a whole.
- The rates of deaths due to heart disease, all cancers, and diabetes were higher in the Southern Tier region than throughout New York State.

Health Care Employment

- Overall, the number of health care jobs in the Southern Tier region declined between 2017 and 2021.
- The number of health care jobs in ambulatory care in the Southern Tier region increased between 2017 and 2021. In contrast, the number of health care jobs in hospitals, in nursing homes, and in home health care all declined during the same time period.

Employer Demand Survey

- Registered nurses and licensed practical nurses are among the most difficult to recruit and retain in all health care settings throughout the Southern Tier region.
- Hospitals in the Southern Tier region also reported that clinical laboratory technicians, clinical laboratory technologists, non-behavioral health nurse practitioners, respiratory therapists, social workers, and surgical technicians are also among the most difficult to recruit. Environmental service aides (janitorial and housekeeping), food services/dietary, social workers, and surgical technicians are among the most difficult to retain.
- Certified nurse aides/assistants, home health aides, and personal care aides were also reported by nursing homes and by assisted living facilities as among the most difficult to recruit and retain.
- Home health care agencies in the Southern Tier region also indicated that home health aides, homemakers, and personal care aides are among the most difficult to recruit and retain.

Health Care Production and Projected Workforce Need

- The number of licensed practical nurse and social worker graduations increased in the Southern Tier region between 2017 and 2021. The number of registered nurse graduations remained about the same during the same time period.
- There are more than 1,250 projected average annual openings in the Southern Tier region for home health and personal care aides.

1. Population and Health Care Indicators

Table 196. Selected Population Characteristics for the Southern Tier, 2016-2020

Population Characteristics	Regional		Percent of State Population
	Number	Percent of Regional Population	
Total population	632,716	3.2%	N/A
Population under 100% FPL	93,179	15.5%	13.6%
Population under 200% FPL	204,121	34.1%	28.8
Population aged birth to 17 years	121,766	19.2%	20.9%
Population aged 65 and older	120,054	19.0%	16.5%
Population female aged 15 to 44	119,673	18.9%	20.0%
Women aged 15 to 19 who had a birth in past 12 mos.	303	4.5% ^b	1.9% ^b
Women aged 20 to 34 who had a birth in past 12 mos.	5,157	76.2% ^b	65.9% ^b
Women aged 35 to 50 who had a birth in past 12 mos.	1,312	19.4% ^b	32.2% ^b
Black/African American, non-Hispanic	21,109	3.3%	14.0%
Hispanic/Latino	22,362	3.5%	19.1%
Asian/Pacific Islander, non-Hispanic	22,116	3.5%	8.5%
American Indian/Native Alaskan, non-Hispanic	901	0.1%	0.2%
Two or more/other races	18,837	3.0%	3.0%
Population with less than a high school education ^a	39,094	9.1%	12.8%
Population with a high school diploma or equivalent ^a	212,651	49.5%	40.9%
Population with an associate degree ^a	52,820	12.3%	8.9%
Population with a bachelor's degree ^a	64,727	15.1%	20.9%
Population with a master's degree or higher ^a	60,423	14.1%	16.5%
Home ownership	177,610	67.6%	54.1%

^aEducation levels and rates are based on individuals aged 25 years and older.

^bPercent of total births.

FPL, federal poverty level; N/A, not applicable; mos., months.

Source: US Census, American Community Survey, 5-Year Estimates, 2016-2020.

Table 197. Selected Health Indicators for the Southern Tier

Health Indicator	Region		Statewide	
	Number	Rate	Number	Rate
Total deaths, per 100,000	20,289	1066.4	468,772	798.8
Deaths due to heart disease, per 100,000	6,321	332.2	163,285	278.3
Deaths due to all cancers, per 100,000	4,127	216.2	103,089	175.5
Deaths due to diabetes, per 100,000	530	27.9	13,175	22.5
Total births, per 1,000 females aged 15 to 44	18,103	50.2	674,199	57.5
Teen births, per 1,000 females aged 15 to 19	926	13.4	20,879	11.9
Low-birthweight births, as a percent of total births	969	5.6	41,103	6.3
Late/no prenatal care, as a percent of total births	870	4.8	35,780	5.4
Infant deaths, per 1,000 live births	107	5.9	2,940	4.4
Total hospitalizations, per 10,000	196,562	1033.1	6,776,549	1154.8
Total asthma hospitalizations, per 10,000	748	3.9	57,786	9.8
Rate of asthma hospitalizations, aged 25-44 per	151	3.6	7,994	5.0
Rate of asthma hospitalizations, aged 45-64 per	194	3.8	13,566	8.8
Pediatric asthma hospitalization, per 10,000	262	7.1	24,839	20.3
Diabetes hospitalizations, per 10,000	3,340	17.6	125,599	21.4
CLRD hospitalizations, per 10,000	5,518	29.0	174,084	29.7
Heart disease hospitalizations, per 10,000	19,689	103.5	616,944	105.1
Total ED visits, per 10,000	820,079	4310.2	24,263,152	4134.7

CLRD, chronic lower respiratory disease; ED, emergency department.

Source: New York State Community Health Indicator Reports.

2. Health Care Sector Employment

Table 198. Number of Health Care Jobs in the Southern Tier, by Setting, 2017–2021

Setting	2017	2018	2019	2020	2021	Change Between 2017 and 2021	
						Number	Percent
Hospitals	13,506	13,535	13,681	13,198	12,978	-528	-3.9%
Ambulatory care (excluding home health)	7,675	7,796	7,857	7,495	7,819	144	1.9%
Nursing home and residential care facilities	6,689	6,738	6,584	6,126	5,524	-1,165	-17.4%
Home health	1,054	1,079	961	948	893	-161	-15.3%
Total	28,924	29,148	29,083	27,767	27,214	-1,710	-5.9%

Source: NYS Department of Labor, Quarterly Census of Employment and Wages.

3. Employment by Occupations

Table 199. Number of Jobs and Median Salary for Selected Health Care Occupations in the Southern Tier, 2021

Occupational Title	Number of Jobs	Median Salary
Audiologists	N/A	\$101,440
Cardiovascular Technologists and Technicians	80	\$62,290
Clinical Laboratory Technologists and Technicians	600	\$64,510
Dental Assistants	510	\$39,620
Dental Hygienists	360	\$77,670
Diagnostic Medical Sonographers	210	\$79,780
Dietitians and Nutritionists	140	\$64,210
Emergency Medical Technicians	250	\$32,000
Healthcare Social Workers	550	\$48,630
Home Health & Personal Care Aides	5,480	\$31,580
Licensed Practical and Licensed Vocational Nurses	1,580	\$48,640
Magnetic Resonance Imaging Technologists	50	\$69,740
Medical Assistants	670	\$38,660
Medical Secretaries and Administrative Assistants	N/A	\$37,850
Medical Transcriptionists	90	\$39,020
Medical and Health Services Managers	490	\$103,810
Mental Health and Substance Abuse Social Workers	300	\$65,160
Nuclear Medicine Technologists	N/A	\$82,280
Nurse Practitioners	470	\$108,810
Nursing Assistants	3,160	\$31,880
Occupational Therapists	280	\$80,280
Occupational Therapy Assistants	60	\$63,720
Orderlies	50	\$30,310
Paramedics	230	\$48,310
Pharmacists	450	\$132,290
Pharmacy Aides	160	\$31,600
Pharmacy Technicians	620	\$36,830
Phlebotomists	130	\$32,090
Physical Therapist Aides	50	\$31,180
Physical Therapist Assistants	150	\$52,340
Physical Therapists	380	\$81,020
Physician Assistants	200	\$125,320
Psychiatric Technicians	N/A	\$30,880
Radiation Therapists	N/A	\$80,330
Radiologic Technologists and Technicians	390	\$62,290
Recreational Therapists	50	\$61,550
Registered Nurses	5,340	\$77,860
Respiratory Therapists	170	\$68,050
Speech-Language Pathologists	280	\$79,520
Surgical Technologists	150	\$48,330

N/A, not available.

Source: NYS Department of Labor, Employment Statistics, Occupational Wage and Employment Estimates (OES)

4. Employer Demand Survey

a. Hospitals

Table 200. Percent of Respondents Who Indicated Recruitment or Retention Difficulties at Southern Tier Hospitals

Occupations	Percent of Respondents Indicating Difficulty	
	Recruitment	Retention
Certified Nurse Aides/Nurse Aides/Nurse Assistants/Patient Care Techs	100%	83%
Clinical Laboratory Technicians	100%	17%
Clinical Laboratory Technologists	100%	17%
Environmental (janitorial, housekeeping) Service Aides	50%	100%
Food Services/Dietary	50%	100%
Licensed Mental Health Counselors	0%	0%
Licensed Practical Nurses	83%	50%
Management/Executive Staff	67%	0%
Nurse Practitioners (Behavioral Health)	0%	0%
Nurse Practitioners (All other)	100%	0%
Pharmacists	80%	0%
Physician Assistants	75%	20%
Psychiatrists	0%	0%
Respiratory Therapists	100%	67%
Registered Nurses	100%	100%
Licensed Clinical Social Workers	100%	80%
Licensed Master's Social Workers	100%	50%
Surgical Technicians	100%	83%

Table 201. Reasons for Recruitment Difficulties at Southern Tier Hospitals

Occupations	Reasons For Recruiting Difficulties						
	Candidates Applying Not Qualified	General Shortage of Workers	Location/ Transportation Issues	Non-Competitive Salaries	Non-Competitive Benefits	Potential Employees Not Following Up/Skipping Appointments (Ghosting)	Unknown
Certified Nurse Aides/Nurse Aides/Nurse Assistants/Patient Care Techs	33%	83%	17%	67%	0%	67%	0%
Clinical Laboratory Technicians	17%	100%	17%	0%	0%	17%	0%
Clinical Laboratory Technologists	17%	100%	17%	0%	0%	0%	0%
Environmental (janitorial, housekeeping) Service Aides	0%	100%	67%	17%	0%	50%	0%
Food Services/Dietary	17%	100%	67%	67%	0%	50%	0%
Licensed Mental Health Counselors	17%	17%	0%	0%	0%	0%	67%
Licensed Practical Nurses	33%	83%	17%	0%	0%	0%	17%
Management/Executive Staff	50%	17%	0%	17%	17%	0%	17%
Nurse Practitioners (Behavioral Health)	17%	17%	0%	0%	0%	0%	67%
Nurse Practitioners (All other)	17%	17%	0%	0%	0%	0%	67%
Pharmacists	17%	83%	17%	0%	0%	0%	17%
Physician Assistants	17%	17%	0%	0%	0%	0%	67%
Psychiatrists	17%	17%	0%	0%	0%	0%	67%
Respiratory Therapists	17%	100%	17%	83%	0%	0%	0%
Registered Nurses	33%	100%	17%	50%	0%	50%	0%
Licensed Clinical Social Workers	17%	83%	17%	50%	0%	0%	17%
Licensed Master's Social Workers	17%	33%	17%	0%	0%	0%	67%
Surgical Technicians	33%	100%	17%	0%	0%	0%	0%

Table 202. Reasons for Retention Difficulties at Southern Tier Hospitals

Occupations	Reasons for Retention Difficulties						
	Career Change	Left for Better Benefits	Left for Better Salary	Left for Family Commitments	Left for Better Work-Life Balance	Retirement	Unknown
Certified Nurse Aides/Nurse Aides/Nurse Assistants/Patient Care Techs	33%	0%	33%	0%	17%	17%	50%
Clinical Laboratory Technicians	17%	0%	33%	0%	0%	17%	50%
Clinical Laboratory Technologists	17%	0%	33%	0%	0%	17%	50%
Environmental (janitorial, housekeeping) Service Aides	33%	0%	17%	0%	33%	17%	50%
Food Services/Dietary	33%	0%	33%	0%	33%	17%	50%
Licensed Mental Health Counselors	17%	0%	17%	0%	0%	0%	67%
Licensed Practical Nurses	17%	0%	17%	17%	0%	0%	50%
Management/Executive Staff	0%	17%	33%	0%	0%	0%	67%
Nurse Practitioners (Behavioral Health)	0%	0%	17%	0%	17%	0%	67%
Nurse Practitioners (All other)	0%	0%	17%	0%	17%	17%	50%
Pharmacists	0%	0%	17%	0%	17%	17%	50%
Physician Assistants	17%	0%	17%	0%	17%	0%	50%
Psychiatrists	0%	0%	17%	0%	17%	0%	67%
Respiratory Therapists	17%	0%	33%	0%	0%	17%	50%
Registered Nurses	33%	0%	50%	17%	33%	33%	50%
Licensed Clinical Social Workers	0%	0%	17%	0%	17%	0%	67%
Licensed Master's Social Workers	0%	0%	17%	0%	17%	0%	67%
Surgical Technicians	33%	0%	17%	0%	0%	0%	50%

b. Nursing Homes and Assisted Living Facilities**Table 203.** Percent of Respondents Who Indicated Recruitment or Retention Difficulties at Southern Tier Nursing Homes and Assisted Living Facilities

Occupation	Percent of Respondents Indicating Difficulty	
	Recruiting	Retaining
Certified Nurse Aides/Assistants	75.0%	83.3%
Dietitians/Nutritionists	45.5%	14.3%
Home Health Aides	83.3%	85.7%
Infection Preventionist Practitioners	100.0%	42.9%
Licensed Clinical Social Workers (LCSWs)	80.0%	28.6%
Licensed Master Social Workers (LMSWs)	66.7%	25.0%
Licensed Practical Nurse (LPNs)	81.3%	68.8%
MDS Coordinators	57.1%	33.3%
Nurse Directors/Managers	84.6%	53.3%
Nurse Educators	75.0%	44.4%
Occupational Therapists	57.1%	22.2%
Occupational Therapy Assistants	40.0%	28.6%
Paid Feeding Assistants	50.0%	100.0%
Personal Care Aides	77.8%	77.8%
Physical Therapists	57.1%	25.0%
Physical Therapy Assistants	33.3%	25.0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	100.0%	66.7%
Registered Nurses Experienced (3+ years of clinical experience)	92.9%	66.7%
Respiratory Therapists	50.0%	0.0%
Speech-Language Pathologists	66.7%	25.0%
Temporary Nurse Aide/CNA Trainees	75.0%	87.5%

Table 204. Non-COVID-19 Related Reasons for Recruitment Difficulties at Southern Tier Nursing Homes and Assisted Living Facilities

Occupation	Non-COVID-19 Related Reasons for Recruitment Difficulties			
	Shortage of Applicants	Shortage of Applicants Meeting Minimum Job Qualifications	Non - Competitive Salary	Non - Competitive Benefits
Certified Nurse Aides/Assistants	100%	67%	56%	11%
Dietitians/Nutritionists	80%	0%	20%	0%
Home Health Aides	100%	60%	60%	20%
Infection Preventionist Practitioners	83%	67%	50%	0%
Licensed Clinical Social Workers (LCSWs)	50%	0%	0%	0%
Licensed Master Social Workers (LMSWs)	50%	25%	0%	25%
Licensed Practical Nurse (LPNs)	92%	31%	38%	0%
MDS Coordinators	100%	25%	25%	0%
Nurse Directors/Managers	91%	36%	45%	0%
Nurse Educators	100%	50%	50%	0%
Occupational Therapists	75%	25%	25%	0%
Occupational Therapy Assistants	100%	50%	50%	0%
Paid Feeding Assistants	100%	100%	100%	0%
Personal Care Aides	100%	57%	57%	29%
Physical Therapists	75%	25%	25%	0%
Physical Therapy Assistants	100%	50%	50%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	100%	38%	50%	0%
Registered Nurses Experienced (3+ years of clinical experience)	92%	38%	46%	0%
Respiratory Therapists	100%	0%	0%	0%
Speech-Language Pathologists	100%	25%	25%	0%
Temporary Nurse Aide/CNA Trainees	100%	67%	33%	0%

Table 205. COVID-19 Related Reasons for Recruitment Difficulties at Southern Tier Nursing Homes and Assisted Living Facilities

Occupation	COVID-19 Related Reasons for Recruitment Difficulties				
	Family Care Giving Commitments Prevented Availability	Lack of Online Training Certification	Vaccine or Booster Refusal	Fear of COVID-19 Exposure	COVID-19 Testing of Staff and Required Quarantine if a Positive Result Reduced Available Staff
Certified Nurse Aides/Assistants	78%	0%	89%	56%	44%
Dietitians/Nutritionists	0%	20%	0%	20%	0%
Home Health Aides	40%	0%	40%	20%	20%
Infection Preventionist Practitioners	33%	0%	33%	17%	33%
Licensed Clinical Social Workers (LCSWs)	0%	0%	0%	0%	0%
Licensed Master Social Workers (LMSWs)	0%	0%	0%	0%	0%
Licensed Practical Nurse (LPNs)	31%	8%	46%	15%	31%
MDS Coordinators	0%	0%	0%	0%	0%
Nurse Directors/Managers	18%	9%	18%	9%	18%
Nurse Educators	33%	0%	33%	17%	33%
Occupational Therapists	0%	0%	0%	0%	0%
Occupational Therapy Assistants	0%	0%	0%	0%	0%
Paid Feeding Assistants	100%	0%	100%	100%	100%
Personal Care Aides	29%	0%	71%	29%	29%
Physical Therapists	0%	0%	0%	0%	0%
Physical Therapy Assistants	0%	0%	0%	0%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	38%	13%	38%	25%	25%
Registered Nurses Experienced (3+ years of clinical experience)	23%	8%	31%	23%	23%
Respiratory Therapists	0%	0%	0%	0%	0%
Speech-Language Pathologists	0%	0%	0%	0%	0%
Temporary Nurse Aide/can Trainees	50%	0%	67%	67%	50%

Table 206. Non-COVID-19 Related Reasons for Retention Difficulties at Southern Tier Nursing Homes and Assisted Living Facilities

Occupation	Non-COVID-19 Reasons for Retention Difficulties				
	Staff Found Higher Pay and Benefits Elsewhere	Staff Left for Other Employment Sectors	Paperwork and Regulatory Burdens	Retirement	Scheduling Challenges
Certified Nurse Aides/Assistants	90%	80%	40%	30%	70%
Dietitians/Nutritionists	0%	50%	50%	0%	0%
Home Health Aides	100%	50%	33%	0%	50%
Infection Preventionist Practitioners	0%	0%	0%	33%	0%
Licensed Clinical Social Workers (LCSWs)	50%	50%	0%	0%	50%
Licensed Master Social Workers (LMSWs)	0%	0%	0%	0%	0%
Licensed Practical Nurse (LPNs)	100%	82%	36%	36%	73%
MDS Coordinators	0%	33%	33%	0%	0%
Nurse Directors/Managers	63%	63%	50%	25%	38%
Nurse Educators	25%	25%	0%	0%	0%
Occupational Therapists	50%	0%	0%	0%	0%
Occupational Therapy Assistants	50%	0%	0%	0%	0%
Paid Feeding Assistants	100%	50%	0%	0%	0%
Personal Care Aides	100%	57%	29%	0%	43%
Physical Therapists	50%	0%	0%	0%	0%
Physical Therapy Assistants	50%	0%	0%	0%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	83%	50%	50%	0%	33%
Registered Nurses Experienced (3+ years of clinical experience)	90%	80%	40%	40%	50%
Respiratory Therapists	0%	0%	0%	0%	0%
Speech-Language Pathologists	50%	0%	0%	0%	50%
Temporary Nurse Aide/CNA Trainees	71%	57%	29%	0%	57%

Table 207. COVID-19 Related Reasons for Retention Difficulties at Southern Tier Nursing Homes and Assisted Living Facilities

Occupation	COVID-19 Related Reasons for Retention Difficulties			
	Fear of COVID-19 Exposure	Family Care Giving Commitments	Conversion to Another Position	Vaccine or Booster Refusal
Certified Nurse Aides/Assistants	30%	70%	70%	70%
Dietitians/Nutritionists	0%	50%	0%	0%
Home Health Aides	17%	50%	17%	33%
Infection Preventionist Practitioners	0%	0%	0%	0%
Licensed Clinical Social Workers (LCSWs)	0%	0%	0%	0%
Licensed Master Social Workers (LMSWs)	0%	0%	0%	50%
Licensed Practical Nurse (LPNs)	27%	64%	45%	45%
MDS Coordinators	0%	0%	33%	0%
Nurse Directors/Managers	13%	38%	38%	25%
Nurse Educators	0%	0%	0%	25%
Occupational Therapists	0%	0%	0%	0%
Occupational Therapy Assistants	0%	0%	0%	0%
Paid Feeding Assistants	50%	50%	100%	50%
Personal Care Aides	14%	14%	14%	43%
Physical Therapists	0%	0%	0%	0%
Physical Therapy Assistants	0%	0%	0%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	17%	33%	50%	33%
Registered Nurses Experienced (3+ years of clinical experience)	20%	30%	30%	30%
Respiratory Therapists	0%	0%	0%	0%
Speech-Language Pathologists	0%	0%	0%	0%
Temporary Nurse Aide/CNA Trainees	29%	57%	57%	29%

c. Home Health Care**Table 208.** Percent of Respondents Who Indicated Recruitment or Retention Difficulties at Southern Tier Home Health Care Agencies

Occupation	Percent of Respondents Indicating Difficulty	
	Recruiting	Retaining
COVID-19 Compliance Officer	13%	11%
Home Health Aides	93%	87%
Homemaker	88%	88%
Intake Coordinator	0%	0%
Licensed Clinical Social Workers (LCSWs)	0%	0%
Licensed Master Social Workers (LMSWs)	50%	0%
Licensed Practical Nurse (LPNs)	56%	50%
Occupational Therapists	50%	0%
Occupational Therapy Assistants	0%	0%
Personal Care Aides	100%	93%
Physical Therapists	50%	0%
Physical Therapy Assistants	50%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	80%	25%
Registered Nurses Experienced (3+ years of clinical experience)	80%	43%
Respiratory Therapists	0%	0%
Speech-Language Pathologists	50%	0%

Table 209. Additional Reasons for Recruitment Difficulties at Southern Tier Home Health Care Agencies

Occupation	Non-COVID-19 Related Reasons for Recruitment Difficulties			
	Shortage of Applicants	Shortage of Applicants Meeting Minimum Job Qualifications	Non-Competitive Salary	Non-Competitive Benefits
COVID-19 Compliance Officer	0%	100%	0%	0%
Home Health Aides	79%	50%	43%	21%
Homemaker	86%	29%	43%	43%
Intake Coordinator	0%	0%	0%	0%
Licensed Clinical Social Workers (LCSWs)	0%	0%	0%	0%
Licensed Master Social Workers (LMSWs)	100%	0%	0%	0%
Licensed Practical Nurse (LPNs)	100%	20%	80%	40%
Occupational Therapists	100%	0%	100%	0%
Occupational Therapy Assistants	0%	0%	0%	0%
Personal Care Aides	80%	47%	40%	27%
Physical Therapists	100%	0%	100%	0%
Physical Therapy Assistants	100%	0%	0%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	75%	25%	75%	25%
Registered Nurses Experienced (3+ years of clinical experience)	85%	30%	55%	30%
Respiratory Therapists	0%	0%	0%	0%
Speech-Language Pathologists	0%	0%	0%	0%

Table 210. Additional Reasons for Recruitment Difficulties at Southern Tier Home Health Care Agencies

Occupation	COVID-19 Related Reasons for Recruitment Difficulties			
	Family care Giving Commitments Prevented Availability	Lack of Scheduling Flexibility for the Applicant	Vaccine or Booster Refusal	Fear of COVID-19 Exposure
COVID-19 Compliance Officer	0%	100%	0%	0%
Home Health Aides	14%	43%	86%	29%
Homemaker	21%	14%	71%	21%
Intake Coordinator	0%	0%	0%	0%
Licensed Clinical Social Workers (LCSWs)	0%	0%	0%	0%
Licensed Master Social Workers (LMSWs)	0%	0%	0%	0%
Licensed Practical Nurse (LPNs)	20%	40%	60%	0%
Occupational Therapists	100%	0%	0%	0%
Occupational Therapy Assistants	0%	0%	0%	0%
Personal Care Aides	33%	20%	80%	27%
Physical Therapists	100%	0%	0%	0%
Physical Therapy Assistants	0%	0%	0%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	50%	25%	50%	25%
Registered Nurses Experienced (3+ years of clinical experience)	10%	15%	40%	15%
Respiratory Therapists	0%	0%	0%	0%
Speech-Language Pathologists	0%	0%	0%	0%

Table 211. Non-COVID-19 Related Reasons for Retention Difficulties at Southern Tier Home Health Care Agencies

Occupation	Non-COVID-19 Related Reasons for Retention Difficulties				
	Staff found Higher Pay and Benefits Elsewhere	Staff Left for Other Employment Sectors	Paperwork and Regulatory Burdens	Retirement	Scheduling Challenges
COVID-19 Compliance Officer	100%	0%	0%	0%	0%
Home Health Aides	69%	85%	15%	0%	54%
Homemaker	57%	57%	43%	0%	57%
Intake Coordinator	0%	0%	0%	0%	0%
Licensed Clinical Social Workers (LCSWs)	0%	0%	0%	0%	0%
Licensed Master Social Workers (LMSWs)	0%	0%	0%	0%	0%
Licensed Practical Nurse (LPNs)	100%	75%	0%	0%	0%
Occupational Therapists	0%	0%	0%	0%	0%
Occupational Therapy Assistants	0%	0%	0%	0%	0%
Personal Care Aides	71%	79%	21%	0%	57%
Physical Therapists	0%	0%	0%	0%	0%
Physical Therapy Assistants	0%	0%	0%	0%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	100%	100%	100%	0%	0%
Registered Nurses Experienced (3+ years of clinical experience)	70%	50%	40%	20%	10%
Respiratory Therapists	0%	0%	0%	0%	0%
Speech-Language Pathologists	0%	0%	0%	0%	0%

Table 212. Additional Reasons for Retention Difficulties at Southern Tier Home Health Care Agencies

Occupation	COVID-19 Related Reasons for Retention Difficulties				Termination Due to Unsatisfactory Performance
	Scheduling Challenges	Family Care Giving Commitments	Too Few Available Hours for a Full Time Position	Vaccine or Booster Refusal	
COVID-19 Compliance Officer	0%	100%	0%	0%	0%
Home Health Aides	62%	46%	15%	77%	46%
Homemaker	71%	43%	14%	71%	29%
Intake Coordinator	0%	0%	0%	0%	0%
Licensed Clinical Social Workers (LCSWs)	0%	0%	0%	0%	0%
Licensed Master Social Workers (LMSWs)	0%	0%	0%	0%	0%
Licensed Practical Nurse (LPNs)	50%	25%	0%	50%	25%
Occupational Therapists	0%	0%	0%	0%	0%
Occupational Therapy Assistants	0%	0%	0%	0%	0%
Personal Care Aides	71%	57%	14%	79%	50%
Physical Therapists	0%	0%	0%	0%	0%
Physical Therapy Assistants	0%	0%	0%	0%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	0%	100%	0%	100%	0%
Registered Nurses Experienced (3+ years of clinical experience)	10%	20%	0%	20%	10%
Respiratory Therapists	0%	0%	0%	0%	0%
Speech-Language Pathologists	0%	0%	0%	0%	0%

5. Health Workforce Production and Projected Need

a. Graduations

Table 213. The Number of Graduations for Selected Health Care Occupations in the Southern Tier, 2017-2021

Occupational Program	School Year					Change Between 2017 and 2021	
	2017	2018	2019	2020	2021	Number	Percent
Audiologists & Speech Language Pathologists ^a	53	63	54	50	33	-20	-37.7%
Clinical Laboratory Technicians	20	20	18	24	13	-7	-35.0%
Clinical Laboratory Technologists	1		1	1	4	3	300.0%
Dental Hygienists	33	28	33	28	29	-4	-12.1%
EMTs and Paramedics	5	3	40	10	10	5	100.0%
Health Care Administrators	35	36	42	51	49	14	40.0%
License Practical Nurses	71	92	125	148	90	19	26.8%
Medical Assistants	101	77	49	45	21	-80	-79.2%
Occupational Therapists	93	95	103	100	97	4	4.3%
Phlebotomists	25	27	23	18	20	-5	-20.0%
Physical Therapists	173	170	167	169	180	7	4.0%
Physical Therapy Assistants	25	24	19	19	1	-24	-96.0%
Radiation Therapists	27	26	28	30	26	-1	-3.7%
Recreational Therapists	9	5	8	5	10	1	11.1%
Registered Nurses	676	707	701	671	678	2	0.3%
Registered Nurses with Advanced Education ^b	45	50	49	55	53	8	17.8%
Social Workers	47	68	73	64	84	37	78.7%
Substance Abuse/Addiction Counseling	31	20	33	41	47	16	51.6%

^aAudiologists & speech-language pathologists include graduations in audiology, speech-language pathology, and communication sciences and disorders.

^bRegistered nurses with advanced education include graduations or certificates in adult health nursing, clinical nurse specialist, critical care nursing, family practice nursing, geriatric nursing, maternal and child health nursing, palliative care nursing, pediatric nursing, perioperative/OR nursing, public health nursing, women's health nursing, and nursing practice.

Source: Integrated Postsecondary Education Data System.

b. Licenses

Table 214. Number of Licensed Individuals in Selected Health Care Professions in the Southern Tier, 2018–2022

Occupation	2018	2019	2020	2021	2022	Change Between 2018 and 2022	
						Number	Percent
Clinical Laboratory Technicians	101	96	98	100	105	4	4.0%
Clinical Laboratory Technologists	314	284	286	281	275	-39	-12.4%
Dental Assistants	94	99	100	98	96	2	2.1%
Dental Hygienists	499	495	483	471	474	-25	-5.0%
Dietitians/Nutritionists	153	155	158	161	163	10	6.5%
Licensed Practical Nurses	3,028	2,913	2,956	2,865	2,879	-149	-4.9%
Nurse Practitioners	761	808	853	903	948	187	24.6%
Occupational Therapists	361	374	398	411	421	60	16.6%
Occupational Therapy Assistants	51	53	52	56	55	4	7.8%
Pharmacists	519	522	515	530	534	15	2.9%
Physical Therapists	550	571	571	600	615	65	11.8%
Physical Therapist Assistants	276	279	282	293	304	28	10.1%
Physician Assistants	291	309	338	357	372	81	27.8%
Registered Nurses	8,201	8,188	8,229	8,436	8,499	298	3.6%
Respiratory Therapists	154	149	151	132	136	-18	-11.7%
Social Workers	1,474	1,475	1,495	1,559	1,607	133	9.0%
Speech-Language Pathologists	365	373	379	393	394	29	7.9%

Source: New York State Education Department, Office of Professions.

Notes: Nurse practitioners are registered nurses and are certified in 1 or more of 16 specialties. Social workers include master's Clinical Social Workers and master's Licensed Social Workers.

c. Employment Projections

Table 215. Employment Projections for Selected Health Care Occupations for the Southern Tier, By Largest Percentage Increase, 2018–2028

Occupational Title	2018	2028	Change Between 2018 and 2028		Average Annual Openings ^a
			Number	Percent	
Home Health and Personal Care Aides	7,010	9,010	2,000	28.5%	1,259
Speech-Language Pathologists	340	430	90	26.5%	29
Medical Assistants	700	880	180	25.7%	105
Physical Therapist Assistants and Aides	240	300	60	25.0%	40
Nurse Practitioners	580	720	140	24.1%	49
Physician Assistants	310	380	70	22.6%	26
Dental Hygienists	450	540	90	20.0%	42
Dental Assistants	530	630	100	18.9%	76
Physical Therapists	440	520	80	18.2%	28
Emergency Medical Technicians and Paramedics	720	840	120	16.7%	64
Magnetic Resonance Imaging Technologists	60	70	10	16.7%	5
Medical Secretaries and Administrative Assistants	240	280	40	16.7%	34
Occupational Therapists	330	380	50	15.2%	25
Dietitians and Nutritionists	200	230	30	15.0%	16
Registered Nurses	6,560	7,520	960	14.6%	472
Diagnostic Medical Sonographers	140	160	20	14.3%	10
Mental Health and Substance Abuse Social Workers	530	600	70	13.2%	62
Cardiovascular Technologists and Technicians	80	90	10	12.5%	6
Respiratory Therapists	180	200	20	11.1%	13
Medical Records and Health Information Technicians	370	410	40	10.8%	29
Medical and Health Services Managers	610	670	60	9.8%	57
Healthcare Social Workers	480	520	40	8.3%	53
Clinical Laboratory Technologists and Technicians	730	790	60	8.2%	53
Phlebotomists	160	170	10	6.3%	18
Licensed Practical and Licensed Vocational Nurses	1,910	2,010	100	5.2%	160
Psychiatric Aides	290	300	10	3.4%	34
Pharmacy Technicians	680	700	20	2.9%	58
Nursing Assistants	3,410	3,450	40	1.2%	389
Orderlies	80	80	0	0.0%	9
Psychiatric Technicians	70	70	0	0.0%	6
Recreational Therapists	60	60	0	0.0%	3
Surgical Technologists	180	180	0	0.0%	15
Radiologic Technologists and Technicians	450	450	0	0.0%	25
Pharmacists	480	460	-20	-4.2%	19
Medical Transcriptionists	110	100	-10	-9.1%	14

^aAnnual openings reflect creation of new positions in the occupation and replacement for those retiring or otherwise leaving the occupation.
Source: NYS Department of Labor, Jobs in Demand/Projects, Long-Term Occupation Projections, 2018-2028.

I. Western New York

The Western New York region includes the counties of Allegany, Cattaraugus, Chautauqua, Erie, and Niagara.



KEY FINDINGS

Population and Health Care Indicators

- The Western New York region had a higher level of poverty and a higher percent of the population 65 years of age or older than the state as a whole.
- The rates of deaths due to heart disease, all cancers, and diabetes were higher in the Western New York region than throughout New York State.

Health Care Employment

- Overall, the number of health care jobs in the Western New York region declined between 2017 and 2021.
- The number of health care jobs in ambulatory care in the Western New York region increased between 2017 and 2021. In contrast, the number of health care jobs in hospitals, in nursing homes, and in home health care all declined during the same time period.

Employer Demand Survey

- Registered nurses and licensed practical nurses are among the most difficult to recruit and retain in all health care settings throughout the Western New York region.
- Hospitals in the Western New York region also reported that clinical laboratory technologists, respiratory therapists, and surgical technicians are also among the most difficult to recruit and retain.
- Certified nurse aides/assistants, home health aides, and personal care aides were also reported by nursing homes and by assisted living facilities as among the most difficult to recruit and retain.
- Home health care agencies in the Western New York region also indicated that home health aides, homemakers, and personal care aides are among the most difficult to recruit and retain.

Health Care Production and Projected Workforce Need

- The number of licensed practical nurse, mental health counselor, registered nurse, and social worker graduations increased in the Western New York region between 2017 and 2021.
- There are more than 3,350 projected average annual openings in the Western New York region for home health and personal care aides, over 1,100 projected average annual openings for registered nurses, and nearly 1,050 projected average annual openings for nursing assistants.

1. Population and Health Care Indicators

Table 216. Selected Population Characteristics for Western New York, 2016-2020

Population Characteristics	Regional		Percent of State Population
	Number	Percent of Regional Population	
Total population	1,379,656	7.1%	N/A
Population under 100% FPL	189,265	14.2%	13.6%
Population under 200% FPL	406,768	30.4%	28.8%
Population aged birth to 17 years	280,920	20.4%	20.9%
Population aged 65 and older	254,472	18.4%	16.5%
Population female aged 15 to 44	256,971	18.6%	20.0%
Women aged 15 to 19 who had a birth in past 12 mos.	265	1.7% ^b	1.9% ^b
Women aged 20 to 34 who had a birth in past 12 mos.	11,993	76.0% ^b	65.9% ^b
Women aged 35 to 50 who had a birth in past 12 mos.	3,514	22.3% ^b	32.2% ^b
Black/African American, non-Hispanic	135,467	9.8%	14.0%
Hispanic/Latino	71,461	5.2%	19.1%
Asian/Pacific Islander, non-Hispanic	38,631	2.8%	8.5%
American Indian/Native Alaskan, non-Hispanic	8,670	0.6%	0.2%
Two or more/other races	35,458	2.6%	3.0%
Population with less than a high school education ^a	81,680	8.4%	12.8%
Population with a high school diploma or equivalent ^a	462,361	47.6%	40.9%
Population with an associate degree ^a	122,781	12.6%	8.9%
Population with a bachelor's degree ^a	170,513	17.6%	20.9%
Population with a master's degree or higher ^a	133,633	13.8%	16.5%
Home ownership	393,397	67.1%	54.1%

^aEducation levels and rates are based on individuals aged 25 years and older.

FPL, federal poverty level; N/A, not applicable; mos., months.

Source: US Census, American Community Survey, 5-Year Estimates, 2016-2020.

Table 217. Selected Health Indicators for Western New York

Health Indicator	Region		Statewide	
	Number	Rate	Number	Rate
Total deaths, per 100,000	45,245	1,091.8	468,772	798.8
Deaths due to heart disease, per 100,000	14,063	339.3	163,285	278.3
Deaths due to all cancers, per 100,000	9,474	228.5	103,089	175.5
Deaths due to diabetes, per 100,000	1,345	32.5	13,175	22.5
Total births, per 1,000 females aged 15 to 44	43,551	56.5	674,199	57.5
Teen births, per 1,000 females aged 15 to 19	2,056	15.7	20,879	11.9
Low-birthweight births, as a percent of total births	2,735	6.6	41,103	6.3
Late/no prenatal care, as a percent of total births	2,087	5.1	35,780	5.4
Infant deaths, per 1,000 live births	240	5.5	2,940	4.4
Total hospitalizations, per 10,000	461,693	1,114.1	6,776,549	1,154.8
Total asthma hospitalizations, per 10,000	2,391	5.8	57,786	9.8
Rate of asthma hospitalizations, aged 25-44 per 10,000	356	3.5	7,994	5.0
Rate of asthma hospitalizations, aged 45-64 per 10,000	483	4.2	13,566	8.8
Pediatric asthma hospitalization, per 10,000	1,219	14.4	24,839	20.3
Diabetes hospitalizations, per 10,000	8,573	20.7	125,599	21.4
CLRD hospitalizations, per 10,000	12,563	30.3	174,084	29.7
Heart disease hospitalizations, per 10,000	46,578	112.4	616,944	105.1
Total ED visits, per 10,000	1,775,336	4283.9	24,263,152	4134.7

CLRD, chronic lower respiratory disease; ED, emergency department.

Source: New York State Community Health Indicator Reports.

2. Health Care Sector Employment

Table 218. Number of Health Care Jobs in Western New York, by Setting, 2017-2021

Setting	2017	2018	2019	2020	2021	Change Between 2017 and 2021	
						Number	Percent
Hospitals	26,457	27,829	27,796	26,843	25,900	-557	-2.1%
Ambulatory care (excluding home health)	25,782	26,051	26,776	25,538	27,114	1,332	5.2%
Nursing home and residential care facilities	15,482	15,482	15,389	14,110	12,574	-2,908	-18.8%
Home health care	5,566	6,014	6,081	5,743	5,552	-14	-0.3%
Total	73,287	75,376	76,042	72,234	71,140	-2,147	-2.9%

Source: NYS Department of Labor, Quarterly Census of Employment and Wages.

3. Employment by Occupations

Table 219. Number of Jobs and Median Salary for Selected Health Care Occupations in Western New York, 2021

Occupational Title	Number of Jobs	Median Salary
Audiologists	80	\$98,060
Cardiovascular Technologists and Technicians	230	\$66,790
Clinical Laboratory Technologists and Technicians	930	\$62,930
Dental Assistants	1,290	\$40,050
Dental Hygienists	1,070	\$63,070
Diagnostic Medical Sonographers	310	\$77,670
Dietitians and Nutritionists	370	\$64,400
Emergency Medical Technicians	550	\$31,120
Healthcare Social Workers	1,310	\$50,780
Home Health & Personal Care Aides	15,340	\$30,960
Licensed Practical and Licensed Vocational Nurses	4,200	\$48,870
Magnetic Resonance Imaging Technologists	130	\$80,100
Medical Assistants	2,000	\$39,850
Medical Secretaries and Administrative Assistants	3,100	\$38,480
Medical Transcriptionists	160	\$40,530
Medical and Health Services Managers	1,260	\$122,150
Mental Health and Substance Abuse Social Workers	710	\$62,640
Nuclear Medicine Technologists	70	\$81,660
Nurse Anesthetists	190	\$214,610
Nurse Practitioners	1,310	\$103,970
Nursing Assistants	5,760	\$32,930
Occupational Therapists	890	\$80,100
Occupational Therapy Assistants	290	\$51,320
Orderlies	130	\$34,360
Paramedics	300	\$49,080
Pharmacists	1,430	\$132,020
Pharmacy Aides	360	\$30,990
Pharmacy Technicians	1,640	\$30,820
Phlebotomists	460	\$39,470
Physical Therapist Aides	100	\$31,750
Physical Therapist Assistants	370	\$51,320
Physical Therapists	1,320	\$81,020
Physician Assistants	810	\$104,500
Psychiatric Aides	240	\$50,890
Radiation Therapists	50	\$78,440
Radiologic Technologists and Technicians	1,010	\$63,520
Recreational Therapists	70	\$61,190
Registered Nurses	14,530	\$80,100
Respiratory Therapists	510	\$67,600
Speech-Language Pathologists	990	\$80,100
Surgical Technologists	440	\$61,190

N/A, not available.

Source: NYS Department of Labor, Employment Statistics, Occupational Wage and Employment Estimates (OES)

4. Employer Demand Survey

a. Hospitals

Table 220. Percent of Respondents Who Indicated Recruitment or Retention Difficulties at Western New York and Finger Lakes Hospitals

Occupations	Percent of Respondents Indicating Difficulty	
	Recruitment	Retention
Certified Nurse Aides/Nurse Aides/Nurse Assistants/Patient Care Techs	86%	100%
Clinical Laboratory Technicians	64%	57%
Clinical Laboratory Technologists	100%	93%
Environmental (janitorial, housekeeping) Service Aides	64%	86%
Food Services/Dietary	57%	79%
Licensed Mental Health Counselors	57%	57%
Licensed Practical Nurses	93%	86%
Management/Executive Staff	64%	50%
Nurse Practitioners (Behavioral Health)	43%	43%
Nurse Practitioners (All other)	64%	79%
Pharmacists	50%	50%
Physician Assistants	71%	71%
Psychiatrists	50%	57%
Respiratory Therapists	100%	93%
Registered Nurses	100%	100%
Licensed Clinical Social Workers	64%	57%
Licensed Master's Social Workers	71%	50%
Surgical Technicians	93%	86%

Table 221. Reasons for Recruitment Difficulties at Western New York and Finger Lakes Hospitals

Occupations	Reasons For Recruiting Difficulties						
	Candidates Applying Not Qualified	General Shortage of Workers	Location/ Transportation Issues	Non-Competitive Salaries	Non-Competitive Benefits	Potential Employees Not Following Up/Skipping Appointments (Ghosting)	Unknown
Certified Nurse Aides/Nurse Aides/Nurse Assistants/Patient Care Techs	0%	93%	36%	14%	14%	36%	0%
Clinical Laboratory Technicians	7%	64%	0%	14%	7%	0%	21%
Clinical Laboratory Technologists	7%	100%	21%	29%	14%	0%	0%
Environmental (janitorial, housekeeping) Service Aides	0%	79%	29%	36%	14%	50%	0%
Food Services/Dietary	0%	86%	29%	43%	14%	36%	7%
Licensed Mental Health Counselors	21%	57%	14%	29%	21%	0%	21%
Licensed Practical Nurses	14%	86%	21%	43%	21%	29%	0%
Management /Executive Staff	36%	57%	14%	21%	14%	7%	21%
Nurse Practitioners (Behavioral Health)	7%	57%	0%	14%	7%	0%	29%
Nurse Practitioners (All other)	7%	64%	0%	29%	14%	0%	21%
Pharmacists	0%	57%	0%	21%	14%	0%	36%
Physician Assistants	0%	71%	0%	29%	14%	0%	21%
Psychiatrists	0%	57%	14%	21%	7%	14%	36%
Respiratory Therapists	0%	100%	7%	29%	14%	14%	0%
Registered Nurses	0%	100%	29%	43%	29%	21%	0%
Licensed Clinical Social Workers	0%	64%	0%	29%	21%	0%	14%
Licensed Master's Social Workers	0%	64%	0%	29%	14%	0%	14%
Surgical Technicians	7%	100%	0%	29%	21%	21%	0%

Table 222. Reasons for Retention Difficulties at Western New York and Finger Lakes Hospitals

Occupations	Reasons for Retention Difficulties						
	Career Change	Left for Better Benefits	Left for Better Salary	Left for Family Commitments	Left for Better Work-Life Balance	Retirement	Unknown
Certified Nurse Aides/Nurse Aides/Nurse Assistants/Patient Care Techs	43%	7%	71%	29%	43%	29%	14%
Clinical Laboratory Technicians	0%	14%	43%	0%	7%	0%	43%
Clinical Laboratory Technologists	7%	14%	71%	29%	36%	14%	14%
Environmental (janitorial, housekeeping) Service Aides	29%	14%	71%	36%	43%	14%	14%
Food Services/Dietary	29%	14%	86%	29%	36%	21%	14%
Licensed Mental Health Counselors	0%	7%	57%	0%	21%	0%	36%
Licensed Practical Nurses	14%	14%	79%	21%	71%	21%	21%
Management/Executive Staff	29%	14%	71%	0%	50%	21%	14%
Nurse Practitioners (Behavioral Health)	0%	7%	43%	0%	43%	0%	50%
Nurse Practitioners (All other)	7%	14%	57%	21%	64%	21%	21%
Pharmacists	0%	14%	50%	7%	50%	7%	43%
Physician Assistants	0%	14%	57%	21%	64%	14%	21%
Psychiatrists	0%	21%	57%	0%	57%	0%	36%
Respiratory Therapists	7%	14%	71%	21%	79%	14%	14%
Registered Nurses	36%	21%	79%	43%	86%	36%	14%
Licensed Clinical Social Workers	14%	14%	57%	14%	64%	7%	21%
Licensed Master's Social Workers	0%	21%	50%	0%	43%	0%	36%
Surgical Technicians	0%	14%	50%	14%	79%	7%	21%

b. Nursing Homes and Assisted Living Facilities**Table 223.** Percent of Respondents Who Indicated Recruitment or Retention Difficulties at Western New York Nursing Homes and Assisted Living Facilities

Occupation	Percent of Respondents Indicating Difficulty	
	Recruiting	Retaining
Certified Nurse Aides/Assistants	87.5%	83.3%
Dietitians/Nutritionists	41.7%	8.7%
Home Health Aides	80.0%	66.7%
Infection Preventionist Practitioners	57.1%	14.3%
Licensed Clinical Social Workers (LCSWs)	25.0%	18.2%
Licensed Master Social Workers (LMSWs)	18.2%	27.3%
Licensed Practical Nurse (LPNs)	84.8%	55.9%
MDS Coordinators	58.3%	23.1%
Nurse Directors/Managers	76.9%	48.3%
Nurse Educators	58.3%	9.1%
Occupational Therapists	40.0%	18.8%
Occupational Therapy Assistants	50.0%	23.1%
Paid Feeding Assistants	0.0%	50.0%
Personal Care Aides	81.8%	71.4%
Physical Therapists	44.4%	11.8%
Physical Therapy Assistants	58.3%	25.0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	86.7%	62.5%
Registered Nurses Experienced (3+ years of clinical experience)	77.4%	60.0%
Respiratory Therapists	66.7%	40.0%
Speech-Language Pathologists	37.5%	12.5%
Temporary Nurse Aide/CNA Trainees	91.7%	75.0%

Table 224. Non-COVID-19 Related Reasons for Recruitment Difficulties at Western New York Nursing Homes and Assisted Living Facilities

Occupation	Non-COVID-19 Related Reasons for Recruitment Difficulties			
	Shortage of Applicants	Shortage of Applicants Meeting Minimum Job Qualifications	Non-Competitive Salary	Non-Competitive Benefits
Certified Nurse Aides/Assistants	81%	38%	38%	14%
Dietitians/Nutritionists	80%	20%	20%	10%
Home Health Aides	83%	25%	33%	8%
Infection Preventionist Practitioners	50%	0%	25%	0%
Licensed Clinical Social Workers (LCSWs)	67%	0%	33%	0%
Licensed Master Social Workers (LMSWs)	100%	0%	50%	0%
Licensed Practical Nurse (LPNs)	79%	39%	36%	14%
MDS Coordinators	57%	29%	0%	14%
Nurse Directors/Managers	75%	20%	35%	15%
Nurse Educators	100%	0%	14%	0%
Occupational Therapists	67%	0%	17%	33%
Occupational Therapy Assistants	71%	0%	29%	29%
Paid Feeding Assistants	0%	0%	0%	0%
Personal Care Aides	72%	28%	28%	6%
Physical Therapists	63%	0%	38%	25%
Physical Therapy Assistants	57%	0%	29%	29%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	92%	8%	15%	15%
Registered Nurses Experienced (3+ years of clinical experience)	83%	17%	29%	17%
Respiratory Therapists	50%	25%	50%	0%
Speech-Language Pathologists	50%	0%	67%	17%
Temporary Nurse Aide/CNA Trainees	82%	9%	36%	18%

Table 225. COVID-19 Related Reasons for Recruitment Difficulties at Western New York Nursing Homes and Assisted Living Facilities

Occupation	COVID-19 Related Reasons for Recruitment Difficulties				
	Family Care Giving Commitments Prevented Availability	Lack of Online Training Certification	Vaccine or Booster Refusal	Fear of COVID-19 Exposure	COVID-19 Testing of Staff and Required Quarantine if a Positive Result Reduced Available Staff
Certified Nurse Aides/Assistants	38%	10%	52%	43%	29%
Dietitians/Nutritionists	20%	0%	10%	0%	10%
Home Health Aides	50%	8%	67%	58%	50%
Infection Preventionist Practitioners	0%	0%	0%	0%	25%
Licensed Clinical Social Workers (LCSWs)	0%	0%	0%	33%	33%
Licensed Master Social Workers (LMSWs)	0%	0%	0%	50%	100%
Licensed Practical Nurse (LPNs)	25%	0%	57%	29%	25%
MDS Coordinators	14%	0%	14%	0%	29%
Nurse Directors/Managers	15%	5%	25%	10%	10%
Nurse Educators	14%	0%	0%	0%	14%
Occupational Therapists	0%	0%	17%	33%	33%
Occupational Therapy Assistants	0%	0%	0%	14%	29%
Paid Feeding Assistants	0%	0%	0%	0%	0%
Personal Care Aides	39%	11%	44%	39%	39%
Physical Therapists	0%	0%	13%	25%	25%
Physical Therapy Assistants	0%	0%	0%	14%	29%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	15%	8%	23%	8%	15%
Registered Nurses Experienced (3+ years of clinical experience)	21%	4%	29%	8%	17%
Respiratory Therapists	0%	0%	25%	0%	25%
Speech-Language Pathologists	0%	0%	0%	17%	33%
Temporary Nurse Aide/CNA Trainees	36%	9%	18%	18%	18%

Table 226. Non-COVID-19 Related Reasons for Retention Difficulties at Western New York Nursing Homes and Assisted Living Facilities

Occupation	Non-COVID-19 Reasons for Retention Difficulties				
	Staff Found Higher Pay and Benefits Elsewhere	Staff Left for Other Employment Sectors	Paperwork and Regulatory Burdens	Retirement	Scheduling Challenges
Certified Nurse Aides/Assistants	75%	80%	25%	10%	50%
Dietitians/Nutritionists	0%	50%	0%	0%	0%
Home Health Aides	60%	80%	10%	10%	60%
Infection Preventionist Practitioners	100%	0%	100%	0%	0%
Licensed Clinical Social Workers (LCSWs)	0%	0%	0%	0%	50%
Licensed Master Social Workers (LMSWs)	0%	33%	33%	0%	33%
Licensed Practical Nurse (LPNs)	63%	74%	32%	16%	47%
MDS Coordinators	67%	33%	0%	33%	67%
Nurse Directors/Managers	71%	64%	21%	21%	29%
Nurse Educators	0%	0%	0%	0%	0%
Occupational Therapists	67%	67%	0%	0%	67%
Occupational Therapy Assistants	33%	67%	0%	0%	33%
Paid Feeding Assistants	100%	100%	0%	0%	100%
Personal Care Aides	47%	60%	13%	7%	40%
Physical Therapists	50%	50%	0%	0%	50%
Physical Therapy Assistants	33%	33%	0%	0%	33%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	70%	40%	10%	0%	30%
Registered Nurses Experienced (3+ years of clinical experience)	72%	39%	28%	11%	39%
Respiratory Therapists	100%	50%	0%	0%	0%
Speech-Language Pathologists	50%	0%	0%	0%	50%
Temporary Nurse Aide/CNA Trainees	56%	56%	22%	0%	67%

Table 227. COVID-19 Related Reasons for Retention Difficulties at Western New York Nursing Homes and Assisted Living Facilities

Occupation	COVID-19 Related Reasons for Retention Difficulties			
	Fear of COVID-19 Exposure	Family Care Giving Commitments	Conversion to Another Position	Vaccine or Booster Refusal
Certified Nurse Aides/Assistants	30%	45%	20%	55%
Dietitians/Nutritionists	50%	0%	0%	0%
Home Health Aides	30%	50%	30%	50%
Infection Preventionist Practitioners	0%	0%	100%	0%
Licensed Clinical Social Workers (LCSWs)	50%	0%	0%	0%
Licensed Master Social Workers (LMSWs)	67%	0%	0%	33%
Licensed Practical Nurse (LPNs)	32%	32%	21%	63%
MDS Coordinators	33%	0%	0%	33%
Nurse Directors/Managers	29%	14%	29%	14%
Nurse Educators	0%	0%	0%	0%
Occupational Therapists	33%	0%	0%	33%
Occupational Therapy Assistants	33%	0%	0%	33%
Paid Feeding Assistants	100%	100%	100%	100%
Personal Care Aides	20%	33%	27%	33%
Physical Therapists	50%	0%	0%	0%
Physical Therapy Assistants	33%	0%	0%	33%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	10%	0%	10%	30%
Registered Nurses Experienced (3+ years of clinical experience)	11%	17%	22%	39%
Respiratory Therapists	50%	0%	0%	50%
Speech-Language Pathologists	50%	50%	0%	0%
Temporary Nurse Aide/CNA Trainees	22%	22%	22%	33%

c. Home Health Care**Table 228.** Percent of Respondents Who Indicated Recruitment or Retention Difficulties at Western New York Home Health Care Agencies

Occupation	Percent of Respondents Indicating Difficulty	
	Recruiting	Retaining
COVID-19 Compliance Officer	17%	0%
Home Health Aides	100%	89%
Homemaker	80%	90%
Intake Coordinator	25%	17%
Licensed Clinical Social Workers (LCSWs)	75%	25%
Licensed Master Social Workers (LMSWs)	20%	20%
Licensed Practical Nurse (LPNs)	75%	80%
Occupational Therapists	33%	0%
Occupational Therapy Assistants	0%	0%
Personal Care Aides	100%	100%
Physical Therapists	33%	50%
Physical Therapy Assistants	0%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	80%	57%
Registered Nurses Experienced (3+ years of clinical experience)	88%	61%
Respiratory Therapists	0%	0%
Speech-Language Pathologists	0%	0%

Table 229. Non-COVID-19 Related Reasons for Recruitment Difficulties at Western New York Home Health Care Agencies

Occupation	Non-COVID-19 Related Reasons for Recruitment Difficulties			
	Shortage of Applicants	Shortage of Applicants Meeting Minimum Job Qualifications	Non-Competitive Salary	Non-Competitive Benefits
COVID-19 Compliance Officer	0%	100%	0%	0%
Home Health Aides	100%	32%	42%	21%
Homemaker	100%	25%	38%	13%
Intake Coordinator	67%	67%	0%	0%
Licensed Clinical Social Workers (LCSWs)	67%	67%	33%	0%
Licensed Master Social Workers (LMSWs)	100%	0%	0%	0%
Licensed Practical Nurse (LPNs)	89%	33%	56%	33%
Occupational Therapists	0%	0%	0%	0%
Occupational Therapy Assistants	0%	0%	0%	0%
Personal Care Aides	95%	32%	47%	32%
Physical Therapists	0%	0%	0%	0%
Physical Therapy Assistants	0%	0%	0%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	67%	33%	42%	25%
Registered Nurses Experienced (3+ years of clinical experience)	82%	36%	41%	23%
Respiratory Therapists	0%	0%	0%	0%
Speech-Language Pathologists	0%	0%	0%	0%

Table 230. Additional Reasons for Recruitment Difficulties at Western New York Home Health Care Agencies

Occupation	COVID-19 Related Reasons for Recruitment Difficulties			
	Family Care Giving Commitments Prevented Availability	Lack of Scheduling Flexibility for the Applicant	Vaccine or Booster Refusal	Fear of COVID-19 Exposure
COVID-19 Compliance Officer	50%	50%	0%	0%
Home Health Aides	26%	26%	58%	21%
Homemaker	25%	38%	63%	13%
Intake Coordinator	33%	0%	33%	0%
Licensed Clinical Social Workers (LCSWs)	0%	33%	0%	0%
Licensed Master Social Workers (LMSWs)	0%	0%	0%	100%
Licensed Practical Nurse (LPNs)	22%	44%	67%	22%
Occupational Therapists	0%	0%	0%	0%
Occupational Therapy Assistants	0%	0%	0%	0%
Personal Care Aides	42%	32%	58%	21%
Physical Therapists	0%	0%	0%	0%
Physical Therapy Assistants	0%	0%	0%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	25%	50%	58%	17%
Registered Nurses Experienced (3+ years of clinical experience)	23%	32%	41%	5%
Respiratory Therapists	0%	0%	0%	0%
Speech-Language Pathologists	0%	0%	0%	0%

Table 231. Non-COVID-19 Related Reasons for Retention Difficulties at Western New York Home Health Care Agencies

Occupation	Non-COVID-19 Related Reasons for Retention Difficulties				
	Staff Found Higher Pay and Benefits Elsewhere	Staff Left for Other Employment Sectors	Paperwork and Regulatory Burdens	Retirement	Scheduling Challenges
COVID-19 Compliance Officer	0%	0%	0%	0%	0%
Home Health Aides	53%	53%	18%	6%	53%
Homemaker	56%	44%	22%	0%	67%
Intake Coordinator	0%	50%	0%	0%	50%
Licensed Clinical Social Workers (LCSWs)	100%	0%	0%	0%	0%
Licensed Master Social Workers (LMSWs)	0%	0%	0%	0%	100%
Licensed Practical Nurse (LPNs)	63%	25%	0%	25%	13%
Occupational Therapists	0%	0%	0%	0%	0%
Occupational Therapy Assistants	0%	0%	0%	0%	0%
Personal Care Aides	53%	53%	21%	11%	53%
Physical Therapists	0%	0%	0%	0%	100%
Physical Therapy Assistants	0%	0%	0%	0%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	75%	25%	25%	13%	0%
Registered Nurses Experienced (3+ years of clinical experience)	71%	36%	36%	7%	7%
Respiratory Therapists	0%	0%	0%	0%	0%
Speech-Language Pathologists	0%	0%	0%	0%	0%

Table 232. Additional Reasons for Retention Difficulties at Western New York Home Health Care Agencies

Occupation	COVID-19 Related Reasons for Retention Difficulties				Termination Due to Unsatisfactory Performance
	Scheduling Challenges	Family Care Giving Commitments	Too Few Available Hours for a Full Time Position	Vaccine or Booster Refusal	
COVID-19 Compliance Officer	0%	0%	0%	0%	0%
Home Health Aides	53%	29%	24%	35%	29%
Homemaker	56%	22%	33%	22%	22%
Intake Coordinator	50%	50%	0%	50%	0%
Licensed Clinical Social Workers (LCSWs)	0%	0%	0%	0%	0%
Licensed Master Social Workers (LMSWs)	100%	100%	0%	100%	0%
Licensed Practical Nurse (LPNs)	50%	13%	13%	50%	13%
Occupational Therapists	0%	0%	0%	0%	0%
Occupational Therapy Assistants	0%	0%	0%	0%	0%
Personal Care Aides	47%	26%	21%	58%	32%
Physical Therapists	0%	0%	0%	100%	0%
Physical Therapy Assistants	0%	0%	0%	0%	0%
Registered Nurses Newly Licensed (1-2 years of clinical experience)	13%	0%	13%	50%	13%
Registered Nurses Experienced (3+ years of clinical experience)	14%	14%	14%	36%	14%
Respiratory Therapists	0%	0%	0%	0%	0%
Speech-Language Pathologists	0%	0%	0%	0%	0%

5. Health Workforce Production and Project Need

a. Graduations

Table 233. The Number of Graduations for Selected Health Care Occupations in Western New York, 2017-2021

Occupational Program	School Year					Change Between 2017 and 2021	
	2017	2018	2019	2020	2021	Number	Percent
Audiologists & Speech Language Pathologists ^a	212	215	214	217	182	-30	-14.2%
Clinical Laboratory Technicians	18	13	16	12	10	-8	-44.4%
Clinical Laboratory Technologists	30	26	26	30	32	2	6.7%
Clinical Nutritionists	17	19	21	20	19	2	11.8%
Creative Arts Therapists ^b	10	11	10	17	17	7	70.0%
Dental Assistants	22	22	20	20	0	-22	-100.0%
Dental Hygienists	49	53	45	48	49	0	0.0%
Dietitians	86	67	80	88	80	-6	-7.0%
EMTs and Paramedics	20	15	38	35	15	-5	-25.0%
Health Care Administrators	87	69	104	108	119	32	36.8%
License Practical Nurses	367	376	392	437	440	73	19.9%
Marriage and Family Therapists	5	13	7	6	5	0	0.0%
Medical Assistants	126	136	114	101	54	-72	-57.1%
Mental Health Counselors	141	116	138	212	274	133	94.3%
Nuclear Medical Technologists	11	12	9	7	10	-1	-9.1%
Nurse Anesthetist	12	13	17	15	17	5	41.7%
Occupational Therapists	211	219	225	242	189	-22	-10.4%
Occupational Therapy Assistants	35	54	42	54	6	-29	-82.9%
Opticians, Dispensing	20	21	23	30	18	-2	-10.0%
Pharmacists	172	186	196	200	182	10	5.8%
Phlebotomists	10	9	7	0	20	10	100.0%
Physical Therapists	205	166	180	177	150	-55	-26.8%
Physical Therapy Assistants	45	50	47	42	19	-26	-57.8%
Physician Assistants	134	128	123	138	120	-14	-10.4%
Radiation Therapists and Technologists	99	101	128	110	104	5	5.1%
Registered Nurses	1,127	1,142	1,235	1,197	1,254	127	11.3%
Registered Nurses with Advanced Education ^c	115	122	148	136	178	63	54.8%
Respiratory Therapists	24	21	25	28	21	-3	-12.5%
Social Workers	358	392	393	371	424	66	18.4%
Substance Abuse/Addiction Counseling	34	31	31	29	22	-12	-35.3%
Surgical Technology/Technologist	35	50	48	33	35	0	0.0%

^a Audiologists & speech-language pathologists include graduations in audiology, speech-language pathology, and communication sciences and disorders.

^b Creative arts therapists include graduations in art therapy, dance therapy, and music therapy.

^c Registered nurses with advanced education include graduations or certificates in adult health nursing, clinical nurse specialist, critical care nursing, family practice nursing, geriatric nursing, maternal and child health nursing, palliative care nursing, pediatric nursing, perioperative/OR nursing, public health nursing, women's health nursing, and nursing practice.

Source: Integrated Postsecondary Education Data System.

b. Licenses

Table 234. Number of Licensed Individuals in Selected Health Care Professions in Western New York, 2018–2022

Occupation	2018	2019	2020	2021	2022	Change Between 2018 and 2022	
						Number	Percent
Clinical Laboratory Technicians	193	182	190	179	176	-17	-8.8%
Clinical Laboratory Technologists	877	859	888	885	866	-11	-1.3%
Dental Assistants	213	241	252	251	254	41	19.2%
Dental Hygienists	1,147	1,192	1,214	1,201	1,206	59	5.1%
Dietitians/Nutritionists	378	398	400	424	434	56	14.8%
Licensed Practical Nurses	6,659	6,964	6,877	6,755	6,951	292	4.4%
Nurse Practitioners	1,553	1,680	1,812	1,972	2,014	461	29.7%
Occupational Therapists	977	1,047	1,088	1,132	1,179	202	20.7%
Occupational Therapy Assistants	516	538	544	526	518	2	0.4%
Pharmacists	1,804	1,856	1,858	1,927	1,970	166	9.2%
Physical Therapists	1,530	1,646	1,697	1,751	1,805	275	18.0%
Physical Therapist Assistants	498	530	535	533	543	45	9.0%
Physician Assistants	1,033	1,152	1,248	1,316	1,362	329	31.8%
Registered Nurses	19,992	21,088	21,312	21,963	22,157	2,165	10.8%
Respiratory Therapists	515	529	538	533	537	22	4.3%
Social Workers	2,358	2,527	2,614	2,733	2,866	508	21.5%
Speech-Language Pathologists	1,205	1,270	1,311	1,329	1,345	140	11.6%

Source: New York State Education Department, Office of Professions.

Notes: Nurse practitioners are registered nurses and are certified in 1 or more of 16 specialties. Social workers include master's Clinical Social Workers and master's Licensed Social Workers.

c. Table 1

Table 235. Employment Projections for Selected Health Care Occupations for Western New York, By Largest Percentage Increase, 2018–2028

Occupational Title	2018	2028	Change Between 2018 and 2028		Average Annual Openings ^a
			Number	Percent	
Physician Assistants	680	970	290	42.6%	75
Home Health and Personal Care Aides	16,440	23,370	6,930	42.2%	3,354
Nurse Practitioners	1,060	1,500	440	41.5%	112
Occupational Therapy Assistants and Aides	290	400	110	37.9%	48
Physical Therapist Assistants and Aides	350	480	130	37.1%	64
Physical Therapists	1,400	1,900	500	35.7%	119
Speech-Language Pathologists	1,110	1,480	370	33.3%	106
Medical Assistants	1,930	2,510	580	30.1%	303
Phlebotomists	440	560	120	27.3%	64
Healthcare Social Workers	880	1,110	230	26.1%	119
Diagnostic Medical Sonographers	310	390	80	25.8%	28
Nurse Anesthetists	390	490	100	25.6%	32
Respiratory Therapists	520	650	130	25.0%	43
Dental Assistants	1,270	1,580	310	24.4%	190
Dental Hygienists	1,230	1,530	300	24.4%	123
Occupational Therapists	780	970	190	24.4%	68
Emergency Medical Technicians and Paramedics	890	1,100	210	23.6%	87
Magnetic Resonance Imaging Technologists	130	160	30	23.1%	11
Medical Secretaries and Administrative Assistants	1,000	1,230	230	23.0%	148
Medical and Health Services Managers	1,650	2,020	370	22.4%	182
Registered Nurses	14,690	17,490	2,800	19.1%	1,139
Medical Records and Health Information	1,060	1,250	190	17.9%	92
Licensed Practical and Licensed Vocational Nurses	5,320	6,230	910	17.1%	530
Recreational Therapists	60	70	10	16.7%	4
Mental Health and Substance Abuse Social Workers	880	1,020	140	15.9%	107
Dietitians and Nutritionists	320	370	50	15.6%	26
Radiation Therapists	130	150	20	15.4%	9
Nursing Assistants	7,720	8,880	1,160	15.0%	1,045
Cardiovascular Technologists and Technicians	270	310	40	14.8%	20
Radiologic Technologists and Technicians	1,100	1,260	160	14.5%	81
Psychiatric Technicians	140	160	20	14.3%	14
Surgical Technologists	530	600	70	13.2%	52
Dietetic Technicians	80	90	10	12.5%	8
Clinical Laboratory Technologists and Technicians	1,230	1,360	130	10.6%	95
Nuclear Medicine Technologists	120	130	10	8.3%	8
Pharmacy Technicians	1,530	1,620	90	5.9%	136
Pharmacists	1,640	1,620	-20	-1.2%	71

^aAnnual openings reflect creation of new positions in the occupation and replacement for those retiring or otherwise leaving the occupation.

Source: NYS Department of Labor, Jobs in Demand/Projects, Long-Term Occupation Projections, 2018-2028.

IV. APPENDIX

A. Data Sources and Methods

The following describes the data sources used in this report. Where appropriate, the methods used for calculating rates are also included.

Information provided in this report is statewide or by New York State Department of Labor (NYSDOL) regions. A list of counties and a map depicting the NYSDOL regions are presented on pages 3 and 244 as well as on each regional profile page. Data sources include:

1. Center for Health Workforce Studies

New York State Registered Nurse (RN) Graduations

CHWS surveys RN education programs in New York annually to describe trends in the production of RNs in the state. The 2022 survey included questions about applications, acceptances, faculty, perspectives on the local job market, and COVID-19 impacts.

Employer Demand Survey

CHWS, in conjunction with statewide and regional provider organizations, conducts annual surveys of human resources staff from home health care agencies, hospitals, and nursing homes across New York State. The surveys asked about the professions and occupations that pose the greatest recruitment and retention problems in 2022. Respondents were asked to assess recruitment and retention difficulties on a 5-point Likert scale, ranging from “easy” to “difficult.” The percentages reported in this report indicated those facilities that reported either a “somewhat difficult or difficult” on recruitment and/or retention issues. The provider organizations that CHWS collaborated with on these surveys included:

- Association on Aging in New York
- Empire State Association of Assisted Living
- Greater New York Hospital Association
- Healthcare Association of New York State, Inc.
- Healthcare Association of Western and Central New York
- Home Care Association of New York State, Inc.
- Iroquois Healthcare Association
- LeadingAge New York
- New York State Association of Health care Providers, Inc.
- New York State Center for Assisted Living
- New York State Health Facility Association
- Suburban Hospital Alliance

Home health care agencies and hospitals may have sites in multiple counties. In these cases, the counties may be located in different NYSDOL regions. Consequently, information on recruitment and retention for these settings was reported in each region where sites were located. Additionally, in instances where total responses within a region were less than 5, no information is provided, or regions were combined.

2. Department of Labor Jobs

Data from New York State Quarterly Census of Employment and Wages (QCEW, formerly known as ES-202) for 2017 to 2021 were used to describe regional changes in health care employment by setting. Note that this is a count of jobs not individuals. A number of events potentially affected the job counts, including closures, mergers, and/or expansions. Consequently, large changes in jobs in specific health sectors (i.e., hospitals, nursing homes, or home health care) may reflect changes in ownership or the service delivery system rather than actual changes in the workforce. Additionally, more recent changes in jobs and employment such as temporary or permanent layoffs or retirements due to the COVID-19 pandemic may not be reflected in the job counts. For more information about the QCEW data, please visit the QCEW Technical Notes page: <https://labor.ny.gov/stats/lstechqcew.shtm>. When reviewing the counts of jobs, please note:

- These counts include full-time and part-time positions. One person might hold two part-time positions and consequently there is not a one-to-one match of individual workers compared to the number of jobs reported.
- To protect individual privacy, if job counts in an area are reported by less than 3 institutions, NYSDOL not publicly release these job counts.

Salaries

Salary data is reported by both NYSDOL and Occupational Employment and Wage Statistics (OEWS) and the US Bureau of Labor Statistics Occupational Employment Survey (OES). The regional-level wage estimates are from OEWS, and the state-level wage estimates are from OES. The regional wage estimates are based on responses from 6 semi-annual panels collected between November 2017 and May 2021. Wages were then updated to the first quarter of 2022 by making cost-of-living adjustments. These wage estimates include both part-time and full-time employees, as well, as part-time consultants. The Department of Labor does not report salaries in a region with fewer than 3 institutions in a particular setting. The reported state-level wage estimates from BLS include the annual 10th percentile wage (Entry), annual median wage (Median), and annual 90th percentile wage (Experienced). In reviewing both datasets, please be aware that:

- In 2021, the OCC_CODE of Emergency Medical Technicians and Paramedics from both datasets included 29-2042 and 29-2043.
- In 2017 and 2018, the OCC_CODE of Home Health and Personal Care Aides from the BLS data included 31-1011 and 39-9021.
- The state-level employment and wage estimates of Medical Records and Health Information Technicians were not reported as their own occupational category 2019 and 2020 and were not included in the salary table.
- In 2017 and 2018, the OCC_CODE of Medical Secretaries and Administrative Assistants, 43-6013, only included medical secretaries.
- The OCC_CODE of Occupational Therapy Assistants and Aides from both datasets included 31-2011 and 31-2012.
- The OCC_CODE of Physical Therapist Assistants and Aides from both datasets included 31-2021 and 31-2022.
- In 2017 and 2018, the OCC_CODE of Radiologic Technologists and Technicians, 29-2034, only included radiologic technologists.

Projections

NYSDOL develops projections for the state and NYSDOL regions. The state projections are updated for the 2020-2030 and the regional projections are for 2018-2028. Annual job openings reflect both newly created positions in the occupation and turnover of workers in existing positions who retire, change jobs, or leave the occupation.

Occupations with a small increase in the number of new jobs but a high number of annual openings typically reflect significant annual turnover rather than expansion of the occupation. Limitations for these projections include unanticipated external factors such as recession, scope of work or education changes for specific occupational titles, changes in state and/or federal reimbursement, and advancements in technology. In reviewing both datasets, please be aware that:

- The OCC_CODE of Home Health and Personal Care Aides for state data is 31-1130. For the regional data they are broken out separately home health aide (31-1011) and personal care aide (39-9021).
 - The state projections of Medical Records and Health Information Technicians in 2020-2030 were not reported as their own occupational category 2019 and 2020 and were not included in the projections table.
 - The OCC_CODE of Occupational Therapy Assistants and Aides from both datasets include 31-2011 and 31-2012.
 - The OCC_CODE of Physical Therapist Assistants and Aides from both datasets include 31-2021 and 31-2022.
 - The OCC_CODE of both the regional and state projections for Medical Secretaries and Administrative Assistants is 43-6013, which includes only medical secretaries.
3. US Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS)

The IPEDS system is a collection of interrelated surveys conducted annually by the US Department of Education, National Center for Education Statistics. IPEDS gathers information from every college, university, and technical and/or vocational institution that participates in the federal student financial aid program. The data from school year 2016/2017 (hereafter referred to as 2017) to school year 2020/2021 (hereafter referred to as 2021) were used to describe the number of new graduates each year potentially entering health occupations. These data were collected from two- and four-year universities, vocational schools, and technical schools. The number of graduations were displayed and aggregated by NYDOL regions.

These data do not reflect programs that may not have reported graduations or individuals who completed on-the-job training programs. Large changes in graduations may reflect closures, mergers, new programs, and/or other administrative changes in how and where data are reported.

Graduations may include entry-level degrees and those degrees that lead to licensure. For example, social workers include those graduating with bachelor's degrees and those graduating with master's degrees. A master's is required for licensure in New York State.

- The category of social worker graduations in social work (44.0701) and clinical/medical social worker (51.1503).
- Health care administrators include CIPS codes 51.0701, 51.0702, 51.0718, and 51.2211.
- Nurse midwives include Nurse Midwife/Nursing Midwifery and Direct Entry Midwifery.
- Audiologists & speech-language pathologists include graduations in audiology (51.0202), speech-language pathology (51.0203), audiologists and speech-language pathologists (51.0204), and communication sciences and disorders (51.0201).
- Creative arts therapists include graduations in art therapy (51.2301), dance therapy (51.2302), and music therapy (51.2305).
- Registered nurses with advanced education include graduations or certificates in adult health nursing (51.3803), clinical nurse specialist (51.3813), critical care nursing (51.3814), family practice nursing (51.3805), geriatric nursing (51.3821), maternal and child health nursing (51.3806), palliative care nursing (51.3819), pediatric nursing (51.3809), perioperative/OR nursing (51.3812), public health nursing (51.3811), women's health nursing (51.3822), and nursing practice (51.3818).

4. New York State Education Department (NYSED) Licensure Data

Licensure data from 2018 - 2022 presented in this report reflect counts of licensed health care professionals in New York. Data on licenses are available from NYSED on the number of individuals licensed in a health care profession. Licensure data in a health care profession represent the upper limit of the number of individuals in New York who can practice in a profession. However, some individuals who are licensed in a health care profession may not be working in the profession, may be working less than full-time, or may be working in the profession in another state. Licensure data, however, can provide valuable information on major trends in the supply of health care professionals in the state. In reviewing licensure data, please note:

- Counts of health care professionals by region are based on the mailing address in the licensure file, which could be either a home or a practice location. Additionally, certain individuals in the file may be licensed to practice in New York but live in another state.
- Social workers (SWs) are licensed in New York as either licensed clinical social workers (LCSWs) or licensed master social workers (LMSWs). Although state and federal labor department data sources provide statistics for LCSWs and LMSWs combined collectively as social workers, the licensing distinction is reflected for the purposes of understanding recruitment and retention difficulties.
- Nurse practitioners are licensed as RNs but are certified in 1 or more of 16 NP specialties. Information presented in the report at the regional level represents a duplicated count of NPs across all specialties. The statewide count, however, is unduplicated.

5. US Census Bureau, American Community Survey

The American Community Survey (ACS) is conducted each year and is used to provide population estimates. The 2016 - 2020 5-year estimates from the ACS were used to describe selected population characteristics by NYSDOL regions. The population characteristics included total population, age by category, poverty, race/ethnicity, and education level. The education levels and rates were based on individuals aged 25 years and older. The following ACS categories were combined into 1 category for this report:

- Category "Population with Less than a High School Diploma" data was a combination of "Total population aged 25 and older with less than 9th grade education" and "Total population aged 25 and older with 9th to 12th grade education, no diploma."
- Category "Population with a high school diploma or equivalent" was a combination of "Total population 25 years and older who is a high school graduate (includes equivalency)" and "Total population aged 25 years and older, some college no degree."

6. New York State Department of Health

Data for the New York State Community Health Indicator Report (CHIRS) for 2017 - 2019 (2016 - 2018 for cancer), were used to describe the health of the population by NYSDOL regions. The health indicators were obtained from CHIRS and include information on deaths, births, and hospitalizations. Both counts and rates are reported for an average of 3 years. Diabetes hospitalization data are for those with diabetes as the primary diagnosis for hospitalization. The rates for calculating these health indicators are as follows:

- Infant death rates are reported per 1,000 live births.
- Total birth rates are reported per 1,000 females aged 15 to 44 years.
- Teen birth rates are reported per 1,000 females aged 15 to 19 years.
- Low-birthweight rates and percentage of late/no prenatal care are reported per 100 live births. Percent of late/no prenatal care was based on those births where information was provided and not on total births.

- All deaths are reported per 100,000 total population.
- Rates per 10,000 for asthma hospital admissions, aged 25 to 44 are based on population aged 25 to 44 years, and rates per 10,000 for asthma hospital admissions, aged 45 to 64 are based on population aged 45 to 64 years.
- Rates per 10,000 for pediatric asthma hospital admissions are based on population aged birth to 17 years.
- All other rates per 10,000 for hospitalizations and emergency department (ED) visits are based on the total population.

B. Terminology

The settings used in this report are based on the North American Industry Classification System (NAICS) for the health care sector. The breakdown of settings within the health care sector is as follows:

- Hospitals (public and private)
- Nursing and personal care facilities (excluding residential, mental health and substance abuse facilities, and other residential care facilities)
- Home health care
- Ambulatory care settings (excluding home health care), including:
 - Medical and diagnostic laboratories
 - Offices and clinics of Doctor of Medicine
 - Offices and clinics of dentists
 - Offices and clinics of other health practitioners
 - Outpatient care centers; and
 - Other ambulatory health services.

This classification scheme provides standardization among the data sets presented, but it has several limitations. By limiting the analyses to the NAICS health care services industries, health care workers in hospital-sponsored ambulatory care sites may be included in hospital employment counts. In addition, health care professionals in industries outside of the settings listed, such as those working in schools, insurance firms, or who are self-employed, are excluded from the health care sector counts.

Historically, OES groups occupations by category. These occupational categories also have limitations. For example, prior to 2010, registered nursing made no distinction between NPs, nurse midwives, and RNs. Additionally, nursing aides, orderlies, and attendant's occupational category includes multiple job titles, levels of training, and certifications.

There are some job titles in a health care setting that may not necessarily reflect similar OES occupational classifications, and this may cause some problems in reporting. For example, confusion may result from the difference in defining a home health aide as any individual providing services in the home or as an individual who completes home health aide certification requirements.

Throughout this report some abbreviations are used, including:

- CNA -- certified nursing aide
- FPL -- federal poverty level
- FQHC -- federally qualified health center
- LCSW -- licensed clinical social workers

- LMSW -- licensed master social workers
- LPN -- licensed practical nurses
- MDS -- minimum data set (coordinators)
- NP -- nurse practitioners
- RN -- registered nurses

C. Geographic Areas

For purposes of this report, NYSDOL regions are used as described below and as depicted in Figure 1 on page 3. The regions and their respective counties are:

- Capital Region: The counties of Albany, Columbia, Greene, Rensselaer, Saratoga, Schenectady, Warren, and Washington.
- Central New York: The counties of Cayuga, Cortland, Madison, Onondaga, and Oswego.
- Finger Lakes: The counties of Genesee, Livingston, Monroe, Ontario, Orleans, Seneca, Wayne, Wyoming, and Yates.
- Hudson Valley: The counties of Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster, and Westchester.
- Long Island: The counties of Nassau and Suffolk.
- Mohawk Valley: The counties of Fulton, Herkimer, Montgomery, Oneida, Otsego, and Schoharie.
- New York City: The counties of Bronx, Kings (Brooklyn), New York (Manhattan), Queens, and Richmond (Staten Island).
- North Country: The counties of Clinton, Essex, Franklin, Hamilton, Jefferson, Lewis, and St. Lawrence.
- Southern Tier: The counties of Broome, Chemung, Chenango, Delaware, Schuyler, Steuben, Tioga, and Tompkins.
- Western New York: The counties of Allegany, Cattaraugus, Chautauqua, Erie, and Niagara.

For the purpose of this report, the downstate category includes the NYSDOL regions of New York City and Long Island. The upstate category includes the following NYSDOL regions: Capital Region, Central New York, Finger Lakes, Hudson Valley, Mohawk Valley, North Country, Southern Tier, and Western New York.