2016



The Health Care Workforce in New York, 2015-2016 Trends in the Supply and Demand for Health Workers



School of Public Health University at Albany, State University of New York

The Health Care Workforce in New York, 2015-2016: Trends in the Supply of and Demand for Health Workers

February 2017



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PREFACE

This report summarizes data and information about New York's health workforce to describe supply of and demand for workers and to provide projections for future demand. The goals of this report are to assist policy makers and other stakeholders to target health workforce education and job training resources to address the most pressing health care workforce needs; to guide health workforce policies, including decisions about the capacity of health professions education programs; and to inform current and prospective students about health care employment prospects and opportunities.

This report was prepared by Center for Health Workforce Studies (CHWS) staff, including Robert Martiniano, Lauren Boyd, Randy Rosario, Jenny Gao, Yuhao Liu, Nafin Harun, Shen Wang, and Jean Moore, with editing by Rachel Carter and Leanne Keough. 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 organization, 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 data 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. Today, CHWS has established itself as a national leader in the field of health workforce studies.

The views expressed in this report are those of CHWS and do not necessarily represent positions or policies of the School of Public Health, University at Albany, SUNY, the New York State Education Department, the New York State Department of Health, or 1199 Hospital League Health Care Industry Planning and Placement Fund, Inc.

February 2017

ACKNOWLEDGEMENTS

Special appreciation is extended to the participating provider associations as well as the human resources staff who provided valuable information about health workforce recruitment and retention issues.

SUGGESTED CITATION

Martiniano R, Boyd L, Rosario R, Gao J, Liu Y, Harun N, Wang S, Moore J. *The Health Care Workforce in New York, 2015-2016: Trends in the Supply and Demand for Health Workers.* Rensselaer, NY: Center for Health Workforce Studies, School of Public Health, SUNY Albany; February 2017.

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I. EXECUTIVE SUMMARY

A. Background

The health workforce is a cornerstone of the health care delivery system. Efforts to provide high-quality, accessible health care depend on the availability of an adequate supply of appropriately trained health workers. At a time when health care systems are undergoing dramatic changes, data and information on the health workforce can greatly contribute to informed decision making. The health care sector continues to grow in New York, accounting for about 12% of total employment, and continues to increase faster than employment in all other sectors. Additionally, many of the fastest growing occupations in the state are in the health sector. Despite this growth, there is still unmet demand for health care workers in many areas of the state.

New York has a longstanding commitment to population health, particularly for the underserved. Currently, one of New York's most notable efforts to improve the health of its citizens fall under its Medicaid waiver program, the Delivery System Reform Incentive Payment Program (DSRIP), which has supported performing provider systems aimed at reducing the number of inappropriate hospitalizations and emergency department visits for Medicaid patients, particularly those with chronic diseases and multiple comorbidities. Another important initiative underway in New York is the State Health Information Plan (SHIP), designed to identify and stimulate the spread of promising innovations in health care delivery and finance that result in optimal health outcomes for all New Yorkers. As a result of these efforts, the state's providers are strengthening their primary care infrastructure, integrating primary care with behavioral health, focusing on preventive services, and building the capacity for more effective management of chronic diseases.

There is growing emphasis on providing care that is better coordinated, with greater patient engagement and a better understanding of the impacts of social determinants of health on outcomes. Increasingly, providers are adopting team-based models of care that are changing the demand for health workers and the skills these workers need to effectively serve New Yorkers.

As employment in health care continues to grow, there are some differences by region and setting. Employment in home health care in New York is growing the fastest, followed by growth in ambulatory care. Employment in hospitals accounts for over 40% of health care sector employment, but has added fewer new jobs compared to other health care settings. Despite the overall growth in health care jobs in the state, there are still many areas with provider shortages. This report presents data drawn from a variety of sources to describe the state's health workforce, and provides information statewide and by region. It includes information on the health status of New Yorkers, the health care system, and the supply of and demand for health workers. The report is designed to assist policy makers and other stakeholders to improve health workforce planning efforts.

B. Key Findings

Health sector employment in the state and the nation continues to be an important economic driver, accounting for a substantial amount of job growth.

- In 2014, there were nearly 20 million jobs in the US either in the health sector or in health occupations employed outside the health sector, accounting for over 13% of the total US workforce.
- Health sector employment in the state accounted for over 12% of total employment in 2014, higher than the national level of nearly 10%.
- Health sector employment in New York has grown by nearly 24% between 2000 and 2014, compared with less than 1% job growth for all other employment sectors.
- Between 2000 and 2014, upstate^a New York saw rapid health sector job growth with a 17% increase; jobs outside of the health care sector declined by around 6% during that same period.
- Regionally, health care employment varied across the state. Between 2010 and 2014, some upstate regions experienced job growth of almost 7%, while others experienced small declines. New York City experienced the largest job growth, increasing by more than 11% over the same 5year period.

Statewide, jobs grew more rapidly in home health and ambulatory care between 2000 and 2014, compared to other health sector settings.

- While hospitals continued to employ the largest share of health sector workers in the state, job growth was more pronounced in other health care settings.
- Statewide health sector job growth by setting between 2000 and 2014 was as follows:
 - o Hospitals (+27,025, 6.6%)
 - o Ambulatory care (+73,870, 30.1%)
 - Nursing home and personal care facilities (+16,619, 11.6%)
 - Home health care (+87,656, 135.7%)

Changes in the number of health care jobs in New York between 2010 and 2014 varied by occupation.

- The number of personal care aide jobs increased by nearly 40,700 or 40%.
- The number of occupational therapist jobs increased by over 2,000 or 29%.
- The number of physician assistant jobs increased by nearly 1,200 or by 29%.
- The number of registered nursing jobs declined slightly by 150 or 0.1%.
- The number of social worker jobs declined by nearly 1,500 or almost 3%.

Between 2010 and 2014, there was variable growth in the number of licensed health professionals by occupation in the state.

- The number of licensed nurse practitioners grew by almost 30% to 19,825, and the number of licensed physician assistants grew by 31% to over 13,300.
- The number of licensed occupational therapists grew by nearly 16% to almost 12,000, while the number of physical therapists rose by just over 9% to nearly 22,000.

^a For purposes of this report, upstate New York is considered as all counties outside of New York City.

• The number of registered nurses (RNs) grew by nearly 4% to over 280,230 while the number of licensed practical nurses (LPNs) increased by just over 4% to over 72,440.

Primary care physicians^b and psychiatrists^c are not well distributed across the state, with wide regional variation.

- In 2015, the New York City region had the most primary care physicians per capita with 89.6 per 100,000, while the Mohawk Valley (61.5 per 100,000) had the least.
- The New York City region had the most psychiatrists per capita per capita (43.0 per 100,000) in 2015, while the Western New York and Mohawk Valley regions had the least (13.8 per 100,000 and 13.7 per 100,000, respectively).

In 2016, hospitals across the state reported the most difficulty recruiting experienced RNs, nurse practitioners (NPs), physician assistants (PAs) and clinical laboratory technologists.

- Hospitals also indicated that while recruiting newly licensed RNs was not problematic, they were more difficult to retain.
- Hospitals reported plans to expand both inpatient and outpatient services and anticipate a growing demand for NPs, care coordinators, and clinical laboratory technologists.

Nursing homes in the state reported the most difficulty recruiting and retaining RNs, LPNs, and certified nurse aides in 2016.

- The majority of nursing homes reported difficulty hiring workers for evening, night, and weekend shifts.
- About 15% of nursing homes projected expansion of services within the next year, with the remaining nursing homes indicating they would stay the same.

In 2016, the state's home health agencies reported the greatest difficulty recruiting speechlanguage pathologists, occupational therapists, experienced RNs, and respiratory therapists.

- While home health agencies indicated some difficulty recruiting home health aides, homemakers, and personal care aides, they reported greater difficulty retaining them.
- Fifty-two percent of home health care agencies projected service expansion, while most of the remainder expected to keep services at the same level.

Federally qualified health centers (FQHCs) in the state in 2016 reported the most difficulty recruiting primary care physicians, obstetricians/gynecologists, dentists, and most categories of behavioral health workers.

• FQHCs indicated the greatest retention difficulties for most categories of behavioral health workers, especially psychiatric NPs, as well as primary care practitioners, and dentists.

Between 2014 and 2024, the New York State Department of Labor projects growing demand for direct care workers, including home health aides and personal care aides as well as RNs, social workers, and LPNs.

^b Primary care physicians include general practice, family practice, general internal medicine, obstetrics/gynecology, and general pediatrics.

 $[\]ensuremath{\scriptscriptstyle c}$ Psychiatrists include general psychiatrists and child and adolescent psychiatrists.

II. BACKGROUND

A. Overview

The health workforce is a cornerstone of the health care delivery system. Efforts to provide high-quality, accessible health care depend on the availability of an adequate supply of appropriately trained health workers. At a time when health care systems are undergoing dramatic changes, data and information on the health workforce can greatly contribute to informed decision making. The health care sector continues to grow in New York, accounting for about 12% of total employment, and continues to increase faster than employment in all other sectors. Additionally, many of the fastest growing occupations in the state are in the health sector. Despite this growth, there is still unmet demand for health care workers in many areas of the state.

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As employment in health care continues to grow, there are some differences by region and setting. Employment in home health care in New York is growing the fastest, followed by growth in ambulatory care. Employment in hospitals accounts for over 40% of health care sector employment, but has added fewer new jobs compared to other health care settings. Despite the overall growth in health care jobs in the state, there are still many areas with provider shortages. This report presents data drawn from a variety of sources to describe the state's health workforce, and provides information statewide and by region. It includes information on the health status of New Yorkers, the health care system, and the supply of and demand for health workers. The report is designed to assist policy makers and other stakeholders to improve health workforce planning efforts.

B. Objectives and Goals

The objectives of this report are to:

- Describe health care employment trends in New York; and
- Identify the health professions and occupations in greatest demand currently and offer projections for future demand.

The goals of this report are to:

- Assist policy makers and other stakeholders to target health workforce education and job training resources to address the most pressing health workforce needs;
- Guide health workforce policies, including decisions about the capacity of health professions education programs; and
- Inform current and prospective students about health care employment prospects and opportunities.

C. Data Sources and Methods

All data sources for this report are cited unless they are from primary data collection conducted by the Center for Health Workforce Studies (CHWS) and collaborating partners. The following is a list of data sources used in this report. When appropriate, the methods used for calculating the rates in this report are also described.

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 10 and 11.

Data sources include:

- 1. Center for Health Workforce Studies
 - Surveys of Human Resources Directors in Health Care

CHWS, in conjunction with statewide and regional provider organizations, conducts annual surveys of human resources directors from FQHCs, home health care agencies, hospitals, and nursing homes across New York. The 2016 surveys ask about the professions and occupations that pose the greatest recruitment and retention problems, as well as emerging care coordination titles and employment trends. Recruitment and retention difficulty is assessed on a 1 (least difficult) to 5 (most difficult) scale. The provider organizations that CHWS collaborated with on these surveys included:

- o Community Health Center Association of New York State
- Continuing Care Leadership Coalition at the Greater New York Hospital Association
- Healthcare Association of New York State
- Home Care Association of New York State, Inc.
- LeadingAge New York
- New York State Association of Healthcare Providers, Inc.

Home health care agencies serve patients in multiple counties and FQHCs also have sites in multiple counties, which may be located in different NYSDOL regions. Consequently, information on recruitment and retention for home health care agencies and FQHCs was reported in each region where services were provided or sites were located. In instances where total responses for a region (either by setting or occupation) were less than 5, no information is provided or contiguous regions are combined.

• New York State RN Graduations

CHWS surveys RN education programs in New York annually to understand trends in the supply of RNs in the state. The 2016 survey included questions about applications, acceptances, and graduations for that year as well as projected graduations through 2016.

• New York State Physician Data

Physician estimates were developed by using a number of different sources, including physician re-licensure survey data, and represents physicians actively working in New York. Counts used in this report represent bodies, with no estimation of time spent in patient care.

2. US Bureau of Labor Statistics (BLS) and the NYSDOL

Various labor department statistics used in this report are from federal and state sources. In 2010 there were some definitional changes in occupational titles, most notably RNs, personal care aides, and home health aides, which altered the course of previous trends in these professions. Prior to 2010, RNs included advanced practice nurses (NPs, certified nurse midwives, and certified registered nurse anesthetists), whereas currently, these categories are reported separately. Additionally, the previous definition for personal care aides included home health aides. In reviewing changes in counts among years, please be aware of these definitional changes for occupational employment statistics and projections data.

• Covered Employment and Wages Program (ES-202)

Counts of Jobs

Data from 2010-2014 were used to describe regional changes in health care employment by setting. A number of events potentially affected the information reported, including closures, mergers, and expansions. Consequently, large changes in jobs in specific health sectors (ie, hospitals, nursing homes, or home health care) may reflect a change in ownership or the service delivery system rather than changes in the workforce. At times, ES-202 survey responses could not be placed into regions. Consequently, summing the regions will not add up to the statewide total.

• Occupational Employment Statistics (OES)

<u>Wages</u>

Wages are based on 2012, 2013, 2014, and 2015 Occupational Employment Survey (OES) data, which were then revised to the first quarter of 2016 by making cost-of-living adjustments. Average hourly salary was calculated by dividing average annual salary by 52 weeks and by 40 hours per week.

• Employment Projections

Employment projections used in this report reflect a count of the number of jobs in certain occupational categories and by health care setting. Every 2 years, employment projections are developed by BLS for the nation. NYSDOL develops projections for the state and by NYSDOL region, which are both for the period 2012-2022 (Regional) and 2014-2024 (Statewide). 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 within the occupation rather than expansion of the occupation. Limitations to these projections include unanticipated external factors such as recessions, change in scopes of work or education for specific occupational titles, changes in state and/or federal reimbursement, and/or advancements in technology.

3. State Education Department Licensure Data

The licensure data from 2010-2014 presented in this report reflects counts of licensed health professionals in New York. Each year in April, SED updates these data. Data are available from SED on the number of individuals licensed in a health profession. SED licenses more than 40 health professions, and individuals must secure a New York license before practicing in one of these health professions. Licensure data in a health profession represent the upper limit of the number of individuals in New York who can practice in a profession. It is important to recognize the limitations of these data; chiefly, that some individuals who are licensed in a health profession may be working either less than full-time or not at all in the profession, or may be working in the profession but in another state. Licensure data can, however, provide valuable information on major trends in the supply of health professionals in the state.

In reviewing licensure data, please be aware that:

- Social workers (SWs) are licensed in New York as either licensed clinical social workers (LCSWs) or licensed master social workers (LMSWs). Although some data sources provide statistics for LCSWs and LMSWs collectively as social workers, the licensing distinction is reflected for the purposes of understanding recruitment and retention difficulties.
- NPs are licensed as RNs but certified in 1 of 16 NP specialties. Information presented in the report at the regional level represents a duplicated count across all specialties. The statewide count is unduplicated.

• Counts of health professionals by county 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.d

4. US Census

The census is an official count of the entire US population, conducted once every 10 years, and the American Community Survey is conducted each year update the information. The 2010-2014 American Community Survey was used to describe selected population characteristics by NYSDOL regions. The population characteristics included total population, age structure, poverty, race/ethnicity, and education level. The education levels and rates were based on individuals aged 25 years and older.

5. New York State Community Health Indicator Report

These data from 2011-2013 (2010-2012 for cancer), were used to describe the health of the population by NYSDOL regions. The health indicators were obtained from Community Health Indicator Reports (CHIRS) and includes information on deaths, births, and hospitalizations. Both counts and rates are reported for the average of 3 years. The rates for calculating these health indicators are calculated 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 adult asthma hospital admissions are based on population aged 18 and older.
- Rates per 10,000 for pediatric asthma hospital admissions are based on population aged birth to 15 years.
- All other rates per 10,000 for hospitalizations and emergency department (ED) visits are based on the total population.
- 6. New York State Department of Health SPARCS Data

The Statewide Planning and Research Cooperative System (SPARCS) collects patient-level information for all hospital inpatient stays, outpatient visits (including visits to hospital extension settings), and ED visits. Data from SPARCS were used to report the number of preventable hospitalizations. The numbers represent the average of 3 years, from 2011 to 2013, and the rates are based on per 10,000 average total population.

d The total listed in the report includes all New York licensed individuals regardless of whether the address given in the licensure file was a New York address, whereas tables of licensees by region include only those individuals with an address in the region.

D. 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 retardation, mental health and substance abuse facilities, and other residential care facilities);
- Home health care; and
- Ambulatory care settings (excluding home health care), including:
 - Medical and diagnostic laboratories
 - o Offices and clinics of doctors of medicine
 - Offices and clinics of dentists
 - o Offices and clinics of other health practitioners
 - o Outpatient care centers
 - o Other ambulatory health services.

This classification scheme provides standardization among the data sets presented, but it has some limitations. By limiting the analyses to the NAICS health services industries, health care workers in hospital-sponsored ambulatory care sites may be included in hospital employment counts. Also, health care professionals in industries outside of the settings listed, such as those in schools, insurance firms, or who are self-employed, are excluded from the health sector counts. CHWS estimates that, nationally, one-fourth of the health care workforce is employed outside of the health care sector as defined by BLS (Figure 1, page 13).

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. The nursing aides, orderlies, and attendants occupational category also includes multiple job titles, levels of training, and certifications and were separated into separate job categories in 2010.

There are some job titles in a health 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 differences in defining a home health aide as any individual providing services in the home, or as one who completes home health aide certification requirements. Additionally, throughout this report some abbreviations are used. The following is a list of the most common.

CNA	certified nursing aide
FPL	federal poverty level
FQHC	federally qualified health center
HIT	health information technology
LCSW	licensed clinical social worker
LMSW	licensed master social worker
LPN	licensed practical nurse
MDS	minimum data set
NP	nurse practitioner
Ob/Gyn	obstetrician/gynecologist
PA	physician assistant
RN	registered nurse

E. Geographic Areas

For purposes of this report, New York State Department of Labor regions are used as described below and as depicted in Figure 1.

The NYSDOL regions (Figure 1) used in this report are:

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

For the purpose of this report, the term "upstate New York" is used to define all New York state regions outside of New York City.

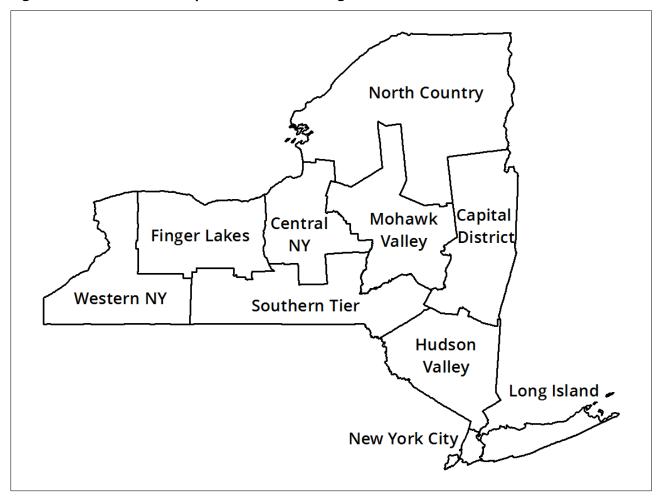


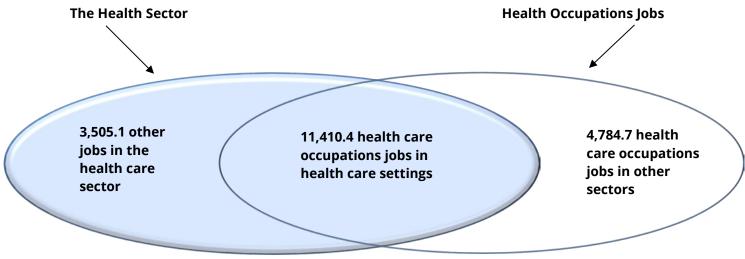
Figure 1. New York State Department of Labor Regions

III. THE HEALTH CARE WORKFORCE IN THE UNITED STATES

A. Total Employment

In 2014, there were nearly 20 million jobs either in the health sector or in health occupations employed outside the health sector, accounting for over 13% of the total US workforce. In 2014, almost 15 million of these jobs (10% of US employment) were in the health sector, including both health and non-health– related occupations. The remaining 4.8 million jobs (3% of US employment) were in health occupations in other sectors (Figure 2 and Table 1).





Source: US Department of Labor, Bureau of Labor Statistics. Employment Projections program: Table 1.9, 2014-24 Industry-Occupation Matrix Data, by Industry; and Table 2.7, Employment and Output by Industry.

Table 1. The US Health Workforce	2014 (in Thousands)
	$r_{i} = 0$

Setting	Health Care Occupation Jobs	Other Jobs	Total
Health Care Settings	11,410.4	3,505.1	14,915.5
Other Work Settings	4,784.7	130,839.7	135,624.4
Total	16,195.1	134,344.8	150,539.9

Setting	Number	Percent
Health Care Occupations Jobs in Health Care Settings	11,410.4	7.6%
Other Jobs in Health Care Settings	3,505.1	2.3%
Health Care Occupations Jobs in Other Settings	4,784.7	3.2%
Total	19,700.2	13.1%

Source: US Department of Labor, Bureau of Labor Statistics. Employment Projections program: Table 1.9, 2014-24 Industry-Occupation Matrix Data, by Industry; and Table 2.7, Employment and Output by Industry.

B. By Setting

Hospitals continued to employ the most health workers in the United States (39%), followed by offices of health practitioners (28%), nursing homes (17%), and both home health care and other ambulatory care settings, at about 8% each (Figure 3).

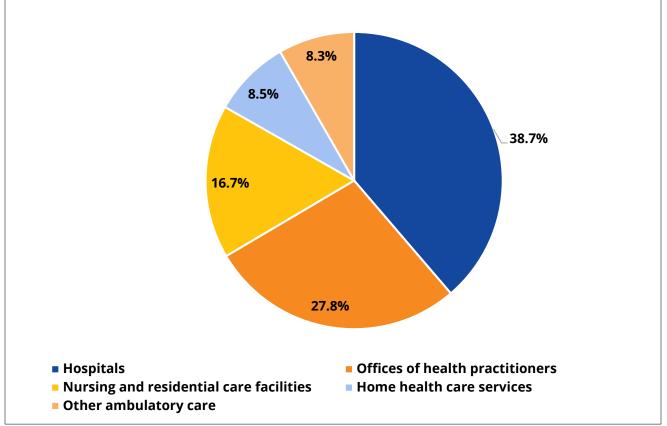


Figure 3. Percent Distribution of the Health Workforce in the United States, by Setting, 2014

Source: US Department of Labor, Bureau of Labor Statistics. Employment Projections program: Table 1.9, 2014-24 Industry-Occupation Matrix Data, by Industry; Table 2.7, Employment and Output by Industry. Between 2004 and 2014, employment in the nation's health sector grew by 20%, while employment in other sectors increased by 3%. It is projected that between 2014 and 2024 health sector employment will grow at a significantly higher rate than employment in all other sectors. Health sector employment is projected to grow from nearly 15 million jobs in 2014 to more than 18 million jobs in 2024, an increase of nearly 22%, compared with only 5% growth for jobs in all other employment sectors (Figure 4).

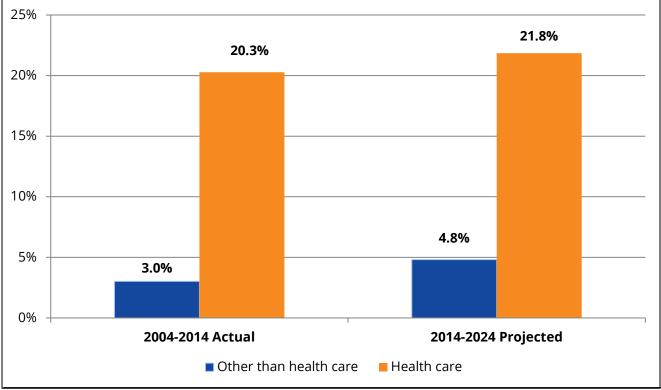


Figure 4. Job Growth in the Health Care Sector Compared With All Other Employment Sectors in the United States, 2004-2014 and Projected 2014-2024

Source: US Department of Labor, Bureau of Labor Statistics. Employment Projections program: Table 1.9, 2014-24 Industry-Occupation Matrix Data, by Industry; and Table 2.7, Employment and Output by Industry. Nationally, home health care is projected to experience the fastest job growth in the health care sector, with an overall growth of 60% between 2014 and 2024, adding over 760,000 jobs during that period. In addition, offices of health practitioners are projected to add more than 1 million jobs during the same 10-year period, with an overall growth of 25%.

Between 2014 and 2024, jobs in nursing and residential care facilities are projected to grow by 22%, adding over 730,000 jobs, and hospitals are projected to grow by 6% during the same period, adding almost 370,000 jobs (Figure 5).

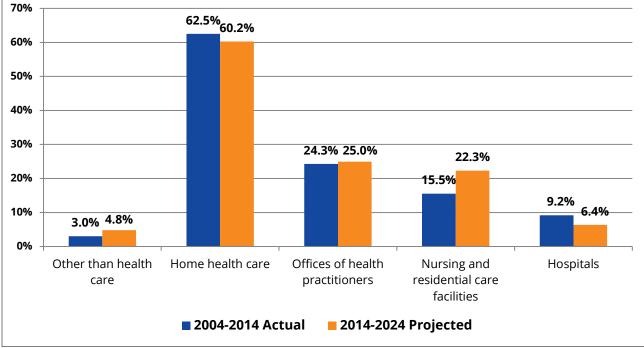


Figure 5. Actual and Projected Growth of Selected Occupational Settings in the Health Care Sector in the United States, 2004-2014 and Projected 2014-2024

Source: US Department of Labor, Bureau of Labor Statistics. Employment Projections program: Table 1.9, 2014-24 Industry-Occupation Matrix Data, by Industry; and Table 2.7, Employment and Output by Industry.

C. By Occupation

Of the total health care workforce in the United States in 2014, RNs (17%) were the single largest health occupation, followed by personal care aides (11%), nursing assistants (9%), and home health aides (6%) (Figure 6).

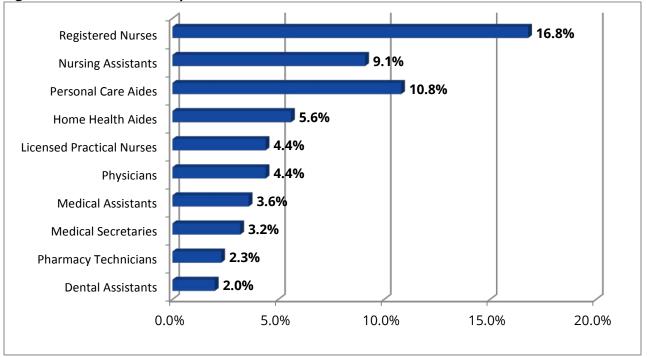


Figure 6. Health Care Occupations in the United States, 2014

Source: Martiniano R, Chorost S, Moore J. Health Care Employment Projections, 2014-2024: An Analysis of Bureau of Labor Statistics Projections by Setting and by Occupation. Rensselaer, NY: Center for Health Workforce Studies, School of Public Health, SUNY Albany; April 2016.

Twenty of the top-30 fastest-growing occupations between 2014 and 2024 are in health care. Jobs for both occupational therapy assistants and physical therapist assistants are projected to increase substantially between 2014 and 2024, both by more than 40%. The projected top 10 fastest-growing health occupations include:

- Occupational therapy assistants (42.7%)
- Physical therapist assistants (40.6%)
- Physical therapist aides (39.0%)
- Home health aides (38.1%)
- Nurse practitioners (35.2%)
- Physical therapists (34.0%)
- Occupational therapy aides (30.6%)
- Physician assistants (30.4%)
- Genetic counselors (28.8%)
- Audiologists (28.6%)

Source: US Department of Labor, Bureau of Labor Statistics. Employment Projections program: Table 1.3, Fastest growing occupations, 2014 and projected 2024 (Numbers in thousands).

The need for workers, however, includes both new job openings and replacement of existing staff due to turnover. Between 2014 and 2024, nearly 1.1 million new RNs will be needed nationwide, including almost 650,000 to replace RNs leaving the profession. During the same period, over 600,000 personal care aides, nearly 600,000 nursing assistants, about 555,000 home health aides, and over 320,000 LPNs will be needed to fill new and existing jobs (Figure 7).

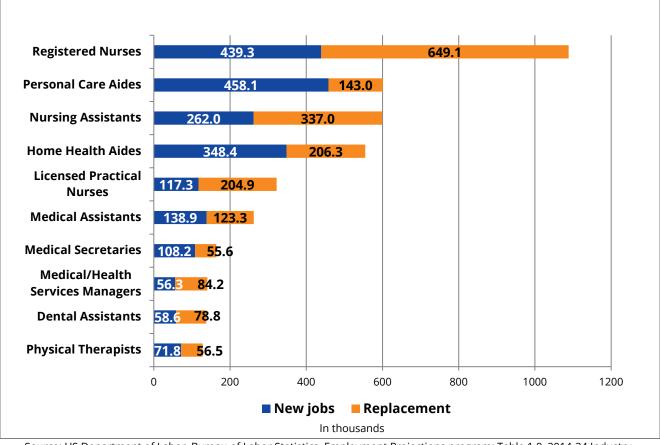


Figure 7. Selected Health Occupations With the Largest Projected Job Need in the United States, 2014-2024 (in Thousands)

Source: US Department of Labor, Bureau of Labor Statistics. Employment Projections program: Table 1.9, 2014-24 Industry-Occupation Matrix Data, by Industry.

IV. NEW YORK HEALTH SECTOR EMPLOYMENT

A. Total Employment

In 2014, health sector employment accounted for 12% of total employment in New York, somewhat higher than the national level. However, this rate did not include those health professionals working in other employment sectors outside the health sector, such as nurses working in educational settings or pharmacists working in settings such as retail pharmacies or supermarkets (Figure 8).

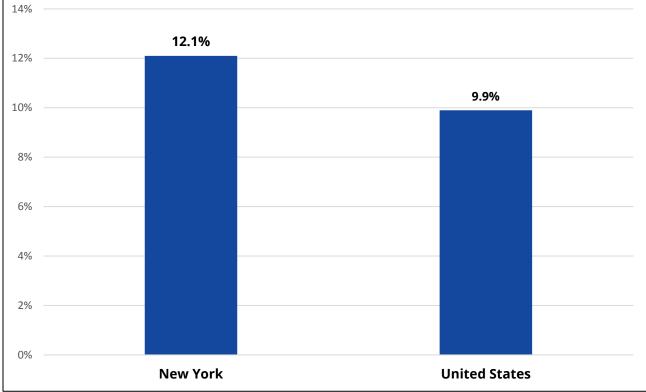


Figure 8. Health Sector Employment as a Percentage of Total Employment, 2014

Sources: US Department of Labor, Bureau of Labor Statistics. Employment Projections program: Table 1.9, 2014-24 Industry-Occupation Matrix Data, by Industry; and Table 2.7, Employment and Output by Industry; New York State Department of Labor, ES-202. Between 2000 and 2014, health care employment in New York grew by nearly 24%, adding over 160,000 jobs, while employment in all other sectors grew by about 48,000 (less than 1%). Between 2008 and 2009 employment in the health sector increased by over 17,000 jobs, or nearly 2%, while employment in all other sectors declined by nearly 300,000 jobs.

Additionally, between 2003 and 2014, employment in health care in New York increased by about 20%, while employment in all other sectors only grew by about 4% (Figure 9).

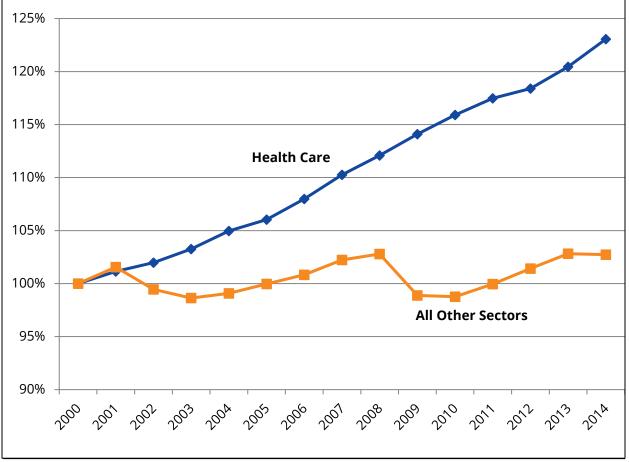


Figure 9. Employment Growth in New York, 2000-2014 (Standardized to 2000)

Source: New York State Department of Labor, ES-202.

Since 2000, health sector employment in New York has grown rapidly. The average annual growth in the health sector since 2000 has been nearly 1.5% annually, with more pronounced growth in 2013 and 2014. (Figure 10).

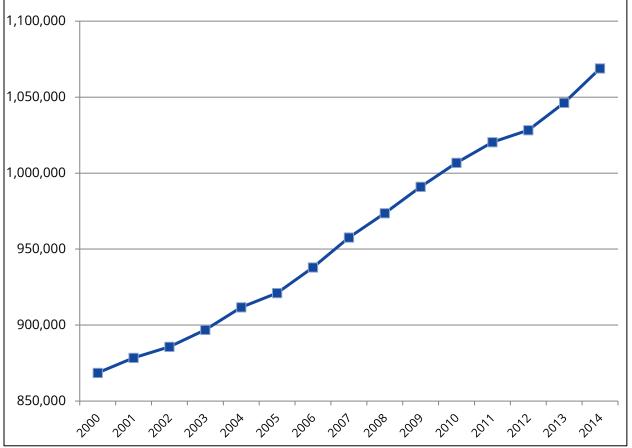


Figure 10. Employment Growth in Total Health Sector Employment in New York, 2000-2014

Source: New York State Department of Labor, ES-202.

Employment Growth in Regions Outside of New York City e

The difference in the growth between health care sector and non-health care sector jobs was most pronounced in regions outside of New York City. Although employment in the health care sector increased by nearly 17% between 2000 and 2014 in upstate New York, employment outside of the health care sector declined by around 6% during that same period. Between 2000 and 2008 employment outside of health care remained relatively steady, but in 2009 and again in 2013 employment dropped significantly in non-health care sectors in upstate New York. After 2010 the annual growth in health care employment began to slow (Figure 11).

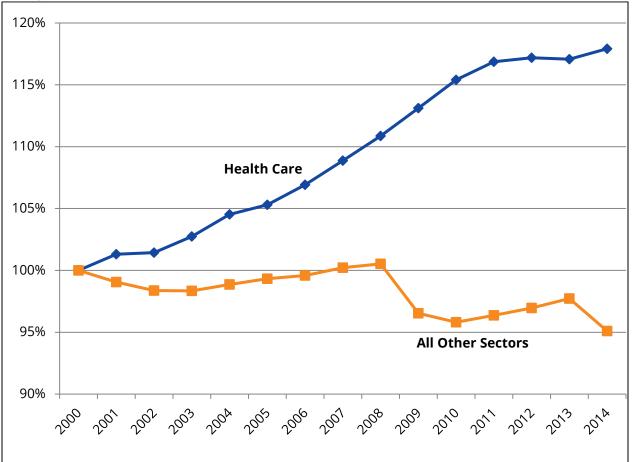


Figure 11. Employment Growth in Regions Outside of New York City, 2000-2014 (Standardized to 2000)

Source: New York State Department of Labor, ES-202.

e For New York City employment growth, please see page 49, Figure 19.

B. Health Sector Employment

Between 2000 and 2014, employment in New York's health sector increased by nearly 24%. Home health care settings (136%) had the largest increase in employment, more than doubling during this period. Ambulatory care settings also experienced substantial growth, employing about 30% more people in 2014 than were employed in 2000. In contrast, nursing homes and hospitals added significantly fewer jobs, with employment growth for these settings at 12% and 7%, respectively (Table 2).

Setting	2000	2014	Number Change	Percent Change
Hospitals	410,300	437,325	27,025	6.6%
Ambulatory care (excluding home health)	245,600	319,470	73,870	30.1%
Nursing home and personal care facilities	143,200	159,819	16,619	11.6%
Home health care	64,600	152,256	87,656	135.7%
Total	863,700	1,068,870	205,170	23.8%

Source: New York State Department of Labor, ES-202.

Although hospitals had much smaller growth rates, these facilities remained the most prominent employer for New York's health sector in 2014, employing 41% of those working in the health sector. Ambulatory care provided 30% of health sector jobs in New York, while nursing home and personal care facilities and home health care each contributed about 14% of health care positions (Figure 12).

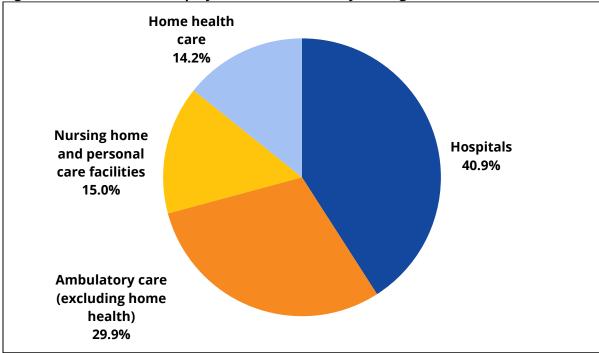


Figure 12. Health Sector Employment in New York, by Setting, 2014

Sources: New York State Department of Labor, ES-202.

C. By Region

Health sector employment in New York grew by almost 6% between 2010 and 2014. In 2014, the New York City region had nearly 485,000 health sector jobs and the Long Island region had more than 165,000 health sector jobs, reflecting increases of 11% and 2%, respectively, between 2010 and 2014. Health sector employment in the Southern Tier region remained stable during the same period (Table 3), while health sector employed in the Mohawk Valley and Western New York regions declined.

Region	2010	2011	2012	2013	2014	Change Between 2010 and 2014	
						Number	Percent
Capital District	54,521	55,320	56,097	56,459	57,226	2,705	5.0%
Central New York	37,093	37,367	38,500	38,941	39,123	2,030	5.5%
Finger Lakes	60,999	61,889	62,521	63,357	64,791	3,792	6.2%
Hudson Valley	110,546	111,655	111,528	111,702	113,251	2,705	2.5%
Long Island	161,395	164,628	163,830	164,474	165,458	4,063	2.5%
Mohawk Valley	27,195	27,019	26,861	26,905	26,247	-948	-3.5%
New York City	435,264	441,651	447,956	466,456	484,870	49,606	11.4%
North Country	17,564	17,784	17,899	17,897	18,215	651	3.7%
Southern Tier	28,648	28,925	29,081	29,089	28,650	2	0.0%
Western New York	71,456	71,384	70,649	70,964	71,039	-417	-0.6%
Total	1,006,782	1,020,423	1,028,317	1,046,244	1,068,870	55,288	5.6%

Table 3. Total Health Sector Employ	vment in New York, by Department	of Labor Region, 2010-2014

Sources: New York State Department of Labor, ES-202.

Between 2010 and 2014, the number of health care jobs per capita across the state increased by over 4%. The Long Island region had the highest number of health care jobs per capita in 2014 with 5,782 jobs per 100,000 total population, followed by New York City with 5,710 jobs per 100,000 total population (Table 4).

The North Country had the lowest number of health care jobs per 100,000 total population in 2014 with 4,197, followed by the Southern Tier with 4,390 health care jobs per 100,000 total population. The Mohawk Valley had the highest percentage of jobs in health care to total jobs in 2014 (14%), followed by Long Island (13.4%) and Hudson Valley regions (12.8%) (Table 4).

	2(010	2014			
Region	Jobs per 100,000 Population	% of Jobs in Health Care	Jobs per 100,000 Population	% of Jobs in Health Care		
Capital District	5,052.0	11.1%	5,269.3	11.3%		
Central New York	4,683.8	11.0%	4,956.5	11.5%		
Finger Lakes	5,011.6	11.4%	5,316.7	11.9%		
Hudson Valley	4,825.5	12.9%	4,870.9	12.8%		
Long Island	5,697.2	13.6%	5,782.0	13.4%		
Mohawk Valley	5,437.3	14.2%	5,321.9	14.1%		
New York City	5,324.2	12.1%	5,710.4	12.2%		
North Country	4,054.5	11.6%	4,196.9	12.2%		
Southern Tier	4,354.4	10.9%	4,390.4	11.0%		
Western New York	5,105.2	11.7%	5,093.3	11.4%		
Total	5,195.5	12.3%	5,413.0	12.3%		

Table 4. Total Employment and Health Sector Employment in New York, by Department of Labor
Region, 2010, 2014

Source: New York State Department of Labor, ES-202; US Census Bureau.

1. Hospital Employment

Between 2010 and 2014, hospital employment in New York increased by more than 8,000 jobs, or 2%.f The Finger Lakes region experienced the largest percentage increase in hospital employment (7.3%) between 2010 and 2014, followed by the New York City (4.5%) and Central New York regions (4.4%). The New York City region experienced the largest growth in the number of new hospital jobs, with slightly more than 9,000 new jobs, followed by the Finger Lakes region with an increase of more than 2,000 hospital jobs. The Hudson Valley, Long Island, Mohawk Valley, North Country, and Western New York regions all saw a loss of hospital jobs between 2010 and 2014 (Table 5).

Region	2010	2011	2012	2013	2014	Change Between 2010 and 2014	
						Number	Percent
Capital District	23,057	23,541	23,796	23,902	23,522	465	2.0%
Central New York	13,133	13,202	13,781	13,869	13,715	582	4.4%
Finger Lakes	28,258	28,916	29,436	29,546	30,306	2,048	7.3%
Hudson Valley	39,765	39,311	38,351	37,400	38,157	-1,608	-4.0%
Long Island	62,646	64,558	62,754	62,687	61,907	-739	-1.2%
Mohawk Valley	12,501	12,359	12,153	12,069	11,435	-1,066	-8.5%
New York City	200,675	198,908	202,774	205,813	209,677	9,002	4.5%
North Country	8,991	9,190	9,251	8,982	8,957	-34	-0.4%
Southern Tier	12,943	13,319	13,659	13,694	13,396	453	3.5%
Western New York	27,348	27,071	26,800	26,717	26,153	-1,195	-4.4%
Total	429,323	430,380	432,758	434,685	437,346	8,023	1.9%

Table 5. Hospital Employment in New York, by Department of Labor Region, 2010-2014

Source: New York State Department of Labor, ES-202.

^f Recent layoffs, closures, or mergers are not reflected in these numbers, either at the state or regional levels.

2. Ambulatory Care

Employment in ambulatory care settings (excluding home health care) increased by nearly 7% between 2010 and 2014, adding nearly 20,000 jobs. The Capital District and New York City regions saw the largest percentage increases both growing by more than 11% during the same period. The number of ambulatory care jobs in New York City increased by more than 12,000 between 2010 and 2014, followed by the Long Island and Hudson Valley regions. Ambulatory care employment in the Southern Tier declined slightly during the same time period (Table 6).

Region	2010	2011	2012	2013	2014	Change Between 2010 and 2014	
						Number	Percent
Capital District	17,222	17,461	17,735	18,264	19,118	1,896	11.0%
Central New York	13,414	13,644	14,125	14,337	14,677	1263	9.4%
Finger Lakes	16,457	16,505	16,536	17,225	17,497	1,040	6.3%
Hudson Valley	40,676	41,085	42,068	42,774	42,939	2,263	5.6%
Long Island	61,385	62,110	62,528	63,485	63,968	2,583	4.2%
Mohawk Valley	6,646	6,635	6,757	6,753	6,755	109	1.6%
New York City	105,439	108,007	109,951	112,658	117,446	12,007	11.4%
North Country	5,103	5,137	5,180	5,286	5,358	255	5.0%
Southern Tier	7,703	7,740	7,586	7,591	7,572	-131	-1.7%
Western New York	23,372	23,640	22,958	23,478	24,140	768	3.3%
Total	299,278	304,422	308,334	311,851	319,470	20,192	6.8%

Table 6. Ambulatory Care Services Employment (Excluding Home Health Care) in New York, by
Department of Labor Region, 2010-2014

Sources: New York State Department of Labor, ES-202.

3. Nursing and Personal Care Facility Employment

Employment in nursing and personal care facilities^g in New York decreased by 3% between 2010 and 2014, with 2 regions accounting for the majority of the overall decrease in the number of jobs. New York City experienced the largest percentage decline of 6.8%. The New York City region lost 3,700 nursing and personal care facilities jobs, while nursing and personal care facility jobs in Long Island dropped by over 1,300. The Hudson Valley region had the largest gain in nursing and personal care facility employment (513), followed by the Finger Lakes region (488) (Table 7).

Region	2010 2011 2012 2013		2013	2014	Change Between 2010 and 2014		
						Number	Percent
Capital District	11,194	11,240	11,413	11,132	11,167	-27	-0.2%
Central New York	9,142	8,929	8,765	8,623	8,589	-553	-6.1%
Finger Lakes	12,811	12,746	12,817	13,059	13,299	488	3.8%
Hudson Valley	20,605	20,742	20,767	20,746	21,118	513	2.5%
Long Island	24,244	24,399	23,918	22,722	22,934	-1,310	-5.4%
Mohawk Valley	6,632	6,561	6,555	6,693	6,692	60	0.9%
New York City	54,439	53,554	51,182	51,102	50,742	-3,697	-6.8%
North Country	2,937	2,920	2,937	3,040	3,063	126	4.3%
Southern Tier	6,901	6,733	6,706	6,665	6,621	-280	-4.1%
Western New York	15,844	15,644	15,618	15,436	15,594	-250	-1.6%
Total	164,753	163,521	160,811	159,218	159,819	-4,934	-3.0%

Table 7. Nursing and Personal Care Facility Employment in New York, by Department of Labor
Region, 2010-2014

Sources: New York State Department of Labor, ES-202.

^g Includes nursing care facilities and community care facilities for the elderly but excludes residential mental retardation, mental health and substance abuse facilities, and other residential care facilities.

4. Home Health Care

Between 2010 and 2014, employment in home health care in New York grew by more than 38,000 jobs, with the New York City region accounting for the vast majority of the increase. Jobs in home health care in New York City grew more than 43%, adding over 32,000 jobs. Outside of New York City, the Long Island region experienced the next largest increase in home health care employment, growing by more than 3,500 jobs between 2010 and 2014, or 27%, followed by the Hudson Valley region, which added more than 1,500 jobs, or 16%. Employment in home health care agencies in the Mohawk Valley region experienced a small decline, losing 51 jobs during the same period (Table 8).

Region	2010	2011	2012	2013	2014	Change Between 2009 and 2013	
						Number	Percent
Capital District	3,049	3,078	3,154	3,161	3,419	370	12.1%
Central New York	1,404	1,593	1,829	2,112	2,142	738	52.6%
Finger Lakes	3,473	3,722	3,732	3,527	3,589	116	3.3%
Hudson Valley	9,499	10,517	10,343	10,782	11,037	1,538	16.2%
Long Island	13,120	13,561	14,630	15,580	16,649	3,529	26.9%
Mohawk Valley	1,416	1,464	1,396	1,390	1,365	-51	-3.6%
New York City	74,711	81,182	84,049	96,883	107,005	32,294	43.2%
North Country	532	538	531	589	837	305	57.3%
Southern Tier	1,102	1,133	1,131	1,139	1,061	-41	-3.7%
Western New York	4,892	5,030	5,272	5,333	5,152	260	5.3%
Total	113,429	122,100	126,413	140,496	152,256	38,827	34.2%

Table 8. Home Health Care Employment in New York, by Department of Labor Region, 2010-2014

Source: New York State Department of Labor, ES-202.

D. By Occupation

1. Current Employment Data

Changes in the number of health care jobs in New York varied by occupation. Although this represents positions and not individuals or full-time equivalents (FTEs), it is useful in identifying trends in occupations and job titles. Notable changes between 2010 and 2014 included:

- The number of personal care aide jobs increased by 40,690, or 40.1%.
- The number of occupational therapist jobs increased by over 2,000, or 29%.
- The number of RN jobs remained relatively stable, declining by 150, or 0.1%.
- The number of social worker jobs declined by nearly 1,500, or 2.7%.

Table 9. Number of jobs in Selected Hear						Change Between 2010 and 2014	
Occupation	2010	2011	2012	2013	2014		
Registered Nurses	169,710	176,180	166,950	169,820	169,560	Number -150	Percent -0.1%
Personal Care Aides	103,710	115,920	127,860	136,140	142,220	40,690	40.1%
Home Health Aides	137,830	133,980	123,260	128,480	146,550	8,720	6.3%
Nursing Assistants	NA	NA	98,340	99,820	101,030	0,720 NA	NA
Social Workers	55,990	51,790	50,760	52,520	54,500	-1,490	-2.7%
Licensed Practical Nurses	45,100	47,950	48,520	49,050	47,550	2,450	5.4%
Medical and Health Services Managers	27,260	27,340	26,630	27,530	27,840	580	2.1%
Medical Assistants	20,950	21,360	20,050	23,170	23,780	2,830	13.5%
Pharmacists	16,660	17,820	18,970	19,060	18,870	2,000	13.3%
Dental Assistants	16,730	17,760	17,420	17,970	18,700	1,970	11.8%
Pharmacy Technicians	14,340	15,730	16,260	16,770	16,580	2,240	15.6%
Physical Therapists	13,740	13,490	13,930	14,170	15,310	1,570	11.4%
Radiologic Technologists	NA	NA	12,210	12,660	13,190	NA	NA
Medical Secretaries	9,530	9,900	10,990	10,790	11,480	1,950	20.5%
Speech-Language Pathologists	8,340	8,870	9,220	10,280	9,950	1,610	19.3%
Medical and Clinical Laboratory							
Technicians	8,240	7,920	7,260	9,850	7,580	-660	-8.0%
Dental Hygienists	9,710	9,690	9,630	9,850	9,960	250	2.6%
Medical & Clinical Laboratory	10.400	10.000	0.010	0.020	0.000	000	0.20/
Technologists	10,460	10,820	9,910	9,830	9,600	-860	-8.2%
Physician Assistant	9,220	9,690	9,320	9,780	10,410	1,190	12.9%
Nurse Practitioners	NA	NA	8,990	9,610	10,310	NA	NA
Medical Records and Health Info Techs	9,630	9,520	9,200	8,850	8,580	-1,050	-10.9%
Occupational Therapists	7,100	7,300	7,650	8,710	9,160	2,060	29.0%
Physical Therapist Assistants/Aides	6,480	6,040	6,730	7,050	7,470	990	15.3%
Respiratory Therapists	5,810	5,900	6,080	5,980	6,000	190	3.3%
Surgical Technologists	4,800	5,000	5,060	4,980	5,080	280	5.8%
Dietitians and Nutritionists	4,520	4,620	4,510	4,330	4,520	0	0.0%
Orderlies	NA	NA	3,860	3,850	4,980	NA	NA
Cardiovascular Technologists &	2,760	2,960	2,880	2,710	2,690	-70	-2.5%
Technicians	2,700	2,500	2,000	2,710	2,050	-70	-2.370
Occupational Therapy Assistants/Aides	2,320	2,370	2,350	2,400	2,470	150	6.5%
Certified Registered Nurse Anesthetists	NA	NA	1,220	1,580	1,430	NA	NA
Nuclear Medicine Technologists	1,230	1,090	1,110	1,190	1,330	100	8.1%
Dietetic Technicians	1,190	1,060	900	790	840	-350	-29.4%
Nurse Midwives	NA	NA	530	490	450	NA	NA

Source: US Department of Labor, Bureau of Labor Statistics, Occupational Employment Statistics.

^h Prior to 2010, RNs included advanced practice nurses (NPs, certified nurse midwives, and certified registered nurse anesthetists). Radiologic technologists were reported separately starting in 2012. Additionally, the previous definition for personal care aides included home health aides.

Average wages per hour in selected health occupations for New York are reported in Table 10. These wages are based on 2012-2015 survey data, which were adjusted to include the first quarter of 2016. Certified registered nurse anesthetists earned the highest hourly wage in 2016 (\$78.35), followed by medical and health service managers, and pharmacists (\$63.21 and \$57.35, respectively). Physical therapist aides (\$13.55), personal care aides (\$12.22), and home health aides (\$11.46) were the lowest wage earners in health care.

Occupation	Average Wage per Hour
Nurse Anesthetists	\$78.35
Medical and Health Services Managers	\$63.21
Pharmacists	\$57.35
Nurse Practitioners	\$52.11
Physician Assistants	\$49.76
Nurse Midwives	\$47.43
Speech-Language Pathologists	\$42.75
Physical Therapists	\$41.52
Occupational Therapists	\$39.54
Nuclear Medicine Technologists	\$38.90
Registered Nurses	\$38.50
Dental Hygienists	\$35.57
Respiratory Therapists	\$33.94
Radiologic Technologists and Technicians	\$32.49
Medical and Clinical Laboratory Technologists	\$32.49
Dietitians and Nutritionists	\$30.71
Cardiovascular Technologists and Technicians	\$28.58
Social Workers	\$27.97
Occupational Therapy Assistants	\$27.52
Physical Therapist Assistants	\$25.74
Surgical Technologists	\$25.13
Medical and Clinical Laboratory Technicians	\$22.92
Licensed Practical and Licensed Vocational Nurses	\$22.68
Medical Records and Health Information Technicians	\$21.30
Mental Health Counselors	\$20.79
Dietetic Technicians	\$19.83
Medical Secretaries	\$18.77
Dental Assistants	\$17.53
Orderlies	\$17.06
Medical Assistants	\$16.80
Nursing Assistants	\$16.37
Occupational Therapy Aides	\$15.65
Pharmacy Technicians	\$15.57
Physical Therapist Aides	\$13.55
Personal Care Aides	\$12.22
Home Health Aides	\$11.46

Table 10. Average Hourly Wage in Selected Health Occupations in New York, 2016

Source: New York State Department of Labor, Labor Statistics, Occupational Wages.

2. Licensure Data for Selected Health Professions in New York

Between 2010 and 2014, the number of licensed RNs in New York increased by more than 10,000, or 4%. Physician assistants had the largest percentage increase, growing by 31% during the same period. The number of NPs also grew by 29% between 2010 and 2014. In contrast, the number of clinical laboratory technicians and clinical laboratory technologists saw a decrease of 11% and 2%, respectively, during the same period (Table 11).

Profession	2010	2011	2012	2013	2014		Between nd 2014
						Number	Percent
Registered Nurses	269,947	270,691	273,052	280,973	280,236	10,289	3.8%
Licensed Practical Nurses	69,568	71,239	70,903	71,813	72,441	2,873	4.1%
Social Workers	48,430	50,391	51,685	53,964	55,353	6,923	14.3%
Pharmacists	21,863	22,431	23,275	24,210	25,816	3,953	18.1%
Physical Therapists	19,987	19,845	20,309	21,086	21,819	1,832	9.2%
Nurse Practitioners	15,395	16,268	17,117	18,815	19,825	4,430	28.8%
Speech-Language Pathologists	14,222	14,981	15,675	16,487	16,852	2,630	18.5%
Clinical Laboratory Technologist	15,118	14,808	14,905	14,665	14,882	-236	-1.6%
Physician Assistants	10,168	10,688	11,275	12,172	13,316	3,148	31.0%
Occupational Therapists	10,320	10,650	11,066	11,568	11,963	1,643	15.9%
Dental Hygienists	10,200	10,449	10,603	10,880	11,110	910	8.9%
Respiratory Therapists	5,279	5,534	5,640	5,892	6,053	774	14.7%
Physical Therapist Assistants	4,957	4,943	5,236	5,617	5,893	936	18.9%
Dietitians/Nutritionists	4,934	4,918	5,138	5,336	5,393	459	9.3%
Occupational Therapy Assistants	3,856	3,981	4,060	4,005	3,952	96	2.5%
Clinical Laboratory Technician	2,300	2,098	2,125	2,046	2,054	-246	-10.7%

Table 11. Number of Licensed Individuals in Selected Health Occupations in New York, 2010-2014ⁱ

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

E. Primary Care Physicians

There were nearly 26,000 primary care physicians practicing in New York. Forty-four percent (44%) of primary care physicians practiced general internal medicine, 22% were in family and general practice, and 21% were in general pediatrics. There were 74.6 obstetricians/gynecologists (Ob/Gyns) per 100,000 women aged 15 to 44 and 127.0 general pediatricians per 100,000 for children from birth to 17 years of age. There were nearly 6,300 psychiatrists, including child and adolescent psychiatrists, practicing in New York State, or approximately 32 per 100,000 population (Table 12).

¹This total includes all New York licensed individuals regardless of whether the address given in the licensure file was a New York address, whereas tables of licensees by region include only those individuals with an address in the region.

Table 12. Filling care Filysician	S and PSychiachists in New Tork, by 3	specially, 2015
Specialty	Physicians	Per 100,000 Population ^a
Family/General Practice	5,527	28.2
Internal Medicine (General)	11.188	57.1
Subtotal	16,715	85.5
Geriatrics	362	13.1
Obstetrics/Gynecology	3,022	74.6
Pediatrics (General)	5,427	127.0
Primary Care Total	25,526	N/A
Psychiatrist	6,275	32.0
^a All rates are per 100,000 total population	except the Ob/Gyn rate, which is per 100,000 w	omen aged 15 to 44, the pediatrician

Table 12. Primary Care Physicians and Psychiatrists in New York, by Specialty, 2015

^a All rates are per 100,000 total population except the Ob/Gyn rate, which is per 100,000 women aged 15 to 44, the pediatrician rate, which is per 100,000 children aged birth to 17 years, and the geriatrics rate, which is per 100,000 population aged 65 and older.

Source: Center for Health Workforce Studies.

While the statewide supply of primary care physicians and psychiatrists appears to be ample, it is widely recognized that these providers are unevenly distributed across regions, within regions at the county level, and at sub-county levels. The maldistribution of providers contributes to access to care barriers for underserved populations, including those that are Medicaid-eligible. As of December 31st, 2016, New York had nearly 4 million individuals in primary care health professional shortage areas (HPSAs) and slightly more than 2 million individuals in dental care HPSAs, most of which are designations that target Medicaid-eligibles._j

The New York City region had the highest rate of family/general practice and internal medicine (general) physicians with 89.6 per 100,000, while the Mohawk Valley had the lowest (61.5 per 100,000). The Finger Lakes region had the largest share of geriatric physicians with 22.3 per 100,000, and the Capital District had the least (2.5 per 100,000). The region with the highest share of obstetrics/gynecology physicians was the Long Island region with 86.6 per 100,000, and the Southern Tier region had the least (52.0 per 100,000). The New York City region also had the highest share of general pediatric physicians with 145.3 per 100,000 and the Southern Tier had the least (62.8 per 100,000). Additionally, the New York City region had the most psychiatrists (43.0 per 100,000), while the Western New York region and the Mohawk Valley had the least (13.8 per 100,000 and 13.7 per 100,000, respectively) (Table 13).

j https://datawarehouse.hrsa.gov/tools/quickreports.aspx

Specialty	Family/Gene and Interna (Gene	l Medicine	Gei	riatrics	Obstetrics/Gynecology Pediatrics (General)		Psychiatry			
	Counts	Per 100,000 Population	Counts	Per 100,000 Population ^a	Counts	Per 100,000 Population ^a	Counts	Per 100,000 Population ^a	Counts	Per 100,000 Population
Capital District	906	83.7	4	2.5	137	66.0	224	100.9	217	20.1
Central New York	595	75.2	8	7.1	105	67.3	167	96.1	137	17.3
Finger Lakes	1,028	84.4	41	22.3	176	75.2	302	114.3	226	18.5
Hudson Valley	1,990	86.1	38	11.5	354	82.0	771	140.2	931	40.3
Long Island	2,469	86.6	51	11.8	458	86.6	878	134.9	723	25.4
Mohawk Valley	381	61.5	8	9.7	52	57.4	68	65.5	85	13.7
New York City	7,480	89.6	187	17.9	1,444	74.8	2,595	145.3	3,595	43.0
North Country	297	68.2	3	4.4	46	57.5	63	67.3	66	15.1
Southern Tier	559	85.3	7	6.4	66	52.0	83	62.8	103	15.6
Western New York	1,009	72.2	15	6.6	185	69.8	276	93.4	193	13.8
^a The obstetrics/gyneco population aged 65 and		0,000 women ag	ged 15 to 44. ⁻	The pediatrics rat	e is per 100,	000 children aged	birth to 17 y	ears. The geriatr	ics rate is pe	r 100,000

Table 13. Primary Care Physicians and Psychiatrists per 100,000 Population in New York, by Region, 2015

Source: Center for Health Workforce Studies.

F. Trends in New York RN Education, 2005-2016

CHWS annually surveys RN education programs in New York to better understand trends in the production of RNs in the state. The 2015-16 survey included questions about applications, acceptances, and graduations for that year, as well as projected graduations through 2016. Of the 121 programs identified for this survey, a total of 112 deans and directors responded, which resulted in a 93% response rate. Data for the non-respondents were carried over from previous surveys; consequently, the following data reflects estimates of graduations for all RN education programs in the state.

In 2015, there were 11,578 graduates from RN education programs in New York, an increase of more than 400, or nearly 4%, compared with 2014 (Figure 13). Between 2014 and 2015, the number of associate degree in nursing (ADN) graduates declined slightly, while the number of (BSN)k graduates increased by more than 550 (9%) during the same period. The number of RN graduations in New York in 2016 is expected to grow by 49, or 0.4%, compared with 2015. ADN graduates are projected to decrease between 2015 and 2016, while increases are projected for BSN graduates and for BSN completers.

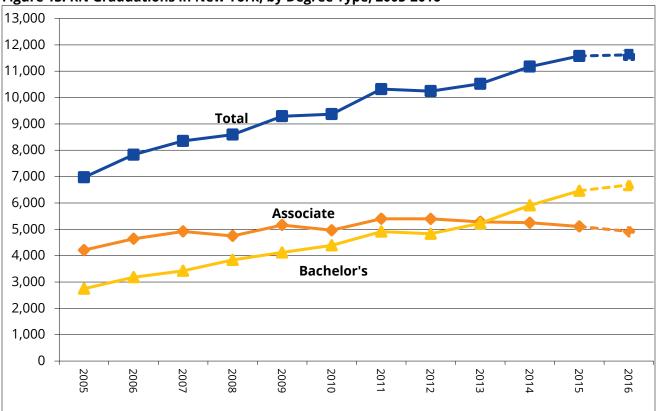


Figure 13. RN Graduations in New York, by Degree Type, 2005-2016

Source: Center for Health Workforce Studies.

Since 2007, there has been a steady rise in the number of graduates from BSN completer programs, and as a result, they account for an increasing share of BSN graduates and total RN graduates. In 2015, BSN

k BSN completers are those RNs who already have either an RN associates degree or a diploma and continue their educations to complete a BSN.

completers accounted for 38% of all BSN graduates and 21% of all RN graduates, up from 26% and 11%, respectively, in 2007 (Figure 14). In 2016, it is projected that BSN completers will account for 39% of BSN graduates and 22% of all RN graduates. If RN production is assessed for newly licensed RNs only (ADNs, RN Diploma, and 4-year BSN), excluding BSN completers, RN production is projected to decline slightly between 2015 and 2016, from 9,102 to 9,007.

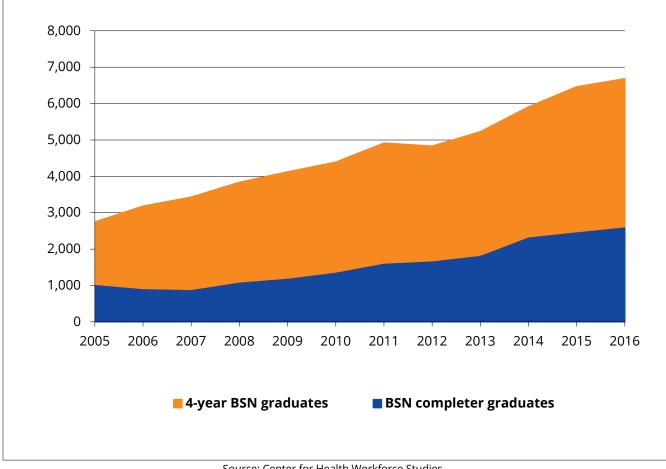


Figure 14. Graduations from BSN 4-Year and BSN Completer Programs, 2005-2016

Source: Center for Health Workforce Studies.

Between 2005 and 2015, RN graduations from privately-sponsored RN education programs, including those based in hospitals, more than doubled, increasing by 117% (Figure 15). During the same period, RN graduations from CUNY- and SUNY-sponsored RN education programs increased by 56% and 26%, respectively. In 2015, nearly 52% of all RN graduates in the state attended privately-sponsored RN education programs, 36% attended SUNY-sponsored RN education programs, and 12% attended CUNY-sponsored RN education programs.

RN graduations from privately-sponsored RN education programs are projected to increase by just over 1% between 2015 and 2016, while graduations from CUNY-sponsored RN programs are expected to decrease by more than 4%, and SUNY-sponsored RN programs are expected to experience no change. Beginning in 2015, privately-sponsored RN education programs graduated more RNs than publicly-sponsored RN education programs, and that trend is expected to continue through 2016.

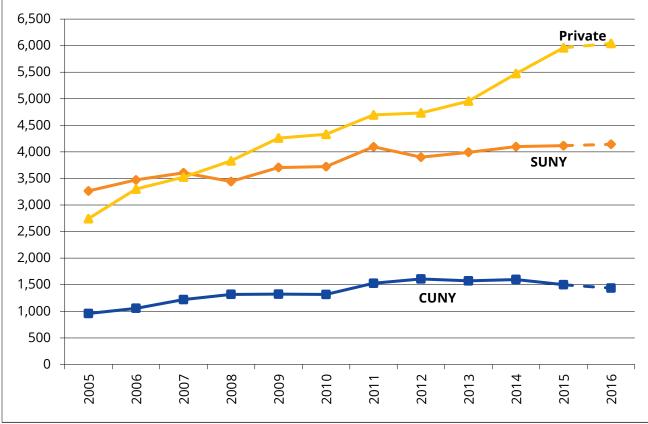


Figure 15. Graduations from New York RN Education Programs, by Sponsor, 2005-2016

Source: Center for Health Workforce Studies.

Between 2012 and 2015, the percentage of deans and directors that reported a similar number (compared to the previous year) of applications to their respective RN education programs has grown, increasing from 32% in 2012 (compared to 2011) to 54% in 2015 (compared to 2014). During the same time period, the percentage of deans and directors that reported an increase in the number of applications to their respective RN education programs has declined, from 56% in 2012 (compared to 2014). In 2015, 60% of ADN and 47% of BSN deans and directors reported applications remained the same compared to 2014, while 21% of ADN and 41% of BSN deans and directors reported increases in applications to their programs between 2014 and 2015 (Figure 16).

Similarly, between 2012 and 2015, the percentage of deans and directors that reported the same number of acceptances to their respective RN education programs from the previous year has grown, increasing from 45% in 2012 (compared to 2011) to 75% in 2015 (compared to 2014). Seventy-nine percent of ADN and 70% of BSN deans and directors reported the same number of acceptances into their programs in 2015 as in 2014, while only 5% of ADN and 21% of BSN deans and directors reported increases in acceptances between 2014 and 2015.

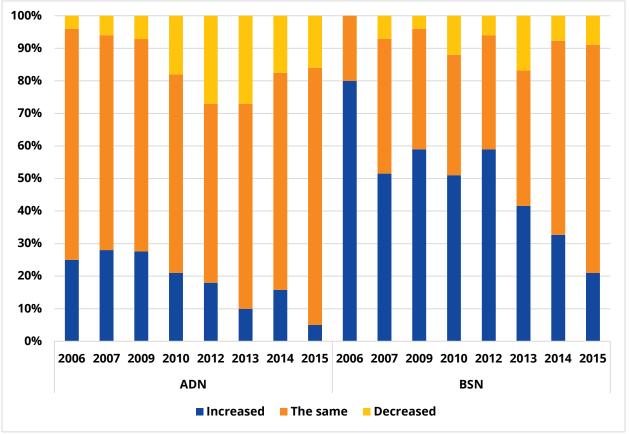


Figure 16. Change in the Number of Acceptances from Previous Year in New York, by Program Type, 2006-2015

Source: Center for Health Workforce Studies.

In 2015, a much higher percentage of deans and directors reported that "many jobs" were available in nursing for newly trained RNs (Figure 17). In comparison to recent years, 56% of deans and directors reported "many jobs", nearly double the percentage in 2014 (29%). While deans and directors reported the availability of "many jobs" across all health care settings for newly trained RNs, they indicated growth was most notable in nursing homes and home health care agencies.

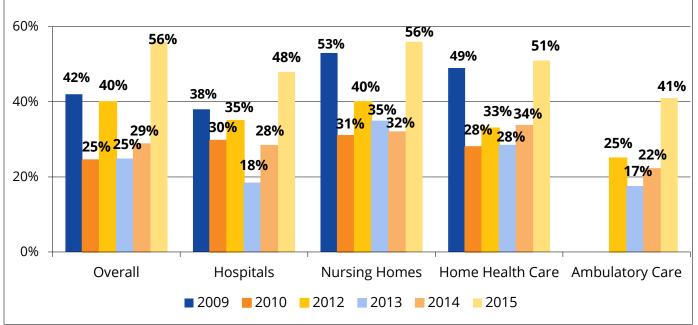


Figure 17. Percentage of RN Program Directors in New York Reporting "Many Jobs" for Newly Licensed RNs, 2009-2015

There were, however, differences by degree type. RN program deans and directors reported that the job market was considerably better for newly trained BSNs than newly trained ADNs (Figure 16). This was especially true in hospitals and home health care agencies. In contrast, the job market was better for newly trained ADNs in nursing homes.

Applications for RN education programs have remained steady for the past several years, and most deans and directors indicated that their programs have filled to their respective capacities. The number of graduates from New York RN education programs has grown steadily over the past 10 years, but the production of new RNs is slowing in ADN programs, while increasing in BSN programs—especially BSN completer programs. Growth in the number of RN graduations is directly attributable to an increasing number of BSN completers, ie, already licensed RNs who go on to obtain a bachelor's degree in nursing. In 2015, 21% of total RN graduates in New York were BSN completers. Although BSN completers do not represent new RN capacity, existing RNs who hold a BSN have increased opportunities for career advancement, and also qualify for further education to become nurse practitioners or nurse educators.

The job market for newly trained RNs appears to be more competitive in 2015 than in 2014, though that varies significantly by DOL region. Between 2014 and 2015, a larger percentage of deans and directors in most upstate DOL regions reported "many jobs" were available across all health care settings, particularly

Source: Center for Health Workforce Studies.

for newly trained BSNs. In contrast, a significantly lower percentage of deans and directors in New York City reported "many jobs" for newly trained RNs.

G. Demand for Workers

CHWS, in conjunction with statewide and regional provider organizations, conducts annual surveys of human resources directors of FQHCs, home health agencies, hospitals, and nursing homes throughout New York. The surveys ask about the professions and occupations that pose the greatest recruitment and retention challenges. Respondents rated difficulty of recruitment and retention using a Likert scale, where 1 represented "not at all difficult" or "no turnover" and 5 indicated "extremely difficult" or "extreme turnover." To conduct these surveys, CHWS collaborated with the following provider organizations:

- Community Health Center Association of New York State
- Continuing Care Leadership Coalition at the Greater New York Hospital Association
- Healthcare Association of New York State
- Home Care Association of New York State, Inc.
- LeadingAge New York
- New York State Association of Healthcare Providers, Inc.

Findings from these surveys are reported statewide and by NYSDOL regions. In instances where total responses for a region by setting were less than 5, no information was provided or contiguous regions were combined.

1. Hospitals

In 2016, 108 hospitals statewide, or approximately 46%, responded to the survey. Hospitals reported the most difficulty recruiting clinical laboratory technologists, followed by psychiatric NPs and experienced RNs. Newly licensed RNs were the most difficult to retain (Table 14). Hospitals also reported recruitment and retention difficulties for primary care physicians, both in inpatient and outpatient settings.

Average Assessment of Percentage of Respondents							
	Difficu				or Difficulties		
Occupation	Recruitment	Retention	Shortage of Workers	Salary Levels	Geographic Location		
Experienced Registered Nurses	3.8	2.9	63%	54%	65%		
Newly Licensed Registered Nurses	2.1	3.4	28%	25%	29%		
Nurse Managers	3.8	2.5	55%	20%	40%		
CNA/Patient Care Techs	2.3	2.8	26%	27%	17%		
Nurse Practitioners	3.6	2.4	56%	36%	45%		
Physician Assistants	3.5	2.5	54%	42%	47%		
Pharmacists	2.9	2.1	38%	18%	33%		
Clinical Lab Technicians	3.4	2.8	49%	31%	34%		
Clinical Lab Technologists	3.9	2.7	74%	43%	47%		
Medical Hospital Coders	3.7	2.8	61%	19%	12%		
Occupational Therapists	3.1	2.1	25%	17%	17%		
Care Coordinators	2.8	2.1	31%	5%	27%		
Case Managers	2.9	2.3	39%	12%	28%		
Care Managers	2.8	2.4	29%	4%	25%		
Patient Navigators	2.3	2.0	33%	5%	10%		
Community Health Workers	2.4	2.7	33%	8%	9%		
Psychologists	3.1	2.7	35%	27%	34%		
Psychiatric NPs	3.9	2.6	59%	31%	40%		
Licensed Clinical Social Workers	3.4	2.5	36%	12%	27%		
Licensed Master Social Workers	2.9	2.7	37%	15%	30%		
Licensed Mental Health Counselors	3.2	2.2	30%	12%	26%		

Table 14. Recruitment and Retention Difficulties for Hospitals in Selected Health Occupations in New
York, 2016

- Many hospitals anticipated growth in inpatient services, with increasing demand for care coordinators (57%), CNAs (55%), and NPs (53%).
- Many hospitals anticipated growth in outpatient services, with increasing demand for CNAs (62%), care coordinators (60%), and clinical lab technicians (55%).

2. Nursing Homes

In 2016, 110 nursing homes in New York responded to the survey for a response rate of 17%. Nursing homes across the state reported the most difficulty recruiting experienced RNs, nurse managers, and

MDS coordinators. Nursing homes also noted that CNAs were the most difficult to retain, followed by both experienced and newly licensed RNs, LPNs, and nurse managers (Table 15).

Table 15. Recruitment and Retention Difficulties for Nursing Homes in Selected Health Occupations
in New York, 2016

	Average Asse Difficu		Percentage of Respondents Indicating Reasons for Difficulties			
Occupation	Recruitment	Retention	Shortage of Workers	Salary Levels	Benefits	Location
Activities Director	2.4	1.9	11%	8%	4%	9%
Certified Nurse Aides (CNAs)	3.3	3.9	51%	31%	16%	28%
Dietary Aides	2.6	3.0	18%	23%	5%	14%
Dietitians/Nutritionists	3.0	2.4	15%	17%	3%	12%
Housekeeping Staff	2.5	2.8	16%	17%	3%	17%
Licensed Practical Nurses	3.5	3.5	46%	34%	15%	22%
Medical Billers	2.8	2.4	21%	9%	2%	9%
Occupational Therapists	3.2	2.6	32%	12%	4%	13%
Occupational Therapy Assistants	3.0	2.5	25%	11%	3%	16%
Physical Therapists	3.1	2.6	28%	14%	4%	18%
Physical Therapist Assistants	2.9	2.5	23%	8%	3%	11%
Registered Nurses (RNs)						
Newly Licensed RNs	3.4	3.1	37%	38%	19%	22%
Experienced RNs	3.9	3.7	45%	36%	16%	24%
MDS Coordinators	3.6	2.9	42%	22%	13%	14%
Nurse Manager	3.9	3.4	44%	27%	13%	16%
Director of Nursing	3.5	2.6	29%	19%	11%	16%
Recreational Therapists	2.8	2.3	13%	15%	4%	9%
Respiratory Therapists	2.9	2.4	33%	9%	3%	15%
Social Workers (SWs)						
Licensed Clinical Social Workers	2.9	2.3	15%	11%	3%	11%
Licensed Master Social Workers	2.8	2.4	18%	12%	5%	10%
Speech-Language Pathologists	3.0	2.7	26%	12%	9%	12%

• Forty-five percent (45%) of nursing homes reported difficulty hiring part-time workers.

• Six percent (6%) of nursing homes reported difficulty hiring bilingual workers.

• Sixty-nine percent (69%) of nursing homes indicated difficulty hiring workers for off shifts (evenings, nights, and weekends).

• About 15% of nursing homes projected expansion of services within the next year.

3. Home Health Care Agencies

In 2016, 50 home health care agencies in New York responded to the survey for a response rate of about 18%. Home health care agencies reported the most difficulties recruiting speech-language pathologists, followed by occupational therapists and respiratory therapists. Survey respondents reported difficulty retaining homemakers and personal care aides (Table 16).

Average Assessment of Difficulty			Percentage of Respondents Indicating Reasons for Difficulties					
Occupation	Recruitment	Retention	Shortage	Non-Competitive Salaries/Benefits	Lack of Specialized Training	Location		
Home Health Aides	3.4	3.6	50%	42%	19%	35%		
Homemakers	3.5	4.0	0%	50%	0%	33%		
Personal Care Aides	3.4	4.0	33%	44%	22%	44%		
Dietitians/Nutritionists	3.3	2.3	0%	0%	17%	17%		
Licensed Practical Nurses	2.6	2.3	8%	25%	17%	4%		
Occupational Therapists	4.1	3.0	0%	24%	24%	35%		
Physical Therapists	3.5	2.8	50%	30%	5%	25%		
Registered Nurses								
Newly Licensed RNs	3.0	3.1	22%	23%	23%	31%		
Experienced RNs	4.0	3.3	46%	43%	14%	29%		
Respiratory Therapists	4.1	3.2	43%	14%	14%	57%		
Social Workers (SWs)								
Licensed Clinical SWs	3.1	2.4	24%	12%	18%	12%		
Licensed Master SWs	2.9	2.4	26%	22%	15%	19%		
Speech-Language Pathologists	4.3	3.5	80%	33%	20%	53%		

Table 16. Recruitment and Retention Difficulties for Home Health Care Agencies in Selected HealthOccupations in New York, 2016

- Thirty-two percent (32%) of home health care agencies reported difficulty hiring part-time workers.
- Twenty-seven percent (27%) of home health care agencies reported difficulty hiring bilingual workers.
- Forty-two percent (42%) of home health care agencies indicated difficulty hiring workers for offshifts (evenings, nights, and weekends).
- Fifty-two percent (52%) of home health care agencies projected expansion of services.

For purposes of this report, home health care agencies include certified home health agencies, long-term home health care programs, and hospice programs.

4. Federally Qualified Health Centers

Sixty-two percent (62%) of FQHCs statewide responded to the 2016 survey. Of these respondents, most had difficulty recruiting psychiatrists, psychiatric NPs, and family/general practice physicians, and they reported the most difficulty retaining psychiatric NPs, followed by other behavioral health practitioners (Table 17).

Occupation		Average Assessment of Difficulty			
U	ccupation	Recruitment	Retention		
	Family/General Practice	4.2	2.9		
	Internal Medicine	4.1	3.0		
Physicians	Ob/Gyn	3.9	2.7		
	Pediatricians	3.5	2.6		
	Physician Assistants (PAs)	2.5	2.7		
	Overall – All Specialties	3.0	2.9		
	Pediatric	2.9	2.3		
Nurse Practitioners	Adult	2.6	2.4		
	Family	3.1	3.0		
	Psychiatric	4.3	3.7		
Nurses	Registered Nurses	3.6	2.8		
1101363	Licensed Practical Nurses	3.1	2.7		
	Psychiatrists	4.4	3.1		
Behavioral Health	Psychologists	3.5	3.2		
Benavioral Health	Substance Abuse Counselors	3.9	3.1		
	Social Workers	3.8	2.9		
Oral Health	Dentists	3.7	3.1		
	Dental Hygienists	2.8	2.5		
Coordination/Patient	Care Coordinators	3.2	2.8		
Care	Case Managers	2.8	2.6		
	HIV Counselors	2.8	2.5		
Patient/Community	Community Health Workers	2.3	2.2		
Education	Patient Health Educators	2.6	2.1		
	Nutritionists/Nutrition Educators	2.9	2.5		
	Patient Health Navigators	2.7	2.3		
Enabling Services	Outreach Workers	2.7	2.4		
	Transportation Workers	2.7	2.1		
	Interpreters	3.2	1.8		
Administrative Support	IT Systems Admin/Maintenance	3.0	2.5		
Others	Physical Therapists	3.0	2.3		
Others	Occupational Therapists	3.5	3.0		

Table 17. Recruitment and Retention Difficulties for FQHCs in Selected Health Occupations in New York, 2016

H. Projected Job Growth

Between 2014 and 2024, the NYSDOL projects more than 10,000 annual job openings (both new jobs and replacement of existing workers who leave) for home health aides in the state, more than 6,000 annual job openings for personal care aides, and over 7,000 annual job openings for RNs (Table 18).

Occupation	2014	2024	Change Between 2014 and 2024		Average Annual Openings
			Number	Percent	a
Home Health Aides	161,970	235,310	73,340	45.3%	10,992
Personal Care Aides	164,700	215,950	51,250	31.1%	6,457
Registered Nurses	183,210	214,460	31,250	17.1%	7,447
Nursing Assistants	110,730	128,430	17,700	16.0%	4,271
Social Workers	60,530	70,330	9,800	16.2%	2,438
Licensed Practical and Licensed Vocational Nurses	51,550	60,870	9,320	18.1%	2,399
Medical Assistants	25,490	31,540	6,050	23.7%	1,136
Physical Therapists	16,740	21,650	4,910	29.3%	939
Emergency Medical Technicians and Paramedics	16,480	21,270	4,790	29.1%	749
Medical and Health Services Managers	31,580	35,520	3,940	12.5%	1,191
Dental Assistants	19,860	23,640	3,780	19.0%	869
Nurse Practitioners	11,420	15,080	3,660	32.0%	635
Physician Assistants	11,480	14,590	3,110	27.1%	569
Clinical, Counseling, and School Psychologists	15,450	18,130	2,680	17.3%	599
Speech-Language Pathologists	10,960	13,320	2,360	21.5%	512
Dental Hygienists	10,640	12,830	2,190	20.6%	395
Occupational Therapists	9,760	11,940	2,180	22.3%	407
Pharmacy Technicians	16,950	19,100	2,150	12.7%	383
Medical Records and Health Information					
Technicians	9,220	10,720	1,500	16.3%	356
Medical and Clinical Laboratory Technicians	8,830	10,280	1,450	16.4%	356
Diagnostic Medical Sonographers	5,270	6,660	1,390	26.4%	240
Radiologic Technologists	14,260	15,550	1,290	9.0%	398
Pharmacists	19,640	20,690	1,050	5.3%	563
Dietitians and Nutritionists	5,220	6,260	1,040	19.9%	143
Medical and Clinical Laboratory Technologists	10,420	11,410	990	9.5%	348
Orderlies	5,400	6,270	870	16.1%	209
Respiratory Therapists	6,410	7,100	690	10.8%	221
Surgical Technologists	5,510	6,180	670	12.2%	122
Cardiovascular Technologists and Technicians	3,050	3,680	630	20.7%	121
Psychiatric Aides	7,100	7,500	400	5.6%	200
Nurse Anesthetists	1,630	1,950	320	19.6%	70
Nurse Midwives	490	560	70	14.3%	19
^a Annual openings reflect creation of new positions in otherwise leaving the occupation.	the occupati	ion and r <mark>epl</mark>	acement for	those retiri	ng or

Table 18. Employment Projections for Selected Health Occupations in New York, including New
York City, 2014-2024

Source: New York State Department of Labor, Jobs in Demand/Projects, Long-Term Occupation Projections, 2012-2022.

V. REGIONAL PROFILES

A. 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).

Population

New York City's population had a higher percentage of people under 100% and under 200% of the federal poverty level (FPL) than New York as a whole. New York City's population was also much more racially and ethnically diverse. New York City also had a higher percentage of its population with less than a high school education or equivalent (Table 19).

Table 19. Selected Population Characteristics in the New York City Region, 2010-2014(5-Year Average)

Devulation Chavastavistics?	Reg	Region					
Population Characteristics ^a	Number	Percent	Percent				
Total population	8,354,889	N/A	N/A				
Population under 100% FPL	1,696,394	20.3%	15.2%				
Population under 200% FPL	3,327,324	39.8%	31.7%				
Population aged birth to 17 years	1,785,344	21.4%	21.8%				
Population aged 65 and older	1,046,671	12.5%	14.1%				
Population female aged 15 to 44	1,929,479	23.1%	20.7%				
Women aged 15 to 19 who had a birth in past 12 mos.	4,740	0.1%	0.05%				
Women aged 20 to 34 who had a birth in past 12 mos.	76,042	0.9%	0.8%				
Women aged 35 to 50 who had a birth in past 12 mos.	32,806	0.4%	0.3%				
Black/African American, non-Hispanic	1,886,662	22.6%	14.4%				
Hispanic/Latino	2,407,983	28.8%	18.2%				
Asian/Pacific Islander, non-Hispanic	1,101,324	13.2%	7.7%				
American Indian/Native Alaskan, non-Hispanic	15,951	0.2%	0.2%				
Two or more/other	207,887	2.5%	2.2%				
Less than high school education	1,140,654	19.9%	14.6%				
High school or equivalent	2,221,473	38.8%	43.2%				
Associate degree	359,327	6.3%	8.5%				
Bachelor's degree	1,183,696	20.7%	19.1%				
Master's degree or higher	818,446	14.3%	14.6%				
^a Education levels and rates are based on individuals aged 25 years and older							

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

Source: US Census, American Community Survey, 2010-2014 (5-Year Average)

Health Status

New York City had a lower number of deaths per capita and a higher birth rate than statewide between 2011 and 2013. However, New York City had much higher rates of asthma (both adult and pediatric), diabetes, preventable hospitalizations, and chronic lower respiratory disease hospitalizations than the state as a whole. Additionally, New York City had a higher percentage of births with no or late prenatal care and a higher rate of both total hospitalizations and ED visits than statewide (Table 20).

	Regio	on	Statewide		
Health Indicator	Number	Rate	Number	Rate	
Total deaths, per 100,000	51,369	616.7	147,313	753.1	
Deaths due to heart disease, per 100,000	16,630	199.7	43,448	222.1	
Deaths due to all cancers, per 100,000	12,492	151.1	35,215	180.7	
Deaths due to diabetes, per 100,000	1,777	21.3	3,975	20.3	
Total births, per 1,000 females aged 15 to 44	117,841	61.4	238,078	59.0	
Teen births, per 1,000 females aged 15 to 19	5,635	23.0	12,441	19.5	
Low-birthweight births, as a percent of total births	9,857	8.4	19,006	8.0	
Late/no prenatal care, as a percent of total births	8,303	7.1	13,148	5.6	
Infant deaths, per 1,000 live births	512	4.3	1,179	5.0	
Total hospitalizations, per 10,000	1,086,553	1,304.5	2,398,679	1,226.2	
Preventable hospitalizations, per 10,000	135,320	162.5	293,493	150.0	
Adult asthma hospitalizations, per 10,000	15,345	23.4	24,276	15.9	
Pediatric asthma hospitalizations, per 10,000	7,827	43.9	11,340	26.6	
Diabetes hospitalizations, per 10,000	20,344	24.4	37,847	19.3	
CLRD hospitalizations, per 10,000	34,447	41.4	71,475	36.5	
Heart disease hospitalizations, per 10,000	86,568	103.9	212,301	108.5	
Total ED visits, per 10,000	3,778,598	4,536.6	7,993,838	4,086.4	

Table 20. Selected Health Indicators in the New York City Region, 2011-2013
(3-Year Average)

Source: New York State Community Health Indicator Reports, 2011-2013 (3- Year Average)

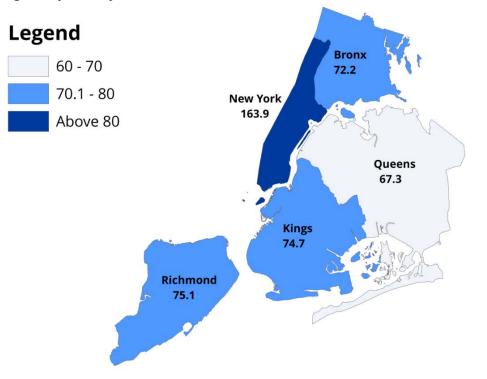
Primary Care Physicians

There were about 12,000 primary care physicians practicing in the New York City region in 2015. Slightly less than half of them (49%) practiced general internal medicine, and nearly 15% practiced general pediatrics. At 145.3 physicians per 100,000 children ages 0 - 17, general pediatricians were the most prevalent of the primary care specialties. There were over 3,000 psychiatrists, including child and adolescent psychiatrists, practicing in the New York City region, or approximately 43 per 100,000. The county of New York had the most family, general, and internal medicine practitioners per 100,000 total population (163.9), and Queens had the least (67.3) (Table 21 and Figure 18).

Specialty	Physicians	Per 100,000 Population ^a		
Family/General Practice	1,735	20.8		
Internal Medicine (General)	5,746	68.8		
Subtotal	7,481	89.6		
Geriatrics	187	17.9		
Obstetrics/Gynecology	1,444	74.8		
Pediatrics (General)	2,595	145.3		
Primary Care Total	11,707	N/A		
Psychiatrist	3,595	43.0		
^a All rates are per 100,000 total population except the Ob/Gyn rate, which is per 100,000 women aged 15 to 44, the pediatrician rate, which is per 100,000 children aged birth to 17 years, and the geriatrics rate, which is per 100,000 population aged 65 and older.				

Source: Center for Health Workforce Studies

Figure 18. Number of Selected Primary Care Physicians per 100,000 Population in the New York City Region, by County, 2015



Employment

Total Health Sector Employment

Between 2001 and 2014, employment in the health sector in New York City grew steadily, with the largest increases occurring after 2006. Employment trends in all other sectors fluctuated, experiencing highs and lows. Between 2008 and 2009, employment in New York City in sectors outside of health care declined but has since recovered. Between 2001 and 2014 employment in the health sector in New York City rose by nearly 28%, while employment in all other sectors grew by about 8% during the same period (Figure 19).

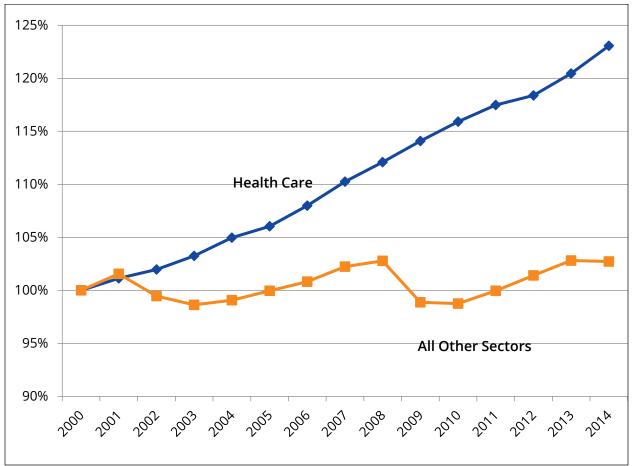


Figure 19. Employment Growth in the New York City Region, 2000-2014 (Standardized to 2001)

Source: New York State Department of Labor, ES-202

Employment by Setting

Hospitals continued to be the largest employer of New York City health workers in 2014, accounting for 43% of all health care jobs. Ambulatory care settings and home health care agencies followed at 24% and 22%, respectively (Figure 20).

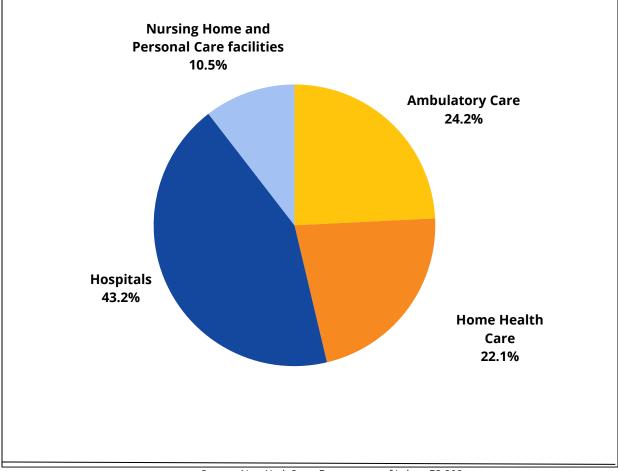


Figure 20. Health Sector Employment in the New York City Region, by Setting, 2014

Source: New York State Department of Labor, ES-202

Between 2010 and 2014, employment increased substantially in New York City in ambulatory care and home health care, while nursing homes lost jobs during the same period. Home health care jobs grew by more than 43% between 2010 and 2014. Ambulatory care settings and hospitals experienced job growth of 11% and 4% respectively, whereas the number of jobs in nursing homes declined by 7% (Figures 21 and 22).

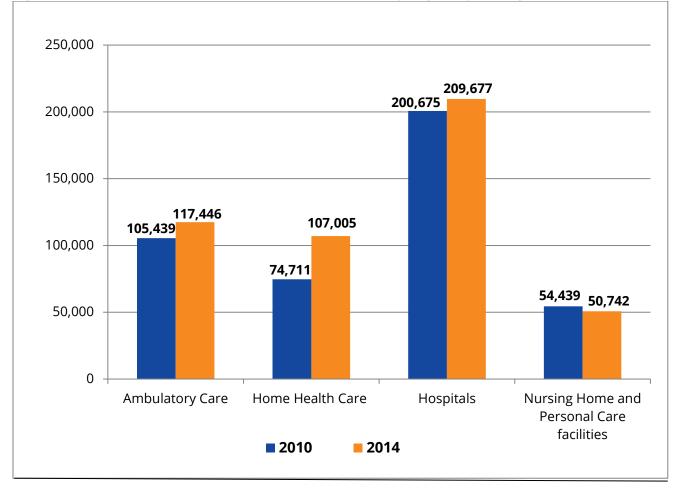


Figure 21. Number of Health Care Jobs in the New York City Region by Setting, 2010-2014

Source: New York State Department of Labor, ES-202

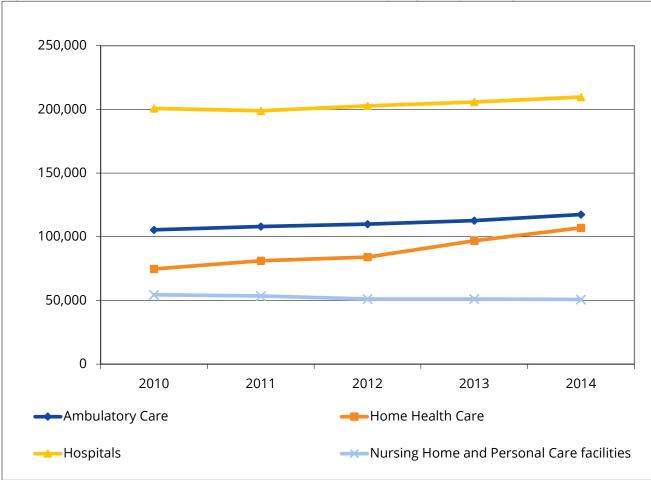


Figure 22. Number of Health Care Jobs in the New York City Region, by Setting, 2010-2014

Source: New York State Department of Labor, ES-202

Employment and Wage by Occupation

Employment for selected health occupations for the New York City region is reported in Table 22. As of the first quarter of 2015, home health aides had the largest share of jobs (117,760), followed by personal care aides (71,390) and RNs (70,990). Nurse anesthetists (440) and dietetic technicians (260) had the fewest jobs in the region.

Average wages per hour in selected health occupations for New York City are reported in Table 23. These wages are based on 2012-2015 survey data, which were adjusted to include the first quarter of 2016. Certified registered nurse anesthetists earned the highest hourly wage in 2016 (\$76.00), followed by medical and health service managers (\$67.16), NPs (\$55.56), and pharmacists (\$54.58). Personal care aides and home health aides were the lowest wage earners (\$11.54 and \$11.14, respectively).

Occupation	Employment
Home Health Aides	117,760
Personal Care Aides	71,390
Registered Nurses	70,990
Nursing Assistants	40,910
Social Workers	26,450
Licensed Practical and Licensed Vocational Nurses	13,930
Medical and Health Services Managers	13,390
Medical Assistants	11,330
Pharmacists	8,080
Dental Assistants	8,000
Pharmacy Technicians	6,310
Physical Therapists	6,090
Radiologic Technologists and Technicians	5,110
Physician Assistants	4,820
Nurse Practitioners	4,590
Medical and Clinical Laboratory Technologists	4,220
Medical Secretaries	3,730
Occupational Therapists	3,240
Medical Records and Health Information Technicians	3,160
Medical and Clinical Laboratory Technicians	3,070
Surgical Technologists	2,650
Speech-Language Pathologists	2,460
Respiratory Therapists	2,460
Mental Health Counselors	2,440
Dental Hygienists	2,360
Orderlies	2,250
Dietitians and Nutritionists	1,830
Physical Therapist Aides	1,460
Physical Therapist Assistants	1,200
Cardiovascular Technologists and Technicians	1,180
Occupational Therapy Assistants	670
Nuclear Medicine Technologists	470
Nurse Anesthetists	440
Dietetic Technicians	260

Table 22. Number of Jobs in Selected Health Occupations in the New York City Region, 2015

Source: New York State Department of Labor, Bureau of Labor Statistics, Occupational Wages

Occupation	Average Wage
	per Hour
Nurse Anesthetists	\$76.00
Medical and Health Services Managers	\$67.16
Nurse Practitioners	\$55.56
Pharmacists	\$54.48
Physician Assistants	\$50.35
Nurse Midwives	\$48.51
Physical Therapists	\$43.97
Speech-Language Pathologists	\$43.63
Registered Nurses	\$43.49
Occupational Therapists	\$41.77
Dental Hygienists	\$41.63
Nuclear Medicine Technologists	\$40.19
Respiratory Therapists	\$36.87
Radiologic Technologists and Technicians	\$35.00
Medical and Clinical Laboratory Technologists	\$33.71
Dietitians and Nutritionists	\$32.19
Occupational Therapy Assistants	\$29.76
Social Workers	\$28.65
Cardiovascular Technologists and Technicians	\$28.20
Physical Therapist Assistants	\$27.00
Surgical Technologists	\$26.96
Licensed Practical and Licensed Vocational Nurses	\$25.44
Medical and Clinical Laboratory Technicians	\$24.11
Medical Records and Health Information Technicians	\$23.21
Medical Secretaries	\$22.31
Mental Health Counselors	\$21.55
Dietetic Technicians	\$21.51
Orderlies	\$19.27
Nursing Assistants	\$18.00
Pharmacy Technicians	\$17.17
Medical Assistants	\$16.95
Dental Assistants	\$16.15
Occupational Therapy Aides	\$14.12
Physical Therapist Aides	\$12.72
Personal Care Aides	\$11.54
Home Health Aides	\$11.14

Table 23. Average Hourly Wage in Selected Health Occupations in the New York City Region, 2016

Source: New York State Department of Labor, Labor Statistics, Occupational Wages

Licensed Health Professionals

NPs had the largest percentage increase of licensed health professionals, growing by nearly 47% between 2010 and 2014. During the same period, the number of licensed social workers increased by more than 3,000, or 17%, and the number of licensed RNs in New York City grew by over 5,000 or 9%. Many other health professions grew, including physical therapist assistants (29%), pharmacists (28%), and physician assistants (27%). Conversely, clinical laboratory technicians experienced a decrease of 16% (Table 24).

Profession	2010	2011	2012	2013	2014	Change Between 2010 and 2014	
Profession	2010	2011	2012	2015	2014	Number	Percent
Registered Nurses	58,980	59,559	61,393	63,947	64,326	5,346	9.1%
Licensed Practical Nurses	14,201	14,588	14,792	15,207	15,495	1,294	9.1%
Social Workers	18,353	19,175	19,874	20,987	21,531	3,178	17.3%
Pharmacists	5,503	5,709	5,930	6,291	7,046	1,543	28.0%
Physical Therapists	4,714	4,799	4,978	5,176	5,474	760	16.1%
Nurse Practitioners	3,263	3,541	3,874	4,462	4,782	1,519	46.6%
Speech-Language Pathologists	3,744	3,972	4,243	4,564	4,696	952	25.4%
Clinical Laboratory Technologists	4,493	4,406	4,474	4,418	4,498	5	0.1%
Physician Assistants	2,885	3,013	3,211	3,466	3,667	782	27.1%
Occupational Therapists	2,771	2,911	3,067	3,207	3,376	605	21.8%
Dental Hygienists	1,704	1,775	1,856	1,965	2,059	355	20.8%
Respiratory Therapists	1,331	1,402	1,439	1,516	1,568	237	17.8%
Physical Therapist Assistants	1,085	1,104	1,213	1,296	1,401	316	29.1%
Dietitians/Nutritionists	1,477	1,489	1,564	1,642	1,663	186	12.6%
Occupational Therapy Assistants	944	992	1,013	996	996	52	5.5%
Clinical Laboratory Technicians	631	577	581	537	530	-101	-16.0%

Table 24. Number of Licensed Individuals in Selected Health Occupations in the New York City
Region, 2010-2014

Source: New York State Education Department, Office of Professions

Demand for Health Workers

Hospitals

Hospitals in New York City reported the most difficulty recruiting medical coders, licensed mental health counselors, and nurse managers. Medical coders and physician assistants were also the most difficult to retain (Table 25).

Occupation	Average Ass Diffic		Percentage of Respondents Indicating Reasons for Difficulties			
Occupation	Recruitment	Retention	Shortage of Workers	Salary Levels	Geographic Location	
Experienced Registered Nurses	3.7	2.2	21%	36%	0%	
Newly Licensed Registered Nurses	1.6	2.7	21%	36%	7%	
Nurse Managers	3.9	2.5	21%	29%	0%	
CNA/Patient Care Techs	1.3	1.1	21%	7%	0%	
Nurse Practitioners	2.8	2.0	36%	29%	0%	
Physician Assistants	3.3	2.8	29%	21%	0%	
Pharmacists	3.2	1.9	29%	14%	7%	
Clinical Lab Technicians	2.9	2.3	21%	7%	0%	
Clinical Lab Technologists	3.2	2.6	50%	36%	7%	
Medical Hospital Coders	4.3	2.8	57%	29%	21%	
Occupational Therapists	2.8	2.0	36%	21%	0%	
Care Coordinators	2.8	2.3	29%	7%	0%	
Case Managers	2.8	2.3	29%	7%	0%	
Care Managers	2.8	2.3	29%	7%	0%	
Patient Navigators	2.1	1.8	29%	0%	7%	
Community Health Workers	2.1	1.8	29%	0%	7%	
Psychologists	2.6	2.0	29%	21%	7%	
Psychiatric NPs	3.4	2.0	50%	21%	7%	
Licensed Clinical Social Workers	3.7	2.5	29%	29%	0%	
Licensed Master Social Workers	2.9	2.2	29%	29%	0%	
Licensed Mental Health Counselors	4.0	2.0	29%	21%	0%	

Table 25. Recruitment and Retention Difficulties for Hospitals in Selected Health Occupations in the
New York City Region, 2016

- Many hospitals projected growth in inpatient services, with increasing demand for care managers (36%), NPs (36%), and clinical lab technicians (36%).
- Many hospitals projected growth in outpatient services, with increasing demand for medical coders (64%), RNs (64%), and care managers (50%).

Nursing Homes

Nursing homes in New York City reported that experienced RNs were the most difficult to recruit, followed by MDS coordinators, LPNs, nurse managers, and directors of nursing. CNAs were the most difficult to retain, followed by experienced RNs and LPNs. The primary reasons for these difficulties were related to salary levels and shortages of workers (Table 26).

in the New York City Region, 2016	Average Asse Diffici	Percentage of Respondents Indicating Reasons for Difficulties				
Occupation	Recruitment	Retention	Shortage of Workers	Salary Levels	Benefits	Location
Activities Director	2.1	2.3	29%	43%	0%	0%
Certified Nurse Aides/Assts. (CNAs)	2.9	3.9	55%	45%	27%	0%
Dietary Aides	2.7	2.9	33%	33%	0%	0%
Dietitians/Nutritionists	3.1	2.7	38%	50%	0%	13%
Housekeeping Staff	2.4	2.5	33%	33%	0%	0%
Licensed Practical Nurses	3.6	3.4	40%	40%	10%	0%
Medical Billers	2.0	1.8	20%	60%	0%	0%
Occupational Therapists	2.9	2.9	33%	44%	0%	11%
Occupational Therapy Assistants	2.7	2.8	33%	33%	0%	11%
Physical Therapists	2.9	2.8	33%	44%	0%	11%
Physical Therapist Assistants	2.7	2.6	33%	33%	0%	11%
Registered Nurses (RNs)						
Newly Licensed RNs	2.9	3.0	20%	50%	0%	10%
Experienced RNs	3.8	3.8	30%	60%	0%	10%
MDS Coordinators	3.6	2.9	33%	44%	0%	0%
Nurse Manager	3.6	3.0	44%	44%	0%	11%
Director of Nursing	3.6	2.8	43%	43%	0%	14%
Recreational Therapists	3.0	2.1	38%	25%	0%	0%
Respiratory Therapists	2.0	3.0	67%	67%	0%	0%
Social Workers (SWs)						
Licensed Clinical SWs	3.2	2.4	29%	43%	0%	0%
Licensed Master SWs	2.6	2.5	43%	43%	0%	0%
Speech-Language Pathologists	2.7	2.7	43%	57%	0%	14%

Table 26. Recruitment and Retention Difficulties for Nursing Homes in Selected Health Occupations
in the New York City Region, 2016

• Twenty-seven percent (27%) of nursing homes reported difficulty hiring part-time workers.

- Thirty-six percent (36%) of nursing homes reported difficulty hiring bilingual workers.
- Fifty-five percent (55%) of nursing homes indicated difficulty hiring workers for off shifts (evenings, nights, and weekends).

Home Health Care Agencies

Home health care agencies in New York City reported the most difficulty recruiting speech-language pathologists, followed by respiratory therapists and physical therapists. Homemakers, personal care aides, and speech-language pathologists were the most difficult to retain (Table 27).

Occupations in the New York City Region, 2016								
	Average Asse Difficu		Percentage of Respondents Indicating Reasons f Difficulties					
Occupation	Recruitment	Retention	Shortage	Non-Competitive Salaries/Benefits	Lack of Specialized Training	Location		
Home Health Aides	2.8	3.5	25%	25%	0%	50%		
Homemakers	3.5	4.0	50%	50%	0%	50%		
Personal Care Aides	2.0	4.0	0%	0%	0%	100%		
Dietitians/Nutritionists	2.0	1.5	0%	0%	0%	50%		
Licensed Practical Nurses	2.0	2.0	25%	0%	0%	25%		
Occupational Therapists	3.8	3.0	60%	20%	20%	40%		
Physical Therapists	4.0	3.4	60%	40%	0%	40%		
Registered Nurses								
Newly Licensed RNs	2.5	2.8	25%	0%	0%	50%		
Experienced RNs	3.7	3.1	71%	14%	0%	57%		
Respiratory Therapists	4.0	2.0	0%	0%	0%	100%		
Social Workers (SWs)								
Licensed Clinical SWs	3.0	3.0	50%	50%	0%	50%		
Licensed Master SWs	2.2	2.4	20%	40%	0%	60%		
Speech-Language Pathologists	4.5	4.0	100%	50%	0%	75%		

Table 27. Recruitment and Retention Difficulties for Home Health Care Agencies in Selected Health
Occupations in the New York City Region, 2016

• Fourteen percent (14%) of home health care agencies indicated difficulty hiring part-time workers.

• Fourteen Percent (14%) of home health care agencies indicated difficulty hiring workers for off shifts (evenings, nights, and weekends).

• Only one-fourth of home health care agencies in New York City expected to increase services within the next year.

FQHCs

New York City and Long Island regions were combined due to low response rates. FQHCs in this region had the most difficulty recruiting and retaining physical therapists and occupational therapists, and physicians, psychiatrists, and psychiatric NPs were also difficult to recruit (Table 28).

Occupation		Average Assessment of Difficulty			
	cupation	Recruitment	Retention		
	Family/General Practice	4.2	2.7		
	Internal Medicine	4.1	2.8		
Physicians	Ob/Gyn	4.0	2.8		
	Pediatricians	3.3	3.0		
	Physician Assistants (PAs)	2.7	3.0		
	Overall – All Specialties	3.3	2.5		
	Pediatric	3.5	2.7		
Nurse Practitioners	Adult	3.1	2.5		
	Family	3.7	3.0		
	Psychiatric	4.4	3.0		
	Registered Nurses	3.9	3.3		
Nurses	Licensed Practical Nurses	3.5	2.8		
	Psychiatrists	4.6	3.3		
Behavioral Health	Psychologists	4.2	4.0		
Benavioral Health	Substance Abuse Counselors	1.0	0.0		
	Social Workers	3.7	3.0		
Oral Health	Dentists	3.4	2.3		
Oral Health	Dental Hygienists	2.8	2.6		
Coordination/Patient	Care Coordinators	3.3	3.2		
Cordination/Patient	Case Managers	3.3	3.2		
Cale	HIV Counselors	2.2	2.0		
Patient/Community	Community Health Workers	2.4	2.7		
Education	Patient Health Educators	2.8	2.0		
Education	Nutritionists/Nutrition Educators	3.3	2.7		
	Patient Health Navigators	2.6	2.0		
Enabling Services	Outreach Workers	2.4	2.0		
Lindbillig Services	Transportation Workers	2.0	1.5		
	Interpreters	1.0	1.0		
Administrative Support	IT Systems Admin/Maintenance	3.2	3.0		
Others	Physical Therapists	5.0	5.0		
Others	Occupational Therapists	5.0	5.0		

Table 28. Recruitment and Retention Difficulties for FQHCs in Selected Health Occupations in the	•
New York City and Long Island Region, 2016	

- Fifty-five percent (55%) of FQHCs in these regions identified difficulty hiring bilingual staff; Spanish is the language most needed.
- Sixty-four percent (64%) of FQHCs in these regions anticipate expanding one or more service.

Employment Projections by Health Occupation

According to the NYSDOL, the largest numbers of average annual job openings projected in New York City between 2012 and 2022 will be for home health aides (5,730), personal care aides (3,610), and RNs (2,260) (Table 29).

Table 29. Employment Projections for Selected Health Occupations in the New York City Region,
2012-2022

Occupation	2012	2022	Change Bet and 2	Average Annual	
			Number	Percent	Openings ^a
Home Health Aides	81,960	123,670	41,710	50.9%	5,730
Personal Care Aides	77,130	107,720	30,590	39.7%	3,610
Registered Nurses	67,540	77,030	9,490	14.1%	2,260
Nursing Assistants	42,260	47,960	5,700	13.5%	1,370
Social Workers	27,360	31,040	3,680	13.5%	930
Licensed Practical and Licensed Vocational Nurses	14,310	17,150	2,840	19.8%	630
Medical Assistants	9,280	11,950	2,670	28.8%	450
Pharmacy Technicians	6,750	8,570	1,820	27.0%	250
Physical Therapists	6,020	7,740	1,720	28.6%	320
Pharmacists	8,680	10,290	1,610	18.5%	370
Medical and Health Services Managers	13,110	14,710	1,600	12.2%	480
Emergency Medical Technicians and Paramedics	6,900	8,180	1,280	18.6%	320
Dental Assistants	6,410	7,640	1,230	19.2%	250
Physician Assistants	3,630	4,690	1,060	29.2%	180
Nurse Practitioners	2,890	3,630	740	25.6%	140
Radiologic Technologists	4,180	4,910	730	17.5%	130
Occupational Therapists	3,110	3,770	660	21.2%	110
Medical and Clinical Laboratory Technicians	2,800	3,440	640	22.9%	130
Medical Records and Health Info Techs	3,740	4,350	610	16.3%	160
Diagnostic Medical Sonographers	1,310	1,850	540	41.2%	70
Dental Hygienists	2,020	2,540	520	25.7%	100
Speech-Language Pathologists	2,930	3,400	470	16.0%	90
Clinical, Counseling, and School Psychologists	5,450	5,910	460	8.4%	200
Medical and Clinical Laboratory Technologists	4,470	4,870	400	8.9%	160
Surgical Technologists	2,290	2,680	390	17.0%	60
Dietitians and Nutritionists	1,950	2,260	310	15.9%	50
Orderlies	1840	2150	310	16.8%	70
Respiratory Therapists	2,200	2,500	300	13.6%	60
Cardiovascular Technologists & Technicians	840	1,030	190	22.6%	30
Psychiatric Aides	3,010	3,200	190	6.3%	80
Nurse Anesthetists	490	580	90	18.4%	20
Nurse Midwives	280	320	40	14.3%	20

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

Source: New York State Department of Labor, Jobs in Demand/Projects, Long-Term Occupation Projections, 2012-2022

B. Capital District

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

Population

The population of the Capital District region was less racially and ethnically diverse than New York as a whole and also had a lower percentage of people below 100% and 200% of the FPL. A higher percentage of individuals in the Capital District held high school diplomas or equivalents and associate degrees than statewide, while a lower percentage held bachelor's degrees, and the percentage of individuals with a master's degree or higher was comparable to the statewide rate (Table 30).

Table 30. Selected Population Characteristics in the Capital District Region, 2010-2014(5-Year Average)

Domulation Chave stavistics?	Reg	Region			
Population Characteristics ^a	Number	Percent	Percent		
Total population	1,082,855	N/A	N/A		
Population under 100% FPL	121,537	11.2%	15.2%		
Population under 200% FPL	272,388	25.2%	31.7%		
Population aged birth to 17 years	222,143	20.5%	21.8%		
Population aged 65 and older	167,044	15.4%	14.1%		
Population female aged 15 to 44	207,059	19.1%	20.7%		
Women aged 15 to 19 who had a birth in past 12 mos.	358	0.0%	0.05%		
Women aged 20 to 34 who had a birth in past 12 mos.	8,062	0.7%	0.8%		
Women aged 35 to 50 who had a birth in past 12 mos.	2,701	0.2%	0.3%		
Black/African American, non-Hispanic	70,039	6.5%	14.4%		
Hispanic/Latino	46,539	4.3%	18.2%		
Asian/Pacific Islander, non-Hispanic	33,489	3.1%	7.7%		
American Indian/Native Alaskan, non-Hispanic	1,583	0.1%	0.2%		
Two or more/other	26,750	2.5%	2.2%		
Less than high school education	64,973	8.7%	14.6%		
High school or equivalent	352,926	47.3%	43.2%		
Associate degree	85,930	11.5%	8.5%		
Bachelor's degree	132,831	17.8%	19.1%		
Master's degree or higher	109,357	14.7%	14.6%		
^a Education levels and rates are based on individuals aged 2	5 years and olde	r.			

Source: US Census, American Community Survey, 2010-2014 (5-Year Average)

Health Status

The Capital District region had a higher total death rate and deaths due to all types of cancer than the state as a whole and upstate New York. The Capital District region had lower rates of asthma (both adult and pediatric) and diabetes hospitalizations compared with both the state as a whole and upstate New York. The rate for preventable hospitalizations was much lower in the Capital District region compared with the state as a whole and upstate New York (Table 31).

	Regi	on	Statev	vide	Upstate	
Health Indicator	Number	Rate	Number	Rate	Number	Rate
Total deaths, per 100,000	9,696	895.9	95,944	854.1	147,313	753.1
Deaths due to heart disease, per 100,000	2,559	236.4	26,818	238.7	43,448	222.1
Deaths due to all cancers, per 100,000	2,386	220.7	22,723	202.4	35,215	180.7
Deaths due to diabetes, per 100,000	227	20.9	2,198	19.6	3,975	20.3
Total births, per 1,000 females aged 15 to 44	10,993	53.2	120,237	56.8	238,078	59.0
Teen births, per 1,000 females aged 15 to 19	675	18.5	6,806	17.3	12,441	19.5
Low-birthweight births, as a percent of total births	856	7.8	9,150	7.6	19,006	8.0
Late/no prenatal care, as a percent of total births	505	4.7	4,845	4.1	13,148	5.6
Infant deaths, per 1,000 live births	71	6.5	667	5.5	1,179	5.0
Total hospitalizations, per 10,000	118,625	1,096.1	1,312,126	1,168.1	2,398,679	1,226.2
Preventable hospitalizations, per 10,000	14,133	129.3	158,173	140.8	293,493	150.0
Adult asthma hospitalizations, per 10,000	761	8.8	8,931	10.2	24,276	15.9
Pediatric asthma hospitalizations, per 10,000	241	10.9	3,513	14.2	11,340	26.6
Diabetes hospitalizations, per 10,000	1,507	13.9	17,503	15.6	37,847	19.3
CLRD hospitalizations, per 10,000	3,669	33.9	37,028	33.0	71,475	36.5
Heart disease hospitalizations, per 10,000	10,100	93.3	125,733	111.9	212,301	108.5
Total ED visits, per 10,000	413,659	3,822.2	4,215,240	3,752.5	7,993,838	4,086.4

Table 31. Selected Health Indicators in the Capital District Region, 2011-2013 (3-Year Average)

Source: New York State Community Health Indicator Reports, 2011-2013 (3- Year Average)

Primary Care Physicians

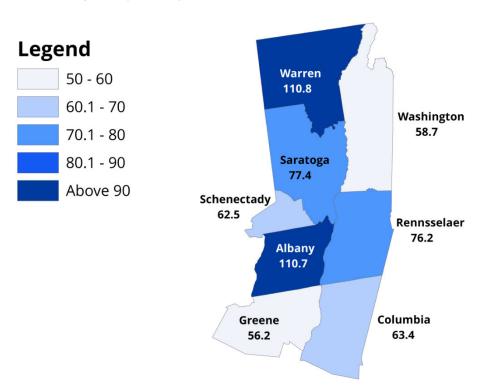
There were nearly 1,300 primary care physicians practicing in the Capital District region in 2015. Over onethird (38%) of them were in family or general practice and 33% were in general internal medicine. There were over 200 psychiatrists, including child and adolescent psychiatrists, practicing in the Capital District region, or approximately 20.1 per 100,000. Warren County had the highest rate of physicians, with 110.8 per 100,000 total population, whereas Greene County had the lowest rate with 56.2 per 100,000 total population. Albany County also had a high rate of primary care physicians, with 110.7 per 100,000 total population (Table 32 and Figure 23).

Specialty	Physicians	Per 100,000 Populationª			
Family/General Practice	488	45.1			
Internal Medicine (General)	418	38.6			
Subtotal	906	83.7			
Geriatrics	4	2.5			
Obstetrics/Gynecology	137	66.0			
Pediatrics (General)	224	100.9			
Primary Care Total	1,271	N/A			
Psychiatrist	217	20.1			
^a All rates are per 100,000 total population except the Ob/Gyn rate, which is per 100,000 women aged 15 to 44, the pediatrician rate, which is per 100,000 children aged birth to 17 years, and the geriatrics rate, which is per 100,000 population aged 65 and older.					

Table 32. Primary Care Physicians and Psychiatrists in the Capital District Region, by Specialty, 2015

Source: Center for Health Workforce Studies

Figure 23. Number of Selected Primary Care Physicians per 100,000 Population in the Capital District Region, by County, 2015



Employment

Total Health Sector Employment

Between 2010 and 2014, employment in the health care sector in the Capital District region grew by more than 2,700 jobs, or nearly 5%. Ambulatory care (11%), hospitals (2%), and home health (12%) contributed to this overall trend, while jobs in nursing home and personal care facilities (-0.2%) declined slightly (Table 33).

Setting	2010	0 2011	2011 2012	12 2013	2014	Change I 2010 ar	
						Number	Percent
Hospitals	23,057	23,541	23,796	23,902	23,522	465	2.0%
Ambulatory care (excluding home health)	17,222	17,461	17,735	18,284	19,118	1,896	11.0%
Nursing home and personal care facilities	11,194	11,240	11,413	11,132	11,167	-27	-0.2%
Home health care	3,049	3,078	3,154	3,161	3,419	370	12.1%
Total	54,521	55,320	56,098	56,459	57,226	2,705	5.0%

Table 33. Number of Health Care Jobs in the Capital District Region, by Setting, 2010-2014

Source: New York State Department of Labor, ES-202

Employment and Wage by Occupation

Employment for selected health occupations is reported in Table 34. RNs in the Capital District had the largest number of jobs in 2015 (11,180), followed by nursing assistants (6,750), personal care aides (6,660), and home health aides (4,210). Occupational therapy assistants (110) and nuclear medicine technologists (60) had the smallest number of jobs in the Capital District region.

Average wages per hour in selected health occupations for the Capital District are reported in Table 35. These wages were based on 2012-2015 survey data, which were adjusted to include the first quarter of 2016. Nurse anesthetists earned the highest hourly wage in 2016 (\$71.82), followed by pharmacists and medical and health services managers (\$58.13 and \$49.65, respectively). Nursing assistants (\$13.53), personal care aides (\$12.96), and home health aides (\$12.38) were the lowest wage earners.

Occupation	Employment
Registered Nurses	11,180
Nursing Assistants	6,750
Personal Care Aides	6,660
Home Health Aides	4,210
Licensed Practical and Licensed Vocational Nurses	3,680
Social Workers	3,140
Medical and Health Services Managers	1,720
Pharmacists	1,360
Pharmacy Technicians	1,250
Medical Assistants	1,140
Dental Assistants	1,010
Physical Therapists	840
Medical Secretaries	830
Radiologic Technologists and Technicians	770
Physician Assistants	730
Nurse Practitioners	690
Speech-Language Pathologists	690
Medical Records and Health Information Technicians	690
Dental Hygienists	670
Medical and Clinical Laboratory Technologists	670
Medical and Clinical Laboratory Technicians	570
Occupational Therapists	540
Mental Health Counselors	400
Respiratory Therapists	380
Dietitians and Nutritionists	320
Surgical Technologists	290
Physical Therapist Assistants	280
Orderlies	250
Cardiovascular Technologists and Technicians	200
Nurse Anesthetists	180
Occupational Therapy Assistants	110
Nuclear Medicine Technologists	60

Table 34. Number of Jobs in Selected Health Occupations in the Capital District Region, 2015

Source: New York State Department of Labor, Bureau of Labor Statistics, Occupational Wages

Occupation	Average Wage per Hour
Nurse Anesthetists	\$71.82
Pharmacists	\$58.13
Medical and Health Services Managers	\$49.65
Nurse Practitioners	\$49.45
Physician Assistants	\$46.11
Nuclear Medicine Technologists	\$39.70
Physical Therapists	\$35.92
Occupational Therapists	\$34.67
Speech-Language Pathologists	\$32.07
Dental Hygienists	\$30.95
Registered Nurses	\$30.33
Medical and Clinical Laboratory Technologists	\$29.54
Dietitians and Nutritionists	\$29.40
Respiratory Therapists	\$29.07
Social Workers	\$27.96
Radiologic Technologists and Technicians	\$27.90
Cardiovascular Technologists and Technicians	\$27.57
Occupational Therapy Assistants	\$23.43
Physical Therapist Assistants	\$22.08
Licensed Practical and Licensed Vocational Nurses	\$20.90
Dietetic Technicians	\$19.26
Medical and Clinical Laboratory Technicians	\$19.10
Surgical Technologists	\$18.84
Mental Health Counselors	\$18.58
Dental Assistants	\$17.82
Medical Secretaries	\$17.24
Occupational Therapy Aides	\$17.12
Medical Records and Health Information Technicians	\$17.04
Medical Assistants	\$16.03
Pharmacy Technicians	\$15.25
Orderlies	\$15.10
Physical Therapist Aides	\$13.54
Nursing Assistants	\$13.53
Personal Care Aides	\$12.96
Home Health Aides	\$12.38

Table 35. Average Hourly Wage in Selected Health Occupations in the Capital District Region, 2016

Source: New York State Department of Labor, Labor Statistics, Occupational Wages

Licensed Health Professionals

Between 2010 and 2014, the Capital District experienced a large increase in the number of licensed RNs more than 680, or about 4%. This was followed by smaller increases in LPNs (390), social workers (230), NPs (188), and PAs (167). The licensed professions with the largest percentage increases in the Capital District during that period included PAs (28%), NPs (27%), and occupational therapists (13%).

Region, 2010-2014 Profession	2010	2011	2012	2013	2014	Change Between 2010 and 2014	
						Number	Percent
Registered Nurses	15,513	15,506	15,643	16,276	16,199	686	4.4%
Licensed Practical Nurses	5,064	5,245	5,269	5,355	5,454	390	7.7%
Social Workers	2,320	2,415	2,450	2,515	2,550	230	9.9%
Pharmacists	1,431	1,444	1,487	1,546	1,541	110	7.7%
Physical Therapists	1,011	1,019	1,050	1,087	1,082	71	7.0%
Nurse Practitioners	704	716	748	831	892	188	26.7%
Speech-Language Pathologists	892	912	913	939	950	58	6.5%
Clinical Laboratory Technologists	924	876	854	826	837	-87	-9.4%
Physician Assistants	593	612	643	680	760	167	28.2%
Occupational Therapists	539	547	578	591	607	68	12.6%
Dental Hygienists	821	849	855	874	873	52	6.3%
Respiratory Therapists	360	370	377	390	400	40	11.1%
Physical Therapist Assistants	355	339	337	333	320	-35	-9.9%
Dietitians/Nutritionists	300	294	303	313	332	32	10.7%
Occupational Therapy Assistants	292	308	309	307	305	13	4.5%
Clinical Laboratory Technicians	130	115	109	98	98	-32	-24.6%

Table 36. Number of Licensed Individuals in Selected Health Occupations in the Capital District
Region, 2010-2014

Source: New York State Education Department, Office of Professions

Demand for Health Workers

Hospitals

Hospitals in the Capital District region reported the most difficulty recruiting experienced RNs, psychologists, and psychiatric NPs. Other occupations identified as difficult to recruit included NPs, PAs, nurse managers, medical coders, case managers, and clinical lab technologists and technicians. CNAs/patient care technicians were the most difficult to retain, followed by nurse practitioners, physician assistants, and licensed master social workers.

Table 37. Recruitment and Retention Difficulties for Hospitals in Selected Health Occupations in the Capital District Region, 2016

Occupation	Average Asse Difficu		Percentage of Respondents Indicating Reasons for Difficulties			
Occupation	Recruitment	Retention	Shortage of Workers	Salary Levels	Geographic Location	
Experienced Registered Nurses	4.8	3.0	75%	25%	0%	
Newly Licensed Registered Nurses	2.5	4.0	100%	75%	0%	
Nurse Managers	3.8	2.3	0%	0%	0%	
CNA/Patient Care Technicians	3.3	4.8	75%	75%	0%	
Nurse Practitioners	4.0	4.0	0%	25%	0%	
Physician Assistants	4.0	4.0	75%	25%	75%	
Pharmacists	3.0	2.3	0%	0%	0%	
Clinical Lab Technicians	3.5	3.0	25%	0%	0%	
Clinical Lab Technologists	3.5	3.3	25%	0%	0%	
Medical Hospital Coders	3.8	3.0	75%	75%	0%	
Occupational Therapists	1.5	1.5	0%	0%	0%	
Care Coordinators	3.0	3.0	0%	0%	0%	
Case Managers	3.8	3.0	75%	75%	0%	
Care Managers	3.0	3.0	0%	0%	0%	
Patient Navigators	3.0	3.0	0%	0%	0%	
Community Health Workers	3.0	3.8	75%	75%	0%	
Psychologists	4.8	3.8	75%	0%	25%	
Psychiatric NPs	4.8	3.0	75%	0%	0%	
Licensed Clinical Social Workers	3.0	3.3	0%	0%	0%	
Licensed Master Social Workers	3.0	4.0	75%	0%	0%	
Licensed Mental Health Counselors	3.0	3.0	0%	0%	0%	

- Many hospitals projected growth in inpatient services, with increasing demand for NPs (100%), RNs (100%), and CNA (100%).
- Many hospitals projected growth in outpatient services, with increasing demand for NPs (100%), RNs (100%), and PAs (100%).

Nursing Homes

Nursing homes in the Capital District region reported that in 2016 experienced RNs were the most difficult to recruit. CNAs were the most difficult to retain, followed by speech-language pathologists. Likewise, experienced RNs, MDS coordinators, and nurse managers were also difficult to retain (Table 38).

Table 38. Recruitment and Retention Difficulties for Nursing Homes in Selected Health Occupations in the Capital District Region, 2016					
	Average Assessment of	Percentage of Respondents Indicating			

	Average Asse		Percentage of Respondents Indicating Reasons for Difficulties				
Occupation	Difficu Recruitment	Retention	Shortage of Workers	Salary Levels	Benefits	es Location	
Activities Director	3.0	2.3	13%	13%	0%	11%	
Certified Nurse Aides/Assts. (CNAs)	3.9	3.8	78%	11%	11%	22%	
Dietary Aides	2.4	2.6	13%	13%	0%	13%	
Dietitians/Nutritionists	3.8	2.8	20%	20%	0%	0%	
Housekeeping Staff	2.2	2.8	11%	11%	0%	11%	
Licensed Practical Nurses	3.1	2.6	33%	22%	11%	11%	
Medical Billers	2.5	2.3	0%	0%	0%	0%	
Occupational Therapists	3.3	2.3	0%	0%	0%	0%	
Occupational Therapy Assistants	3.3	2.3	0%	0%	0%	0%	
Physical Therapists	2.8	2.3	0%	0%	0%	0%	
Physical Therapist Assistants	3.3	2.3	0%	0%	0%	0%	
Registered Nurses (RNs)							
Newly Licensed RNs	3.1	3.0	38%	25%	13%	13%	
Experienced RNs	4.1	3.7	44%	44%	11%	11%	
MDS Coordinators	3.4	3.2	25%	13%	0%	13%	
Nurse Manager	3.4	3.0	22%	0%	0%	11%	
Director of Nursing	3.6	2.0	29%	14%	0%	14%	
Recreational Therapists	1.3	2.0	0%	0%	0%	0%	
Respiratory Therapists	N/A	N/A	N/A	N/A	N/A	N/A	
Social Workers (SWs)							
Licensed Clinical SWs	3.0	2.7	0%	25%	0%	25%	
Licensed Master SWs	3.0	1.8	17%	0%	17%	17%	
Speech-Language Pathologists	4.0	2.0	0%	0%	0%	0%	

• Fifty-six percent (56%) reported difficulty hiring part-time workers.

• Eleven percent (11%) reported difficulty hiring bilingual workers.

• Seventy-eight percent (78%) indicated difficulty hiring workers for off shifts (evenings, nights, and weekends).

Home Health Care Agencies

Home health care agencies in the Capital District region reported the greatest difficulty recruiting respiratory therapists and homemakers, followed by occupational therapists. These agencies also reported that home health aides and personal care aides were the most difficult to retain (Table 39).

·	Average Asse Difficu		Percentage of Respondents Indicating Reasons f Difficulties			
Occupation	Recruitment	Retention	Shortage	Non-Competitive Salaries/Benefits	Lack of Specialized Training	Location
Home Health Aides	3.7	3.3	0%	33%	33%	67%
Homemakers	5.0	2.0	0%	0%	0%	0%
Personal Care Aides	3.7	3.3	0%	33%	33%	33%
Dietitians/Nutritionists	4.0	2.5	0%	0%	0%	0%
Licensed Practical Nurses	2.7	2.3	0%	33%	33%	0%
Occupational Therapists	4.7	2.7	0%	33%	33%	0%
Physical Therapists	4.0	2.7	67%	33%	0%	33%
Registered Nurses						
Newly Licensed RNs	3.0	3.0	0%	0%	0%	0%
Experienced RNs	4.3	3.0	50%	50%	25%	25%
Respiratory Therapists	5.0	N/A	100%	0%	0%	0%
Social Workers						
Licensed Clinical SWs	3.0	2.0	0%	0%	0%	0%
Licensed Master SWs	3.8	2.8	50%	0%	0%	0%
Speech-Language Pathologists	4.0	3.0	50%	0%	0%	0%

Table 39. Recruitment and Retention Difficulties for Home Health Care Agencies in Selected Health
Occupations in the Capital District, 2016

- Twenty percent (20%) of home health care agencies reported difficulty hiring part-time workers and hiring bilingual workers.
- Forty percent (40%) of home health care agencies indicated difficulty hiring workers for off shifts (evenings, nights, and weekends).
- More than half of home health care agencies in the Capital District projected expanding services within the next year.

FQHCs

Hudson Valley and Capital District regions were combined due to low survey response rates. FQHCs in this region had the most difficulty recruiting family/general practice physicians Ob/Gyns and LPNs. FQHCs reported the most difficulty retaining IT support and RNs (Table 40).

Occupation		Average Assessment of Difficulty			
		Recruitment	Retention		
	Family/General Practice	3.8	2.2		
	Internal Medicine	3.6	2.2		
Physicians	Ob/Gyn	3.8	2.6		
	Pediatricians	2.5	2.2		
	Physician Assistants (PAs)	2.2	2.6		
	Overall – All Specialties	2.6	2.6		
	Pediatric	2.5	2.3		
Nurse Practitioners	Adult	2.3	2.3		
	Family	2.6	2.6		
	Psychiatric	2.8	2.7		
N	Registered	3.3	2.8		
Nurses	Licensed Practical Nurses	3.8	2.7		
	Psychiatrists	3.3	2.3		
Behavioral Health	Psychologists	2.7	3.0		
	Substance Abuse Counselors	2.5	2.7		
	Social Workers	2.8	2.3		
Oral Health	Dentists	2.8	2.3		
Oral Health	Dental Hygienists	2.5	2.3		
Coordination/Patient	Care Coordinators	3.3	2.7		
Coordination/Patient	Case Managers	2.0	2.3		
Care	HIV Counselors	1.0	1.0		
Patient/Community	Community Health Workers	1.0	1.0		
Education	Patient Health Educators	1.0	1.0		
Education	Nutritionists/Nutrition Educators	2.3	2.3		
	Patient Health Navigators	1.0	1.0		
Enabling Services	Outreach Workers	1.0	1.0		
chaning services	Transportation Workers	1.0	1.0		
	Interpreters	1.0	1.0		
Administrative	IT Systems Admin/Maintenance	3.5	2.8		
Support		5.5	2.0		
Others	Physical Therapists	3.0	1.0		
Occupational Therapists		2.0	1.0		

Table 40. Recruitment and Retention Difficulties for FQHCs in Selected Health Occupations in the
Capital District and Hudson Valley Regions, 2016

• Sixty percent (60%) of FQHCs in these regions indicated difficulty hiring bilingual staff; Spanish was the language most needed.

• Eighty percent (80%) of FQHCs in these regions indicated anticipation for expanding one or more service.

Employment Projections by Health Occupation

According to the NYSDOL, the largest numbers of average annual job openings projected in the Capital District between 2012 and 2022 will be for RNs (390), home health aides (260), personal care aides (210), and nursing assistants (210) (Table 41).

Table 41. Employment Projections for Selected Health Occupations in the Capital District Region	,
2012-2022	

Occupation	2012	2022	Change Between 2012 and 2022		Average Annual
			Number	Percent	Openings ^a
Personal Care Aides	5,550	7,230	1,680	30.3%	210
Home Health Aides	5,090	6,690	1,600	31.4%	260
Registered Nurses	12,010	13,590	1,580	13.2%	390
Nursing Assistants	6,290	7,230	940	14.9%	210
Licensed Practical and Licensed Vocational Nurses	3,980	4,750	770	19.3%	180
Social Workers	3,880	4,370	490	12.6%	140
Emergency Medical Technicians and Paramedics	1,400	1,860	460	32.9%	90
Pharmacy Technicians	1,090	1,350	260	23.9%	40
Medical Assistants	1,010	1,270	260	25.7%	50
Physician Assistants	620	840	220	35.5%	30
Nurse Practitioners	670	880	210	31.3%	30
Physical Therapists	820	1,020	200	24.4%	40
Dental Hygienists	850	1,040	190	22.4%	40
Medical and Health Services Managers	1,810	1,980	170	9.4%	60
Medical and Clinical Laboratory Technicians	730	900	170	23.3%	40
Speech-Language Pathologists	850	1,010	160	18.8%	30
Pharmacists	990	1,130	140	14.1%	30
Medical Records and Health Info Techs	580	710	130	22.4%	30
Dental Assistants	900	1,030	130	14.4%	30
Radiologic Technologists	800	920	120	15.0%	20
Occupational Therapists	510	610	100	19.6%	20
Diagnostic Medical Sonographers	250	350	100	40.0%	10
Surgical Technologists	340	420	80	23.5%	10
Clinical, Counseling, and School Psychologists	820	890	70	8.5%	30
Dietitians and Nutritionists	300	350	50	16.7%	0
Respiratory Therapists	340	390	50	14.7%	20
Medical and Clinical Laboratory Technologists	630	680	50	7.9%	20
Cardiovascular Technologists & Technicians	200	240	40	20.0%	10
Nurse Anesthetists	190	220	30	15.8%	0
Psychiatric Aides	400	430	30	7.5%	10
Orderlies	150	170	20	13.3%	0

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

Source: New York State Department of Labor, Jobs in Demand/Projects, Long-Term Occupation Projections, 2012-2022

C. Central New York

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

Population

The distribution of the population in the Central New York region by age roughly matched the state's distribution, including the percentage of females of child-bearing age (ages 15 to 44). However, the Central New York region was substantially less racially and ethnically diverse than the state as a whole and had a higher percentage of individuals with high school diplomas or equivalents and a higher percentage of individuals with associate degrees compared to the state as a whole (Table 42).

Table 42. Selected Population Characteristics in the Central New York Region, 2010-2014(5-Year Average)

Donulation Chave stavistics?	Regio	Statewide				
Population Characteristics ^a	Number	Percent	Percent			
Total population	790,948	N/A	N/A			
Population under 100% FPL	113,183	14.3%	15.2%			
Population under 200% FPL	240,252	30.4%	31.7%			
Population aged birth to 17 years	173,535	21.9%	21.8%			
Population aged 65 and older	115,300	14.6%	14.1%			
Population female aged 15 to 44	156,493	19.8%	20.7%			
Women aged 15 to 19 who had a birth in past 12 mos.	558	0.1%	0.05%			
Women aged 20 to 34 who had a birth in past 12 mos.	7,116	0.9%	0.8%			
Women aged 35 to 50 who had a birth in past 12 mos.	1,706	0.2%	0.3%			
Black/African American, non-Hispanic	55,949	7.1%	14.4%			
Hispanic/Latino	27,675	3.5%	18.2%			
Asian/Pacific Islander, non-Hispanic	18,345	2.3%	7.7%			
American Indian/Native Alaskan, non-Hispanic	3,824	0.5%	0.2%			
Two or more/other	17,045	2.2%	2.2%			
Less than high school education	56,993	10.8%	14.6%			
High school or equivalent	256,129	48.8%	43.2%			
Associate degree	62,870	12.0%	8.5%			
Bachelor's degree	83,837	16.0%	19.1%			
Master's degree or higher	65,544	12.5%	14.6%			
^a Education levels and rates are based on individuals aged 25 years and older.						

Source: US Census, American Community Survey, 2010-2014 (5-Year Average)

Health Status

The Central New York region had a higher overall total death rate and deaths due to all cancers than the state as a whole and upstate New York. The overall birth rate was lower in Central New York than in the state and upstate New York but the teen birth rate was higher. The Central New York region also had lower rates of asthma (both adult and pediatric), heart disease hospitalizations, ED visits, and total hospitalizations compared to the state as a whole and upstate New York, but had a similar rate of preventable hospitalizations to New York State, and slightly a higher rate than Upstate overall (Table 43).

	Regio	n	Upsta	ate	Statewide		
Health Indicator	Number	Rate	Number	Rate	Number	Rate	
Total deaths, per 100,000	6,920	875.3	147,313	753.1	147,313	753.1	
Deaths due to heart disease, per 100,000	1,584	200.3	43,448	222.1	43,448	222.1	
Deaths due to all cancers, per 100,000	1,702	215.1	35,215	180.7	35,215	180.7	
Deaths due to diabetes, per 100,000	163	20.6	3,975	20.3	3,975	20.3	
Total births, per 1,000 females aged 15 to 44	8,596	55.0	238,078	59.0	238,078	59.0	
Teen births, per 1,000 females aged 15 to 19	716	22.9	12,441	19.5	12,441	19.5	
Low-birthweight births, as a percent of total births	621	7.2	19,006	8.0	19,006	8.0	
Late/no prenatal care, as a percent of total births	303	3.5	13,148	5.6	13,148	5.6	
Infant deaths, per 1,000 live births	50	5.9	1,179	5.0	1,179	5.0	
Total hospitalizations, per 10,000	89,502	1,132.0	2,398,679	1,226.2	2,398,679	1,226.2	
Preventable hospitalizations, per 10,000	11,989	151.6	293,493	150.0	293,493	150.0	
Adult asthma hospitalizations, per 10,000	437	7.1	24,276	15.9	24,276	15.9	
Pediatric asthma hospitalizations, per 10,000	141	8.1	11,340	26.6	11,340	26.6	
Diabetes hospitalizations, per 10,000	1,216	15.4	37,847	19.3	37,847	19.3	
CLRD hospitalizations, per 10,000	2,482	31.4	71,475	36.5	71,475	36.5	
Heart disease hospitalizations, per 10,000	8,494	107.4	212,301	108.5	212,301	108.5	
Total ED visits, per 10,000	279,104		7,993,838	4.086.4	7,993,838	4,086.4	

Table 43. Selected Health Indicators in the Central New York Region, 2011-2013 (3-Year Average)

Source: New York State Community Health Indicator Reports, 2011-2013 (3- Year Average)

Primary Care Physicians

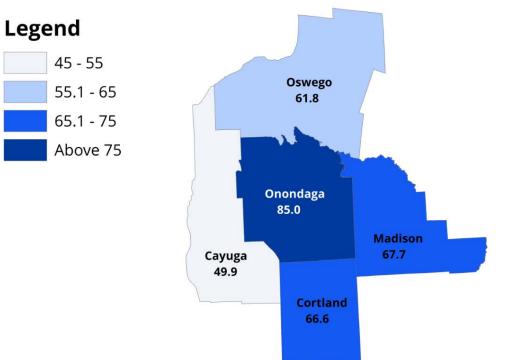
There were nearly 900 primary care physicians practicing in the Central New York region. Thirty-nine percent (39%) were in family or general practice, 29% were in general internal medicine, and another 19% were in general pediatrics. There were over 100 psychiatrists per 100,000 total population, including child and adolescent psychiatrists, practicing in the Central New York region, or approximately 17.3 per 100,000. Onondaga County had the most family, general, and internal medicine (general) physicians per capita, with 85.0 per 100,000 total population, whereas Cayuga County had the fewest, with 49.9 per 100,000 (Table 44 and Figure 24).

Table 44. Primary Care Physicians and Psychiatrists in the Central New York Region, by Specialty,	
2015	

Specialty	Physicians	Per 100,000 Population ^a			
Family/General Practice	338	42.7			
Internal Medicine (General)	257	32.5			
Subtotal	595	75.2			
Geriatrics	8	7.1			
Obstetrics/Gynecology	105	67.3			
Pediatrics (General)	167	96.1			
Primary Care Total	875	N/A			
Psychiatrist	137	17.3			
^a All rates are per 100,000 total population except the Ob/Gyn rate, which is per 100,000 women aged 15 to 44, the pediatrician rate, which is per 100,000 children aged birth to 17 years, and the geriatrics rate, which is per 100,000 population aged 65 and older.					

Source: Center for Health Workforce Studies

Figure 24. Number of Selected Primary Care Physicians per 100,000 Population in the Central New York Region, by County, 2015



Employment

Total Health Sector Employment

Between 2010 and 2014, health sector employment in the Central New York region grew by over 2,000 jobs, or over 5%. Employment in home health care grew by more than 730 jobs, or 53%, while jobs in nursing home and personal care facilities declined by over 550 jobs, or 6%, during the same period. Hospitals added more than 580 jobs between 2010 and 2014, growing by over 4%, while ambulatory care increased by more than 1,250 positions, or 9% (Table 45).

Setting	2010 2011	2012	2013	2014	Change Between 2010 and 2014		
						Number	Percent
Hospitals	13,133	13,202	13,781	13,869	13,715	582	4.4%
Ambulatory care (excluding home health)	13,414	13,644	14,125	14,337	14,677	1263	9.4%
Nursing home and personal care facilities	9,142	8,929	8,765	8,623	8,589	-553	-6.1%
Home health care	1,404	1,593	1,829	2,112	2,142	738	52.6%
Total	37,093	37,367	38,500	38,941	39,123	2,030	5.5%

Table 45. Number of Health Care Jobs in the Central New York Region, by Setting, 2010-2014

Source: New York State Department of Labor, ES-202

Employment and Wage by Occupation

Employment for selected health occupations for the Central New York region is reported in Table 46. RNs in the Central New York region had the most jobs in the first quarter of 2015 (6,130), followed by personal care aides (4,720) and nursing assistants (3,880). Physical therapist aides, nuclear medicine technologists, and dietetic technicians had the fewest jobs (80, 50, and 50, respectively).

Wages in selected health occupations for Central New York are reported in Table 47. These wages are based on 2012-2015 survey data, which were adjusted to include the first quarter of 2016. Certified registered nurse anesthetists earned the highest hourly wage in 2016 (\$72.79), followed by pharmacists and medical and health service managers (\$61.36 and \$52.46, respectively). The lowest wage earners for the Central New York region were home health aides (\$12.58), personal care aides (\$12.25), and orderlies (\$12.24).

Occupation	Employment
Registered Nurses	6,130
Personal Care Aides	4,720
Nursing Assistants	3,880
Licensed Practical and Licensed Vocational Nurses	2,580
Home Health Aides	2,040
Social Workers	1,830
Medical and Health Services Managers	870
Medical Secretaries	860
Medical Assistants	730
Radiologic Technologists and Technicians	710
Pharmacy Technicians	690
Pharmacists	660
Physical Therapists	630
Dental Hygienists	630
Dental Assistants	630
Nurse Practitioners	570
Physician Assistants	510
Medical and Clinical Laboratory Technologists	480
Medical Records and Health Information Technicians	430
Speech-Language Pathologists	400
Occupational Therapists	340
Mental Health Counselors	330
Physical Therapist Assistants	240
Surgical Technologists	210
Respiratory Therapists	190
Dietitians and Nutritionists	190
Cardiovascular Technologists and Technicians	100
Occupational Therapy Assistants	90
Physical Therapist Aides	80
Nuclear Medicine Technologists	50
Dietetic Technicians	50

Table 46. Number of Jobs in Selected Health Occupations in the Central New York Region, 2015

Source: New York State Department of Labor, Bureau of Labor Statistics, Occupational Wages

Occupation	Average Wage per Hour
Nurse Anesthetists	\$72.79
Pharmacists	\$61.36
Medical and Health Services Managers	\$52.46
Physician Assistants	\$50.19
Nurse Practitioners	\$47.28
Nurse Midwives	\$38.64
Nuclear Medicine Technologists	\$37.93
Physical Therapists	\$36.34
Speech-Language Pathologists	\$32.80
Occupational Therapists	\$32.60
Dental Hygienists	\$32.06
Registered Nurses	\$29.51
Dietitians and Nutritionists	\$28.89
Respiratory Therapists	\$28.56
Radiologic Technologists and Technicians	\$28.34
Cardiovascular Technologists and Technicians	\$28.29
Medical and Clinical Laboratory Technologists	\$26.98
Social Workers	\$25.49
Surgical Technologists	\$24.19
Medical and Clinical Laboratory Technicians	\$23.96
Occupational Therapy Assistants	\$23.45
Physical Therapist Assistants	\$21.56
Dietetic Technicians	\$20.98
Medical Records and Health Information Technicians	\$19.37
Mental Health Counselors	\$18.94
Licensed Practical and Licensed Vocational Nurses	\$18.65
Dental Assistants	\$16.83
Occupational Therapy Aides	\$15.65
Physical Therapist Aides	\$15.60
Medical Secretaries	\$15.38
Medical Assistants	\$14.72
Pharmacy Technicians	\$13.80
Nursing Assistants	\$13.38
Home Health Aides	\$12.58
Personal Care Aides	\$12.25
Orderlies	\$12.24

Table 47. Average Hourly Wage in Selected Health Occupations in the Central New York Region, 2016

Source: New York State Department of Labor, Labor Statistics, Occupational Wages

Licensed Health Professionals

Between 2010 and 2014 in Central New York, the number of licensed registered nurses increased by over 800, more than any other licensed health profession. During the same period, there were 230 more social workers, an increase of 19%. Additionally, physician assistants saw the highest percentage increase in numbers (44.3%), while the number of occupational therapy assistants declined by over 3% (Table 48).

Region, 2010-2014 Profession	2010	2011	2012	2013	2014		Between nd 2014
						Number	Percent
Registered Nurses	10,785	10,935	11,197	11,606	11,601	816	7.6%
Licensed Practical Nurses	5,046	5,177	5,130	5,136	5,178	132	2.6%
Social Workers	1,217	1,263	1,323	1,397	1,451	234	19.2%
Pharmacists	708	714	746	794	789	81	11.4%
Physical Therapists	724	721	735	784	792	68	9.4%
Nurse Practitioners	959	992	1,018	1,124	1,173	214	22.3%
Speech-Language Pathologists	471	489	512	522	534	63	13.4%
Clinical Laboratory Technologists	564	558	561	555	598	34	6.0%
Physician Assistants	370	405	436	462	534	164	44.3%
Occupational Therapists	307	298	315	347	364	57	18.6%
Dental Hygienists	548	563	563	558	568	20	3.6%
Respiratory Therapists	342	353	355	373	386	44	12.9%
Physical Therapist Assistants	235	241	255	264	269	34	14.5%
Dietitians/Nutritionists	187	183	192	204	201	14	7.5%
Occupational Therapy Assistants	97	95	103	99	94	-3	-3.1%
Clinical Laboratory Technicians	123	110	128	126	129	6	4.9%

Table 48. Number of Licensed Individuals in Selected Health Occupations in the Central New York
Region, 2010-2014

Source: New York State Education Department, Office of Professions

Demand for Health Workers

Hospitals

Hospitals in the Central New York region reported the most difficulty recruiting psychiatric NPs, followed by experienced registered nurses, psychologists, and licensed mental health counselors. They had the most difficulty retaining newly licensed RNs, physician assistants, psychiatric NPs, and psychologists (Table 49).

Table 49. Recruitment and Retention Difficulties for Hospitals in Selected Health Occupations in the
Central New York Region, 2016

	Average Asse Difficu		Percentage of Respondents Indicating Reasons for Difficulties			
Occupation	Recruitment	Retention	Shortage of Workers	Salary Levels	Geographic Location	
Experienced Registered Nurses	3.8	2.6	33%	33%	83%	
Newly Licensed Registered Nurses	1.6	3.0	17%	33%	50%	
Nurse Managers	3.2	2.2	33%	33%	17%	
CNA/Patient Care Techs	1.0	1.3	0%	0%	0%	
Nurse Practitioners	3.4	2.3	67%	17%	33%	
Physician Assistants	3.0	3.0	50%	17%	33%	
Pharmacists	2.4	2.0	17%	33%	17%	
Clinical Lab Technicians	2.6	2.5	33%	17%	0%	
Clinical Lab Technologists	2.8	2.5	33%	17%	0%	
Medical Hospital Coders	3.0	2.0	33%	17%	0%	
Occupational Therapists	2.4	2.0	33%	17%	17%	
Care Coordinators	2.0	1.3	17%	0%	17%	
Case Managers	3.0	1.5	33%	0%	17%	
Care Managers	2.3	1.3	17%	0%	17%	
Patient Navigators	2.6	1.3	33%	0%	17%	
Community Health Workers	3.0	1.3	33%	17%	33%	
Psychologists	3.8	2.8	50%	17%	33%	
Psychiatric NPs	4.0	3.0	67%	33%	33%	
Licensed Clinical Social Workers	3.4	1.3	33%	0%	0%	
Licensed Master Social Workers	3.0	2.3	17%	0%	0%	
Licensed Mental Health Counselors	3.7	2.3	17%	0%	0%	

- Many hospitals projected growth in inpatient services, with increasing demand for NPs (67%), medical assistant (50%), and CNA (50%).
- Many hospitals projected growth in outpatient services, with increasing demand for care coordinator (67%), RNs (50%), and CNA (50%).

Nursing Homes

In the Central New York region, nursing homes reported that MDS coordinators, nurse managers, and directors of nursing were the most difficult to recruit. LPNs were the most difficult occupation to retain for nursing homes in the Central New York region, followed by housekeeping staff, nurse managers, and CNAs (Table 50).

In the Central New York Region, 2	Average Asse		Percentage of Respondents Indicating Reasons for Difficulties			
Occupation	Difficu Recruitment	Retention	Shortage of Workers	Salary Levels	Benefits	es Location
Activities Director	2.8	2.0	0%	0%	0%	0%
Certified Nurse Aides/Assts. (CNAs)	3.5	4.0	67%	0%	0%	33%
Dietary Aides	2.6	3.5	0%	20%	0%	0%
Dietitians/Nutritionists	2.8	2.7	0%	0%	0%	0%
Housekeeping Staff	3.2	4.2	0%	17%	0%	33%
Licensed Practical Nurses	4.2	4.4	50%	0%	0%	33%
Medical Billers	2.6	2.3	20%	0%	0%	0%
Occupational Therapists	4.0	3.3	50%	0%	0%	0%
Occupational Therapy Assistants	3.5	3.0	25%	0%	0%	0%
Physical Therapists	4.0	3.0	25%	25%	0%	0%
Physical Therapist Assistants	3.8	3.3	50%	25%	0%	0%
Registered Nurses (RNs)						
Newly Licensed RNs	4.3	3.0	0%	0%	0%	33%
Experienced RNs	4.2	3.8	33%	0%	0%	17%
MDS Coordinators	4.5	3.0	25%	0%	0%	0%
Nurse Manager	4.5	4.2	50%	0%	0%	17%
Director of Nursing	4.4	3.3	60%	0%	0%	20%
Recreational Therapists	2.5	2.7	0%	0%	0%	0%
Respiratory Therapists	3.5	2.0	25%	0%	0%	0%
Social Workers (SWs)						
Licensed Clinical SWs	3.8	2.3	25%	0%	0%	0%
Licensed Master SWs	3.8	2.7	25%	0%	0%	0%
Speech-Language Pathologists	3.3	2.5	25%	0%	0%	0%

Table 50. Recruitment and Retention Difficulties for Nursing Homes in Selected Health Occupations
in the Central New York Region, 2016

• Thirty-three percent (33%) of nursing homes reported difficulty hiring part-time workers.

• All respondents indicated difficulty hiring workers for off shifts (evenings, nights, and weekends).

Home Health Care Agencies

Responses rates to recruitment and retention surveys were too low in the Central New York and Mohawk Valley regions to report individually, so responses were combined. Home health care agencies in these two regions reported the most difficulty recruiting homemakers, followed by occupational therapists and personal care aides. Similarly, survey respondents reported difficulties retaining personal care aides (Table 51).

Table 51. Recruitment and Retention Difficulties for Home Health Care Agencies in Selected Health
Occupations in the Central New York and Mohawk Valley Regions, 2016

		erage Assessment of Percentage of Respondents Indicatin Difficulty for Difficulties				g Reasons	
Occupation	Recruitment	Retention	Shortage	Non- Competitive Salaries/ Benefits	Lack of Specialized Training	Location	
Home Health Aides	3.4	3.0	0%	20%	0%	40%	
Homemakers	5.0	2.0	0%	0%	0%	0%	
Personal Care Aides	4.0	3.3	0%	33%	0%	33%	
Dietitians/Nutritionists	3.5	2.0	0%	0%	0%	0%	
Licensed Practical Nurses	2.4	2.0	0%	20%	0%	0%	
Occupational Therapists	4.5	2.0	0%	50%	0%	0%	
Physical Therapists	3.0	2.0	50%	50%	0%	50%	
Registered Nurses							
Newly Licensed RNs	3.3	3.0	0%	0%	0%	0%	
Experienced RNs	3.7	3.0	17%	33%	17%	17%	
Respiratory Therapists	N/A	N/A	N/A	N/A	N/A	N/A	
Social Workers (SWs)							
Licensed Clinical SWs	2.0	2.0	0%	0%	0%	0%	
Licensed Master SWs	3.0	2.5	20%	0%	0%	0%	
Speech-Language Pathologists	N/A	N/A	N/A	N/A	N/A	N/A	

• Two-thirds (67%) of home health care agencies indicated difficulty hiring workers for off shifts (evenings, nights, and weekends).

• One-third (33%) of home health care agencies indicated difficulty hiring part-time workers.

• Two-thirds of home health care agencies indicated they would be expanding services within the next year.

FQHCs

FQHCs in the Central New York region had the most difficulty recruiting psychiatric NPs, psychiatrists, and substance abuse counselors. FQHCs in the region had the most difficulty retaining psychiatric NPs and dentists (Table 52).

	Occupation		ent of Difficulty
00	ccupation	Recruitment	Retention
	Family/General Practice	4.0	3.5
	Internal Medicine	3.7	4.0
Physicians	Ob/Gyn	3.0	3.0
	Pediatricians	3.5	3.0
	Physician Assistants (PAs)	2.7	3.0
	Overall – All Specialties	2.3	3.3
	Pediatric	2.0	4.0
Nurse Practitioners	Adult	2.0	4.0
	Family	2.8	3.3
	Psychiatric	5.0	5.0
Nurses	Registered Nurses	4.0	2.0
Nuises	Licensed Practical Nurses	2.7	2.0
	Psychiatrists	5.0	0.0
Behavioral Health	Psychologists	0.0	0.0
Bellavioral Health	Substance Abuse Counselors	5.0	3.0
	Social Workers	4.5	3.0
Oral Health	Dentists	4.0	5.0
	Dental Hygienists	3.0	3.0
Coordination/Patient	Care Coordinators	3.0	3.0
Conditiation/Patient	Case Managers	3.0	3.0
Care	HIV Counselors	3.0	3.0
Patient/Community	Community Health Workers	3.0	2.5
Education	Patient Health Educators	3.0	2.5
	Nutritionists/Nutrition Educators	2.5	2.0
	Patient Health Navigators	3.0	3.0
Enabling Services	Outreach Workers	3.0	3.0
Lindbilling Services	Transportation Workers		2.0
	Interpreters	3.5	3.0
Administrative Support	IT Systems Admin/Maintenance	4.0	3.0
Others	Physical Therapists	0.0	0.0
Others	Occupational Therapists	0.0	0.0

Table 52. Recruitment and Retention Difficulties for FQHCs in Selected Health Occupations in the Central New York Region, 2016

• Eighty percent (80%) of FQHCs in this region indicated plans to expand services.

Employment Projections by Health Occupation

According to the NYSDOL, the largest numbers of average annual job openings projected in the Central New York region between 2012 and 2022 will be for RNs (220), personal care aides (150), and LPNs (140). Over this same period, the region is expected to experience the largest percentage increase in employment for home health aides (31%) and physician assistants (31%), followed by dental hygienists (23%) and emergency medical technicians and paramedics (23%) (Table 53).

Personal Care Aides Registered Nurses Home Health Aides Licensed Practical and Licensed Vocational Nurses Nursing Assistants Medical Assistants Social Workers Physician Assistants Emergency Medical Technicians and Paramedics Physical Therapists Dental Hygienists Dental Assistants	4,880 7,780 2,140 3,460 4,330 950 2,240 480 660 790 480	5,940 8,450 2,810 4,020 4,640 1,160 2,430 630 810	Number 1,060 670 670 560 310 210 190 150	Percent 21.7% 8.6% 31.3% 16.2% 7.2% 22.1% 8.5% 31.3%	220 110 140 110 40 80
Registered Nurses Registered Nurses Home Health Aides Incensed Practical and Licensed Vocational Nurses Nursing Assistants Medical Assistants Medical Assistants Social Workers Physician Assistants Emergency Medical Technicians and Paramedics Physical Therapists Dental Hygienists	7,780 2,140 3,460 4,330 950 2,240 480 660 790	8,450 2,810 4,020 4,640 1,160 2,430 630 810	670 670 560 310 210 190 150	8.6% 31.3% 16.2% 7.2% 22.1% 8.5% 31.3%	40 80
Home Health Aides Interventional Nurses Licensed Practical and Licensed Vocational Nurses Interventional Nurses Nursing Assistants Interventional Nurses Medical Assistants Interventional Nurses Social Workers Interventional Nurses Physician Assistants Interventional Nurses Emergency Medical Technicians and Paramedics Interventional Nurses Physical Therapists Interventional Nurses Dental Hygienists Interventional Nurses	2,140 3,460 4,330 950 2,240 480 660 790	2,810 4,020 4,640 1,160 2,430 630 810	670 560 310 210 190 150	31.3% 16.2% 7.2% 22.1% 8.5% 31.3%	110 140 110 40 80
Licensed Practical and Licensed Vocational Nurses Nursing Assistants Medical Assistants Social Workers Physician Assistants Emergency Medical Technicians and Paramedics Physical Therapists Dental Hygienists	3,460 4,330 950 2,240 480 660 790	4,020 4,640 1,160 2,430 630 810	560 310 210 190 150	16.2% 7.2% 22.1% 8.5% 31.3%	140 110 40 80
Nursing Assistants Medical Assistants Social Workers Physician Assistants Emergency Medical Technicians and Paramedics Physical Therapists Dental Hygienists	4,330 950 2,240 480 660 790	4,640 1,160 2,430 630 810	310 210 190 150	7.2% 22.1% 8.5% 31.3%	110 40 80
Medical Assistants	950 2,240 480 660 790	1,160 2,430 630 810	210 190 150	22.1% 8.5% 31.3%	40 80
Social Workers Physician Assistants Physician Assistants Emergency Medical Technicians and Paramedics Physical Therapists Dental Hygienists	2,240 480 660 790	2,430 630 810	190 150	8.5% 31.3%	80
Physician AssistantsEmergency Medical Technicians and ParamedicsPhysical TherapistsDental Hygienists	480 660 790	630 810	150	31.3%	
Emergency Medical Technicians and Paramedics Physical Therapists Dental Hygienists	660 790	810			20
Physical Therapists Dental Hygienists	790		150		20
Dental Hygienists		020	100	22.7%	40
	180	920	130	16.5%	30
Dental Assistants	400	590	110	22.9%	20
	710	820	110	15.5%	30
Nurse Practitioners	470	570	100	21.3%	20
Pharmacy Technicians	780	870	90	11.5%	20
Medical and Health Services Managers	800	880	80	10.0%	30
Medical and Clinical Laboratory Technologists	620	700	80	12.9%	30
Radiologic Technologists	600	670	70	11.7%	20
Medical Records and Health Info Techs	490	560	70	14.3%	20
Speech-Language Pathologists	420	460	40	9.5%	10
Medical and Clinical Laboratory Technicians	200	240	40	20.0%	10
Clinical, Counseling, and School Psychologists	520	550	30	5.8%	10
Occupational Therapists	360	390	30	8.3%	10
Respiratory Therapists	340	370	30	8.8%	10
Diagnostic Medical Sonographers	150	180	30	20.0%	0
Surgical Technologists	290	320	30	10.3%	0
Pharmacists	750	770	20	2.7%	20
Dietitians and Nutritionists	200	210	10	5.0%	0
Nurse Anesthetists	50	60	10	20.0%	0

Table 53. Employment Projections for Selected Health Occupations in the Central New York Region,
2012-2022

Source: New York State Department of Labor, Jobs in Demand/Projects, Long-Term Occupation Projections, 2012-2022

D. Finger Lakes

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

Population

The population of the Finger Lakes region had a lower percentage of individuals below 100% and 200% of the FPL compared to the statewide average, was slightly older than the population of the state as a whole, and was also less racially and ethnically diverse. The region also had a higher percentage of individuals with high school or equivalent degrees and associate degrees, but had a lower percentage of individuals with bachelor's degrees and of those with master's degrees or higher compared to the state as a whole (Table 54).

Table 54. Selected Population Characteristics in the Finger Lakes Region, 2010-2014(5-Year Average)

	Regio	Region			
Population Characteristics ^a	Number	Percent	Percent		
Total population	1,219,191	N/A	N/A		
Population under 100% FPL	167,603	13.7%	15.2%		
Population under 200% FPL	363,551	29.8%	31.7%		
Population aged birth to 17 years	264,352	21.7%	21.8%		
Population aged 65 and older	184,082	15.1%	14.1%		
Population female aged 15 to 44	234,537	19.2%	20.7%		
Women aged 15 to 19 who had a birth in past 12 mos.	606	0.0%	0.05%		
Women aged 20 to 34 who had a birth in past 12 mos.	10,565	0.9%	0.8%		
Women aged 35 to 50 who had a birth in past 12 mos.	2,835	0.2%	0.3%		
Black/African American, non-Hispanic	123,203	10.1%	14.4%		
Hispanic/Latino	73,950	6.1%	18.2%		
Asian/Pacific Islander, non-Hispanic	29,903	2.5%	7.7%		
American Indian/Native Alaskan, non-Hispanic	2,837	0.2%	0.2%		
Two or more/other	23,565	1.9%	2.2%		
Less than high school education	86,454	10.5%	14.6%		
High school or equivalent	385,238	46.7%	43.2%		
Associate degree	98,990	12.0%	8.5%		
Bachelor's degree	143,130	17.4%	19.1%		
Master's degree or higher	110,650	13.4%	14.6%		
^a Education levels and rates are based on individuals aged 25 years and ol	der.	•	•		

Source: US Census, American Community Survey, 2010-2014 (5-Year Average)

Health Status

The Finger Lakes region had higher rates of total deaths, deaths due to all cancers, and infant deaths than the state as a whole or upstate New York. While the total birth rate in the Finger Lakes region was lower than the state as a whole or Upstate York, the teen birth rate in the Finger Lakes region was higher than those two corresponding benchmarks.

The rates of preventable hospitalizations, ED visits, and total hospitalizations were lower in the Finger Lakes region than either the state as a whole or upstate. The Finger Lakes region also had lower rates of pediatric and adult asthma, chronic lower respiratory disease, and heart disease hospitalizations than the state as a whole and upstate (Table 55).

(3-Year Average)	Regio	n	Upstate	e	Statewi	ide
Health Indicator	Number	Rate	Number	Rate	Number	Rate
Total deaths, per 100,000	10,752	882.1	95,944	854.1	147,313	753.1
Deaths due to heart disease, per 100,000	2,538	208.2	26,818	238.7	43,448	222.1
Deaths due to all cancers, per 100,000	2,521	206.9	22,723	202.4	35,215	180.7
Deaths due to diabetes, per 100,000	223	18.3	2,198	19.6	3,975	20.3
Total births, per 1,000 females aged 15 to 44	12,975	55.3	120,237	56.8	238,078	59.0
Teen births, per 1,000 females aged 15 to 19	867	20.1	6,806	17.3	12,441	19.5
Low-birthweight births, as a percent of total births	997	7.7	9,150	7.6	19,006	8.0
Late/no prenatal care, as a percent of total births	476	3.9	4,845	4.1	13,148	5.6
Infant deaths, per 1,000 live births	85	6.5	667	5.5	1,179	5.0
Total hospitalizations, per 10,000	133,904	1,098.5	1,312,126	1,168.1	2,398,679	1,226.2
Preventable hospitalizations, per 10,000	16,885	138.5	158,173	140.8	293,493	150.0
Adult asthma hospitalizations, per 10,000	877	8.8	8,931	10.2	24,276	15.9
Pediatric asthma hospitalizations, per 10,000	22	11.9	3,513	14.2	11,340	26.6
Diabetes hospitalizations, per 10,000	1,932	15.8	17,503	15.6	37,847	19.3
CLRD hospitalizations, per 10,000	3,342	27.4	37,028	33.0	71,475	36.5
Heart disease hospitalizations, per 10,000	12,973	106.4	125,733	111.9	212,301	108.5
Total ED visits, per 10,000	441,465	3,621.5				4,086.4

Table 55. Selected Health Indicators in the Finger Lakes Region, 2011-2013 (3-Year Average)

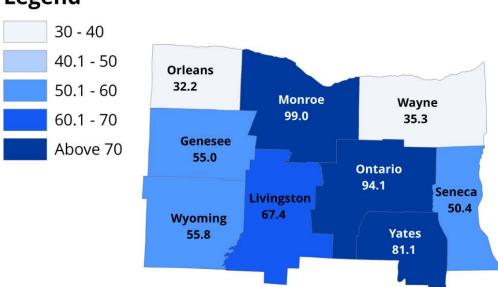
Source: New York State Community Health Indicator Reports, 2011-2013 (3- Year Average)

Primary Care Physicians

There were over 1,500 primary care physicians practicing in the Finger Lakes region in 2015. Forty percent (40%) were in general internal medicine, 26% were in family or general practice, and another 20% were in general pediatrics. There were more than 200 psychiatrists, including child and adolescent psychiatrists, practicing in the Finger Lakes region, or approximately 18.5 per 100,000. Monroe County had the highest rate with 99.0 of family, general, and internal medicine (general) physicians per 100,000 total population, and Orleans County had the lowest rate with 32.2 per 100,000 total population (Table 56 and Figure 25).

Physicians	Per 100,000 Populationª		
402	33.0		
626	51.4		
1,028	84.4		
41	22.3		
176	75.2		
302	114.3		
1,547	N/A		
226	18.5		
^a All rates are per 100,000 total population except the Ob/Gyn rate, which is per 100,000 women aged 15 to 44, the pediatrician rate, which is per 100,000 children aged birth to 17 years, and the geriatrics rate, which is per 100,000 population aged 65 and older.			
	402 626 1,028 41 176 302 1,547 226 rate, which is per 100,000 women aged 15 to 4		

Figure 25. Number of Selected Primary Care Physicians per 100,000 Population in the Finger Lakes Region, by County, 2015



Legend

Employment

Total Health Sector Employment

Between 2010 and 2014, health sector employment throughout the Finger Lakes region grew by nearly 3,800 jobs, or by over 6%. Employment in hospitals increased by over 2,100 jobs, or 8% and employment in ambulatory care settings grew by over 1,000 jobs, or 6%, during the same period. Home health care had the lowest percentage increase in jobs (3%) between 2010 and 2014, adding the least number of jobs (116) (Table 57).

Setting	2010	2011	2012	2013	2014	Change I 2010 ar	
						Number	Percent
Hospitals	28,258	28,916	29,436	29,546	30,406	2,148	7.6%
Ambulatory care (excluding home health)	16,457	16,505	16,538	17,225	17,497	1,040	6.3%
Nursing home and personal care facilities	12,811	12,746	12,817	13,059	13,299	488	3.8%
Home health care	3,473	3,722	3,732	3,527	3,589	116	3.3%
Total	60,999	61,889	62,523	63,357	64,791	3,792	6.2%

Table 57. Number of Health Care Jobs in the Finger Lakes Region, by Setting, 2010-2014

Source: New York State Department of Labor, ES-202

Employment and Wage by Occupation

Employment for selected health occupations is reported in Table 58. RNs accounted for the most jobs in the Finger Lakes region in the first quarter of 2015 (11,810), followed by personal care aides (7,870) and nursing assistants (6,490). Dietetic technicians, nuclear medicine technologists, and nurse anesthetists had the fewest jobs (100, 70, and 60, respectively) in the region.

Wages in selected health occupations for the Finger Lakes region are reported in Table 59. These wages were based on 2012-2015 survey data, which were adjusted to include the first quarter of 2016. Certified registered nurse anesthetists earned the highest hourly wage in 2016 (\$83.25), followed by pharmacists and medical and health services managers (\$56.51 and \$50.54, respectively). Orderlies (\$12.91), personal care aides (\$12.58), and home health aides (\$12.43) were the lowest wage earners in the selected health occupations reported for the Finger Lakes region.

Occupation	Employment
Registered Nurses	11,810
Personal Care Aides	7,870
Nursing Assistants	6,490
Home Health Aides	4,620
Licensed Practical and Licensed Vocational Nurses	3,890
Social Workers	3,260
Medical and Health Services Managers	1,320
Medical Secretaries	1,310
Pharmacy Technicians	1,140
Dental Hygienists	1,120
Physical Therapists	1,090
Nurse Practitioners	1,080
Dental Assistants	1,070
Medical Assistants	1,020
Pharmacists	990
Radiologic Technologists and Technicians	940
Physician Assistants	900
Speech-Language Pathologists	850
Medical and Clinical Laboratory Technologists	840
Occupational Therapists	720
Medical and Clinical Laboratory Technicians	720
Medical Records and Health Information Technicians	520
Respiratory Therapists	450
Mental Health Counselors	360
Physical Therapist Assistants	340
Dietitians and Nutritionists	300
Surgical Technologists	300
Orderlies	280
Occupational Therapy Assistants	160
Physical Therapist Aides	140
Cardiovascular Technologists and Technicians	120
Dietetic Technicians	100
Nuclear Medicine Technologists	70
Nurse Anesthetists	60

Table 58. Number of Jobs in Selected Health Occupations in the Finger Lakes Region, 2015

Source: New York State Department of Labor, Bureau of Labor Statistics, Occupational Wages

Occupation	Average Wage per Hour
Nurse Anesthetists	\$83.25
Pharmacists	\$56.51
Medical and Health Services Managers	\$50.54
Nurse Midwives	\$49.59
Physician Assistants	\$47.53
Nurse Practitioners	\$44.42
Physical Therapists	\$37.76
Occupational Therapists	\$36.10
Nuclear Medicine Technologists	\$34.28
Speech-Language Pathologists	\$31.55
Registered Nurses	\$29.92
Dental Hygienists	\$29.80
Medical and Clinical Laboratory Technologists	\$28.37
Dietitians and Nutritionists	\$27.75
Respiratory Therapists	\$26.38
Cardiovascular Technologists and Technicians	\$26.38
Radiologic Technologists and Technicians	\$25.60
Social Workers	\$24.11
Occupational Therapy Assistants	\$23.91
Physical Therapist Assistants	\$22.83
Mental Health Counselors	\$19.94
Surgical Technologists	\$19.34
Licensed Practical and Licensed Vocational Nurses	\$19.33
Medical Records and Health Information Technicians	\$18.64
Dental Assistants	\$17.74
Medical and Clinical Laboratory Technicians	\$17.71
Medical Secretaries	\$15.25
Medical Assistants	\$14.83
Dietetic Technicians	\$14.57
Pharmacy Technicians	\$13.57
Nursing Assistants	\$13.49
Physical Therapist Aides	\$13.16
Orderlies	\$12.91
Personal Care Aides	\$12.58
Home Health Aides	\$12.43

Table 59. Average Hourly Wage in Selected Health Occupations in the Finger Lakes Region, 2016

Source: New York State Department of Labor, Labor Statistics, Occupational Wages

Licensed Health Professionals

Between 2010 and 2014, the number of licensed RNs in the Finger Lakes region increased by nearly 1,400, or 9%. Additionally, over 300 (15%) social workers and more than 280 (5%) LPNs were added to the region. PAs had the largest percentage increase (26%), followed by respiratory therapists (21%), pharmacists (19%), physical therapist assistants (18%), and nurse practitioners (17%). Whereas the majority of selected licensed health professionals increased, 3 occupations experienced losses—occupational therapy assistants (-10%), clinical laboratory technicians (-3%), and clinical laboratory technologists (-2%) (Table 60).

Profession	2010	2011	2012	2013	2014	Change Betw 2014 2010 and 20	
						Number	Percent
Registered Nurses	15,502	15,704	16,195	16,883	16,893	1,391	9.0%
Licensed Practical Nurses	6,191	6,395	6,342	6,395	6,474	283	4.6%
Social Workers	2,110	2,199	2,291	2,374	2,434	324	15.4%
Pharmacists	1,036	1,071	1,121	1,172	1,233	197	19.0%
Physical Therapists	967	990	1,006	1,056	1,085	118	12.2%
Nurse Practitioners	1,365	1,413	1,451	1,538	1,593	228	16.7%
Speech-Language Pathologists	978	1,022	1,037	1,070	1,079	101	10.3%
Clinical Laboratory Technologists	960	939	950	935	941	-19	-2.0%
Physician Assistants	625	642	686	733	789	164	26.2%
Occupational Therapists	601	614	635	663	682	81	13.5%
Dental Hygienists	1,032	1,049	1,041	1,059	1,089	57	5.5%
Respiratory Therapists	285	305	318	331	346	61	21.4%
Physical Therapist Assistants	279	287	299	310	330	51	18.3%
Dietitians/Nutritionists	256	247	265	269	269	13	5.1%
Occupational Therapy Assistants	226	222	222	213	203	-23	-10.2%
Clinical Laboratory Technicians	71	65	64	70	69	-2	-2.8%

Table 60. Number of Licensed Individuals in Selected Health Occupations in the Finger Lakes
Region, 2010-2014

Source: New York State Education Department, Office of Professions

Demand for Health Workers

Hospitals

Hospitals in the Finger Lakes region reported the most difficulty recruiting clinical lab technologists, followed by psychiatric NPs, experienced registered nurses, nurse managers, and clinical laboratory technicians. Hospitals also reported the greatest retention difficulty for patient care technicians/CNAs, newly licensed RNs, experienced RNs, and nurse managers (Table 61).

Table 61. Recruitment and Retention Difficulties for Hospitals in Selected Health Occupations in the
Finger Lakes Region, 2016

Occupation	Average Asse Diffice		Percentage of Respondents Indicating Reasons for Difficulties			
	Recruitment Retention		Shortage of Workers	Salary Levels	Geographic Location	
Experienced Registered Nurses	3.7	3.0	57%	71%	57%	
Newly Licensed Registered Nurses	2.3	3.6	43%	71%	43%	
Nurse Managers	3.7	3.0	43%	43%	43%	
CNA/Patient Care Techs	2.7	3.9	43%	57%	14%	
Nurse Practitioners	3.6	2.7	71%	29%	29%	
Physician Assistants	3.6	2.6	57%	29%	43%	
Pharmacists	1.8	1.4	14%	14%	0%	
Clinical Lab Technicians	3.6	2.9	71%	43%	43%	
Clinical Lab Technologists	4.1	2.9	71%	43%	43%	
Medical Hospital Coders	3.1	2.7	43%	29%	29%	
Occupational Therapists	3.3	2.9	57%	71%	29%	
Care Coordinators	2.0	1.8	0%	0%	0%	
Case Managers	2.7	1.9	29%	29%	0%	
Care Managers	2.2	2.0	0%	0%	0%	
Patient Navigators	2.2	2.0	14%	14%	0%	
Community Health Workers	2.0	1.8	14%	14%	0%	
Psychologists	2.7	2.3	0%	0%	0%	
Psychiatric NPs	4.0	2.0	57%	14%	43%	
Licensed Clinical Social Workers	3.0	2.5	14%	14%	29%	
Licensed Master Social Workers	3.0	2.4	29%	43%	57%	
Licensed Mental Health Counselors	3.0	2.5	0%	14%	14%	

• Many hospitals projected growth in inpatient services, with increasing demand for NPs (57%), RNs (43%), and CNAs (71%).

• Many hospitals projected growth in outpatient services, with increasing demand for NPs (71%), RNs (57%), and CNAs (71%).

Nursing Homes

Nursing homes in the Finger Lakes region reported recruiting difficulties for experienced RNs, LPNs, MDS coordinators, and nurse managers. Nursing homes in the region also reported the most difficulty retaining CNAs, experienced RNs, LPNs, and nurse managers (Table 62).

Table 62. Recruitment and Retention Difficulties for Nursing Homes in Selected Health Occupations
in the Finger Lakes Region, 2016

in the ringer Lakes Region, 2010	Average Asse Difficu		Percentage of Respondents Inc Reasons for Difficulties			
Occupation	Recruitment	Retention	Shortage of Workers	Salary Levels	Benefits	Location
Activities Director	2.3	1.8	7%	0%	0%	7%
Certified Nurse Aides/Assts. (CNAs)	3.6	4.0	36%	36%	18%	23%
Dietary Aides	2.9	3.4	25%	10%	5%	15%
Dietitians/Nutritionists	2.9	2.1	0%	11%	0%	6%
Housekeeping Staff	2.2	2.7	9%	14%	5%	9%
Licensed Practical Nurses	3.9	3.7	57%	35%	13%	22%
Medical Billers	3.4	2.8	33%	0%	0%	17%
Occupational Therapists	2.7	2.1	12%	0%	0%	0%
Occupational Therapy Assistants	2.8	2.2	12%	0%	0%	0%
Physical Therapists	2.7	2.2	12%	0%	0%	12%
Physical Therapist Assistants	2.5	2.2	13%	0%	0%	0%
Registered Nurses (RNs)						
Newly Licensed RNs	3.6	3.5	25%	38%	25%	13%
Experienced RNs	4.0	3.8	36%	32%	18%	14%
MDS Coordinators	3.9	3.1	56%	25%	25%	13%
Nurse Manager	3.9	3.7	35%	35%	22%	13%
Director of Nursing	3.8	2.6	21%	16%	16%	0%
Recreational Therapists	2.9	2.0	0%	0%	0%	0%
Respiratory Therapists	3.3	2.8	25%	0%	0%	25%
Social Workers (SWs)						
Licensed Clinical SWs	2.8	2.2	7%	0%	7%	7%
Licensed Master SWs	2.8	1.9	8%	0%	0%	8%
Speech-Language Pathologists	2.8	2.5	0%	0%	8%	0%

• Fifty-seven percent (57%) reported difficulty hiring part-time workers.

- Four percent (4%) reported difficulty hiring bilingual workers.
- Seventy-eight percent (78%) indicated difficulty hiring workers for off shifts (evenings, nights, and weekends).

Home Health Care Agencies

Responses to the recruitment and retention survey from home health care agencies in the Finger Lakes region were too low in number for an adequate analysis, so responses were combined with those from the Western New York region for this study. Home health care agencies in these combined regions indicated the most difficulty recruiting homemakers and speech-language pathologists. Home health aides were the most difficult to retain, followed by personal care aides, and speech-language pathologists (Table 63).

Table 63. Recruitment and Retention Difficulties for Home Health Care Agencies in Selected Health
Occupations in the Finger Lakes and Western New York Regions, 2016

	Average Asse Diffice		Percentage of Respondents Indicating Reason for Difficulties			
Occupation	Recruitment	Retention	Shortage	Non- Competitive Salaries/ Benefits	Lack of Specialized Training	Location
Home Health Aides	3.2	3.5	33%	17%	17%	33%
Homemakers	5.0	2.0	0%	0%	0%	0%
Personal Care Aides	4.0	3.0	0%	0%	0%	50%
Dietitians/Nutritionists	3.7	2.3	0%	0%	67%	0%
Licensed Practical Nurses	1.8	2.0	0%	25%	0%	0%
Occupational Therapists	4.0	2.0	0%	100%	0%	0%
Physical Therapists	3.0	2.0	67%	33%	0%	33%
Registered Nurses						
Newly Licensed RNs	2.0	2.0	0%	0%	0%	0%
Experienced RNs	3.2	2.8	17%	67%	17%	17%
Respiratory Therapists	N/A	N/A	N/A	N/A	N/A	N/A
Social Workers (SWs)						
Licensed Clinical SWs	2.8	2.0	25%	25%	0%	0%
Licensed Master SWs	2.8	2.0	50%	17%	0%	0%
Speech-Language Pathologists	5.0	3.0	100%	0%	0%	0%

- Seventeen percent (17%) of home health care agencies reported difficulty hiring part-time workers and hiring bilingual workers.
- Fifty percent (50%) of home health care agencies indicated difficulty hiring workers for off shifts (evenings, nights, and weekends).
- Two-thirds of the respondents reported plans to expand services within the next year.

FQHCs

FQHCs in the Finger Lakes region had the most difficulty recruiting internal medicine physicians, psychiatric NPs, and substance abuse counselors. FQHCs in the Finger Lakes region had the most difficulty retaining psychiatric NPs and family practice NPs (Table 64).

Occupation		Average Assessment of Difficulty			
	occupation	Recruitment	Retention		
	Family/General Practice	4.4	3.0		
	Internal Medicine	5.0	3.5		
Physicians	Ob/Gyn	0.0	0.0		
	Pediatricians	4.5	2.0		
	Physician Assistants (PAs)	2.3	2.7		
	Overall – All Specialties	3.0	3.5		
	Pediatric	3.0	2.0		
Nurse Practitioners	Adult	0.0	0.0		
	Family	3.3	4.0		
	Psychiatric	5.0	5.0		
Nursos	Registered Nurses	3.8	2.8		
Nurses	Licensed Practical Nurses	2.7	3.3		
	Psychiatrists	0.0	0.0		
Behavioral Health	Psychologists	0.0	0.0		
Benavioral Health	Substance Abuse Counselors	5.0	3.0		
	Social Workers	4.5	3.0		
Oral Health	Dentists	4.3	3.3		
	Dental Hygienists	3.0	2.3		
Coordination/Patient	Care Coordinators	4.0	3.0		
Coordination/Patient	Case Managers	4.0	3.0		
Care	HIV Counselors	4.0	3.0		
Dationt/Community	Community Health Workers	4.0	3.0		
Patient/Community Education	Patient Health Educators	4.0	3.0		
Education	Nutritionists/Nutrition Educators	4.0	3.0		
	Patient Health Navigators	4.0	3.0		
Enabling Convisos	Outreach Workers	4.0	3.5		
Enabling Services	Transportation Workers	3.5	3.0		
	Interpreters	4.5	2.0		
Administrative	IT Systems Admin/Maintonance	2.5	2.0		
Support	IT Systems Admin/Maintenance	2.5	2.0		
Others	Physical Therapists	0.0	0.0		
Uniers	Occupational Therapists	0.0	0.0		

Table 64. Recruitment and Retention Difficulties for FQHCs in Selected Health Occupations in the Finger Lakes Region, 2016

• All (100%) survey respondents indicated that they anticipated expanding services.

• Sixty percent (60%) of FQHCs in this region indicated difficulty hiring bilingual staff; Spanish was the language most needed.

Employment Projections by Health Occupation

According to the NYSDOL, the largest numbers of average annual job openings projected in the Finger Lakes region between 2012 and 2022 will be for RNs (350), home health aides (260), and nursing assistants (210) (Table 65).

Table 65. Employment Projections for Selected Health Occupations in the Finger Lakes Region,
2012-2022

Occupation		2022	Change B 2012 an	Average Annual	
			Number	Percent	Openings ^a
Home Health Aides	5,910	7,380	1,470	24.9%	260
Personal Care Aides	5,740	7,150	1,410	24.6%	180
Registered Nurses	12,080	13,270	1,190	9.9%	350
Nursing Assistants	6,930	7,760	830	12.0%	210
Licensed Practical and Licensed Vocational	4,400	5,070	670	15.2%	180
Emergency Medical Technicians and	1,340	1,650	310	23.1%	70
Social Workers	3,030	3,280	250	8.3%	90
Physical Therapists	1,030	1,220	190	18.4%	50
Medical and Clinical Laboratory Technicians	910	1,100	190	20.9%	40
Physician Assistants	710	890	180	25.4%	30
Nurse Practitioners	920	1,090	170	18.5%	40
Medical and Health Services Managers	1,520	1,680	160	10.5%	60
Dental Hygienists	1,050	1,210	160	15.2%	50
Medical Assistants	710	860	150	21.1%	30
Pharmacy Technicians	1,110	1,240	130	11.7%	20
Diagnostic Medical Sonographers	280	380	100	35.7%	10
Dental Assistants	1,110	1,210	100	9.0%	30
Radiologic Technologists	720	810	90	12.5%	20
Occupational Therapists	620	700	80	12.9%	20
Medical Records and Health Info Techs	530	610	80	15.1%	20
Pharmacists	1,010	1,080	70	6.9%	30
Medical and Clinical Laboratory Technologists	790	860	70	8.9%	30
Speech-Language Pathologists	680	740	60	8.8%	20
Surgical Technologists	330	390	60	18.2%	10
Cardiovascular Technologists & Technicians	230	280	50	21.7%	10
Dietitians and Nutritionists	300	340	40	13.3%	0
Respiratory Therapists	350	380	30	8.6%	10
Clinical, Counseling, and School Psychologists	800	820	20	2.5%	20
Nurse Anesthetists	50	60	10	20.0%	0

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

Source: New York State Department of Labor, Jobs in Demand/Projects, Long-Term Occupation Projections, 2012-2022

E. Hudson Valley

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

Population

The population of the Hudson Valley region had lower percentages of individuals below 100% and 200% of the FPL and was less diverse than the state overall. The Hudson Valley region also had a higher percentage of its population with a master's degree or higher than the state as a whole (Table 66).

Table 66. Selected Population Characteristics in the Hudson Valley Region, 2010-2014
(5-Year Average)

Donulation Characteristics?	Regio	Region				
Population Characteristics ^a	Number	Percent	Percent			
Total population	2,310,598	N/A	N/A			
Population under 100% FPL	244,955	10.6%	15.2%			
Population under 200% FPL	545,512	23.6%	31.7%			
Population aged birth to 17 years	549,981	23.8%	21.8%			
Population aged 65 and older	332,727	14.4%	14.1%			
Population female aged 15 to 44	431,607	18.7%	20.7%			
Women aged 15 to 19 who had a birth in past 12 mos.	1,072	0.0%	0.05%			
Women aged 20 to 34 who had a birth in past 12 mos.	18,252	0.8%	0.8%			
Women aged 35 to 50 who had a birth in past 12 mos.	9,098	0.4%	0.3%			
Black/African American, non-Hispanic	243,928	10.6%	14.4%			
Hispanic/Latino	415,309	18.0%	18.2%			
Asian/Pacific Islander, non-Hispanic	100,742	4.4%	7.7%			
American Indian/Native Alaskan, non-Hispanic	2,833	0.1%	0.2%			
Two or more/other	49,300	2.1%	2.2%			
Less than high school education	183,573	11.9%	14.6%			
High school or equivalent	646,639	41.9%	43.2%			
Associate degree	120,052	7.8%	8.5%			
Bachelor's degree	317,671	20.6%	19.1%			
Master's degree or higher	277,344	18.0%	14.6%			
^a Education levels and rates are based on individuals aged 25 years and older.						

Source: US Census, American Community Survey, 2010-2014 (5-Year Average)

Health Status

The Hudson Valley region had lower rates of total deaths, deaths due to heart disease, and deaths due to cancer than the state as a whole and upstate New York. The Hudson Valley region had lower rates of asthma hospitalizations (both adult and pediatric) than the state as a whole, but these rates were higher than their corresponding upstate New York rates. Total hospitalizations, preventable hospitalizations, and ED visits were also lower in Hudson Valley, compared with statewide and upstate rates (Table 67).

	Regi	ion	Upsta	ate	Statev	vide	
Health Indicator	Number	Rate	Number	Rate	Number	Rate	
Total deaths, per 100,000	16,784	726.4	95,944	854.1	147,313	753.1	
Deaths due to heart disease, per 100,000	4,802	207.8	26,818	238.7	43,448	222.1	
Deaths due to all cancers, per 100,000	4,102	178.1	22,723	202.4	35,215	180.7	
Deaths due to diabetes, per 100,000	353	15.3	2,198	19.6	3,975	20.3	
Total births, per 1,000 females aged 15 to 44	25,893	60.1	120,237	56.8	238,078	59.0	
Teen births, per 1,000 females aged 15 to 19	1,062	13.0	6,806	17.3	12,441	19.5	
Low-birthweight births, as a percent of total births	1,868	7.2	9,150	7.6	19,006	8.0	
Late/no prenatal care, as a percent of total births	1,011	4.0	4,845	4.1	13,148	5.6	
Infant deaths, per 1,000 live births	125	4.8	667	5.5	1,179	5.0	
Total hospitalizations, per 10,000	263,051	1,138.4	1,312,126	1,168.1	2,398,679	1,226.2	
Preventable hospitalizations, per 10,000	29,893	129.4	158,173	140.8	293,493	150.0	
Adult asthma hospitalizations, per 10,000	2,121	12.0	8,931	10.2	24,276	15.9	
Pediatric asthma hospitalizations, per 10,000	839	15.3	3,513	14.2	11,340	26.6	
Diabetes hospitalizations, per 10,000	3,260	14.1	17,503	15.6	37,847	19.3	
CLRD hospitalizations, per 10,000	7,093	30.7	37,028	33.0	71,475	36.5	
Heart disease hospitalizations, per 10,000	22,860	98.9	125,733	111.9	212,301	108.5	
Total ED visits, per 10,000	792,017	3,427.6	4,215,240	3,752.5	7,993,838	4,086.4	

Table 67. Selected Health Indicators in the Hudson Valley Region, 2011-2013)
(3-Year Average)	

Source: New York State Community Health Indicator Reports, 2011-2013 (3- Year Average)

Primary Care Physicians

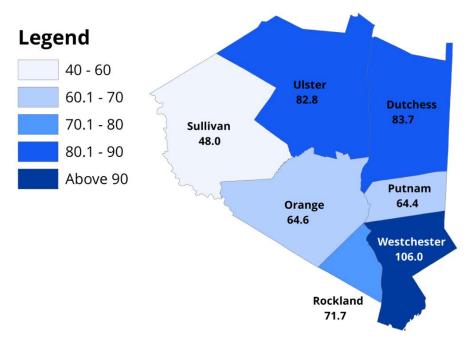
There were more than 3,000 primary care physicians practicing in the Hudson Valley region in 2015. Fortyfive percent (45%) were in general internal medicine, 24% were in general pediatrics, and another 19% were in general or family practice. There were over 900 psychiatrists, including child and adolescent psychiatrists, practicing in the Hudson Valley region, or approximately 40.3 per 100,000. Westchester County had the highest rate of family, general, and internal medicine (general) physicians in the region with 106.0 per 100,000 population, whereas Sullivan County had the lowest rate with 48.0 per 100,000 (Table 68 and Figure 26).

Table 68. Primary Care Physicians and Psychiatrists in the Hudson	n Valley Region, by Specialty, 2015
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Specialty	Physicians	Per 100,000 Population ^a
Family/General Practice	585	25.3
Internal Medicine (General)	1,405	60.8
Subtotal	1,990	86.1
Geriatrics	38	11.5
Obstetrics/Gynecology	354	82.0
Pediatrics (General)	771	140.2
Primary Care Total	3,154	N/A
Psychiatrist	931	40.3
^a All rates are per 100,000 total population except the Ob/Gyi 100,000 children aged birth to 17 years, and the geriatrics rat		

Source: Center for Health Workforce Studies

Figure 26. Number of Selected Primary Care Physicians per 100,000 Population in the Hudson Valley Region, by County, 2015



Employment

Total Health Sector Employment

Between 2010 and 2014, health sector employment in the Hudson Valley region increased by nearly 3%, adding slightly more than 2,700 jobs. All settings in the health sector experienced job growth between 2010 and 2014, except hospitals, which experienced a decrease of more than 1,600 jobs (-4%). Home health care had the largest percentage increase in jobs (16%), followed by ambulatory care (6%) and nursing home and personal care facilities (3%) (Table 69).

Setting	2010	2011	Change Betwe 2011 2012 2013 2014 2010 and 2010		2014		
						Number	Percent
Hospitals	39,765	39,311	38,351	37,400	38,157	-1,608	-4.0%
Ambulatory care (excluding home health)	40,676	41,085	42,068	42,774	42,939	2,263	5.6%
Nursing home and personal care facilities	20,605	20,742	20,767	20,746	21,118	513	2.5%
Home health care	9,499	10,517	10,343	10,782	11,037	1,538	16.2%
Total	110,546	111,655	111,529	111,702	113,251	2,705	2.5%

Table 69. Number of Health Care Jobs in the Hudson Valley Region, by Setting, 2010-2014

Source: New York State Department of Labor, ES-202

Employment and Wage by Occupation

Employment for selected health occupations is reported in Table 70. RNs in the Hudson Valley region accounted for the most jobs in the first quarter of 2015 (19,010), followed by personal care aides (15,180) and nursing assistants (11,370). Cardiovascular technologists and technicians and nuclear medicine technologists had the fewest jobs (320 and 130, respectively).

Wages in selected health occupations for the Hudson Valley region are reported in Table 71. These wages were based on 2012-2015 survey data, which were adjusted to include the first quarter of 2016. Certified registered nurse anesthetists earned the highest hourly wage in 2016 (\$71.80), followed by medical and health service managers (\$61.75) and pharmacists (\$59.15). Home health aides (\$12.65) earned the least amount for the selected health occupations in the Hudson Valley region.

Occupation	Employment
Registered Nurses	19,010
Personal Care Aides	15,180
Nursing Assistants	11,370
Home Health Aides	10,760
Licensed Practical and Licensed Vocational Nurses	6,010
Social Workers	5,940
Dental Assistants	2,720
Medical Assistants	2,610
Medical and Health Services Managers	2,570
Pharmacy Technicians	2,270
Pharmacists	1,860
Speech-Language Pathologists	1,750
Dental Hygienists	1,710
Physical Therapists	1,690
Radiologic Technologists and Technicians	1,570
Medical Secretaries	1,320
Occupational Therapists	1,100
Medical Records and Health Information Technicians	1,030
Physician Assistants	1,010
Nurse Practitioners	830
Medical and Clinical Laboratory Technologists	760
Mental Health Counselors	750
Medical and Clinical Laboratory Technicians	720
Dietitians and Nutritionists	690
Respiratory Therapists	590
Physical Therapist Assistants	550
Occupational Therapy Assistants	460
Physical Therapist Aides	440
Surgical Technologists	410
Orderlies	400
Cardiovascular Technologists and Technicians	320
Nuclear Medicine Technologists	130

Table 70. Number of Jobs in Selected Health Occupations in the Hudson Valley Region, 2015

Source: New York State Department of Labor, Bureau of Labor Statistics, Occupational Wages

Occupation	Average Wage per Hour
Nurse Anesthetists	\$71.80
Medical and Health Services Managers	\$61.75
Pharmacists	\$59.15
Speech-Language Pathologists	\$54.36
Nurse Practitioners	\$53.16
Physician Assistants	\$51.62
Nurse Midwives	\$49.96
Physical Therapists	\$43.82
Occupational Therapists	\$43.44
Nuclear Medicine Technologists	\$41.05
Registered Nurses	\$39.48
Dental Hygienists	\$39.00
Respiratory Therapists	\$35.61
Radiologic Technologists and Technicians	\$35.42
Medical and Clinical Laboratory Technologists	\$34.88
Dietitians and Nutritionists	\$32.14
Cardiovascular Technologists and Technicians	\$31.84
Social Workers	\$29.89
Occupational Therapy Assistants	\$29.32
Physical Therapist Assistants	\$26.85
Medical and Clinical Laboratory Technicians	\$25.85
Surgical Technologists	\$24.33
Licensed Practical and Licensed Vocational Nurses	\$24.15
Mental Health Counselors	\$21.58
Dietetic Technicians	\$21.53
Medical Records and Health Information Technicians	\$20.65
Dental Assistants	\$19.11
Medical Secretaries	\$18.22
Medical Assistants	\$16.84
Nursing Assistants	\$16.38
Occupational Therapy Aides	\$15.25
Pharmacy Technicians	\$15.22
Physical Therapist Aides	\$13.94
Orderlies	\$13.60
Personal Care Aides	\$13.59
Home Health Aides	\$12.65

Table 71. Average Hourly Wage in Selected Health Occupations in the Hudson Valley Region, 2016

Source: New York State Department of Labor, Labor Statistics, Occupational Wages

Licensed Health Professionals

Between 2010 and 2014, the number of licensed RNs in the Hudson Valley region increased by more than 1,000, or by 3%. The number of physician assistants (32%) grew the fastest, followed by NPs (28%), and speech-language pathologists (19%). In contrast, the Hudson Valley experienced declines in the number of clinical laboratory technologists (-2%) and clinical laboratory technicians (-5%) (Table 72).

Region, 2010-2014								
Profession	2010	2011	2012	2013			Between nd 2014	
						Number	Percent	
Registered Nurses	31,875	31,788	32,299	33,026	32,884	1,009	3.2%	
Licensed Practical Nurses	7,621	7,763	7,763	7,951	8,001	380	5.0%	
Social Workers	7,160	7,383	7,448	7,643	7,748	588	8.2%	
Pharmacists	2,030	2,021	2,094	2,154	2,318	288	14.2%	
Physical Therapists	2,293	2,340	2,407	2,488	2,544	251	10.9%	
Nurse Practitioners	1,838	1,945	2,064	2,235	2,345	507	27.6%	
Speech-Language Pathologists	1,910	2,013	2,106	2,208	2,265	355	18.6%	
Clinical Laboratory Technologists	1,433	1,419	1,433	1,387	1,406	-27	-1.9%	
Physician Assistants	810	844	884	953	1,069	259	32.0%	
Occupational Therapists	1,353	1,408	1,421	1,462	1,507	154	11.4%	
Dental Hygienists	1,127	1,136	1,150	1,166	1,189	62	5.5%	
Respiratory Therapists	624	645	647	679	689	65	10.4%	
Physical Therapist Assistants	503	494	510	528	543	40	8.0%	
Dietitians/Nutritionists	717	705	733	758	751	34	4.7%	
Occupational Therapy Assistants	710	751	782	782	797	87	12.3%	
Clinical Laboratory Technicians	248	227	227	233	236	-12	-4.8%	

Table 72. Number of Licensed Individuals in Selected Health Occupations in the Hudson Valley
Region, 2010-2014

Source: New York State Education Department, Office of Professions

Demand for Health Workers

Hospitals

Hospitals in the Hudson Valley region reported the most difficulty recruiting licensed mental health counselors, licensed clinical social workers, and clinical lab technologists. Licensed mental health counselors were also the most difficult to retain, followed by licensed clinical social workers, experienced RNs, and licensed master social workers (Table 73).

Table 73. Recruitment and Retention Difficulties for Hospitals in Selected Health Occupations in the
Hudson Valley Region, 2016

	Average Asse Difficu		Percentage of Respondents Indicating Reasons for Difficulties			
Occupation	Recruitment	Retention	Shortage of Workers	Salary Levels	Geographic Location	
Experienced Registered Nurses	4.7	4.0	43%	71%	29%	
Newly Licensed Registered Nurses	2.3	3.8	29%	57%	14%	
Nurse Managers	3.1	1.5	14%	14%	14%	
CNA/Patient Care Techs	3.0	3.2	14%	86%	43%	
Nurse Practitioners	3.5	2.8	14%	14%	14%	
Physician Assistants	3.5	3.5	14%	57%	14%	
Pharmacists	2.3	2.8	14%	71%	29%	
Clinical Lab Technicians	1.8	1.5	14%	14%	14%	
Clinical Lab Technologists	5.0	1.7	86%	57%	57%	
Medical Hospital Coders	3.0	1.8	43%	0%	14%	
Occupational Therapists	3.0	3.0	29%	57%	14%	
Care Coordinators	1.5	1.0	14%	0%	14%	
Case Managers	2.2	1.2	29%	14%	14%	
Care Managers	1.5	1.0	14%	0%	14%	
Patient Navigators	2.0	1.6	29%	0%	14%	
Community Health Workers	1.5	1.0	14%	0%	14%	
Psychologists	1.8	1.5	0%	0%	0%	
Psychiatric NPs	4.0	1.0	43%	0%	0%	
Licensed Clinical Social Workers	5.0	4.5	29%	43%	0%	
Licensed Master Social Workers	4.2	4.0	14%	43%	0%	
Licensed Mental Health Counselors	5.0	5.0	0%	43%	0%	

- Many hospitals projected growth in inpatient services, with increasing demand for care coordinators (71%), community health workers (57%), and patient navigators (57%).
- Many hospitals projected growth in outpatient services, with increasing demand for LPNs (14%), newly licensed RNs (29%), and care coordinators (29%).

Nursing Homes

Nursing homes in the Hudson Valley region reported the greatest difficulty recruiting nurse managers, dietitians/nutritionists, and experienced RNs. CNAs were the most difficult to retain for nursing homes in the region, followed by experienced RNs, and dietitians/nutritionists (Table 74).

Table 74. Recruitment and Retention Difficulties for Nursing Homes in Selected Health Occupation	S
in the Hudson Valley Region, 2016	

	Average Asse Difficu				pondents l r Difficulti	
Occupation	Recruitment	Retention	Shortage of Workers	Salary Levels	Benefits	Location
Activities Director	2.4	2.0	8%	0%	0%	23%
Certified Nurse Aides/Assts. (CNAs)	3.1	3.6	47%	40%	7%	20%
Dietary Aides	2.9	3.0	13%	20%	0%	20%
Dietitians/Nutritionists	3.8	3.3	31%	15%	0%	15%
Housekeeping Staff	2.7	2.5	13%	13%	0%	20%
Licensed Practical Nurses	3.0	3.5	43%	36%	14%	21%
Medical Billers	2.6	2.5	14%	0%	0%	0%
Occupational Therapists	3.2	2.5	36%	14%	7%	7%
Occupational Therapy Assistants	3.1	2.5	21%	14%	0%	14%
Physical Therapists	3.2	2.5	29%	14%	7%	14%
Physical Therapist Assistants	3.0	2.4	31%	8%	0%	8%
Registered Nurses (RNs)						
Newly Licensed RNs	3.1	2.6	17%	25%	17%	17%
Experienced RNs	3.7	3.5	40%	40%	13%	27%
MDS Coordinators	2.9	2.4	25%	17%	8%	8%
Nurse Manager	3.8	3.1	36%	36%	14%	14%
Director of Nursing	3.1	2.3	25%	17%	17%	17%
Recreational Therapists	3.3	2.8	29%	29%	14%	14%
Respiratory Therapists	3.3	2.2	14%	0%	0%	14%
Social Workers (SWs)						
Licensed Clinical SWs	2.9	2.4	17%	8%	0%	8%
Licensed Master SWs	3.1	2.7	21%	14%	7%	7%
Speech-Language Pathologists	3.0	2.5	11%	0%	0%	11%

- Fifty-three percent (53%) of nursing homes reported difficulty hiring part-time workers.
- Sixty-seven percent (67%) of nursing homes indicated difficulty hiring workers for off shifts (evenings, nights, and weekends).

Home Health Care Agencies

Home health care agencies in the Hudson Valley region reported the most difficulty recruiting speechlanguage pathologists, followed by experienced RNs and home health aides. Home health aides and personal care aides were the most difficult to retain, followed by homemakers and speech-language pathologists (Table 75).

	Average Asse Difficu		Percentage of Respondents Indicating Reas for Difficulties					
Occupation	Recruitment	Retention	Shortage	Non- Competitive Salaries/ Benefits	Lack of Specialized Training	Location		
Home Health Aides	4.2	4.5	83%	67%	17%	20%		
Homemakers	3.7	4.3	0%	33%	0%	33%		
Personal Care Aides	3.0	4.5	50%	0%	0%	50%		
Dietitians/Nutritionists	2.7	2.3	0%	0%	0%	67%		
Licensed Practical Nurses	3.3	3.0	33%	50%	33%	17%		
Occupational Therapists	4.0	3.0	0%	25%	25%	25%		
Physical Therapists	4.0	3.5	60%	40%	0%	20%		
Registered Nurses								
Newly Licensed RNs	2.2	2.5	20%	0%	25%	25%		
Experienced RNs	4.4	3.5	43%	43%	29%	29%		
Respiratory Therapists	4.0	2.0	0%	0%	0%	100%		
Social Workers (SWs)								
Licensed Clinical SWs	3.0	3.0	25%	25%	25%	25%		
Licensed Master SWs	3.0	3.3	25%	50%	25%	25%		
Speech-Language Pathologists	4.5	4.3	100%	50%	0%	50%		

Table 75. Recruitment and Retention Difficulties for Home Health Care Agencies in Selected Health
Occupations in the Hudson Valley Region, 2016

• Twenty-nine (29%) of home health care agencies reported difficulty hiring part-time workers.

• Forty-three (43%) of home health care agencies reported difficulty hiring bilingual workers.

• Twenty-nine percent (29%) of home health care agencies indicated difficulty hiring workers for off shifts (evenings, nights, and weekends).

• Over 60% of home health care agencies in the Hudson Valley planned to expand services within the next year.

FQHCs

Hudson Valley and Capital District regions were combined due to low response rates to the survey. FQHCs in these regions had the most difficulty recruiting family/general practice physicians, Ob/Gyns, and LPNs. FQHCs in these regions had the most difficulty retaining IT staff and RNs (Table 76).

	ccupation	Average Assessm	ent of Difficulty
01	cupation	Recruitment	Retention
	Family/General Practice	3.8	2.2
	Internal Medicine	3.6	2.2
Physicians	Ob/Gyn	3.8	2.6
	Pediatricians	2.5	2.2
	Physician Assistants (PAs)	2.2	2.6
	Overall – All Specialties	2.6	2.6
	Pediatric	2.5	2.3
Nurse Practitioners	Adult	2.3	2.3
	Family	2.6	2.6
	Psychiatric	2.8	2.7
Nurses	Registered Nurses	3.3	2.8
Nuises	Licensed Practical Nurses	3.8	2.7
	Psychiatrists	3.3	2.3
Behavioral Health	Psychologists	2.7	3.0
Bellavioral Health	Substance Abuse Counselors	2.5	2.7
	Social Workers	2.8	2.3
Oral Health	Dentists	2.8	2.3
Orai freattri	Dental Hygienists	2.5	2.3
Coordination/Patient	Care Coordinators	3.3	2.7
Contination/Patient	Case Managers	2.0	2.3
	HIV Counselors	1.0	1.0
Patient/Community	Community Health Workers	1.0	1.0
Education	Patient Health Educators	1.0	1.0
	Nutritionists/Nutrition Educators	2.3	2.3
	Patient Health Navigators	1.0	1.0
Enabling Services	Outreach Workers	1.0	1.0
	Transportation Workers	1.0	1.0
	Interpreters	1.0	1.0
Administrative Support	IT Systems Admin/Maintenance	3.5	2.8
Others	Physical Therapists	3.0	1.0
	Occupational Therapists	2.0	1.0

Table 76. Recruitment and Retention Difficulties for FQHCs in Selected Health Occupations in the
Hudson Valley and Capital District Regions, 2016

- Sixty percent (60%) of FQHCs in these regions indicated difficulty hiring bilingual staff; Spanish was the language most needed.
- Eighty percent (80%) of FQHCs in these regions reported expansion plans for one or more service.

Employment Projections by Health Occupation

According to the NYSDOL, the largest numbers of average annual job openings projected in the Hudson Valley region between 2012 and 2022 will be for RNs (640), home health aides (620), and personal care aides (590) (Table 77).

				Between	Average
Occupation	2012	2022	2012 ar	nd 2022	Annual
			Number	Percent	Openings ^a
Personal Care Aides	13,810	18,670	4,860	35.2%	590
Home Health Aides	9,510	13,890	4,380	46.1%	620
Registered Nurses	17,860	20,790	2,930	16.4%	640
Nursing Assistants	11,510	13,730	2,220	19.3%	440
Licensed Practical and Licensed Vocational	6,310	8,140	1,830	29.0%	330
Social Workers	5,730	6,560	830	14.5%	200
Medical Assistants	2,470	3,210	740	30.0%	120
Physical Therapists	1,860	2,440	580	31.2%	110
Medical and Health Services Managers	2,740	3,170	430	15.7%	110
Emergency Medical Technicians and	1,520	1,930	410	27.0%	80
Physician Assistants	880	1,240	360	40.9%	60
Dental Assistants	2,170	2,510	340	15.7%	90
Dental Hygienists	1,360	1,670	310	22.8%	70
Nurse Practitioners	920	1,210	290	31.5%	50
Speech-Language Pathologists	1,490	1,720	230	15.4%	40
Diagnostic Medical Sonographers	560	790	230	41.1%	30
Pharmacy Technicians	1,320	1,550	230	17.4%	30
Medical Records and Health Info Techs	990	1,220	230	23.2%	50
Clinical, Counseling, and School Psychologists	1,920	2,120	200	10.4%	70
Occupational Therapists	1,070	1,270	200	18.7%	30
Radiologic Technologists	1,190	1,380	190	16.0%	40
Pharmacists	1,690	1,870	180	10.7%	60
Medical and Clinical Laboratory Technicians	740	910	170	23.0%	40
Dietitians and Nutritionists	710	860	150	21.1%	30
Respiratory Therapists	740	890	150	20.3%	30
Cardiovascular Technologists & Technicians	430	560	130	30.2%	20
Surgical Technologists	530	640	110	20.8%	20
Medical and Clinical Laboratory Technologists	720	790	70	9.7%	30
Psychiatric Aides	1,430	1,480	50	3.5%	30
Orderlies	220	250	30	13.6%	0

Table 77. Employment Projections for Selected Health Occupations in the Hudson Valley Region,2012 and 2022

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

Source: New York State Department of Labor, Jobs in Demand/Projects, Long-Term Occupation Projections, 2012-2022

F. Long Island

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

Population

The Long Island region had a significantly lower percentage of individuals below 100% and 200% of the FPL compared to the statewide average. The region had similar rates of education compared to the statewide percentage (Table 78).

Table 78. Selected Population Characteristics in the Long Island Region, 2010-2014(5-Year Average)

Population Characteristics	Regi	Region			
	Number	Percent	Percent		
Total population	2,850,974	N/A	N/A		
Population under 100% FPL	184,047	6.5%	15.2%		
Population under 200% FPL	484,403	17.0%	31.7%		
Population aged birth to 17 years	650,717	22.8%	21.8%		
Population aged 65 and older	429,370	15.1%	14.1%		
Population female aged 15 to 44	528,795	18.5%	20.7%		
Women aged 15 to 19 who had a birth in past 12 mos.	643	0.0%	0.05%		
Women aged 20 to 34 who had a birth in past 12 mos.	19,498	0.7%	0.8%		
Women aged 35 to 50 who had a birth in past 12 mos.	10,796	0.4%	0.3%		
Black/African American, non-Hispanic	252,356	8.9%	14.4%		
Hispanic/Latino	469,173	16.5%	18.2%		
Asian/Pacific Islander, non-Hispanic	164,316	5.8%	7.7%		
American Indian/Native Alaskan, non-Hispanic	3,594	0.1%	0.2%		
Two or more/other	46,951	1.6%	2.2%		
Less than high school education	193,888	10.0%	14.6%		
High school or equivalent	854,265	43.9%	43.2%		
Associate degree	164,980	8.5%	8.5%		
Bachelor's degree	402,455	20.7%	19.1%		
Master's degree or higher	329,914	17.0%	14.6%		
^a Education levels and rates are based on individuals aged 25 years and ol	der.				

Source: US Census, American Community Survey, 2010-2014 (5-Year Average)

Health Status

The Long Island region had higher rates of total deaths and deaths due to all cancers and heart disease than the state as a whole, but it had lower rates of deaths due to diabetes. The rate of total hospitalizations was higher in the Long Island region compared with the statewide and upstate rates. In contrast, the rate of ED visits on Long Island was lower than both the statewide rate and upstate rates. All of the natality indicators listed, including total births, teen births, low-birthweight births, late/no prenatal care, and infant deaths, were better in the Long Island region than statewide. The Long Island region, however, had a higher rate of heart disease hospitalizations than the upstate region and the state as a whole (Table 79).

	Region		Upsta	ate	Statewide		
Health Indicator	Number	Rate	Number	Rate	Number	Rate	
Total deaths, per 100,000	22,219	780.2	95,944	854.1	147,313	753.1	
Deaths due to heart disease, per 100,000	7,244	254.4	26,818	238.7	43,448	222.1	
Deaths due to all cancers, per 100,000	5,323	187.2	22,723	202.4	35,215	180.7	
Deaths due to diabetes, per 100,000	398	14.0	2,198	19.6	3,975	20.3	
Total births, per 1,000 females aged 15 to 44	29,726	56.4	120,237	56.8	238,078	59.0	
Teen births, per 1,000 females aged 15 to 19	1,039	10.7	6,806	17.3	12,441	19.5	
Low-birthweight births, as a percent of total births	2,316	7.8	9,150	7.6	19,006	8.0	
Late/no prenatal care, as a percent of total births	1,051	3.6	4,845	4.1	13,148	5.6	
Infant deaths, per 1,000 live births	121	4.1	667	5.5	1,179	5.0	
Total hospitalizations, per 10,000	360,849	1,267.1	1,312,126	1,168.1	2,398,679	1,226.2	
Preventable hospitalizations, per 10,000	43,011	151.0	158,173	140.8	293,493	150.0	
Adult asthma hospitalizations, per 10,000	2,775	12.6	8,931	10.2	24,276	15.9	
Pediatric asthma hospitalizations, per 10,000	1,275	19.6	3,513	14.2	11,340	26.6	
Diabetes hospitalizations, per 10,000	4,643	16.3	17,503	15.6	37,847	19.3	
CLRD hospitalizations, per 10,000	9,662	33.9	37,028	33.0	71,475	36.5	
Heart disease hospitalizations, per 10,000	37,316	131.0	125,733	111.9	212,301	108.5	
Total ED visits, per 10,000	969,178	3,403.2	4,215,240	3,752.5	7,993,838	4,086.4	

Table 79. Selected Health Indicators in the Long Island Region, 2011-2013 (3-Year Average)

Source: New York State Community Health Indicator Reports, 2011-2013 (3- Year Average)

Primary Care Physicians

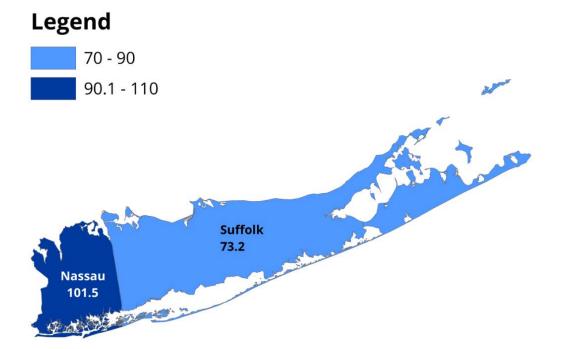
There were more than 3,800 primary care physicians practicing in the Long Island region. Forty-two percent (42%) were in general internal medicine, 23% were in general pediatrics, and another 22% were in general or family practice. There were over 700 psychiatrists, including child and adolescent psychiatrists, practicing in the Long Island region, or approximately 25.4 per 100,000. Nassau County had 101.5 family/general, and internal medicine (general) practitioners per 100,000 population, whereas Suffolk County only had 73.2 of those physicians per 100,000 total population (Table 80 and Figure 27).

Per 100,000 Specialty **Physicians Population**^a Family/General Practice 838 29.4 Internal Medicine (General) 57.2 1,631 86.6 Subtotal 2,469 11.8 Geriatrics 51 Obstetrics/Gynecology 458 86.6 134.9 Pediatrics (General) 878 **Primary Care Total** 3,855 N/A Psychiatrist 723 25.4 ^a All rates are per 100,000 total population except the Ob/Gyn rate, which is per 100,000 women aged 15 to 44, the pediatrician rate, which is per 100,000 children aged birth to 17 years, and the geriatrics rate, which is per 100,000 population aged 65 and older.

Table 80. Primary Care Physicians and Psychiatrists in the Long Island Region, by Specialty

2015 Source: Center for Health Workforce Studies

Figure 27. Number of Selected Primary Care Physicians per 100,000 Population in the Long Island Region, by County, 2015



Employment

Total Health Sector Employment

Health sector employment in the Long Island region grew by nearly 3% between 2010 and 2014, adding more than 4,000 jobs. Employment in home health care grew the fastest, increasing by 27% between 2010 and 2014. There was also growth in ambulatory care (4%), while the number of jobs in nursing home and personal care facilities and in hospitals decreased by 5% and 1%, respectively, during the same time period.

Setting	2010	2011	2012	2013	2014	Change I 2010 an	
						Number	Percent
Hospitals	62,646	64,558	62,754	62,687	61,907	-739	-1.2%
Ambulatory care (excluding home health)	61,385	62,110	62,528	63,485	63,968	2,583	4.2%
Nursing home and personal care facilities	24,244	24,399	23,918	22,722	22,934	-1310	-5.4%
Home health care	13,120	13,561	14,630	15,580	16,649	3,529	26.9%
Total	161,395	164,628	163,830	164,474	165,458	4,063	2.5%

Table 81. Number of Health Care Jobs in the Long Island Region, by Setting, 2010-2014

Source: New York State Department of Labor, ES-202

Employment and Wage by Occupation

Employment for selected health occupations in the Long Island region is reported in Table 82. RNs (25,340) on Long Island accounted for the most jobs in the first quarter of 2015, followed by personal care aides (23,270), nursing assistants (14,010), and home health aides (9,360). Occupational therapy assistants and aides, nuclear medicine technologists, and dietetic technicians had the fewest jobs (390, 210, and 110, respectively).

Wages in selected health occupations for Long Island are reported in Table 83. These wages were based on 2012-2015 survey data, which were adjusted to include the first quarter of 2016. Certified registered nurse anesthetists earned the highest hourly wage in 2016 (\$83.32), followed by medical and health service managers (\$71.63), pharmacists (\$60.00), and NPs (\$55.73). Personal care aides (\$12.75) and home health aides (\$11.61) were the lowest wage earners among the selected health occupations in the Long Island region.

Occupation	Employment
Registered Nurses	25,340
Personal Care Aides	23,270
Nursing Assistants	14,010
Home Health Aides	9,360
Licensed Practical and Licensed Vocational Nurses	6,620
Social Workers	5,680
Medical Assistants	4,580
Medical and Health Services Managers	4,160
Dental Assistants	3,870
Physical Therapists	3,460
Pharmacists	2,800
Pharmacy Technicians	2,770
Physician Assistants	2,370
Radiologic Technologists and Technicians	2,320
Dental Hygienists	2,090
Speech-Language Pathologists	2,040
Medical Secretaries	1,840
Nurse Practitioners	1,780
Medical and Clinical Laboratory Technologists	1,600
Occupational Therapists	1,300
Medical Records and Health Information Technicians	1,300
Physical Therapist Assistants	1,040
Physical Therapist Aides	930
Medical and Clinical Laboratory Technicians	910
Orderlies	840
Respiratory Therapists	790
Dietitians and Nutritionists	710
Mental Health Counselors	700
Cardiovascular Technologists and Technicians	670
Surgical Technologists	550
Occupational Therapy Assistants	390
Nuclear Medicine Technologists	210
Dietetic Technicians	110

Table 82. Number of Jobs in Selected Health Occupations in the Long Island Region, 2015

Source: New York State Department of Labor, Bureau of Labor Statistics, Occupational Wages

Occupation	Average Wage per Hour
Nurse Anesthetists	\$83.32
Medical and Health Services Managers	\$71.63
Pharmacists	\$60.00
Nurse Practitioners	\$55.73
Nurse Midwives	\$54.26
Physician Assistants	\$49.76
Speech-Language Pathologists	\$48.55
Physical Therapists	\$42.92
Occupational Therapists	\$42.86
Registered Nurses	\$40.88
Nuclear Medicine Technologists	\$40.56
Dental Hygienists	\$38.64
Respiratory Therapists	\$36.27
Medical and Clinical Laboratory Technologists	\$35.34
Radiologic Technologists and Technicians	\$34.37
Social Workers	\$31.06
Occupational Therapy Assistants	\$30.82
Dietitians and Nutritionists	\$30.36
Cardiovascular Technologists and Technicians	\$29.88
Physical Therapist Assistants	\$29.16
Surgical Technologists	\$27.22
Licensed Practical and Licensed Vocational Nurses	\$25.67
Medical and Clinical Laboratory Technicians	\$24.30
Medical Records and Health Information Technicians	\$23.66
Dietetic Technicians	\$22.70
Medical Secretaries	\$20.29
Mental Health Counselors	\$20.12
Dental Assistants	\$19.52
Occupational Therapy Aides	\$19.11
Nursing Assistants	\$18.08
Medical Assistants	\$17.78
Orderlies	\$16.92
Pharmacy Technicians	\$15.72
Physical Therapist Aides	\$14.49
Personal Care Aides	\$12.75
Home Health Aides	\$11.61

Table 83. Average Hourly Wage in Selected Health Occupations in the Long Island Region, 2016

Source: New York State Department of Labor, Labor Statistics, Occupational Wages

Licensed Health Professionals

Between 2010 and 2014, the number of licensed RNs on Long Island increased by nearly 2,300, or 6%. During the same period, there were increases in the number of most of the other licensed health professionals, including social workers (967), PAs (797), NPs (673), pharmacists (625), and speech-language pathologists (621). The occupations with the greatest percentage growth in numbers included PAs (40%), NPs (24%), and speech-language pathologists (19%). In contrast, the number of licensed clinical laboratory technicians declined by 38, or by 11%, between 2010 and 2014 (Table 84).

Profession	2010	2011	2012	2013	2014		Between nd 2014
						Number	Percent
Registered Nurses	40,185	40,574	41,377	42,592	42,502	2,317	5.8%
Licensed Practical Nurses	8,718	8,884	8,922	8,979	9,064	346	4.0%
Social Workers	8,464	8,717	8,965	9,246	9,431	967	11.4%
Pharmacists	3,741	3,805	3,938	4,060	4,366	625	16.7%
Physical Therapists	3,342	3,367	3,490	3,608	3,769	427	12.8%
Nurse Practitioners	2,765	2,890	3,051	3,287	3,438	673	24.3%
Speech-Language Pathologists	3,222	3,389	3,575	3,759	3,843	621	19.3%
Clinical Laboratory Technologists	2,410	2,381	2,424	2,414	2,443	33	1.4%
Physician Assistants	1,987	2,120	2,248	2,466	2,784	797	40.1%
Occupational Therapists	1,860	1,916	2,000	2,102	2,176	316	17.0%
Dental Hygienists	1,699	1,720	1,730	1,784	1,821	122	7.2%
Respiratory Therapists	936	983	997	1,023	1,051	115	12.3%
Physical Therapist Assistants	973	958	990	1,008	1,043	70	7.2%
Dietitians/Nutritionists	966	975	1,023	1,040	1,051	85	8.8%
Occupational Therapy Assistants	396	413	419	427	417	21	5.3%
Clinical Laboratory Technicians	352	323	327	311	314	-38	-10.8%

Table 84. Number of Licensed Individuals in Selected Health Occupations in the Long Island Region,2010-2014

Source: New York State Education Department, Office of Professions

Demand for Health Workers

Hospitals

Hospitals in the Long Island region reported the most difficulty recruiting medical coders, followed by psychiatric NPs, nurse practitioners, clinical lab technologists, nurse managers, and PAs. Community health workers were the most difficult to retain, followed newly licensed RNs, clinical lab technicians, care managers, and medical coders (Table 85).

Table 85. Recruitment and Retention Difficulties for Hospitals in Selected Health Occupations in the	
Long Island Region, 2016	

	Average Asse Difficu		Percentage of Respondents Indicating Reasons for Difficulties			
Occupation	Recruitment	Retention	Shortage of Workers	Salary Levels	Geographic Location	
Experienced Registered Nurses	3.1	2.3	71%	71%	93%	
Newly Licensed Registered Nurses	1.4	3.7	0%	0%	7%	
Nurse Managers	3.8	2.9	75%	4%	29%	
CNA/Patient Care Techs	1.5	2.6	0%	4%	4%	
Nurse Practitioners	3.9	2.2	89%	64%	68%	
Physician Assistants	3.8	2.3	86%	64%	68%	
Pharmacists	3.2	2.2	86%	0%	68%	
Clinical Lab Technicians	3.7	3.7	68%	68%	71%	
Clinical Lab Technologists	3.9	2.4	96%	68%	96%	
Medical Hospital Coders	4.6	3.1	89%	0%	4%	
Occupational Therapists	3.8	1.6	0%	0%	4%	
Care Coordinators	3.6	2.6	68%	0%	68%	
Case Managers	3.6	2.9	68%	0%	68%	
Care Managers	3.6	3.1	68%	0%	68%	
Patient Navigators	2.4	2.7	68%	0%	7%	
Community Health Workers	3.0	4.5	64%	0%	4%	
Psychologists	3.0	2.9	68%	64%	68%	
Psychiatric NPs	4.1	3.0	96%	68%	71%	
Licensed Clinical Social Workers	3.5	2.2	64%	0%	64%	
Licensed Master Social Workers	2.9	2.9	64%	0%	64%	
Licensed Mental Health Counselors	2.9	1.5	64%	0%	64%	

- Many hospitals projected growth in inpatient services, with increasing demand for NPs (71%), care managers (68%), and CNAs (68%).
- Many hospitals projected growth in outpatient services, with increasing demand for radiologic technologists (89%), community health workers (89%), and care coordinators (89%).

Nursing Homes

Nursing homes in the Long Island region reported the most difficulty recruiting experienced RNs and MDS coordinators, followed by nurse managers, directors of nursing, occupational therapists, and newly licensed RNs. CNAs and dietary aides were the most difficult to retain, followed by experienced RNs and nurse managers (Table 86).

In the Long Island Region, 2016	Average Asse Difficu		Percentage of Respondents Indica Reasons for Difficulties			
Occupation	Recruitment	Retention	Shortage of Workers	Salary Levels	Benefits	Location
Activities Director	2.3	1.9	20%	10%	10%	10%
Certified Nurse Aides/Assts. (CNAs)	2.7	3.6	17%	25%	25%	33%
Dietary Aides	2.7	3.6	17%	25%	25%	33%
Dietitians/Nutritionists	2.2	2.1	9%	9%	9%	9%
Housekeeping Staff	1.9	2.3	18%	9%	9%	9%
Licensed Practical Nurses	2.8	3.2	25%	42%	17%	25%
Medical Billers	2.8	2.6	33%	17%	17%	17%
Occupational Therapists	3.1	2.3	33%	22%	11%	22%
Occupational Therapy Assistants	2.9	2.4	33%	22%	11%	22%
Physical Therapists	2.8	2.5	22%	22%	11%	22%
Physical Therapist Assistants	2.7	2.4	11%	11%	11%	22%
Registered Nurses (RNs)						
Newly Licensed RNs	3.1	2.5	27%	36%	18%	18%
Experienced RNs	3.7	3.3	50%	33%	25%	25%
MDS Coordinators	3.7	2.6	50%	20%	10%	10%
Nurse Manager	3.6	3.3	60%	30%	10%	10%
Director of Nursing	3.3	2.8	27%	27%	9%	18%
Recreational Therapists	2.5	2.5	8%	17%	8%	17%
Respiratory Therapists	2.5	2.0	60%	20%	20%	20%
Social Workers (SWs)						
Licensed Clinical SWs	2.6	2.3	13%	25%	13%	13%
Licensed Master SWs	2.6	2.5	17%	25%	8%	17%
Speech-Language Pathologists	2.5	2.5	20%	20%	20%	20%

Table 86. Recruitment and Retention Difficulties for Nursing Homes in Selected Health Occupations
in the Long Island Region, 2016

Other information reported by nursing homes in the Long Island region included:

- Forty-two percent (42%) of nursing homes reported difficulty hiring part-time workers.
- Eight percent (8%) of nursing homes reported difficulty hiring bilingual workers.
- Fifty percent (50%) of nursing homes indicated difficulty hiring workers for off shifts (evenings, nights, and weekends).
- Twenty-five percent (25%) of nursing homes indicated they were planning to expand service in the next year. No nursing homes planned to reduce services.

Home Health Care Agencies

Home health care agencies in the Long Island region reported the most difficulty recruiting respiratory therapists, followed by experienced RNs, and speech-language pathologists. Personal care aides were the most difficult to retain, followed by home health aides, homemakers, experienced RNs, and speech-language pathologists (Table 87).

Table 87. Recruitment and Retention Difficulties for Home Health Care Agencies in Selected Health
Occupations in the Long Island Region, 2016

	Average Asse Diffice		Percentage of Respondents Indicating Reason Difficulties			
Occupation	Recruitment	Retention	Shortage	Non- Competitive Salaries/Benefits	Lack of Specialized Training	Location
Home Health Aides	2.0	3.0	33%	0%	0%	67%
Homemakers	2.0	3.0	0%	0%	0%	100%
Personal Care Aides	2.0	4.0	0%	0%	0%	100%
Dietitians/Nutritionists	2.5	2.0	0%	0%	0%	50%
Licensed Practical Nurses	2.2	2.0	20%	0%	20%	20%
Occupational Therapists	3.3	2.0	0%	0%	0%	25%
Physical Therapists	3.3	2.5	50%	25%	0%	25%
Registered Nurses						
Newly Licensed RNs	2.0	2.5	33%	0%	0%	50%
Experienced RNs	3.8	3.0	60%	20%	20%	40%
Respiratory Therapists	4.0	2.5	0%	0%	0%	100%
Social Workers (SWs)						
Licensed Clinical SWs	2.3	2.0	0%	0%	0%	33%
Licensed Master SWs	2.0	2.0	0%	0%	0%	25%
Speech-Language Pathologists	3.5	3.0	75%	25%	0%	75%

• Forty percent (40%) of home health care agencies reported difficulty hiring part-time workers.

• One-fifth (20%) of home health care agencies reported difficulty hiring bilingual workers.

• Forty percent (40%) of home health care agencies indicated difficulty hiring workers for off shifts (evenings, nights, and weekends).

• The majority of respondents indicated that there would not be any expansion or reduction of services within the next year.

FQHCs

New York City and Long Island regions were combined due to low survey response rates. FQHCs in these regions had the most difficulty recruiting and retaining physical therapists and occupational therapists (Table 88).

Occupation		Average Assessment of Difficulty			
00	cupation	Recruitment	Retention		
	Family/General Practice	4.2	2.7		
	Internal Medicine	4.1	2.8		
Physicians	Ob/Gyn	4.0	2.8		
	Pediatricians	3.3	3.0		
	Physician Assistants (PAs)	2.7	3.0		
	Overall – All Specialties	3.3	2.5		
	Pediatric	3.5	2.7		
Nurse Practitioners	Adult	3.1	2.5		
	Family	3.7	3.0		
	Psychiatric	4.4	3.0		
N	Registered Nurses	3.9	3.3		
Nurses	Licensed Practical Nurses	3.5	2.8		
	Psychiatrists	4.6	3.3		
Behavioral Health	Psychologists	4.2	4.0		
Benavioral Health	Substance Abuse Counselors	1.0	0.0		
	Social Workers	3.7	3.0		
Oral Health	Dentists	3.4	2.3		
Oral Health	Dental Hygienists	2.8	2.6		
Coordination/Patient	Care Coordinators	3.3	3.2		
Cordination/Patient	Case Managers	3.3	3.2		
Care	HIV Counselors	2.2	2.0		
Patient/Community	Community Health Workers	2.4	2.7		
Education	Patient Health Educators	2.8	2.0		
Education	Nutritionists/Nutrition Educators	3.3	2.7		
	Patient Health Navigators	2.6	2.0		
Enabling Services	Outreach Workers	2.4	2.0		
Lindbilling Services	Transportation Workers	2.0	1.5		
	Interpreters	1.0	1.0		
Administrative Support	IT Systems Admin/Maintenance	3.2	3.0		
Others	Physical Therapists	5.0	5.0		
others	Occupational Therapists	5.0	5.0		

Table 88. Recruitment and Retention Difficulties for FQHCs in Selected Health Occupations in the
New York City and Long Island Region, 2016

- Fifty-five percent (55%) of FQHCs in these regions identified difficulty hiring bilingual staff; Spanish is the language most needed.
- Sixty-four percent (64%) of FQHCs in these regions anticipate expanding one or more service.

Employment Projections by Health Occupation

otherwise leaving the profession.

According to the NYSDOL, the largest numbers of average annual job openings projected in the Long Island region between 2012 and 2022 will be for home health aides (860), RNs (830), and personal care aides (820) (Table 89).

Occupation	2012	2022	Change Between 2012 and 2022		Average Annual	
occupation	2012	2022	Number	Percent	Openings ^a	
Personal Care Aides	15,620	22,720	7,100	45.5%	820	
Home Health Aides	12,890	19,000	6,110	47.4%	860	
Registered Nurses	24,290	27,850	3,560	14.7%	830	
Nursing Assistants	16,080	18,460	2,380	14.8%	550	
Licensed Practical and Licensed Vocational	6,800	8,490	1,690	24.9%	340	
Medical Assistants	5,470	7,090	1,620	29.6%	260	
Social Workers	5,870	6,740	870	14.8%	210	
Physical Therapists	2,840	3,660	820	28.9%	150	
Physician Assistants	2,230	2,980	750	33.6%	120	
Dental Assistants	3,760	4,430	670	17.8%	150	
Emergency Medical Technicians and	2,590	3,130	540	20.8%	120	
Medical and Health Services Managers	3,900	4,430	530	13.6%	150	
Dental Hygienists	1,980	2,490	510	25.8%	100	
Nurse Practitioners	1,550	1,990	440	28.4%	70	
Radiologic Technologists	2,420	2,860	440	18.2%	70	
Pharmacy Technicians	2,390	2,810	420	17.6%	60	
Diagnostic Medical Sonographers	830	1,170	340	41.0%	40	
Medical and Clinical Laboratory Technicians	1,190	1,510	320	26.9%	60	
Pharmacists	2,640	2,950	310	11.7%	90	
Speech-Language Pathologists	2,040	2,330	290	14.2%	60	
Medical Records and Health Info Techs	1,310	1,570	260	19.8%	70	
Occupational Therapists	1,200	1,450	250	20.8%	50	
Medical and Clinical Laboratory	1,770	1,950	180	10.2%	70	
Respiratory Therapists	1,060	1,230	170	16.0%	40	
Cardiovascular Technologists & Technicians	640	800	160	25.0%	30	
Surgical Technologists	680	820	140	20.6%	20	
Dietitians and Nutritionists	680	800	120	17.6%	20	
Nurse Anesthetists	430	540	110	25.6%	20	
Psychiatric Aides	1,200	1,310	110	9.2%	30	
Clinical, Counseling, and School	1,870	1,970	100	5.3%	60	
Orderlies	350	400	50	14.3%	20	
^a Annual openings reflect creation of new positions in the occupation and replacement for those retiring or						

Table 89. Employment Projections for Selected Health Occupations in the Long Island Region, 2012and 2022

Source: New York State Department of Labor, Jobs in Demand/Projects, Long-Term Occupation Projections, 2012-2022

G. Mohawk Valley

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

Population

The Mohawk Valley region population was much less racially and ethnically diverse and older than New York as a whole. The Mohawk Valley region also had a higher percentage of people with a high school diploma or equivalent, but a smaller percentage of people with a bachelor's degree or higher than the state as a whole (Table 90).

Table 90. Selected Population Characteristics in the Mohawk Valley Region, 2010-2014(5-Year Average)

	Regi	Region				
Population Characteristics ^a	Number	Percent	Percent			
Total population	497,025	N/A	N/A			
Population under 100% FPL	77,808	15.7%	15.2%			
Population under 200% FPL	171,324	34.5%	31.7%			
Population aged birth to 17 years	104,383	21.0%	21.8%			
Population aged 65 and older	84,764	17.1%	14.1%			
Population female aged 15 to 44	90,558	18.2%	20.7%			
Women aged 15 to 19 who had a birth in past 12 mos.	320	0.1%	0.05%			
Women aged 20 to 34 who had a birth in past 12 mos.	4,259	0.9%	0.8%			
Women aged 35 to 50 who had a birth in past 12 mos.	1,050	0.2%	0.3%			
Black/African American, non-Hispanic	16,819	3.4%	14.4%			
Hispanic/Latino	23,252	4.7%	18.2%			
Asian/Pacific Islander, non-Hispanic	9,835	2.0%	7.7%			
American Indian/Native Alaskan, non-Hispanic	798	0.2%	0.2%			
Two or more/other	8,713	1.8%	2.2%			
Less than high school education	43,438	12.8%	14.6%			
High school or equivalent	182,364	53.6%	43.2%			
Associate degree	41,005	12.1%	8.5%			
Bachelor's degree	42,777	12.6%	19.1%			
Master's degree or higher	30,708	9.0%	14.6%			
^a Education levels and rates are based on individuals aged 25 years and older.						

Source: US Census, American Community Survey, 2010-2014 (5-Year Average)

Health Status

The Mohawk Valley region had much higher rates of total deaths, including deaths due to heart disease, deaths due to all cancer, and deaths due to diabetes, than the state as a whole and upstate New York. Additionally, the rates of total hospitalizations as well as hospitalizations due to chronic lower respiratory disease, and heart disease were all higher than the state or upstate New York rates. The rates of preventable hospitalizations and ED visits were also much higher in the Mohawk Valley region compared with rates statewide and upstate New York. Although it had a lower total birth rate than statewide, the Mohawk Valley had a higher teen birth rate than the state as a whole (Table 91).

	Region		Statewide		Upstate	
Health Indicator	Number	Rate	Number	Rate	Number	Rate
Total deaths, per 100,000	5,166	1,039.7	147,313	753.1	95,944	854.1
Deaths due to heart disease, per 100,000	1,475	296.9	43,448	222.1	26,818	238.7
Deaths due to all cancers, per 100,000	1,129	226.5	35,215	180.7	22,723	202.4
Deaths due to diabetes, per 100,000	138	27.7	3,975	20.3	2,198	19.6
Total births, per 1,000 females aged 15 to 44	5,225	57.7	238,078	59.0	120,237	56.8
Teen births, per 1,000 females aged 15 to 19	422	23.8	12,441	19.5	6,806	17.3
Low-birthweight births, as a percent of total births	388	7.4	19,006	8.0	9,150	7.6
Late/no prenatal care, as a percent of total births	286	5.5	13,148	5.6	4,845	4.1
Infant deaths, per 1,000 live births	31	5.9	1,179	5.0	667	5.5
Total hospitalizations, per 10,000	63,331	1,274.6	2,398,679	1,226.2	1,312,126	1,168.1
Preventable hospitalizations, per 10,000	8,922	179.6	293,493	150.0	158,173	140.8
Adult asthma hospitalizations, per 10,000	183	8.8	24,276	15.9	8,931	10.2
Pediatric asthma hospitalizations, per 10,000	64	11.8	11,340	26.6	3,513	14.2
Diabetes hospitalizations, per 10,000	902	18.2	37,847	19.3	17,503	15.6
CLRD hospitalizations, per 10,000	2,206	44.4	71,475	36.5	37,028	33.0
Heart disease hospitalizations, per 10,000	6,284	126.5	212,301	108.5	125,733	111.9
Total ED visits, per 10,000	234,071	4,711.1	7,993,838	4,086.4	4,215,240	3,752.5

Table 91. Selected Health Indicators in the Mohawk Valley Region, 2011-2013 (3-Year Average)

Source: New York State Community Health Indicator Reports, 2011-2013 (3- Year Average)

Primary Care Physicians

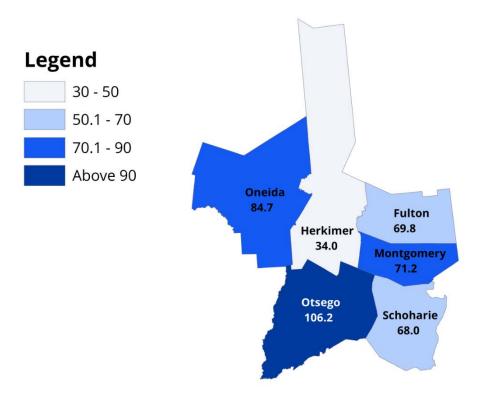
There were more than 500 primary care physicians practicing in the Mohawk Valley region. Forty-one percent (41%) were in family or general practice and 34% were in general internal medicine. There were over 80 psychiatrists, including child and adolescent psychiatrists, practicing in the Mohawk Valley region, or approximately 13.7 per 100,000 total population. Otsego County had the highest rate with nearly 106.2 family, general, and internal medicine (general) physicians per 100,000 population, and Herkimer County had the lowest rate with 34.0 per 100,000 (Table 92 and Figure 28).

Table 92. Primary Care Physicians and Psychiatrists in the Mohawk Valley Region, by Specialty,2015

Specialty	Physicians	Per 100,000 Populationª				
Family/General Practice	209	33.7				
Internal Medicine (General)	172	27.8				
Subtotal	381	61.5				
Geriatrics	8	9.7				
Obstetrics/Gynecology	52	57.4				
Pediatrics (General)	68	65.5				
Primary Care Total	510	N/A				
Psychiatrist	85	13.7				
^a All rates are per 100,000 total population except the Ob/Gyn rate, which is per 100,000 women aged 15 to 44, the pediatrician rate, which is per 100,000 children aged birth to 17 years, and the geriatrics rate, which is per 100,000 population aged 65 and older.						

Source: Center for Health Workforce Studies

Figure 28. Number of Selected Primary Care Physicians per 100,000 Population in the Mohawk Valley Region, by County, 2015



Employment

Total Health Sector Employment

Between 2010 and 2014, health sector employment in the Mohawk Valley region experienced an overall decline of of 948 jobs. Employment in ambulatory care increased by more than 100 jobs, or by 2%, whereas jobs in nursing home and personal care facilities grew by 1%, adding 60 jobs. In contrast, employment in hospitals fell by over 1,000 jobs, or 9%, and employment in home health care declined nearly 4% during the same period (Table 93).

Setting	2010	2011	2012	2013	2014	Change I 2010 ar	
						Number	Percent
Hospitals	12,501	12,359	12,153	12,069	11,435	-1,066	-8.5%
Ambulatory care (excluding home health)	6,646	6,635	6,757	6,753	6,755	109	1.6%
Nursing home and personal care facilities	6,632	6,561	6,555	6,693	6,692	60	0.9%
Home health care	1,416	1,464	1,396	1,390	1,365	-51	-3.6%
Total	27,195	27,019	26,861	26,905	26,247	-948	-3.5%

Table 93. Number of Health Care Jobs in the Mohawk Valley Region, by Setting, 2010-2014

Source: New York State Department of Labor, ES-202

Employment and Wage by Occupation

Employment for selected health occupations is reported in Table 93. RNs in the Mohawk Valley region accounted for the most jobs in the first quarter of 2015 (4,600), followed by home health aides (4,540) and personal care aides (4,370). Surgical technologists, occupational therapy assistants, cardiovascular technologists and technicians accounted for the fewest jobs at 110, 70, and 60, respectively.

Wages in selected health occupations for Mohawk Valley are reported in Table 94. These wages were based on 2012-2015 survey data, which was adjusted to include the first quarter of 2016. Pharmacists earned the highest hourly wage in 2016 (\$61.14), followed by PAs (\$49.22). Personal care aides were the lowest wage earners (\$12.42), followed by home health aides (\$12.80) in the Mohawk Valley region.

Occupation	Employment
Registered Nurses	4,600
Home Health Aides	4,540
Personal Care Aides	4,370
Nursing Assistants	3,040
Licensed Practical and Licensed Vocational Nurses	1,970
Social Workers	1,240
Medical and Health Services Managers	580
Pharmacists	560
Pharmacy Technicians	530
Dental Assistants	350
Radiologic Technologists and Technicians	340
Medical Assistants	340
Nurse Practitioners	320
Medical Records and Health Information Technicians	290
Physical Therapists	260
Medical Secretaries	250
Dental Hygienists	240
Physician Assistants	230
Medical and Clinical Laboratory Technologists	230
Speech-Language Pathologists	210
Occupational Therapists	190
Physical Therapist Assistants	180
Mental Health Counselors	160
Respiratory Therapists	140
Medical and Clinical Laboratory Technicians	130
Dietitians and Nutritionists	120
Surgical Technologists	110
Occupational Therapy Assistants	70
Cardiovascular Technologists and Technicians	60

Table 94. Number of Jobs in Selected Health Occupations in the Mohawk Valley Region, 2015

Source: New York State Department of Labor, Bureau of Labor Statistics, Occupational Wages

Occupation	Average Wage per Hour
Pharmacists	\$61.14
Physician Assistants	\$49.22
Nurse Practitioners	\$46.53
Medical and Health Services Managers	\$46.41
Nuclear Medicine Technologists	\$38.00
Physical Therapists	\$35.54
Occupational Therapists	\$35.13
Speech-Language Pathologists	\$33.28
Dental Hygienists	\$33.20
Respiratory Therapists	\$30.35
Registered Nurses	\$29.84
Medical and Clinical Laboratory Technologists	\$29.75
Radiologic Technologists and Technicians	\$29.35
Dietitians and Nutritionists	\$28.97
Social Workers	\$26.91
Mental Health Counselors	\$24.08
Cardiovascular Technologists and Technicians	\$23.52
Occupational Therapy Assistants	\$21.24
Surgical Technologists	\$21.00
Physical Therapist Assistants	\$20.56
Medical and Clinical Laboratory Technicians	\$20.12
Dietetic Technicians	\$19.22
Licensed Practical and Licensed Vocational Nurses	\$18.45
Medical Records and Health Information Technicians	\$17.76
Dental Assistants	\$15.95
Medical Assistants	\$15.38
Physical Therapist Aides	\$14.37
Medical Secretaries	\$13.70
Pharmacy Technicians	\$13.33
Nursing Assistants	\$13.10
Home Health Aides	\$12.80
Personal Care Aides	\$12.42

Table 95. Average Hourly Wage in Selected Health Occupations in the Mohawk Valley Region, 2016

Source: New York State Department of Labor, Labor Statistics, Occupational Wages

Licensed Health Professionals

Between 2010 and 2014, the number of licensed RNs in the Mohawk Valley region increased by nearly than 200, or 4%. NPs experienced the highest percentage growth (19%), followed by respiratory therapists (18%), and PAs (17%). In contrast, the number of occupational therapy assistants and clinical laboratory technicians experienced declines between 2010 and 2014 in the Mohawk Valley region (Table 96).

Region, 2010-2014 Profession	2010	2011	2012	2013	2014		Between nd 2014
						Number	Percent
Registered Nurses	6,786	6,832	6,978	7,137	7,021	235	3.5%
Licensed Practical Nurses	3,505	3,579	3,533	3,518	3,506	1	0.0%
Social Workers	640	681	666	680	702	62	9.7%
Pharmacists	480	498	519	528	542	62	12.9%
Physical Therapists	341	339	357	378	385	44	12.9%
Nurse Practitioners	402	418	428	468	479	77	19.2%
Speech-Language Pathologists	223	225	227	238	238	15	6.7%
Clinical Laboratory Technologists	343	332	341	342	350	7	2.0%
Physician Assistants	182	192	194	207	212	30	16.5%
Occupational Therapists	309	320	328	331	342	33	10.7%
Dental Hygienists	265	283	289	289	295	30	11.3%
Respiratory Therapists	186	194	205	215	220	34	18.3%
Physical Therapist Assistants	210	204	205	221	217	7	3.3%
Dietitians/Nutritionists	89	90	94	92	96	7	7.9%
Occupational Therapy Assistants	157	153	154	146	141	-16	-10.2%
Clinical Laboratory Technicians	87	77	74	73	72	-15	-17.2%

Table 96. Number of Licensed Individuals in Selected Health Occupations in the Mohawk Valley
Region, 2010-2014

Source: New York State Education Department, Office of Professions

Demand for Health Workers

Hospitals

Hospitals in the Mohawk Valley region reported that newly licensed RNs posed the most difficulty to recruit, followed by experienced RNs and nurse managers. Experienced RNs and newly licensed RNs were also the most difficult to retain, followed by medical coders and psychologists (Table 97).

Table 97. Recruitment and Retention Difficulties for Hospitals in Selected Health Occupations in the
Mohawk Valley Region, 2016

Monawk valley Region, 2010	Average Asse Difficu		of Percentage of Responde Indicating Reasons for Diff			
Occupation	Recruitment	Retention	Shortage of Workers	Salary Levels	Geographic Location	
Experienced Registered Nurses	4.4	3.8	80%	60%	100%	
Newly Licensed Registered Nurses	4.5	3.8	60%	20%	80%	
Nurse Managers	4.0	2.8	60%	40%	80%	
CNA/Patient Care Techs	3.2	2.4	60%	0%	20%	
Nurse Practitioners	2.3	2.8	40%	20%	40%	
Physician Assistants	1.5	1.5	0%	0%	0%	
Pharmacists	2.2	2.0	20%	0%	20%	
Clinical Lab Technicians	2.5	2.0	20%	0%	20%	
Clinical Lab Technologists	3.6	2.6	60%	0%	20%	
Medical Hospital Coders	3.2	3.0	60%	40%	20%	
Occupational Therapists	2.6	2.6	40%	0%	20%	
Care Coordinators	1.8	2.0	0%	0%	0%	
Case Managers	2.8	2.0	40%	0%	20%	
Care Managers	1.8	1.8	0%	0%	0%	
Patient Navigators	1.4	1.4	0%	0%	0%	
Community Health Workers	1.5	1.4	0%	0%	0%	
Psychologists	3.0	3.0	20%	20%	20%	
Psychiatric NPs	3.0	2.5	40%	20%	40%	
Licensed Clinical Social Workers	2.5	2.0	20%	0%	0%	
Licensed Master Social Workers	2.0	2.0	20%	0%	0%	
Licensed Mental Health Counselors	3.0	1.0	20%	0%	0%	

• Many hospitals projected growth in inpatient services, with increasing demand for nurse managers (40%), care managers (60%), and care coordinators (40%).

• Many hospitals projected growth in outpatient services, with increasing demand for occupational therapists (40%), RNs (40%), and patient navigators (40%).

Nursing Homes

Nursing homes in the Mohawk Valley region reported the most difficulty recruiting experienced RNs, followed by MDS coordinators and nurse managers. CNAs were the most difficult to retain, followed by dietary aides, experienced RNs, and housekeeping staff (Table 98).

Table 98. Recruitment and Retention Difficulties for Nursing Homes in Selected Health Occupations
in the Mohawk Valley Region, 2016

	Difficulty Reasons for					Reasons for Difficulties			
Occupation	Recruitment	Retention	Shortage of Workers	Salary Levels	Benefits	Location			
Activities Director	2.0	1.7	0%	0%	14%	0%			
Certified Nurse Aides/Assts. (CNAs)	2.9	3.9	67%	33%	0%	33%			
Dietary Aides	2.1	3.4	29%	43%	0%	14%			
Dietitians/Nutritionists	2.5	2.2	0%	20%	0%	0%			
Housekeeping Staff	2.5	3.3	25%	13%	0%	38%			
Licensed Practical Nurses	3.0	3.1	33%	11%	0%	22%			
Medical Billers	2.7	2.3	17%	0%	0%	0%			
Occupational Therapists	2.8	2.7	17%	0%	0%	17%			
Occupational Therapy Assistants	2.7	2.3	0%	0%	0%	14%			
Physical Therapists	3.0	2.4	14%	14%	0%	14%			
Physical Therapist Assistants	3.0	2.3	0%	0%	0%	13%			
Registered Nurses (RNs)									
Newly Licensed RNs	3.3	3.0	71%	14%	0%	29%			
Experienced RNs	3.7	3.4	56%	11%	0%	33%			
MDS Coordinators	3.4	2.7	57%	0%	0%	43%			
Nurse Manager	3.4	2.7	44%	0%	0%	33%			
Director of Nursing	3.1	2.6	29%	0%	0%	29%			
Recreational Therapists	2.8	2.3	25%	0%	0%	0%			
Respiratory Therapists	2.5	2.3	50%	0%	0%	25%			
Social Workers (SWs)									
Licensed Clinical SWs	3.0	2.7	17%	0%	0%	33%			
Licensed Master SWs	3.2	2.8	17%	0%	0%	17%			
Speech-Language Pathologists	3.0	3.0	40%	0%	0%	20%			

• Forty-four percent (44%) of nursing homes reported difficulty hiring part-time workers.

• Fifty-six percent (56%) of nursing homes indicated difficulty hiring workers for off shifts (evenings, nights, and weekends).

Home Health Care Agencies

Responses rates to employer demand surveys were too low in the Central New York and Mohawk Valley, so survey responses were combined. Home health care agencies in these two regions reported the most difficulty recruiting homemakers, followed by occupational therapists and personal care aides. Similarly, respondents reported difficulty retaining personal care aides (Table 98).

	Average Asse Diffice		Percentage of Respondents Indicating Reas for Difficulties				
Occupation	Recruitment	Retention	Shortage	Non- Competitive Salaries/ Benefits	Lack of Specialized Training	Location	
Home Health Aides	3.4	3.0	0%	20%	0%	40%	
Homemakers	5.0	2.0	0%	0%	0%	0%	
Personal Care Aides	4.0	3.3	0%	33%	0%	33%	
Dietitians/Nutritionists	3.5	2.0	0%	0%	0%	0%	
Licensed Practical Nurses	2.4	2.0	0%	20%	0%	0%	
Occupational Therapists	4.5	2.0	0%	50%	0%	0%	
Physical Therapists	3.0	2.0	50%	50%	0%	50%	
Registered Nurses							
Newly Licensed RNs	3.3	3.0	0%	0%	0%	0%	
Experienced RNs	3.7	3.0	17%	33%	17%	17%	
Respiratory Therapists	N/A	N/A	N/A	N/A	N/A	N/A	
Social Workers (SWs)							
Licensed Clinical SWs	2.0	2.0	0%	0%	0%	0%	
Licensed Master SWs	3.0	2.5	20%	0%	0%	0%	
Speech-Language Pathologists	N/A	N/A	N/A	N/A	N/A	N/A	

Table 98. Recruitment and Retention Difficulties for Home Health Care Agencies in Selected Health Occupations in the Central New York and Mohawk Valley Regions, 2016

- Two-thirds (67%) of home health care agencies indicated difficulty hiring workers for off shifts (evenings, nights, and weekends).
- One-third (33%) of home health care agencies indicated difficulty hiring part-time workers.

• Two-thirds of the respondents indicated that they would be expanding services within the next year.

FQHCs

The North Country and Mohawk Valley regions were combined due to low survey response rates. FQHCs in these regions had the most difficulty recruiting substance abuse counselors, followed by psychiatric NPs and dentists. FQHCs in these regions had the most difficulty retaining psychiatric NPs (Table 100).

Occupation		Average Assessm	ent of Difficulty
00			Retention
	Family/General Practice	4.0	3.4
	Internal Medicine	4.0	3.7
Physicians	Ob/Gyn	3.0	2.0
	Pediatricians	4.0	3.5
	Physician Assistants (PAs)	2.8	3.0
	Overall – All Specialties	3.3	3.3
	Pediatric	3.0	2.0
Nurse Practitioners	Adult	3.0	2.0
	Family	3.0	3.3
	Psychiatric	4.3	4.0
Nurses	Registered Nurses	3.8	3.3
Nurses	Licensed Practical Nurses	3.6	3.0
	Psychiatrists	3.5	3.5
Behavioral Health	Psychologists	3.0	2.0
Bellavioral Health	Substance Abuse Counselors	5.0	2.5
	Social Workers	4.0	3.3
Oral Health	Dentists	4.2	3.5
Ofai Health	Dental Hygienists	2.4	2.5
Coordination/Patient	Care Coordinators	3.0	3.0
Condination/Patient	Case Managers	2.3	2.5
Care	HIV Counselors	4.0	3.0
Patient/Community	Community Health Workers	4.0	3.0
Education	Patient Health Educators	4.0	3.0
	Nutritionists/Nutrition Educators	2.5	2.5
	Patient Health Navigators	4.0	3.0
Enabling Services	Outreach Workers	3.0	2.5
Linabiling Services	Transportation Workers	4.0	2.0
	Interpreters	4.0	2.0
Administrative Support	IT Systems Admin/Maintenance	2.5	1.5
Others	Physical Therapists	1.0	1.0
Unicis	Occupational Therapists	0.0	0.0

Table 100. Recruitment and Retention Difficulties for FQHCs in Selected Health Occupations in the Mohawk Valley and North Country Regions, 2016

• Eighty-three percent (83%) of FQHCs in these regions anticipated expanding one or more service.

Employment Projections by Health Occupation

According to the NYSDOL, the largest numbers of average annual job openings projected in the Mohawk Valley region between 2012 and 2022 will be for personal care aides (160), RNs (150), home health aides (100), and nursing assistants (100), (Table 101).

Table 101. Employment Projections for Selected Health Occupations in the Mohawk Valley Region,
2012 and 2022

Occupation	2012	2022		Between nd 2022	Average Annual	
	2012			Percent	Openings ^a	
Personal Care Aides	4,290	5,560	1,270	29.6%	160	
Registered Nurses	4,770	5,350	580	12.2%	150	
Home Health Aides	2,480	3,030	550	22.2%	100	
Nursing Assistants	3,390	3,780	390	11.5%	100	
Licensed Practical and Licensed Vocational	2,170	2,520	350	16.1%	90	
Emergency Medical Technicians and Paramedics	530	710	180	34.0%	30	
Physical Therapists	500	610	110	22.0%	20	
Medical and Health Services Managers	750	850	100	13.3%	30	
Nurse Practitioners	280	380	100	35.7%	20	
Diagnostic Medical Sonographers	180	260	80	44.4%	10	
Medical Assistants	290	370	80	27.6%	20	
Social Workers	1,200	1,270	70	5.8%	40	
Physician Assistants	180	250	70	38.9%	10	
Radiologic Technologists	410	470	60	14.6%	20	
Pharmacy Technicians	540	600	60	11.1%	20	
Occupational Therapists	270	320	50	18.5%	0	
Respiratory Therapists	230	270	40	17.4%	0	
Medical Records and Health Info Techs	250	290	40	16.0%	10	
Dietitians and Nutritionists	140	170	30	21.4%	0	
Pharmacists	470	500	30	6.4%	10	
Dental Hygienists	300	330	30	10.0%	10	
Dental Assistants	380	410	30	7.9%	10	
Speech-Language Pathologists	270	290	20	7.4%	0	
Medical and Clinical Laboratory Technologists	170	190	20	11.8%	0	
Medical and Clinical Laboratory Technicians	70	90	20	28.6%	0	
Surgical Technologists	80	100	20	25.0%	0	
Orderlies	110	130	20	18.2%	0	
Cardiovascular Technologists & Technicians	70	80	10	14.3%	0	
Clinical, Counseling, and School Psychologists	310	310	0	0.0%	10	
Psychiatric Aides ^a Annual openings reflect creation of new positions in the occup	430	410	-20	-4.7%	10	

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

Source: New York State Department of Labor, Jobs in Demand/Projects, Long-Term Occupation Projections, 2012-2022

H. North Country

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

Population

The North Country region was much less racially and ethnically diverse compared with New York as a whole. Additionally, the region had a slightly greater percentage of people under 200% of the FPL compared with the statewide average. A higher percentage of the North Country region population had a high school diploma or equivalent, or associate degrees, but a much smaller percentage held a bachelor's degree or higher than the state as a whole (Table 102).

Table 102. Selected Population Characteristics in the North Country Region, 2010-2014(5-Year Average)

Regulation Changetonictics?	Reg	ion	Statewide			
Population Characteristics ^a	Number	Percent	Percent			
Total population	435,256	N/A	N/A			
Population under 100% FPL	65,057	14.9%	15.2%			
Population under 200% FPL	144,701	33.2%	31.7%			
Population aged birth to 17 years	93,388	21.5%	21.8%			
Population aged 65 and older	61,990	14.2%	14.1%			
Population female aged 15 to 44	80,814	18.6%	20.7%			
Women aged 15 to 19 who had a birth in past 12 mos.	260	0.1%	0.05%			
Women aged 20 to 34 who had a birth in past 12 mos.	4,237	1.0%	0.8%			
Women aged 35 to 50 who had a birth in past 12 mos.	752	0.2%	0.3%			
Black/African American, non-Hispanic	15,667	3.6%	14.4%			
Hispanic/Latino	15,499	3.6%	18.2%			
Asian/Pacific Islander, non-Hispanic	4,870	1.1%	7.7%			
American Indian/Native Alaskan, non-Hispanic	5,269	1.2%	0.2%			
Two or more/other	8,000	1.8%	2.2%			
Less than high school education	37,313	12.9%	14.6%			
High school or equivalent	159,415	55.3%	43.2%			
Associate degree	31,703	11.0%	8.5%			
Bachelor's degree	32,283	11.2%	19.1%			
Master's degree or higher	27,629	9.6%	14.6%			
^a Education levels and rates are based on individuals aged 25 years and older.						

Source: US Census, American Community Survey, 2010-2014 (5-Year Average)

Health Status

The North Country region had a higher rate of deaths due to diabetes but a slightly lower rate of death due to heart disease than the state as a whole. The North Country also had higher rates of hospitalizations due to chronic lower respiratory disease, but had lower rates for diabetes hospitalizations than upstate New York and the state as a whole. The North Country had substantially higher rates of ED visits than statewide or upstate New York (Table 103).

Table 103. Selected Health Indicators in the North Country Region, 2011-2013	;
(3-Year Average)	

	Region	Region		е	Statewide		
Health Indicator	Number	Rate	Number	Rate	Number	Rate	
Total deaths, per 100,000	3,669	842.4	95,944	854.1	147,313	753.1	
Deaths due to heart disease, per 100,000	928	213.0	26,818	238.7	43,448	222.1	
Deaths due to all cancers, per 100,000	866	199.0	22,723	202.4	35,215	180.7	
Deaths due to diabetes, per 100,000	113	25.9	2,198	19.6	3,975	20.3	
Total births, per 1,000 females aged 15 to 44	5,410	66.8	120,237	56.8	238,078	59.0	
Teen births, per 1,000 females aged 15 to 19	381	26.0	6,806	17.3	12,441	19.5	
Low-birthweight births, as a percent of total births	389	7.3	9,150	7.6	19,006	8.0	
Late/no prenatal care, as a percent of total births	188	3.5	4,845	4.1	13,148	5.6	
Infant deaths, per 1,000 live births	37	6.8	667	5.5	1,179	5.0	
Total hospitalizations, per 10,000	48,250	1,107.9	1,312,126	1,168.1	2,398,679	1,226.2	
Preventable hospitalizations, per 10,000	6,464	148.4	158,173	140.8	293,493	150.0	
Adult asthma hospitalizations, per 10,000	244	9.9	8,931	10.2	24,276	15.9	
Pediatric asthma hospitalizations, per 10,000	4	5.6	3,513	14.2	11,340	26.6	
Diabetes hospitalizations, per 10,000	632	14.5	17,503	15.6	37,847	19.3	
CLRD hospitalizations, per 10,000	1,722	39.5	37,028	33.0	71,475	36.5	
Heart disease hospitalizations, per 10,000	4,561	104.7	125,733	111.9	212,301	108.5	
Total ED visits, per 10,000	226,149				7,993,838	4,086.4	

Source: New York State Community Health Indicator Reports, 2011-2013 (3- Year Average)

Primary Care Physicians

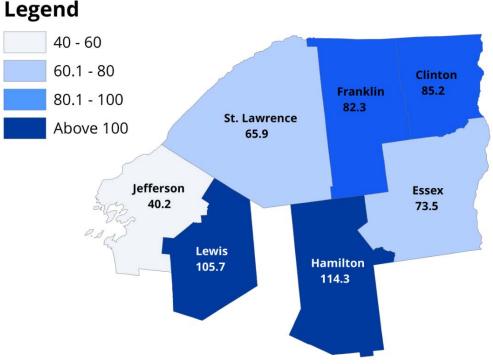
There were 409 primary care physicians practicing in the North Country region. Forty-three percent (43%) were in family or general practice and 30% were in general internal medicine. There were over 60 psychiatrists, including child and adolescent psychiatrists, practicing in the North Country region, or approximately 15.1 per 100,000. Hamilton County had the highest rate with nearly 114.3 family, general, and internal medicine (general) physicians per 100,000 population, and Jefferson County had the lowest rate with 40.2 per 100,000 (Table 104 and Figure 29).

Table 104. Primary Care Physicians and Psychiatrists in the North Country Region, by Specialty,2015

Specialty	Physicians	Per 100,000 Populationª		
Family/General Practice	174	39.9		
Internal Medicine (General)	123	28.3		
Subtotal	297	68.2		
Geriatrics	3	4.4		
Obstetrics/Gynecology	46	57.5		
Pediatrics (General)	63	67.3		
Primary Care Total	409	N/A		
Psychiatrist	66	15.1		
^a All rates are per 100,000 total population except the Ob/Gyn rate, which is per 100,000 women aged 15 to 44, the pediatrician rate, which is per 100,000 children aged birth to 17 years, and the geriatrics rate, which is per 100,000 population aged 65 and older.				

Source: Center for Health Workforce Studies

Figure 29. Number of Selected Primary Care Physicians per 100,000 Population in the North Country Region, by County, 2015



Employment

Total Health Sector Employment

Total health sector employment in the North Country region grew by nearly 4% between 2010 and 2014, adding just over 650 jobs. Employment in home health care grew by over 300 jobs (57.3%), and jobs in nursing home and personal care facilities increased by 126 (4%). In contrast, there was a decline in hospital jobs by over 30 positions, or 0.4%, during the same period (Table 105).

Setting	2010	2011	2012	2013	2014	Change Between 2010 and 2014	
Secting	2010	2011	2012	2013	2014	Number	Percent
Hospitals	8,991	9,190	9,251	8,982	8,957	-34	-0.4%
Ambulatory care (excluding home health)	5,103	5,137	5,180	3,040	5,358	255	5.0%
Nursing home and personal care facilities	2,937	2,920	2,937	5,286	3,063	126	4.3%
Home health care	532	538	531	589	837	305	57.3%
Total	17,564	17,784	17,899	17,897	18,215	651	3.7%

Table 105. Number of Health Care Jobs in the North Country Region, by Setting, 2010-2014

Source: New York State Department of Labor, ES-202

Employment and Wage by Occupation

Employment for selected health occupations is reported in Table 105. RNs in the North Country region accounted for the most jobs in the first quarter of 2015 (3,540), followed by personal care aides (3,320) and nursing assistants (2,440). Occupational therapy assistants (40), dietetic technicians (30), and orderlies (20) had the fewest jobs among the selected health occupations.

Wages in selected health occupations for the North Country region are reported in Table 106. These wages were based on 2012-2015 survey data, which were adjusted to include the first quarter of 2016. Pharmacists earned the highest hourly wage in 2016 (\$61.11), followed by physician assistants (\$55.37) and medical and health services managers (\$50.51). Home health aides (\$11.68) and orderlies (\$10.50) were the lowest wage earners for the selected health occupations in the North Country region.

Occupation	Employment
Registered Nurses	3,540
Personal Care Aides	3,320
Nursing Assistants	2,440
Licensed Practical and Licensed Vocational Nurses	1,720
Home Health Aides	1,250
Social Workers	880
Medical and Health Services Managers	400
Pharmacists	370
Physical Therapists	370
Pharmacy Technicians	340
Dental Assistants	310
	200
Dental Hygienists	300
Physician Assistants	270
Nurse Practitioners	230
Speech-Language Pathologists	230
Radiologic Technologists and Technicians	230
Occupational Therapists	190
Medical Assistants	190
Medical and Clinical Laboratory Technologists Medical Records and Health Information Technicians	160
Medical Records and Health Information Technicians	160
	140
Respiratory Therapists	100
Physical Therapist Assistants Dietitians and Nutritionists	
Surgical Technologists	90 80
Medical and Clinical Laboratory Technicians	
Medical and Clinical Laboratory Technicians	<u> </u>
Cardiovascular Technologists and Technicians	50
	40
Nuclear Medicine Technologists Occupational Therapy Assistants	40 40
Dietetic Technicians	30
Orderlies	20

Table 106. Number of Jobs in Selected Health Occupations in the North Country Region, 2015

Source: New York State Department of Labor, Bureau of Labor Statistics, Occupational Wages

Table 107. Average Hourly Wage in Selected Health Occupations in Occupation	Average Wage per Hour
Pharmacists	\$61.11
Physician Assistants	\$55.37
Medical and Health Services Managers	\$50.51
Nurse Practitioners	\$44.64
Nurse Midwives	\$43.37
Speech-Language Pathologists	\$37.93
Physical Therapists	\$34.82
Occupational Therapists	\$32.74
Nuclear Medicine Technologists	\$32.05
Registered Nurses	\$32.04
Medical and Clinical Laboratory Technologists	\$30.50
Dental Hygienists	\$30.42
Respiratory Therapists	\$29.98
Dietitians and Nutritionists	\$28.59
Radiologic Technologists and Technicians	\$27.21
Cardiovascular Technologists and Technicians	\$26.75
Social Workers	\$23.77
Mental Health Counselors	\$23.52
Medical and Clinical Laboratory Technicians	\$22.89
Surgical Technologists	\$22.02
Physical Therapist Assistants	\$21.29
Occupational Therapy Assistants	\$21.25
Dietetic Technicians	\$20.07
Medical Records and Health Information Technicians	\$19.05
Licensed Practical and Licensed Vocational Nurses	\$18.77
Occupational Therapy Aides	\$15.47
Medical Secretaries	\$15.33
Medical Assistants	\$15.20
Dental Assistants	\$15.11
Pharmacy Technicians	\$14.09
Nursing Assistants	\$12.89
Personal Care Aides	\$12.84
Physical Therapist Aides	\$12.57
Home Health Aides	\$11.68
Orderlies	\$10.50

Table 107. Average Hourly Wage in Selected Health Occupations in the North Country Region, 2016

Source: New York State Department of Labor, Labor Statistics, Occupational Wages

Licensed Health Professionals

Between 2010 and 2014, the number of licensed RNs in the North Country region increased by more than 300, or 7%. NPs (38%) experienced the highest percentage increase in the region, followed by respiratory therapists (30%), pharmacists (18%), and social workers (18%) during the same period. The number of both clinical laboratory technician and occupational therapy assistants declined in the North Country region, falling by 21% and 6%, respectively (Table 108).

Profession	2010	2011	2012	2013	2014		Between nd 2014
						Number	Percent
Registered Nurses	5,082	5,165	5,260	5,494	5,413	331	6.5%
Licensed Practical Nurses	2,591	2,674	2,679	2,740	2,700	109	4.2%
Social Workers	375	383	397	414	443	68	18.1%
Pharmacists	336	346	366	396	397	61	18.2%
Physical Therapists	301	301	316	329	327	26	8.6%
Nurse Practitioners	226	238	260	289	311	85	37.6%
Speech-Language Pathologists	226	237	252	256	262	36	15.9%
Clinical Laboratory Technologists	245	249	259	257	250	5	2.0%
Physician Assistants	191	200	211	226	250	59	30.9%
Occupational Therapists	132	136	139	148	153	21	15.9%
Dental Hygienists	225	235	240	245	241	16	7.1%
Respiratory Therapists	69	79	81	88	90	21	30.4%
Physical Therapist Assistants	151	151	157	165	173	22	14.6%
Dietitians/Nutritionists	80	81	81	82	86	6	7.5%
Occupational Therapy Assistants	84	82	85	84	79	-5	-6.0%
Clinical Laboratory Technicians	77	72	70	63	61	-16	-20.8%

Table 108. Number of Licensed Individuals in Selected Health Occupations in the North Country
Region, 2010-2014

Source: New York State Education Department, Office of Professions

Demand for Health Workers

Hospitals

Hospitals in the North Country region had the most difficulty recruiting clinical laboratory technologists, followed by nurse managers, nurse practitioners, and psychiatric NPs. Clinical lab technologists and CNAs were the most difficult to retain in hospitals across the region, followed by licensed clinical social workers and licensed master social workers (Table 109).

Table 109. Recruitment and Retention Difficulties for Hospitals in Selected Health Occupations in the
North Country Region, 2016

	Average Asse Difficu			Percentage of Respondents cating Reasons for Difficulties			
Occupation	Recruitment	Retention	Shortage of Workers	Salary Levels	Geographic Location		
Experienced Registered Nurses	3.3	2.2	56%	11%	33%		
Newly Licensed Registered Nurses	1.8	2.0	11%	0%	33%		
Nurse Managers	4.0	2.3	44%	11%	56%		
CNA/Patient Care Techs	2.3	3.2	22%	22%	22%		
Nurse Practitioners	4.0	2.0	44%	11%	56%		
Physician Assistants	3.7	2.0	44%	0%	44%		
Pharmacists	2.8	1.7	11%	0%	22%		
Clinical Lab Technicians	3.5	2.8	56%	22%	33%		
Clinical Lab Technologists	4.7	3.2	56%	22%	44%		
Medical Hospital Coders	3.2	1.8	11%	0%	11%		
Occupational Therapists	3.5	2.4	44%	11%	44%		
Care Coordinators	2.0	1.5	11%	0%	11%		
Case Managers	1.8	1.6	0%	0%	0%		
Care Managers	2.0	1.5	0%	0%	0%		
Patient Navigators	2.0	1.4	11%	11%	11%		
Community Health Workers	1.8	1.5	11%	0%	11%		
Psychologists	2.8	2.5	11%	0%	11%		
Psychiatric NPs	4.0	3.0	44%	11%	33%		
Licensed Clinical Social Workers	2.6	3.0	44%	0%	22%		
Licensed Master Social Workers	3.0	3.0	22%	0%	22%		
Licensed Mental Health Counselors	2.0	2.3	11%	0%	11%		

- Many hospitals projected growth in inpatient services, with increasing demand for care coordinators (33%), CNAs (33%), and NPs (22%).
- Many hospitals projected growth in outpatient services, with increasing demand for CNAs (56%), NPs (56%), and medical coders (44%).

Nursing Homes

Nursing homes in the North Country region reported the most difficulty recruiting occupational therapists, followed by experienced RNs, occupational therapy assistants, and physical therapists. Speech-language pathologists were cited as the most difficult to retain, followed CNAs, occupational therapists, occupational therapy assistants, physical therapists, and physical therapist assistants (Table 110).

in the North Country Region, 2016							
Average Assessm Difficulty			Percentage of Respondents Indicating				
	Diffici	Reasons for Difficulties					
Occupation	Recruitment	Retention	Shortage of Workers	Salary Levels	Benefits	Location	
Activities Director	2.8	1.0	0%	0%	0%	0%	
Certified Nurse Aides/Assts. (CNAs)	3.8	4.0	83%	17%	0%	17%	
Dietary Aides	2.3	2.0	0%	0%	0%	20%	
Dietitians/Nutritionists	3.8	2.5	50%	0%	0%	75%	
Housekeeping Staff	2.0	2.0	0%	25%	0%	0%	
Licensed Practical Nurses	3.3	3.0	50%	33%	17%	0%	
Medical Billers	3.0	2.5	0%	0%	0%	0%	
Occupational Therapists	4.5	4.0	75%	0%	0%	50%	
Occupational Therapy Assistants	4.3	4.0	67%	33%	0%	67%	
Physical Therapists	4.3	4.0	67%	0%	0%	67%	
Physical Therapist Assistants	4.0	4.0	50%	0%	0%	25%	
Registered Nurses (RNs)							
Newly Licensed RNs	3.7	3.8	25%	25%	25%	0%	
Experienced RNs	4.4	3.8	60%	40%	20%	20%	
MDS Coordinators	3.0	3.0	0%	0%	0%	0%	
Nurse Manager	3.8	3.5	60%	40%	20%	0%	
Director of Nursing	3.0	1.0	0%	0%	0%	0%	
Recreational Therapists	2.0	2.0	0%	0%	0%	0%	
Respiratory Therapists	3.3	3.3	33%	0%	0%	33%	
Social Workers (SWs)							
Licensed Clinical SWs	2.0	2.0	0%	0%	0%	0%	
Licensed Master SWs	3.0	3.0	0%	0%	0%	0%	
Speech-Language Pathologists	4.0	4.3	67%	0%	0%	33%	

Table 110. Recruitment and Retention Difficulties for Nursing Homes in Selected Health Occupations
in the North Country Region, 2016

• Seventeen percent (17%) of nursing homes reported difficulty hiring part-time workers.

• Eighty-three percent (83%) of nursing homes indicated difficulty hiring workers for off shifts (evenings, nights, and weekends).

Home Health Care Agencies

Home health care agencies in the North Country region reported difficulty recruiting occupational therapists, experienced RNs, speech-language pathologists, and, homemakers. Newly licensed RNs and respiratory therapists were the most difficult to retain, followed by experienced RNs (Table 111).

	Average Assessment of DifficultyPercentage of Respondents IndicationDifficultyfor Difficulties					<u> </u>		
Occupation	Recruitment	Retention	Shortage	Non- Competitive Salaries/ Benefits	Lack of Specialized Training	Location		
Home Health Aides	4.2	3.6	60%	40%	20%	50%		
Homemakers	4.5	3.0	0%	0%	0%	0%		
Personal Care Aides	4.0	3.3	33%	33%	33%	0%		
Dietitians/Nutritionists	3.8	3.0	0%	0%	0%	0%		
Licensed Practical Nurses	2.8	2.4	0%	40%	20%	0%		
Occupational Therapists	4.6	3.3	0%	50%	50%	50%		
Physical Therapists	3.7	2.7	50%	67%	17%	33%		
Registered Nurses								
Newly Licensed RNs	4.2	4.0	40%	50%	25%	50%		
Experienced RNs	4.6	3.9	63%	75%	25%	38%		
Respiratory Therapists	4.0	4.0	50%	50%	50%	50%		
Social Workers								
Licensed Clinical SWs	3.8	2.8	25%	0%	0%	25%		
Licensed Master SWs	3.8	3.0	50%	33%	33%	33%		
Speech-Language Pathologists	4.6	3.8	60%	60%	40%	60%		

Table 111. Recruitment and Retention Difficulties for Home Health Care Agencies in Selected
Health Occupations in the North Country Region, 2016

• Eighty-six percent (86%) of home health agencies reported difficulty hiring part-time workers.

• Twenty-nine percent (29%) of home health agencies reported difficulty hiring bilingual workers.

• Fifty-seven percent (57%) of home health agencies indicated difficulty hiring workers for off shifts (evenings, nights, and weekends).

• Half of the home health agencies in the North Country expected to expand services within the next year.

FQHCs

The North Country and Mohawk Valley regions were combined due to low response rates to the recruitment and retention survey. FQHCs in these combined regions had the most difficulty recruiting substance abuse counselors, and retaining psychiatric NPs, pediatricians, and psychiatrists (Table 112).

Occupation		Average Assessment of Difficulty			
U	ccupation	Recruitment	Retention		
	Family/General Practice	4.0	3.4		
	Internal Medicine	4.0	3.7		
Physicians	Ob/Gyn	3.0	2.0		
	Pediatricians	4.0	3.5		
	Physician Assistants (PAs)	2.8	3.0		
	Overall – All Specialties	3.3	3.3		
	Pediatric	3.0	2.0		
Nurse Practitioners	Adult	3.0	2.0		
	Family	3.0	3.3		
	Psychiatric	4.3	4.0		
N 1	Registered Nurses	3.8	3.3		
Nurses	Licensed Practical Nurses	3.6	3.0		
	Psychiatrists	3.5	3.5		
Behavioral Health	Psychologists	3.0	2.0		
Benavioral Health	Substance Abuse Counselors	5.0	2.5		
	Social Workers	4.0	3.3		
	Dentists	4.2	3.5		
Oral Health	Dental Hygienists	2.4	2.5		
Orai Health	Case Managers	2.3	2.5		
	HIV Counselors	4.0	3.0		
Patient/Community	Community Health Workers	4.0	3.0		
Education	Patient Health Educators	4.0	3.0		
Lucation	Nutritionists/Nutrition Educators	2.5	2.5		
	Patient Health Navigators	4.0	3.0		
Enabling Services	Outreach Workers	3.0	2.5		
Lindbillig Services	Transportation Workers	4.0	2.0		
	Interpreters	4.0	2.0		
Administrative Support	IT Systems Admin/Maintenance	2.5	1.5		
Others	Physical Therapists	1.0	1.0		
Unicis	Occupational Therapists	0.0	0.0		

Table 112. Recruitment and Retention Difficulties for FQHCs in Selected Health Occupations in the, Mohawk Valley and North Country Regions, 2016

• Eighty-three percent (83%) of FQHCs in these regions anticipated expanding one or more service.

Employment Projections by Health Occupation

According to the NYSDOL, the largest numbers of average annual job openings projected in the North Country region between 2012 and 2022 will be for personal care aides (100), RNs (100), home health aides (60), nursing assistants (60), and LPNs (60) (Table 113).

Occupation	2012			Change Between 2012 and 2022	
			Number	Percent	Openings ^a
Personal Care Aides	2,940	3,720	780	26.5%	100
Home Health Aides	1,440	1,780	340	23.6%	60
Registered Nurses	3,730	4,010	280	7.5%	100
Nursing Assistants	1,960	2,180	220	11.2%	60
Licensed Practical and Licensed Vocational	1,580	1,740	160	10.1%	60
Social Workers	680	740	60	8.8%	10
Emergency Medical Technicians and	250	310	60	24.0%	20
Pharmacy Technicians	350	410	60	17.1%	10
Medical and Health Services Managers	500	550	50	10.0%	10
Physical Therapists	270	320	50	18.5%	20
Medical Assistants	290	340	50	17.2%	10
Speech-Language Pathologists	230	270	40	17.4%	C
Dental Hygienists	230	270	40	17.4%	10
Pharmacists	380	410	30	7.9%	10
Physician Assistants	190	220	30	15.8%	0
Nurse Practitioners	150	180	30	20.0%	C
Orderlies	220	250	30	13.6%	C
Dental Assistants	410	440	30	7.3%	10
Dietitians and Nutritionists	100	120	20	20.0%	C
Occupational Therapists	160	180	20	12.5%	C
Medical and Clinical Laboratory Technicians	90	110	20	22.2%	C
Diagnostic Medical Sonographers	70	90	20	28.6%	C
Radiologic Technologists	210	230	20	9.5%	C
Surgical Technologists	80	100	20	25.0%	C
Clinical, Counseling, and School Psychologists	270	280	10	3.7%	10
Respiratory Therapists	90	100	10	11.1%	C
Nurse Anesthetists	20	30	10	50.0%	C
Medical and Clinical Laboratory Technologists	220	230	10	4.5%	10
Cardiovascular Technologists & Technicians	60	70	10	16.7%	C
Medical Records and Health Info Techs	220	230	10	4.5%	10
Psychiatric Aides	630	620	-10	-1.6%	10
^a Annual openings reflect creation of new positions in the oc profession.	cupation and	replacemer	nt for those reti	ring or otherw	ise leaving the

Table 113. Employment Projections for Selected Health Occupations in the North Country Region,2012-2022

Source: New York State Department of Labor, Jobs in Demand/Projects, Long-Term Occupation Projections, 2012-2022

I. Southern Tier

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

Population

Between 2010 and 2014, the Southern Tier region was much less racially and ethnically diverse and was older than New York as a whole. The Southern Tier also had a higher percentage of residents with high school diplomas or associate degrees, and a lower percentage of people with a bachelor's degree or higher, compared with the state overall (Table 114).

Table 114. Selected Population Characteristics in the Southern Tier Region, 2010-2014(5-Year Average)

Dopulation Characteristics?	Reg	Region			
Population Characteristics ^a	Number	Percent	Percent		
Total population	655,587	N/A	N/A		
Population under 100% FPL	101,987	15.6%	15.2%		
Population under 200% FPL	219,825	33.5%	31.7%		
Population aged birth to 17 years	132,703	20.2%	21.8%		
Population aged 65 and older	106,285	16.2%	14.1%		
Population female aged 15 to 44	126,229	19.3%	20.7%		
Women aged 15 to 19 who had a birth in past 12 mos.	339	0.1%	0.05%		
Women aged 20 to 34 who had a birth in past 12 mos.	6,036	0.9%	0.8%		
Women aged 35 to 50 who had a birth in past 12 mos.	1,293	0.2%	0.3%		
Black/African American, non-Hispanic	21,249	3.2%	14.4%		
Hispanic/Latino	19,524	3.0%	18.2%		
Asian/Pacific Islander, non-Hispanic	21,567	3.3%	7.7%		
American Indian/Native Alaskan, non-Hispanic	1,398	0.2%	0.2%		
Two or more/other	13,683	2.1%	2.2%		
Less than high school education	45,469	10.4%	14.6%		
High school or equivalent	223,784	51.2%	43.2%		
Associate degree	51,347	11.8%	8.5%		
Bachelor's degree	60,070	13.8%	19.1%		
Master's degree or higher	55,832	12.8%	14.6%		
^a Education levels and rates are based on individuals aged 25 years and older.					

Source: US Census, American Community Survey, 2010-2014 (5-Year Average)

Health Status

The Southern Tier region had higher rates of total deaths, deaths due to heart disease, deaths due to cancer, and deaths due to diabetes than New York as a whole and upstate New York. The Southern Tier region had a lower overall birth rate but had a higher teen birth rate than upstate New York. In addition, the Southern Tier region had higher rates of ED visits and avoidable hospitalizations than the state as a whole or upstate New York. The region had lower rates of adult and pediatric asthma hospitalizations and heart disease hospitalizations than the state as a whole and upstate New York (Table 115).

	Regi	on	Upstate		Statewide	
Health Indicator	Number	Rate	Number	Rate	Number	Rate
Total deaths, per 100,000	6,254	955.4	95,944	854.1	147,313	753.1
Deaths due to heart disease, per 100,000	1,704	260.3	26,818	238.7	43,448	222.1
Deaths due to all cancers, per 100,000	1,420	216.3	22,723	202.4	35,215	180.7
Deaths due to diabetes, per 100,000	152	23.2	2,198	19.6	3,975	20.3
Total births, per 1,000 females aged 15 to 44	6,647	52.9	120,237	56.8	238,078	59.0
Teen births, per 1,000 females aged 15 to 19	516	20.8	6,806	17.3	12,441	19.5
Low-birthweight births, as a percent of total births	484	7.3	9,150	7.6	19,006	8.0
Late/no prenatal care, as a percent of total births	290	4.4	4,845	4.1	13,148	5.6
Infant deaths, per 1,000 live births	35	5.3	667	5.5	1,179	5.0
Total hospitalizations, per 10,000	70,368	1,075.0	1,312,126	1,168.1	2,398,679	1,226.2
Preventable hospitalizations, per 10,000	9,969	152.3	158,173	140.8	293,493	150.0
Adult asthma hospitalizations, per 10,000	236	6.5	8,931	10.2	24,276	15.9
Pediatric asthma hospitalizations, per 10,000	8	6.7	3,513	14.2	11,340	26.6
Diabetes hospitalizations, per 10,000	947	14.5	17,503	15.6	37,847	19.3
CLRD hospitalizations, per 10,000	2,310	35.3	37,028	33.0	71,475	36.5
Heart disease hospitalizations, per 10,000	6,942	106.0	125,733	111.9	212,301	108.5
Total ED visits, per 10,000	283,398	4,329.5	4,215,240	3,752.5	7,993,838	4,086.4

Table 115. Selected Health Indicators in the Southern Tier Region, 2011-2013 (3-Year Average)

Source: New York State Community Health Indicator Reports, 2011-2013 (3- Year Average)

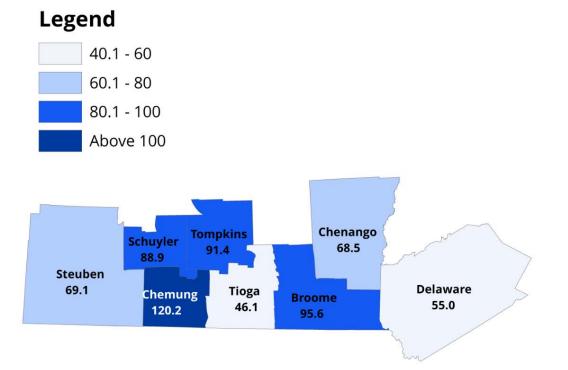
Primary Care Physicians

There were more than 700 primary care physicians practicing in the Southern Tier region. Forty-two percent (42%) were in family or general practice and 37% were in general internal medicine. There were over 100 psychiatrists, including child and adolescent psychiatrists, practicing in the Southern Tier region, or approximately 15.6 per 100,000. Chemung County had the highest rate (120.2) of family, general, and internal medicine (general) physicians per 100,000 population. Tioga County had the lowest rate with 46.1 per 100,000 population (Table 116 and Figure 30).

Specialty	Physicians	Per 100,000 Populationª		
Family/General Practice	298	45.5		
Internal Medicine (General)	261	39.8		
Subtotal	559	85.3		
Geriatrics	7	6.4		
Obstetrics/Gynecology	66	52.0		
Pediatrics (General)	83	62.8		
Primary Care Total	715	N/A		
Psychiatrist	103	15.6		
^a All rates are per 100,000 total population except the Ob/Gyn rate, which is per 100,000 women aged 15 to 44, the pediatrician rate, which is per 100,000 children aged birth to 17 years, and the geriatrics rate, which is per 100,000 population aged 65 and older.				

Source: Center fo	r Health Wor	kforce Studies

Figure 30. Number of Selected Primary Care Physicians per 100,000 Population in the Southern Tier Region, by County, 2015



Employment

Total Health Sector Employment

Between 2010 and 2014, health sector employment throughout the Southern Tier region remained stable. Employment in hospitals had the largest percentage increase, growing by 453 jobs, or nearly 4%. Employment in all other health care sectors declined during the same time period (Table 117).

Setting	2010	2011	2012	2013	2014	Change I 2010 ar	
						Number	Percent
Hospitals	12,943	13,319	13,659	13,694	13,396	453	3.5%
Ambulatory care (excluding home health)	7,703	7,740	7,586	7,591	7,572	-131	-1.7%
Nursing homes and personal care facilities	6,901	6,733	6,706	6,665	6,621	-280	-4.1%
Home health care	1,102	1,133	1,131	1,139	1,061	-41	-3.7%
Total	28,648	28,925	29,082	29,089	28,650	2	0.0%

Table 117. Number of Health Care Jobs in the Southern Tie	r Region, by Setting, 2010-2014
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Source: New York State Department of Labor, ES-202

Employment and Wage by Occupation

Employment for selected health occupations is reported in Table 118. RNs (5,330) held the most jobs in the Southern Tier region, followed by personal care aides (3,930) and nursing assistants (2,960). Physical therapist aides and cardiovascular technologists and technicians held the fewest jobs (60 and 50, respectively).

Wages in selected health occupations for the Southern Tier region are reported in Table 119. These wages were based on 2012-2015 survey data, which were adjusted to include the first quarter of 2016. Pharmacists earned the highest hourly wage in 2016 (\$58.53), followed by PAs (\$55.29) and medical and health services managers (\$51.60). Occupational therapy aides (\$12.46) and home health aides (\$12.18) were the lowest wage earners among the selected health care occupations in the Southern Tier region.

Occupation	Employment
Registered Nurses	5,330
Personal Care Aides	3,930
Nursing Assistants	2,960
Licensed Practical and Licensed Vocational Nurses	1,770
Home Health Aides	1,690
Social Workers	1,620
Medical and Health Services Managers	530
Pharmacists	480
Pharmacy Technicians	480
Dental Hygienists	450
Medical Assistants	410
Dental Assistants	390
Nurse Practitioners	380
Physical Therapists	380
Radiologic Technologists and Technicians	340
Speech-Language Pathologists	300
Medical Records and Health Information Technicians	270
Occupational Therapists	260
Medical and Clinical Laboratory Technicians	260
Medical and Clinical Laboratory Technologists	220
Medical Secretaries	220
Physician Assistants	210
Respiratory Therapists	170
Mental Health Counselors	160
Surgical Technologists	160
Dietitians and Nutritionists	120
Physical Therapist Assistants	100
Occupational Therapy Assistants	60
Physical Therapist Aides	60
Cardiovascular Technologists and Technicians	50

Table 118. Number of Jobs in Selected Health Occupations in the Southern Tier Region, 2015

Source: New York State Department of Labor, Bureau of Labor Statistics, Occupational Wages

Occupation	Average Wage per Hour
Pharmacists	\$58.53
Physician Assistants	\$55.29
Medical and Health Services Managers	\$51.60
Nurse Practitioners	\$45.22
Nuclear Medicine Technologists	\$37.90
Physical Therapists	\$35.24
Occupational Therapists	\$32.14
Respiratory Therapists	\$31.77
Speech-Language Pathologists	\$30.79
Medical and Clinical Laboratory Technologists	\$29.65
Registered Nurses	\$29.19
Radiologic Technologists and Technicians	\$28.75
Dietitians and Nutritionists	\$28.61
Cardiovascular Technologists and Technicians	\$28.16
Dental Hygienists	\$28.13
Occupational Therapy Assistants	\$25.09
Social Workers	\$24.37
Physical Therapist Assistants	\$22.93
Medical and Clinical Laboratory Technicians	\$20.47
Surgical Technologists	\$20.32
Licensed Practical and Licensed Vocational Nurses	\$18.88
Mental Health Counselors	\$18.71
Dental Assistants	\$17.98
Medical Records and Health Information Technicians	\$16.73
Dietetic Technicians	\$16.51
Medical Assistants	\$15.37
Orderlies	\$14.77
Medical Secretaries	\$14.56
Nursing Assistants	\$13.79
Pharmacy Technicians	\$13.51
Personal Care Aides	\$12.87
Physical Therapist Aides	\$12.60
Occupational Therapy Aides	\$12.46
Home Health Aides	\$12.18

Table 119. Average Hourly Wage in Selected Health Occupations in the Southern Tier Region, 2016

Source: New York State Department of Labor, Labor Statistics, Occupational Wages

Licensed Health Professionals

Between 2010 and 2014, the Southern Tier region experienced the most growth in the number of licensed NPs (nearly 300, or 89%) and RNs (199, or 3%). Physical therapist assistants experienced the largest percentage increase at 332%, followed by clinical laboratory technologists (125%). In contrast, the region experienced declines in the number of dietitians/nutritionists (68%), and occupational therapy assistants (67%) (Table 120).

Profession	2010	2011	2012	2013	2014		Between nd 2014	
						Number	Percent	
Registered Nurses	7,854	7,874	7,940	8,170	8,053	199	2.5%	
Licensed Practical Nurses	3,049	3,113	3,107	3,178	3,169	120	3.9%	
Social Workers	1,299	1,315	1,313	1,373	1,436	137	10.5%	
Pharmacists	540	546	568	500	546	6	1.1%	
Physical Therapists	456	461	476	489	494	38	8.3%	
Nurse Practitioners	338	349	361	623	640	302	89.3%	
Speech-Language Pathologists	215	206	221	352	347	132	61.4%	
Clinical Laboratory Technologists	158	158	152	341	355	197	124.7%	
Physician Assistants	458	463	479	245	264	-194	-42.4%	
Occupational Therapists	210	227	235	314	322	112	53.3%	
Dental Hygienists	352	351	350	503	507	155	44.0%	
Respiratory Therapists	278	284	300	163	166	-112	-40.3%	
Physical Therapist Assistants	53	51	52	232	229	176	332.1%	
Dietitians/Nutritionists	473	474	481	149	151	-322	-68.1%	
Occupational Therapy Assistants	142	139	146	50	47	-95	-66.9%	
Clinical Laboratory Technicians	102	88	94	93	94	-8	-7.8%	

Table 120. Number of Licensed Individuals in Selected Health Occupations in the Southern Tier
Region, 2010-2014

Source: New York State Education Department, Office of Professions

Demand for Health Workers

Hospitals

Hospitals in the Southern Tier reported the most difficulty recruiting experienced RNs, clinical lab technologists, and psychologists. Hospitals in this region indicated they had the most difficulty retaining CNAs, experienced RNs, and newly licensed RNs (Table 121).

Table 121. Recruitment and Retention Difficulties for Hospitals in Selected Health Occupations in the
Southern Tier Region, 2016

Occupation	Average Asse Diffice	Percentage of Respondents Indicating Reasons for Difficulties			
Occupation	Recruitment	Retention	Shortage of Workers	Salary Levels	Geographic Location
Experienced Registered Nurses	4.6	3.5	100%	50%	100%
Newly Licensed Registered Nurses	3.8	3.5	90%	40%	100%
Nurse Managers	3.7	1.8	100%	50%	100%
CNA/Patient Care Techs	3.7	3.6	50%	80%	90%
Nurse Practitioners	3.4	3.0	30%	70%	70%
Physician Assistants	3.2	3.0	30%	70%	70%
Pharmacists	4.0	2.4	30%	70%	40%
Clinical Lab Technicians	3.1	2.2	50%	40%	50%
Clinical Lab Technologists	4.2	2.6	90%	80%	50%
Medical Hospital Coders	3.2	3.3	70%	70%	30%
Occupational Therapists	3.1	2.4	50%	30%	50%
Care Coordinators	3.2	2.6	40%	40%	40%
Case Managers	3.0	2.6	40%	50%	50%
Care Managers	2.6	2.7	30%	30%	30%
Patient Navigators	3.1	2.6	30%	30%	30%
Community Health Workers	2.3	2.6	30%	30%	30%
Psychologists	4.1	3.0	40%	40%	80%
Psychiatric NPs	3.7	2.9	40%	40%	80%
Licensed Clinical Social Workers	3.1	2.6	40%	40%	40%
Licensed Master Social Workers	2.9	2.6	50%	40%	50%
Licensed Mental Health Counselors	3.6	3.0	40%	40%	40%

- Many hospitals projected growth in inpatient services, with increasing demand for care managers (80%), care coordinators (80%), and NPs (70%).
- Many hospitals projected growth in outpatient services, with increasing demand for care managers (80%), RNs (50%), and community health workers (50%).

Nursing Homes

Nursing homes in the Southern Tier region indicated that experienced RNs were the most difficult to recruit, followed by nurse managers, LPNs, speech-language pathologists, and physical therapists. LPNs, newly licensed RNs, and nurse managers were the most difficult to retain (Table 122).

in the Southern Tier Region, 2016										
	Average Asse		Percentage of Respondents Indicating							
	Difficu	ulty	Re	Reasons for Difficulties						
Occupation	Recruitment	Retention	Shortage of Workers	Salary Levels	Benefits	Location				
Activities Director	1.8	1.5	0%	0%	17%	0%				
Certified Nurse Aides/Assts. (CNAs)	3.9	4.1	78%	56%	44%	67%				
Dietary Aides	2.6	3.0	13%	50%	25%	25%				
Dietitians/Nutritionists	2.5	2.0	17%	0%	17%	17%				
Housekeeping Staff	2.7	3.0	22%	22%	11%	44%				
Licensed Practical Nurses	4.3	4.3	78%	67%	56%	44%				
Medical Billers	1.8	2.3	0%	0%	0%	25%				
Occupational Therapists	3.5	3.3	50%	17%	17%	33%				
Occupational Therapy Assistants	3.4	3.0	40%	0%	20%	40%				
Physical Therapists	4.2	4.0	67%	17%	17%	50%				
Physical Therapist Assistants	3.0	3.0	25%	0%	25%	25%				
Registered Nurses (RNs)										
Newly Licensed RNs	4.1	4.3	100%	71%	71%	57%				
Experienced RNs	4.6	4.2	89%	56%	67%	56%				
MDS Coordinators	3.8	3.8	67%	50%	67%	50%				
Nurse Manager	4.5	4.3	75%	50%	50%	50%				
Director of Nursing	3.3	3.3	50%	33%	50%	67%				
Recreational Therapists	4.0	2.0	0%	50%	0%	100%				
Respiratory Therapists	3.0	2.0	0%	0%	0%	0%				
Social Workers (SWs)										
Licensed Clinical SWs	2.7	1.5	0%	0%	0%	0%				
Licensed Master SWs	1.8	1.8	0%	0%	17%	0%				
Speech-Language Pathologists	4.3	3.7	67%	33%	67%	33%				

Table 122. Recruitment and Retention Difficulties for Nursing Homes in Selected Health Occupationsin the Southern Tier Region, 2016

• Sixty-seven percent (67%) of nursing homes reported difficulty hiring part-time workers.

• Eighty-nine percent (89%) of nursing homes indicated difficulty hiring workers for off shifts (evenings, nights, and weekends).

Home Health Care Agencies

Home health care agencies in the Southern Tier region indicated that experienced RNs and licensed clinical social workers were the most difficult to recruit. Homemakers were the most difficult to retain, followed by home health aides and personal care aides (Table 123).

Table 123. Recruitment and Retention Difficulties for Home Health Care Agencies in Selected	
Health Occupations in the Southern Tier Region, 2016	

	Average Asse Difficu		Percentage of Respondents Indicating Reaso for Difficulties				
Occupation	Recruitment	Retention	Shortage	Non- Competitive Salaries/ Benefits	Lack of Specialized Training	Location	
Home Health Aides	3.7	4.5	67%	100%	67%	67%	
Homemakers	1.0	5.0	0%	200%	0%	100%	
Personal Care Aides	3.0	4.5	50%	100%	50%	100%	
Dietitians/Nutritionists	3.0	2.5	0%	0%	0%	0%	
Licensed Practical Nurses	2.8	3.0	0%	25%	0%	0%	
Occupational Therapists	3.5	3.0	0%	0%	0%	50%	
Physical Therapists	4.0	3.0	50%	0%	0%	50%	
Registered Nurses							
Newly Licensed RNs	2.5	3.0	50%	100%	100%	0%	
Experienced RNs	4.8	2.7	75%	50%	0%	50%	
Respiratory Therapists	4.0	3.0	100%	0%	0%	0%	
Social Workers (SWs)							
Licensed Clinical SWs	4.5	3.0	50%	0%	100%	0%	
Licensed Master SWs	2.7	2.0	0%	0%	33%	0%	
Speech-Language Pathologists	4.0	3.0	100%	0%	50%	100%	

• Twenty percent (20%) of home health care agencies reported difficulty hiring part-time workers.

• Twenty percent (20%) of home health care agencies reported difficulty hiring bilingual workers.

• Eighty percent (80%) of home health care agencies indicated difficulty hiring workers for off shifts (evenings, nights, and weekends).

• The majority of home health agencies in the Southern Tier planned expansion of services within the next year.

FQHCs

FQHCs in the Southern Tier region had the most difficulty recruiting Ob/Gyns, pediatricians, and psychiatric NPs, and psychiatrists. FQHCs in this region had the most difficulty retaining psychiatric NPs, followed by obstetricians/gynecologists and substance abuse counselors (Table 124).

	Occupation	Average Assessment of Difficulty		
		Recruitment	Retention	
	Family/General Practice	4.2	2.7	
	Internal Medicine	4.5	3.0	
Physicians	Ob/Gyn	5.0	4.0	
	Pediatricians	5.0	2.0	
	Physician Assistants (PAs)	2.2	2.4	
	Overall – All Specialties	2.5	2.8	
	Pediatric	3.0	2.0	
Nurse Practitioners	Adult	2.0	3.0	
	Family	2.5	3.0	
	Psychiatric	5.0	5.0	
Nurses	Registered Nurses	3.6	2.6	
Nurses	Licensed Practical Nurses	2.8	3.0	
	Psychiatrists	5.0	2.0	
Behavioral Health	Psychologists	0.0	0.0	
Benavioral Health	Substance Abuse Counselors	4.5	4.0	
	Social Workers	4.0	2.7	
Oral Health	Dentists	3.8	3.0	
Oral Health	Dental Hygienists	2.8	2.3	
Coordination/Patient	Care Coordinators	3.7	2.0	
Coordination/Patient	Case Managers	3.0	2.0	
Care	HIV Counselors	4.0	3.0	
	Community Health Workers	2.5	2.0	
Patient/Community Education	Patient Health Educators	2.5	2.0	
Education	Nutritionists/Nutrition Educators	3.5	2.5	
	Patient Health Navigators	4.0	3.0	
Enabling Convisos	Outreach Workers	4.0	3.5	
Enabling Services	Transportation Workers	3.5	3.0	
	Interpreters	4.5	2.0	
Administrative Support	IT Systems Admin/Maintenance	3.3	2.5	
Others	Physical Therapists	0.0	0.0	
oulers	Occupational Therapists	0.0	0.0	

Table 124. Recruitment and Retention Difficulties for FQHCs in Selected Health Occupations in the
Southern Tier Region, 2016

- Sixty-seven percent (67%) of FQHCs in this region have difficulty hiring bilingual staff; Spanish is the language most needed.
- Eighty-three percent (83%) of FQHCs in this region anticipated expanding one or more service.

Employment Projections by Health Occupation

profession.

According to the NYSDOL, the largest numbers of average annual job openings projected in the Southern Tier region between 2012 and 2022 will be for RNs (240), nursing assistants (150), and personal care aides (100) (Table 125).

2012	Change Between 2 2022 2012 and 2022						Average Annual	
		Number	Percent	Openings ^a				
3,180	3,920	740	23.3%	100				
8,800	9,460	660	7.5%	240				
5,010	5,520	510	10.2%	150				
1,970	2,460	490	24.9%	90				
1,960	2,190	230	11.7%	70				
1,750	1,900	150	8.6%	60				
800	950	150	18.8%	40				
540	640	100	18.5%	20				
550	640	90	16.4%	20				
540	630	90	16.7%	20				
760	830	70	9.2%	20				
730	790	60	8.2%	30				
260	310	50	19.2%	20				
330	380	50	15.2%	10				
140	190	50	35.7%	0				
320	370	50	15.6%	10				
380	430	50	13.2%	10				
390	430	40	10.3%	10				
430	470	40	9.3%	20				
530	570	40	7.5%	10				
660	700	40	6.1%	10				
350	380	30	8.6%	10				
190	220	30	15.8%	0				
300	330	30	10.0%	10				
190	210	20	10.5%	0				
410	420	10	2.4%	10				
670	680	10	1.5%	20				
370	380	10	2.7%	10				
540	530	-10	-1.9%	10				
	8,800 5,010 1,970 1,960 1,960 1,750 800 5,010 1,960 1,960 5,010 1,960 5,010 800 540 550 540 760 730 260 330 140 320 380 390 430 530 660 350 660 350 190 300 190 410 670 370 670 370	8,800 9,460 5,010 5,520 1,970 2,460 1,960 2,190 1,750 1,900 800 950 540 640 550 640 540 630 760 830 730 790 260 310 330 380 330 380 330 380 340 190 350 370 380 430 390 430 390 430 390 380 390 380 390 430 390 300 390 380 430 970 390 300 390 380 430 970 390 380 390 380 400 220 300 330	3,1803,9207408,8009,4606605,0105,5205101,9702,4604901,9602,1902301,9602,1901508009501508009501505406401005506409054063090760830707307906026031050330380501401905038043050380430503804304043047040530570406607004030038030190220304104201067068010540530-10	3,1803,92074023.3%8,8009,4606607.5%5,0105,52051010.2%1,9702,46049024.9%1,9602,19023011.7%1,7501,9001508.6%80095015018.8%54064010018.5%5506409016.4%5406309016.7%760830709.2%730790608.2%2603105019.2%3303805015.2%3404305013.2%3503705015.6%3804305013.2%3904304010.3%430470409.3%530570407.5%660700406.1%3303303010.0%1902203015.8%3003303010.5%410420102.4%670680101.5%370380102.7%				

Table 125. Employment Projections for Selected Health Occupations in the Southern Tier Region,	
2012-2022	

Source: New York State Department of Labor, Jobs in Demand/Projects, Long-Term Occupation Projections, 2012-2022

J. Western New York

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

Population

The population of the Western New York region was less racially and ethnically than New York as a whole. The region had a smaller percentage of people with a bachelor's degree or higher but a slightly larger portion of the population had a high school diploma or equivalent, or an associate degree compared to the state as a whole (Table 126).

Table 126. Selected Population Characteristics in the Western New York Region, 2010-2014(5-Year Average)

Deputation Characteristics?	Regi	Region			
Population Characteristics ^a	Number	Percent	Percent		
Total population	1,397,007	N/A	N/A		
Population under 100% FPL	205,950	14.7%	15.2%		
Population under 200% FPL	444,669	31.8%	31.7%		
Population aged birth to 17 years	295,686	21.2%	21.8%		
Population aged 65 and older	226,939	16.2%	14.1%		
Population female aged 15 to 44	264,281	18.9%	20.7%		
Women aged 15 to 19 who had a birth in past 12 mos.	811	0.1%	0.05%		
Women aged 20 to 34 who had a birth in past 12 mos.	11,823	0.8%	0.8%		
Women aged 35 to 50 who had a birth in past 12 mos.	3,180	0.2%	0.3%		
Black/African American, non-Hispanic	138,694	9.9%	14.4%		
Hispanic/Latino	60,740	4.3%	18.2%		
Asian/Pacific Islander, non-Hispanic	31,766	2.3%	7.7%		
American Indian/Native Alaskan, non-Hispanic	9,126	0.7%	0.2%		
Two or more/other	24,473	1.8%	2.2%		
Less than high school education	97,816	10.2%	14.6%		
High school or equivalent	479,200	50.2%	43.2%		
Associate degree	113,185	11.8%	8.5%		
Bachelor's degree	147,492	15.4%	19.1%		
Master's degree or higher	118,133	12.4%	14.6%		
^a Education levels and rates are based on individuals aged 25 years and older.					

Source: US Census, American Community Survey, 2010-2014 (5-Year Average)

Health Status

The Western New York region had substantially higher rates of total deaths, including deaths due to heart disease, deaths due to all cancers, and deaths due to diabetes, than the state as a whole or upstate New York. Although the overall birth rate was lower in the Western New York region than in the state overall, the teen birth rate was higher. The rate of infant deaths was also higher in the Western New York region than statewide or in upstate New York. As compared with the state, the region had lower rates of preventable, asthma-related (adult and pediatric), diabetes-related, and respiratory disease-related hospitalizations than the state as a whole (Table 127).

Hoolth Indicator	Region Statewide		vide	Upsta	ate	
Health Indicator	Number	Rate	Number	Rate	Number	Rate
Total deaths, per 100,000	14,484	1,037.9	147,313	753.1	95,944	854.1
Deaths due to heart disease, per 100,000	3,985	285.5	43,448	222.1	26,818	238.7
Deaths due to all cancers, per 100,000	3,275	234.3	35,215	180.7	22,723	202.4
Deaths due to diabetes, per 100,000	433	31.0	3,975	20.3	2,198	19.6
Total births, per 1,000 females aged 15 to 44	14,771	56.0	238,078	59.0	120,237	56.8
Teen births, per 1,000 females aged 15 to 19	1,128	23.9	12,441	19.5	6,806	17.3
Low-birthweight births, as a percent of total births	1,231	8.4	19,006	8.0	9,150	7.6
Late/no prenatal care, as a percent of total births	734	5.2	13,148	5.6	4,845	4.1
Infant deaths, per 1,000 live births	112	7.6	1,179	5.0	667	5.5
Total hospitalizations, per 10,000	164,247	1,176.9	2,398,679	1,226.2	1,312,126	1,168.1
Preventable hospitalizations, per 10,000	18,500	132.6	293,493	150.0	158,173	140.8
Adult asthma hospitalizations, per 10,000	1,016	8.4	24,276	15.9	8,931	10.2
Pediatric asthma hospitalizations, per						
10,000	427	13.1	11,340	26.6	3,513	14.2
Diabetes hospitalizations, per 10,000	2,464	17.7	37,847	19.3	17,503	15.6
CLRD hospitalizations, per 10,000	4,543	32.6	71,475	36.5	37,028	33.0
Heart disease hospitalizations, per 10,000	16,203	116.1	212,301	108.5	125,733	111.9
Total ED visits, per 10,000	576,200	4,128.7	7,993,838	4,086.4	4,215,240	3,752.5

Table 127. Selected Health Indicators in the Western New York Region, 2011-2013 (3-Year Average)

Source: New York State Community Health Indicator Reports, 2011-2013 (3- Year Average)

Primary Care Physicians

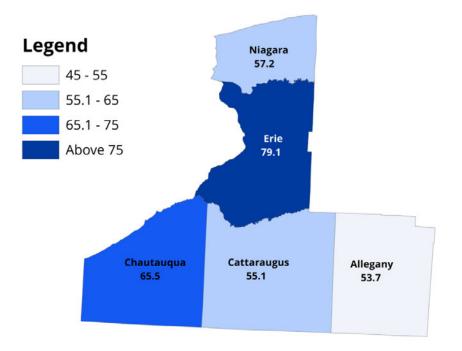
There were nearly 1,500 primary care physicians practicing in the Western New York region. Thirty-one percent (31%) were in family or general practice and another 37% were in general internal medicine. There were almost 200 psychiatrists, including child and adolescent psychiatrists, practicing in the Western New York region, or approximately 13.8 per 100,000. Erie County had the highest rate of family, general, and internal medicine (general) providers within the region, with 79.1 per 100,000 population. Allegany County had the lowest rate of providers, with 53.7 per 100,000 (Table 128 and Figure 31).

Table 128. Primary Care Physicians and Psychiatrists in the Western New York Region, by Specialty,2015

Specialty	Physicians	Per 100,000 Populationª		
Family/General Practice	461	33.0		
Internal Medicine (General)	548	39.2		
Subtotal	1,009	72.2		
Geriatrics	15	6.6		
Obstetrics/Gynecology	185	69.8		
Pediatrics (General)	276	93.4		
Primary Care Total	1,485	N/A		
Psychiatrist	193	13.8		
^a All rates are per 100,000 total population except the Ob/Gyn rate, which is per 100,000 women aged 15 to 44, the pediatrician rate, which is per 100,000 children aged birth to 17 years, and the geriatrics rate, which is per 100,000 population aged 65 and older.				

Source: New York State Physician Re-registration Survey

Figure 31. Number of Selected Primary Care Physicians per 100,000 Population in the Western New York Region, by County, 2015



Employment

Total Health Sector Employment

Between 2010 and 2014, health sector employment throughout the Western New York region decreased by 417 jobs, or 0.6%. Nearly 1,200 jobs (4%) were lost in hospitals between 2010 and 2014, but jobs in home health care increased by 260 jobs, or almost 5.3%, and jobs in ambulatory care increased by over 750 jobs, or 3%. Nursing home and personal care facilities experienced a loss of 250 jobs, or about 2% (Table 129).

Setting	2010	2011	2012	2013	2014	Change I 2010 an	
						Number	Percent
Hospitals	27,348	27,071	26,800	26,717	26,153	-1,195	-4.4%
Ambulatory care (excluding home health)	23,372	23,640	22,958	23,478	24,140	768	3.3%
Nursing home and personal care facilities	15,844	15,644	15,618	15,436	15,594	-250	-1.6%
Home health care	4,892	5,030	5,272	5,333	5,152	260	5.3%
Total	71,456	71,384	70,648	70,964	71,039	-417	-0.6%

Table 129. Number of Health Care Jobs in the Western New York Region, by Setting, 2010-2014

Source: New York State Department of Labor, ES-202

Employment and Wage by Occupation

Employment for selected health occupations is reported in Table 129. RNs (13,300) held the most jobs in in the Western New York region, followed by personal care aides (9,090) and nursing assistants (6,390). Dietetic technicians (90) and occupational therapy aides (50) had the fewest jobs.

Wages in selected health occupations for Western New York are reported in Table 130. These wages were based on 2012-2015 survey data, which were adjusted to include the first quarter of 2016. Certified registered nurse anesthetists earned the highest hourly wage in 2016 (\$78.25), followed by pharmacists (\$60.82) and medical and health services managers (\$51.25). Pharmacy technicians (\$13.95), personal care aides (\$12.48), and home health aides (\$12.34) were the lowest wage earners in the selected health occupations in the Western New York region.

Occupation	Employment
Registered Nurses	13,300
Personal Care Aides	9,090
Nursing Assistants	6,390
Home Health Aides	5,640
Licensed Practical and Licensed Vocational Nurses	5,090
Social Workers	3,750
Pharmacy Technicians	1,820
Medical Assistants	1,610
Pharmacists	1,540
Medical Secretaries	1,430
Dental Assistants	1,220
Medical and Health Services Managers	1,210
Speech-Language Pathologists	1,200
Dental Hygienists	1,180
Physical Therapists	1,040
Radiologic Technologists and Technicians	980
Medical Records and Health Information Technicians	800
Nurse Practitioners	790
Physician Assistants	700
Occupational Therapists	690
Mental Health Counselors	520
Respiratory Therapists	500
Surgical Technologists	420
Medical and Clinical Laboratory Technologists	410
Medical and Clinical Laboratory Technicians	400
Physical Therapist Assistants	360
Dietitians and Nutritionists	330
Occupational Therapy Assistants	270
Cardiovascular Technologists and Technicians	200
Physical Therapist Aides	140
Nuclear Medicine Technologists	120
Dietetic Technicians	90
Occupational Therapy Aides Source: New York State Department of Labor, Bureau of Labor Stati	50

Table 130. Number of Jobs in Selected Health Occupations in the Western New York Region, 2015

Source: New York State Department of Labor, Bureau of Labor Statistics, Occupational Wages

Table 131. Average Hourly Wage in Selected Health Occupations in the Western New York Region,2016

Occupation	Average Wage per Hour
Nurse Anesthetists	\$78.25
Pharmacists	\$60.82
Medical and Health Services Managers	\$51.25
Nurse Midwives	\$47.87
Nurse Practitioners	\$46.84
Physician Assistants	\$45.76
Speech-Language Pathologists	\$36.75
Physical Therapists	\$35.80
Nuclear Medicine Technologists	\$34.55
Registered Nurses	\$33.28
Occupational Therapists	\$32.04
Respiratory Therapists	\$28.89
Medical and Clinical Laboratory Technologists	\$28.38
Dental Hygienists	\$27.66
Dietitians and Nutritionists	\$27.38
Radiologic Technologists and Technicians	\$27.10
Cardiovascular Technologists and Technicians	\$25.75
Surgical Technologists	\$24.21
Social Workers	\$22.90
Physical Therapist Assistants	\$22.12
Occupational Therapy Assistants	\$21.31
Medical and Clinical Laboratory Technicians	\$21.31
Medical Records and Health Information Technicians	\$20.63
Mental Health Counselors	\$19.64
Licensed Practical and Licensed Vocational Nurses	\$19.62
Dental Assistants	\$17.65
Dietetic Technicians	\$16.76
Medical Assistants	\$16.51
Medical Secretaries	\$16.22
Occupational Therapy Aides	\$14.59
Physical Therapist Aides	\$14.48
Nursing Assistants	\$14.14
Pharmacy Technicians	\$13.95
Personal Care Aides	\$12.48
Home Health Aides	\$12.34

Source: New York State Department of Labor, Labor Statistics, Occupational Wages

Licensed Health Professionals

Between 2010 and 2014 in the Western New York region, the number of licensed RNs increased by more than 1,000, or nearly 5%, and the number of licensed social workers grew by almost 370, or by nearly 20%. By percentage, PAs grew the fastest in the Western New York region, increasing by 48%, followed by physical therapist assistants (34%), NPs (23%), and social workers (20%). In contrast, occupational therapy assistants experienced declines of 2% (Table 132).

Profession	2010	2011	2012	2013	2014		Between nd 2014
						Number	Percent
Registered Nurses	18,815	18,876	19,260	19,977	19,831	1,016	5.4%
Licensed Practical Nurses	7,041	7,182	7,133	7,188	7,302	261	3.7%
Social Workers	1,916	2,038	2,108	2,223	2,290	374	19.5%
Pharmacists	1,613	1,651	1,694	1,735	1,887	274	17.0%
Physical Therapists	1,267	1,274	1,323	1,383	1,409	142	11.2%
Nurse Practitioners	1,164	1,212	1,254	1,351	1,434	270	23.2%
Speech-Language Pathologists	1,105	1,146	1,172	1,203	1,207	102	9.2%
Clinical Laboratory Technologists	988	983	989	977	984	-4	-0.4%
Physician Assistants	622	665	712	802	919	297	47.7%
Occupational Therapists	767	786	812	848	877	110	14.3%
Dental Hygienists	1,090	1,131	1,138	1,157	1,167	77	7.1%
Respiratory Therapists	451	455	480	495	509	58	12.9%
Physical Therapist Assistants	322	337	351	393	430	108	33.5%
Dietitians/Nutritionists	318	316	337	353	349	31	9.7%
Occupational Therapy Assistants	586	602	601	592	572	-14	-2.4%
Clinical Laboratory Technicians	192 Verik State Ed	196	194	188	201	9	4.7%

Table 132. Number of Licensed Individuals in Selected Health Occupations in the Western New
York Region, 2010-2014

Source: New York State Education Department, Office of Professions

Demand for Health Workers

Hospitals

Hospitals in the Western New York region reported the most difficulty recruiting clinical laboratory technologists and technicians, and nurse managers. Hospitals in Western New York indicated the most difficulty retaining experienced RNs, newly licensed RNs, and clinical lab technologists (Table 133).

Table 133. Recruitment and Retention Difficulties for Hospitals in Selected Health Occupations in the
Western New York Region, 2016

Occupation				ntage of Respondents icating Reasons for Difficulties		
Occupation	Occupation Recruitment		Shortage of Workers	Salary Levels	Geographic Location	
Experienced Registered Nurses	3.9	4.3	89%	67%	100%	
Newly Licensed Registered Nurses	2.3	4.0	22%	11%	22%	
Nurse Managers	4.2	3.0	78%	11%	89%	
CNA/Patient Care Techs	3.9	3.9	67%	22%	0%	
Nurse Practitioners	3.9	2.3	67%	0%	78%	
Physician Assistants	3.9	2.1	78%	67%	89%	
Pharmacists	2.6	2.0	22%	11%	33%	
Clinical Lab Technicians	4.4	3.0	78%	0%	11%	
Clinical Lab Technologists	4.6	4.0	89%	11%	22%	
Medical Hospital Coders	2.9	2.9	56%	0%	0%	
Occupational Therapists	2.1	1.9	11%	0%	22%	
Care Coordinators	2.1	2.0	11%	0%	11%	
Case Managers	2.0	1.9	11%	0%	11%	
Care Managers	2.1	2.0	11%	0%	11%	
Patient Navigators	2.1	2.0	11%	0%	11%	
Community Health Workers	1.9	1.8	0%	0%	0%	
Psychologists	2.5	2.0	0%	0%	11%	
Psychiatric NPs	2.5	2.0	0%	0%	11%	
Licensed Clinical Social Workers	1.7	1.7	0%	0%	11%	
Licensed Master Social Workers	1.7	2.0	0%	11%	11%	
Licensed Mental Health Counselors	3.0	2.0	11%	11%	22%	

- Many hospitals projected growth in inpatient services, with increasing demand for NPs (67%), RNs (67%), and CNAs (67%).
- Many hospitals projected growth in outpatient services, with increasing demand for CNAs (89%), LPNs (67%), and clinical lab technicians (67%).

Nursing Homes

Nursing homes in the Western New York region reported the most difficulty recruiting nurse managers, followed by MDS coordinators, LPNs, and experienced RNs. CNAs were the most difficult to retain, followed by dietary aides, LPNs, experienced RNs, and nurse managers (Table 134).

Table 134. Recruitment and Retention Difficulties for Nursing Homes in Selected Health Occupations
in the Western New York Region, 2016

	Average Assessment of DifficultyPercentage of Respond Reasons for Dif			•	•		
Occupation	Recruitment	Retention	Shortage of Workers	Salary Levels	Benefits	Location	
Activities Director	2.3	1.3	14%	0%	0%	14%	
Certified Nurse Aides/Assts. (CNAs)	3.4	3.8	38%	0%	0%	50%	
Dietary Aides	2.9	3.6	13%	13%	0%	13%	
Dietitians/Nutritionists	2.1	1.6	0%	0%	0%	0%	
Housekeeping Staff	3.0	3.4	25%	0%	0%	13%	
Licensed Practical Nurses	3.9	3.6	50%	25%	13%	50%	
Medical Billers	3.0	2.0	17%	0%	0%	17%	
Occupational Therapists	3.4	2.1	38%	0%	0%	13%	
Occupational Therapy Assistants	3.0	2.3	38%	0%	0%	25%	
Physical Therapists	3.1	2.0	25%	0%	0%	13%	
Physical Therapist Assistants	3.0	2.1	25%	0%	0%	13%	
Registered Nurses (RNs)							
Newly Licensed RNs	3.6	3.3	29%	29%	0%	29%	
Experienced RNs	3.9	3.6	38%	25%	0%	38%	
MDS Coordinators	4.0	3.0	17%	0%	0%	0%	
Nurse Manager	4.4	3.6	43%	0%	0%	0%	
Director of Nursing	3.0	2.3	0%	0%	0%	0%	
Recreational Therapists	2.7	2.7	0%	0%	0%	0%	
Respiratory Therapists	2.5	2.5	0%	0%	0%	0%	
Social Workers (SWs)							
Licensed Clinical SWs	3.0	2.3	29%	0%	0%	14%	
Licensed Master SWs	2.8	2.0	20%	0%	0%	20%	
Speech-Language Pathologists	3.0	2.2	33%	0%	0%	0%	

- Thirty-eight percent (38%) of nursing homes reported difficulty hiring part-time workers.
- Sixty-three percent (63%) of nursing homes indicated difficulty hiring workers for off shifts (evenings, nights, and weekends).

Home Health Care Agencies

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As a result of low response rates to the employer demand survey, responses from home health care agencies in the Western New York region were combined with responses from home health care agencies in the Finger Lakes region for analysis. Home health care agencies in these combined regions indicated the most difficulty recruiting homemakers and speech-language pathologists. Home health aides were the most difficult to retain, followed by personal care aides, and speech-language pathologists (Table 135).

Table 135. Recruitment and Retention Difficulties for Home Health Care Agencies in Selected						
Health Occupations in the Finger Lakes and Western New York Regions, 2016						
	Average Assessment of	Percentage of Respondents Indicating Reasons f	or			
	Difficulty	Difficulties				

	Average Asse Diffic		Percentage of Respondents Indicating Reasons for Difficulties				
Occupation	Recruitment	Retention	Shortage	Non- Competitive Salaries/ Benefits	Lack of Specialized Training	Location	
Home Health Aides	3.2	3.5	33%	17%	17%	33%	
Homemakers	5.0	2.0	0%	0%	0%	0%	
Personal Care Aides	4.0	3.0	0%	0%	0%	50%	
Dietitians/Nutritionists	3.7	2.3	0%	0%	67%	0%	
Licensed Practical Nurses	1.8	2.0	0%	25%	0%	0%	
Occupational Therapists	4.0	2.0	0%	100%	0%	0%	
Physical Therapists	3.0	2.0	67%	33%	0%	33%	
Registered Nurses							
Newly Licensed RNs	2.0	2.0	0%	0%	0%	0%	
Experienced RNs	3.2	2.8	17%	67%	17%	17%	
Respiratory Therapists	N/A	N/A	N/A	N/A	N/A	N/A	
Social Workers (SWs)							
Licensed Clinical SWs	2.8	2.0	25%	25%	0%	0%	
Licensed Master SWs	2.8	2.0	50%	17%	0%	0%	
Speech-Language Pathologists	5.0	3.0	100%	0%	0%	0%	

Seventeen percent (17%) of home health care agencies reported difficulty hiring part-time workers. • Seventeen percent (17%) of home health care agencies reported difficulty hiring bilingual workers.

• Fifty percent (50%) of home health care agencies indicated difficulty hiring workers for off shifts (evenings, nights, and weekends).

• Two-thirds of the respondents reported plans to expand services within the next year.

FQHCs

FQHCs in the Western New York region had the most difficulty recruiting psychiatrists, followed by psychiatric NPs and internal medicine physicians. FQHCs in this region had the most difficulty retaining psychiatrists, followed by dentists. (Table 136).

		Average Assessment of Difficulty			
0	ccupation	Recruitment	Retention		
	Family/General Practice	4.4	3.3		
	Internal Medicine	4.7	3.5		
Physicians	Ob/Gyn	4.0	2.0		
	Pediatricians	4.3	1.5		
	Physician Assistants (PAs)	2.5	2.4		
	Overall – All Specialties	3.2	3.0		
	Pediatric	2.0	1.5		
Nurse Practitioners	Adult	1.5	1.5		
	Family	3.3	2.8		
	Psychiatric	4.8	3.2		
Nurses	Registered Nurses	2.9	2.5		
Nul ses	Licensed Practical Nurses	2.3	2.3		
	Psychiatrists	5.0	5.0		
Behavioral Health	Psychologists	0.0	0.0		
Bellavioral Health	Substance Abuse Counselors	4.5	3.5		
	Social Workers	4.2	3.0		
Oral Health	Dentists	4.0	4.7		
	Dental Hygienists	3.0	3.3		
Coordination/Patient	Care Coordinators	2.4	2.3		
Conditiation/Patient	Case Managers	2.0	2.0		
Care	HIV Counselors	4.0	3.0		
Patient/Community	Community Health Workers	1.8	2.0		
Education	Patient Health Educators	2.0	2.0		
Lucation	Nutritionists/Nutrition Educators	2.5	3.0		
	Patient Health Navigators	2.0	2.0		
Enabling Services	Outreach Workers	2.0	1.7		
Lindbilling Services	Transportation Workers	2.5	1.5		
	Interpreters	2.8	1.3		
Administrative Support	IT Systems Admin/Maintenance	2.0	2.0		
Others	Physical Therapists	0.0	0.0		
	Occupational Therapists	0.0	0.0		

Table 136. Recruitment and Retention Difficulties for FQHCs in Selected Health Occupations in the Western New York Region, 2016

• Of those FQHCs who responded for this region, all indicated plans of expanding one or more service.

• Fifty percent (50%) identified difficulty hiring bilingual staff.

Employment Projections by Health Occupation

profession.

According to the NYSDOL, the largest numbers of average annual job openings projected in the Western New York region between 2012 and 2022 will be for RNs (370), personal care aides (310), and home health aides (250) (Table 137).

Occupation	2012	2022	Change Between 2012 and 2022		Average Annual
			Number	Percent	Openings ^a
Personal Care Aides	9,020	11,550	2,530	28.0%	310
Home Health Aides	5,480	6,990	1,510	27.6%	250
Registered Nurses	13,390	14,450	1,060	7.9%	370
Licensed Practical and Licensed Vocational	5,260	6,210	950	18.1%	220
Nursing Assistants	7,330	8,010	680	9.3%	210
Social Workers	3,570	3,900	330	9.2%	110
Physical Therapists	1,180	1,430	250	21.2%	60
Dental Hygienists	1,100	1,350	250	22.7%	60
Nurse Practitioners	850	1,060	210	24.7%	40
Pharmacy Technicians	1,660	1,870	210	12.7%	40
Medical Assistants	1,070	1,270	200	18.7%	40
Dental Assistants	1,110	1,270	160	14.4%	40
Physician Assistants	440	570	130	29.5%	20
Medical and Health Services Managers	1,420	1,540	120	8.5%	50
Occupational Therapists	680	800	120	17.6%	20
Speech-Language Pathologists	1,090	1,200	110	10.1%	30
Medical Records and Health Info Techs	860	970	110	12.8%	30
Pharmacists	1,420	1,520	100	7.0%	40
Radiologic Technologists	1,090	1,190	100	9.2%	30
Emergency Medical Technicians and	810	910	100	12.3%	30
Diagnostic Medical Sonographers	280	370	90	32.1%	10
Surgical Technologists	340	390	50	14.7%	10
Medical and Clinical Laboratory Technicians	320	360	40	12.5%	20
Dietitians and Nutritionists	340	370	30	8.8%	0
Respiratory Therapists	510	540	30	5.9%	10
Cardiovascular Technologists & Technicians	150	170	20	13.3%	0
Clinical, Counseling, and School Psychologists	760	770	10	1.3%	20
Medical and Clinical Laboratory Technologists	440	450	10	2.3%	10
^a Annual openings reflect creation of new positions in the oc	upation and	Ironlacomo	at for those ret	ring or otherw	iso looving tho

Table 137. Employment Projections for Selected Health Occupations in the Western New York
Region, 2012-2022

Source: New York State Department of Labor, Jobs in Demand/Projects, Long-Term Occupation Projections, 2012-2022



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