2014 Health OCCUPATIONS Report

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Healthcare Occupations Report Series

This is the third in a series of reports on Maine's health sector and workforce. The reports reflect the importance of having enough health workers in the required locations to ensure the well-being of the population. The aim is to bring together data from a variety of sources in order to foster a broader and deeper understanding of the factors affecting supply and demand in a number of health and social service occupations.

This report compiles data from state and federal databases, including those available at the Maine Department of Labor, the Bureau of Labor Statistics, Census and the National Center for Education Statistics. The objective is to present the available data in a systematic fashion, illustrate how it can be used, and provide a basic framework on which additional data sources can be added in the future, resources permitting.

Preface

In 2005, the Maine Legislature passed "An Act to Ensure an Adequate Supply of a Skilled Health Care Workforce (L.D. Document 892), which requires the Maine Department of Labor (MDOL), in collaboration with the Maine Department of Health and Human Services (DHHS), to compile a healthcare occupations report every four years. The legislation reflects the importance of understanding both the availability of healthcare workers in a wide range of professions and how this availability corresponds to projected needs. This information is vital to protecting the well-being of Maine people.

The challenges associated with developing and sustaining a workforce that will provide services to Maine's aging and often rural population are significant. Pending retirements of baby boomers will leave a critical gap in skills and experience that will need to be filled; Maine's shifting industry landscape, in which jobs are gradually becoming more centralized in urban areas, presents challenges to achieving a distributed health workforce; and models of care and delivery are in flux, creating uncertainty in assessing and defining future needs. Understanding these dynamics is fundamental to making effective public policies and developing sound public and private investment strategies. MDOL is committed to ongoing analysis of the issues in helping to chart a more prosperous future for all citizens.

This report provides an array of data and analyses related to Maine's health workforce. The report draws from a variety of sources including employment, wage and occupational projections data maintained by MDOL, demographic and economic data from the American Community Survey and detailed information on Maine's health education programs and completers from the National Center of Education Statistics. By combining this data we are able to size the current workforce, analyze projected job openings and measure the state's capacity to increase supply for a variety of health occupations. We did not have access or resources to utilize all data, including state licensure and adult and continuing education information. A complete listing of data inclusions and important exclusions are noted in the report.

We are pleased to transmit this document in cooperation with Maine's Health Workforce Forum, which is comprised of health practitioners, employers, educators, administrators and public policy leaders. The Health Workforce Forum was convened by DHHS to review this report and provide guidance on critical workforce issues confronting this vital sector.

Chris Boudreau
Director, Center for Workforce Research and Information

Acknowledgements

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About this Report

Understanding the importance of having a workforce with the skills and abilities necessary to perform complex medical tasks and provide patient care and support functions, the Maine Legislature commissioned a series of health occupations reports. These reports were to provide labor market and education information for each health occupation licensed or registered in Maine, and "an analysis of trends and the current outlook in employment supply and demand, including implications for the state and health care industry."[1] This is the third report in the series; the first was published in 2006 and the second in 2010.

This report compiles an array of data for nearly 60 health and social service occupations. The report is organized into a series of occupational profiles, with each containing a description of the profession, education requirements, employment and wage characteristics, postsecondary program completer data and an employment outlook. In addition, historical employment and trend analyses, demographic and work setting information, county employment data, per population statistics, sensitivity analyses, and a discussion of pertinent issues were included whenever possible. The introduction includes an analysis of employment trends in the sector and the employment outlook for health occupations in aggregate.

Who should use this report?

- Legislators and others seeking to better understand the labor market dynamics, education capacity and employment distribution in a variety of health occupations.
- Administrators, educators and health professionals seeking more information about postsecondary program capacity in a variety of areas of study and how this relates to projected job opportunities.
- Prospective students looking for information on the employment outlook, wages and education requirements for more than 50 health and social service occupations.
- Anyone seeking data and statistics on one of Maine's largest economic sectors.

How to use this report

This report can be used in different ways. At a minimum, the reader can review the executive summary and a few specific occupational profiles and summary statistic tables. To get the most benefit, it is highly recommended that users also review the section, Data sets and limitations, the introduction and as many profiles as possible, including the first several, which are more detailed than others. While this approach will involve a little more time, it will yield a more complete understanding of the data and how it can be used.

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[1] Public Law 2005, Chapter 327, available on the Internet at: http://www.mainelegislature.org/legis/statutes/22/title22sec256-A.html

Using the Occupational Profiles

For comparability, occupations are grouped into categories (physicians and surgeons, nurses, therapists, technicians, etc.).[2] For each group of occupations, a summary statistics table provides important workforce and demographic data for each detailed occupation. By scanning these tables readers can compare and contrast similar occupations across a variety of metrics. The table below displays the characteristics and sources of data.

Summary Statistics	
Workforce Characteristics	**Data source:**
Employment	Occupational Employment Statistics
Employment per 1,000 population	Occupational Employment Statistics*, population estimates from Maine Office of Policy and Management
versus U.S.	Occupational Employment Statistics, Census
Average annual starting wage (Maine)	Occupational Employment Statistics
Median annual wage (Maine)	Occupational Employment Statistics
U.S. median annual wage	Occupational Employment Statistics
Median wage for all occupations in Maine	Occupational Employment Statistics
Minimum Education Requirement	Occupational Employment Statistics
Job Growth Projections	2010 - 2020 Employment projections
National Median Age	Current Population Survey
Top Industry of Employment	Occupational Employment Statistics
Licensing Board	Various sources

*Employment projections data was used for a few occupations where self-employment is particularly high.

Following each summary statistics table are a few key points for each group of occupations.

Occupational profiles are organized as seen below. Much of the information provided in these sections is sourced directly from government and state agencies that compile this material. These sources are noted below.

SOC code and Occupation title

The SOC code identifies each occupation and is useful when researching occupational information through O*Net, the Occupational Outlook Handbook, America's Career One-Stop, and other labor market information resources.[3]

[2] The grouping of occupations involves some subjectivity. Some occupations could rightfully go into more than one category.

[3] The SOC is a hierarchical system used by federal statistical agencies to classify workers into 840 detailed occupations based on job duties and, in some cases, on skills, education, and/or training. The SOC combines these detailed occupations into 461 broad occupations, 97 minor occupational groups, and 23 major occupational groups.

Occupation description

Occupational descriptions were sourced directly from the 2010 Standard Occupational Classification (SOC) system of the U.S. Bureau of Labor Statistics (BLS). Information on the SOC may be found here: http://www.bls.gov/soc. For some occupations the BLS Occupational Outlook Handbook is also utilized. The OOH is available here: http://www.bls.gov/ooh

Education requirements

Information about education requirements was sourced from the BLS Occupational Outlook Handbook (OOH). Information from the Maine Office of Professional and Occupational Regulation was also utilized.

For nurse practitioners, nurse midwives and nurse anesthetists, academic requirement information was taken from ExploreHealthCareers.org, which is available here: http://explorehealthcareers.org/en/home

Employment & Wages

Employment and wage data is from the Occupational Employment Statistics (OES) program. For occupations with high percentages of self-employed, employment projections data was used, as this includes estimates for the self-employed (but the data is older than what's available through OES—see this discussion on Data sets and Limitations). OES and employment projections data are available on CWRI's website: http://www.maine.gov/labor/cwri/data.html

County level employment data was provided for many occupations. As discussed in the following section, Data sets and limitations, OES data are routinely suppressed due to USBLS confidentiality and data quality requirements. In this report, when data is suppressed it is shown as "n/a" for not available.

Demographic, economic and social characteristics of the workforce

CWRI analyzed the 2006-2010 American Community Survey (ACS) for detailed demographic and social characteristics for certain health occupations in Maine. We used pre-tabulated data as well as the Public Use Micro data Sample files (PUMS). ACS data is available from the Census at this site: www.census.gov/acs

ACS data is not provided for all occupations in this report. For many occupations the sample sizes are small, lowering statistical reliability. This section only appears for occupations where ACS data was evaluated.

Schools offering training and number completing

Raw data came from the Integrated Postsecondary Education Data System (IPEDS) and analysis is from the Center for Workforce Research and Information (CWRI). Completer data is for postsecondary education programs that participate in the federal student loan program (programs with IPEDS data will have financial aid options for students). Continuing and adult education programs are not included in IPEDS data or this report.

Outlook

Employment projections for each occupation are provided and the broad factors affecting supply and demand are addressed. The discussion on the national employment outlook for each occupation was taken directly from the BLS' OOH. Discussion of Maine's employment outlook and other analyses is from CWRI.

Contents

Executive Summary

The health sector plays a central role in the economy. In addition to being a provider of essential services, the sector represents nearly 106,000 jobs and $4.4 billion in annual payroll, making it the largest segment of the economy in terms of employment and wages. The health sector has also contributed to job growth in a significant and steady fashion. Since 2000, more net jobs were generated than in all other sectors combined; and barring a slight decline in 2010, employment increased every year for two decades. Going forward, an aging population, heightened attention on preventative care and technological innovations should continue to support strong demand for health services.

The employment outlook for healthcare jobs is particularly bright. In Maine, jobs for healthcare practitioners and support workers are projected to grow a combined 17 percent from 2010 to 2020, higher than for all other major occupational groups and well above the six percent increase expected for all occupations. Employment within hospital settings is expected to increase much faster than average and account for the majority of job opportunities. Occupations with the strongest growth prospects—diagnostic sonographers, respiratory therapists and radiologic technologists—are employed primarily at hospitals.

In addition to new growth, employment opportunities will arise from the need to replace those that retire or transition into different occupations. Over the coming decade, nearly one out of five currently working in the health workforce may need to be replaced, and in some occupations—optometry, dietetics and nutrition, psychology, dentistry—approximately one out of three. Given the age structure of the workforce, high replacement needs are not surprising. Two-thirds of dentists and psychologists are above 50 years old, as are nearly half of the practitioners in a variety of other occupations, including pharmacists, nurse practitioners and licensed practical nurses. Overall, job opportunities due to replacement needs are expected to exceed those resulting from growth.

Responding to strong demand, Maine's education capacity in health professions increased. In 2011, the number of graduates from postsecondary healthcare programs was 33 percent above the level in 2007. Most of the increase was due to growth in associate's degrees and certificates awarded, which expanded nearly 40 and 90 percent, respectively. Bachelor and graduate degrees awarded increased 12 percent, much slower than for other credentials primarily due to limited growth in nursing programs, which were capacity constrained by a dearth of doctoral prepared professors. More recently, new pharmacy, medical and dental school programs have begun, and these will be an important source of supply of higher level professionals in coming years.

Although overall education capacity increased, some areas of instruction have fewer program completers than projected annual job openings for the corresponding occupation. While job seekers should find these conditions favorable, employers may experience difficulties filling positions. Barring an economic downturn and an associated decline in job opportunities, closing the gap will require strategies for increasing program capacity, retaining existing workers for longer, increasing in-migration, or other means for enhancing supply.

In addition to overall supply, the distribution of practitioners plays a critical role in access to health services. Maine faces a number of challenges on this front. According to the U.S. Department of Agriculture's Economic Research Service, 41 percent of the state's population lives in rural

areas that have lower incomes, higher rates of poverty and unemployment, and lower levels of educational attainment. Recruiting and retaining providers in these regions is often challenging. Maine's urban areas are home to the large hospital systems and a majority of the health workforce. These areas offer better access to services and higher numbers of health workers per population. Cumberland County has 50 percent more health workers per thousand residents than the state average, and Kennebec County 20 percent more. More rural counties—Franklin, Oxford and Washington, in particular—have 20 to 50 percent fewer health workers per population.

Highlights from Select Occupational Profiles

Employment of registered nurses (RNs) increased 29 percent from 2000 to 2010 and is projected to increase another 20 percent through 2020. A range of factors including technological advances, an aging population and heightened attention on preventative care are driving growth. While an associate degree is the minimum education requirement for licensure in Maine, demand for nurses with higher levels of educational attainment is expected to grow faster than average as care giving becomes more complex, the range of competencies necessary to master increases, and the role of RNs within the health delivery system expands. To better equip nurses to meet these increased responsibilities the Institute of Medicine recommends that the proportion with bachelor's degrees be increased to 80 percent by 2020. Recent data indicates that 55 percent of Maine's RNs meet this recommendation.

Growth in the number of nursing graduates has been limited, raising concerns about the future supply of those with a Bachelor of Science in Nursing (BSN) credential. Hospitals represent the majority of RN hiring demand and are large enough to absorb Maine's entire yearly supply of BSN graduates. A limited pool of doctoral-prepared teaching faculty and steep competition for these professionals from higher paying industry employers has been a barrier to capacity growth. Recruiting and retaining nurse faculty with masters and PhDs has been particularly difficult for Maine's higher education institutions.

There were an estimated 4,000 physicians and surgeons working in Maine in 2010—an average number for a New England state (per thousand population) but 36 percent higher than that of the nation (per thousand population). Distribution is highly concentrated, with more than 40 percent employed in Cumberland County, leaving a disproportionately low share of practitioners in some rural areas.

Demographics may play an increasingly large role in the supply and availability of physicians and surgeons. Forty-four and 17 percent of practitioners are above 50 and 60 years old, respectively. American Community Survey data indicates that practitioners above 60 years old were less attached to the workforce and worked fewer hours per week compared to younger practitioners. According to current employment projections, 20 percent of the workforce may retire over the ensuring decade. The University of New England's College of Osteopathic Medicine and the TUSM-MMC medical school program will be important sources of supply, giving newly trained doctors the option to live and practice in the state where they've trained. The medical residency programs will also be instrumental in bringing more practitioners to rural and underserved areas. In addition, physician assistants (PAs) and advanced practice nurses could see expanded roles in primary care, particularly as more physicians focus on specialized areas of medicine. Employment of PAs in Maine has already increased 40 percent over the past 10 years.

There were nearly 600 dentists practicing in Maine in 2010, which was essentially flat with the level in 2004. Relative to the nation, Maine's dentist workforce is comparable in size (per thousand population) but older. With two-thirds of the workforce over 50 years old—and one-third over 60—there is a sizeable need for a pipeline of practitioners with the skills and education necessary to replace those that may retire in coming years. For Maine, this means recruiting and retaining more than 170 dentists just to fill the gap of those that may exit the workforce in the next decade. The University of New England's College of Dental Medicine, which is expected to have first graduates in 2017, will be an important source of newly trained practitioners. The program will also be instrumental in bringing more dentists to rural and underserved areas. Dentists are also increasing the utilization of hygienists, assistants and technology in order to see more patients and enhance productivity.

Technologists and technicians enjoy a particularly bright job outlook. These are among the fastest growing health occupations in Maine and in most cases job opportunities are expected to increase faster here than for the nation. These occupations have a high share of employment within hospitals, which fosters above average rates of growth. Education capacity—as measured by average annual program completers—is below projected job openings in several areas of instruction, including medical and clinical lab technologists, medical and clinical lab technicians and diagnostic medical sonographers.

Direct care workers represent a large and growing segment of the workforce. An aging population and pressure to contain costs of caring for the elderly should drive increased demand for these services. Job prospects for home health and personal care aides are particularly bright. These large and rapidly growing occupations are expected to add many jobs.

The low pay and high emotional and physical demands in direct care occupations can make recruiting and retaining employees difficult. Nearly half the workforce has education credentials above the minimum required for the occupations, which may also contribute to turnover. Recruiting and retaining workers may become more difficult during periods of stronger economic growth, as the number of available employment opportunities in other sectors and occupations increases.

In 2010 there were 22 percent fewer clinical, counseling and school psychologists per thousand residents practicing in this state compared to that of the nation. Nearly 70 percent of Maine's psychologists (all types) were over 50 years old. The number graduating from Maine programs with the doctoral credentials necessary to practice in the field is well below projected job openings. Barring an unexpected decline in demand, closing the gap will require recruiting psychologists from other states and developing strategies to retain existing practitioners for longer.

Although the outlook for health occupations in Maine is bright, the national job picture is even stronger. Nationally, health occupational employment is expected to increase 29 percent, well above the 17 percent rate projected for Maine primarily due to higher population growth forecasts, which foster greater overall economic and industry growth.

Data Sets and Limitations

Data on health occupations is available from a range of sources. The data utilized in preparing this report is from publicly available state and federal data bases from the Maine Department of Labor, Bureau of Labor Statistics, American Community Survey and the National Center for Education Statistics. We did not have access or resources to utilize other important data sets including state licensure information, job vacancy and adult and continuing education data. Accordingly, readers are encouraged to review additional sources of information in conjunction with this report to develop a comprehensive view of the sector and its occupations.

The scope of analysis is a function of the data that was available when the report was prepared. The data sets utilized are designed to provide estimates for the number employed, wages paid and projected job opportunities in a variety of occupations; measure the demographic and economic characteristics of the population and population sub-groups; and identify the postsecondary institutions offering education programs by area of study and the number completing. From this we are able to size the current workforce, measure the state's capacity to increase supply for a variety of occupations and compare this with projected annual job openings. We add context to this by evaluating the demographics, hours worked and educational attainment for several occupations.

It is critical for users to understand the limitations of each data set. The major data sets used and their pertinent limitations are as follows:

Occupational Employment Statistics (OES)

The Occupational Employment Statistics (OES) program produces employment and wage estimates annually for over 800 occupations. Estimates for Maine are produced by the Center for Workforce Research and Information (CWRI) as a collaborative effort with BLS. These estimates are based on surveys of employers and are available for the nation as a whole, for individual states, and for metropolitan and nonmetropolitan areas. OES data is frequently cited as the most popular labor market information program within the United States and is the best and most current source of wage and employment data. OES data used in this report is primarily from 2012.

Definitions & limitations:

- Employees are part-time and full–time workers who are paid a wage or salary. The data does not indicate whether an employed person is full or part-time. OES data is a count of jobs, not persons, based on place of work (as opposed to residence).
- Self-employed persons are not included in the estimates, nor are owners and partners in unincorporated firms, household workers or unpaid family workers.
- OES data are routinely suppressed due to USBLS confidentiality and data quality requirements. In this report, suppressed it is shown as "n/a" for not available.

- OES data is not designed for time series analysis. Changes in occupational definitions, labor force attachment rates and in the timing of the surveys can make comparisons between two different points in time problematic, particularly at the detailed occupational level and for smaller occupations. At the same time, major occupational groups and large occupations have higher degrees of statistical reliability which mitigates some of the concerns. With these factors and caveats in mind, for occupations where the data is more statistically reliable, some trend analysis is provided in order to provide context of the labor market dynamics in a profession.

Employment Projections Data

CWRI produces 10 year employment projections for every Maine industry and over 800 occupations as a collaborative effort with BLS. These forecasts are produced every other year and currently address the 2010 to 2020 period. Occupational projections estimate the number of job openings due to new growth and replacement needs. Also, because these estimates include the self-employed, they can be used to estimate total employment in the base year (2010) for occupations where self-employment is important. The drawback is that this is older data than what is available with OES (2010 vs. 2012).

Readers are encouraged to utilize multiple sources of information, including employment projections data, when assessing potential hiring demand. All data has limitations and by evaluating multiple sources the range of uncertainty may be lowered. Employment projections methodology and important assumptions are highlighted below.

- Projections are made for the total number of job openings expected over the 10 year period, and then spread evenly over each year. In reality, job openings tend to occur in lumps.
- Total annual job openings are considered a minimum number of the workers that need to be trained each year. This is due to the fact that not all who complete training enter the occupation and replacement openings are based on the net as opposed to gross flow of workers in and out of an occupation.
- Projections data is only available at the state level.
- Projections for occupations with a high component of self-employed require more judgment and subjectivity.
- The projection methodology is a top-down process, beginning with macroeconomic assumptions and concluding with industry and occupational estimates through the use of econometric models and analysis of other variables. For healthcare specifically, the projections assume the status quo in terms of the way healthcare is organized, delivered and paid for. The projections do not incorporate assumptions about how the health delivery system may change as a result of the Affordable Care Act (ACA), as the regulations were not complete when the estimates were created.
- Replacement job openings are the number of projected openings resulting from workers retiring from or permanently leaving an occupation. Estimates are based on analysis of U.S. occupational employment data for 13 age cohorts over five-year periods. To the extent that occupational retirement patterns in Maine differ from the

nation, a bias may result. In several occupations CWRI provides a sensitivity analysis for users to better understand the impact that higher replacement rates would have on the number of expected job openings in Maine.

American Community Survey (ACS)

The ACS is a survey that provides estimates of the demographic, economic, household and social characteristics of the population. Data is available for states, smaller geographies and population subgroups. In order to produce reliable state and population subgroup information, the ACS combines data collected over three- and five-year periods, which increases statistical reliability.

CWRI analyzed the 2006 – 2010 ACS. This data reflects information collected over the entire five year period and should not be understood as being reflective of a single year (such as the midpoint of the survey). Due to resource constraints, ACS data was analyzed for a limited number of occupations.

Large confidence intervals often result when analyzing occupational data at a state level. This is particularly true for smaller occupations or when data is analyzed by demographic, socio-economic or other household characteristics—which results in smaller sample sizes. High margins of error make interpreting the data more difficult. When large confidence intervals and high margins of error occurred we opted not to publish data in this report.

Current Population Survey (CPS)

The CPS is a monthly survey of households conducted by the Bureau of Census for the Bureau of Labor Statistics. It provides a comprehensive body of data on the labor force, employment, unemployment, persons not in the labor force, hours of work, earnings, and other demographic and labor force characteristics. The CPS was used in this report to identify the national median age for a variety of health occupations.

Census data

Census data was used for national and state population estimates. Maine population estimates and projections were gathered from the Maine Office of Policy and Management.

Integrated Postsecondary Education Data System (IPEDS)

IPEDS—the primary source of postsecondary education data in the United States—was used to determine the education offerings and credentials conferred for different areas of healthcare instruction. The Higher Education Act of 1965 requires schools participating in the federal student loan program submit completer data for programs leading to a formal reward to the National Center of Education Statistics (NCES). This data is available to the public through IPEDS. For this report, IPEDS data was reviewed for the 2007 to 2011 academic years only.

The primary strength of IPEDS data is that schools are compelled by law to submit data to NCES, ensuring a very high response rate. Limitations stem from the fact that schools self-report program and completer data and these statistics are typically not verified IPEDS. Data quality is only as good as that which is submitted by schools.

- Each school has the responsibility to self-report for each program that leads to 'a formal reward.' While IPEDS reviews data from each institution, they do not review each school's website to ensure that data is submitted for relevant programs.
- Schools have discretion in choosing which classification of instruction program (CIP) best characterizes their programs of training. In some cases programs may be accidentally misclassified, and in some situations genuine ambiguity exists as to which CIP best characterizes the program. These issues can result in a miscounting of program completers by area of instruction. One example is the Medical Lab Technology program offered at the University of Maine at Augusta (UMA) and Presque Isle (UMPI). Although this is a joint program, each campus submits data to IPEDS using different a CIP. In another case, a radiography program was submitted with the CIP for radiation therapy. Since data is self-reported and not verified, it often requires the help of local educators and people familiar with the programs to make the proper adjustments.

Additional limitations stem from the fact that some programs don't participate in the federal student loan programs and don't submit any data to IPEDS. The Maine Medical Center (MMC) School of Surgical Technology is one such program; annual completers from MMC outnumber all other surgical tech programs in Maine, but this data is not in IPEDS. While we made every attempt to capture information from programs such the one at MMC, the school and completer data presented should not be considered exhaustive. Moreover, IPEDS doesn't include adult and continuing education programs, nor did we have access to this data. Thus, the education data provided in this report represents an important segment of Maine's health education programs, but not the entire set. The absence of adult and continuing education information results in an incomplete picture of the state's health education programs.

Exclusions:

Some of the data sources that were not utilized in preparing this document are found below. Readers with access to this data may have different statistics and figures than what is presented in this report.

- State licensure data
- Adult and continuing education program data
- Financial aid data (while we didn't have access to financial aid data, readers may assume that if IPEDS data is available for a program, financial aid is also available).
- Health Practitioner Shortage Area Statistics
- Maine job vacancy survey data
- Longitudinal data
- Help-wanted job information

Stakeholder demand for additional data is high and broadening the range of information included could enhance future reports. Absent additional resources and better data availability, inclusion of these data may not occur.

Abbreviations

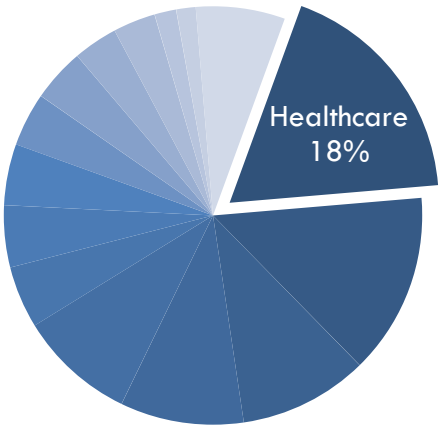
BLS	Bureau of Labor Statistics
MDOL	Maine Department of Labor
DHHS	Department of Health and Human Services
CWRI	Center for Workforce Research and Information
OES	Occupational Employment Statistics
ACS	American Community Survey
IPEDS	Integrated Postsecondary Education Data System
NCES	National Center for Education Statistics
SOC	Standard Occupational Classification System
OOH	Occupational Outlook Handbook (produced by BLS)
CPS	Current Population Survey
MMC	Maine Medical Center
CMMC	Central Maine Medical Center
TUSM-MMC	Tufts University School of Medicine - Maine Medical Center
n/a	Not available
RN	Registered Nurse
BSN	Bachelors of Science in Nursing
ADN	Associates Degree in Nursing
ACA	Affordable Care Act
NP	Nurse practitioner
CIP	Classification of Instruction Program

Introduction

Representing 18 percent of statewide employment and 19 percent of wages paid, healthcare is Maine's largest economic sector, in terms of employment and wages. On this basis, healthcare is larger in Maine than it is for the nation, where it represents 14 and 13 percent of employment and wages, respectively.

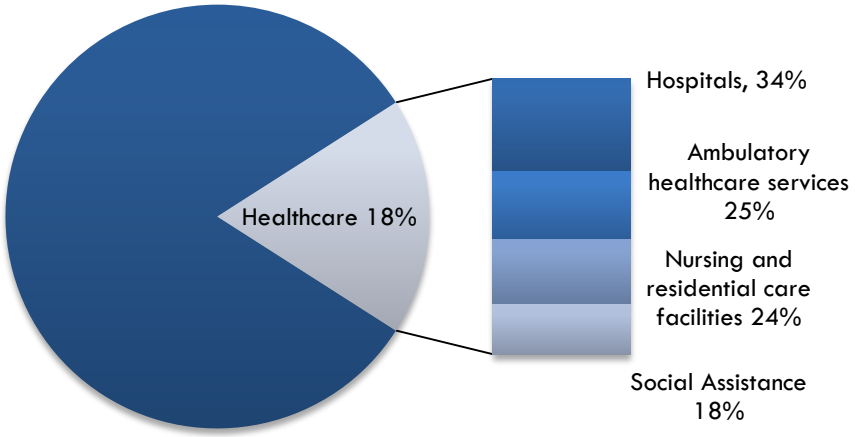
Healthcare is Maine's largest economic sector

Percent of total statewide employment, 2011



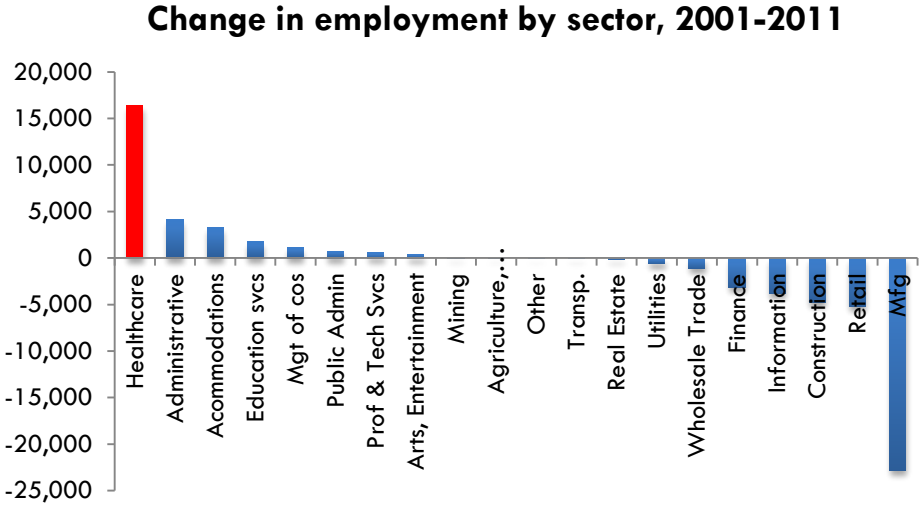
Approximately 105,000 people were employed in the sector in 2011—one third at hospitals; 25 percent in ambulatory healthcare services and the remainder at nursing and residential care facilities and in social assistance. These four industries comprise the health sector. Health sector industry employment is classified in more detail in Appendix I.

Maine health sector employment



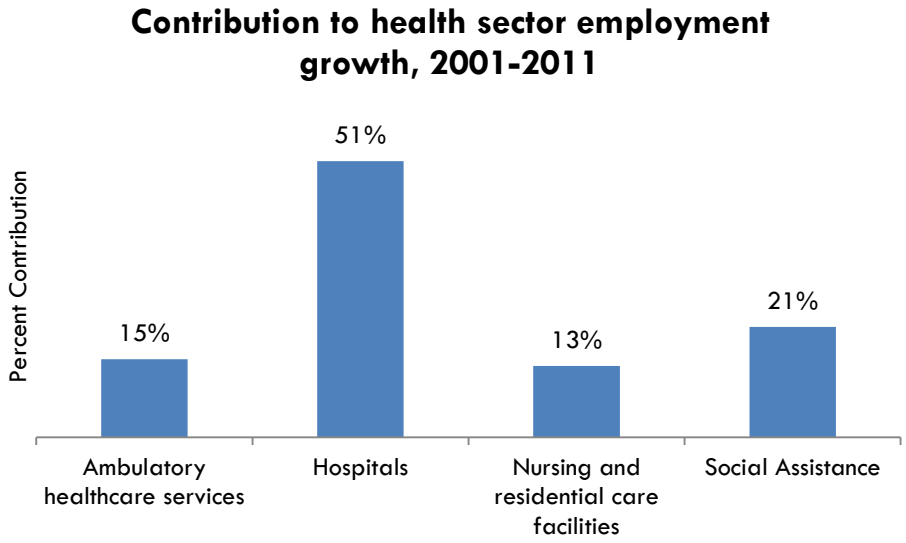
Employment growth has been consistent. With the exception of a few hundred job losses in 2010, employment increased every year since 1990. Few, if any other sectors have a track record of such consistent job creation.

Employment growth has also been significant, increasing 80 percent since 1990 and 19 percent from 2001 to 2011. More net jobs were produced in healthcare over this ten year period than in all other job producing sectors, combined.

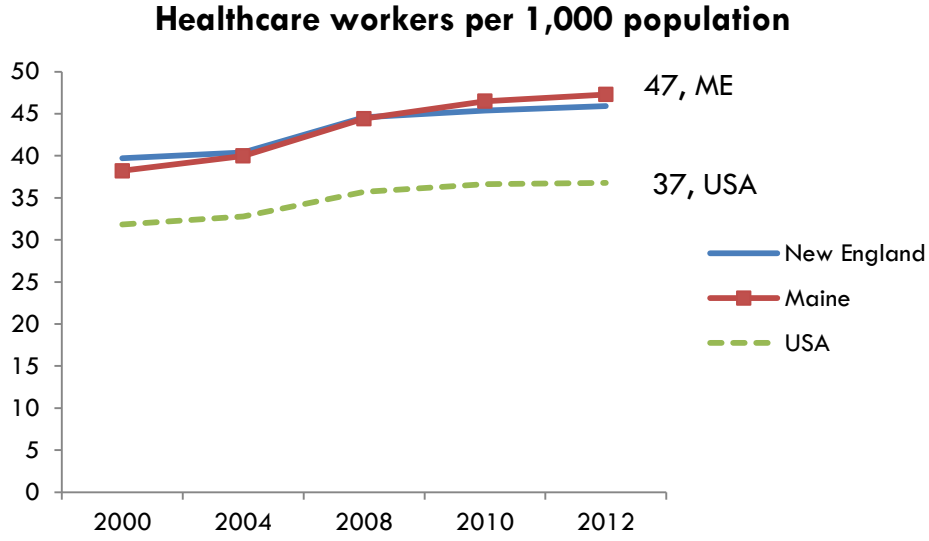


The hospital industry has been the primary driver of employment. From 2001 to 2011, hospital employment increased 32 percent and accounted for 50 percent of the total job gains.[4]

[4] These figures may be skewed by the trend in consolidation of physician offices by hospitals. While the ownership structure of physician offices should not change a hospital's total employment figures (unless the physician's office is closed and the employees are moved into the hospital setting), it is possible that once acquired, hospitals could report



Strong and consistent job growth has helped Maine sustain relatively high numbers of health workers per population. Maine and New England have historically had higher levels of health occupational workers per population than the nation.



Distribution of the workforce plays a critical role in the population's ability to access to health services. Maine faces a number of challenges on this front. According to the U.S. Department of Agriculture Economic Research Service, 41 percent of Mainers reside in rural areas and these populations have lower per capita incomes, higher rates of poverty and unemployment, and lower levels of educational attainment. Recruiting and retaining providers in these regions is often challenging. Maine's urban areas—which are home to the large hospital systems and a majority

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physician's office employees as employees of the hospital. This type of reporting error could have added a few percentage points to hospital employment growth over the last decade.

of the health workforce—offer better access and higher numbers of health workers per population. As seen in the table below, Cumberland County maintains a disproportionately large share of the workforce (31 percent) relative to its share of the population (21 percent), resulting in 50 percent more health workers per population than the state average, and Kennebec County has 20 percent more. More rural counties—Franklin, Oxford and Washington, in particular—have 20 to 50 percent fewer health workers per population.[5]

Distribution of Maine's Health Workforce

	Total Employment, Health Practitioners and Support Workers	Pct. (%) of Total	Pct. (%) of Population	Number of Health Workers per 1,000 Residents
Androscoggin County	5,670	9.0%	8.1%	53
Aroostook County	3,750	6.0%	5.3%	53
Cumberland County	19,770	31.4%	21.4%	70
Franklin County	910	1.4%	2.3%	30
Hancock County	2,220	3.5%	4.1%	41
Kennebec County	6,840	10.9%	9.2%	56
Knox County	1,680	2.7%	3.0%	42
Lincoln County	950	1.5%	2.6%	28
Oxford County	1,450	2.3%	4.3%	25
Penobscot County	8,080	12.8%	11.6%	53
Piscataquis County	870	1.4%	1.3%	50
Sagadahoc County	420	0.7%	2.6%	12
Somerset County	2,380	3.8%	3.9%	46
Waldo County	930	1.5%	2.9%	24
Washington County	1,190	1.9%	2.4%	37
York County	5,080	8.1%	15.0%	26
Total	**62,190**	**98.9%***	**100%**	**47**

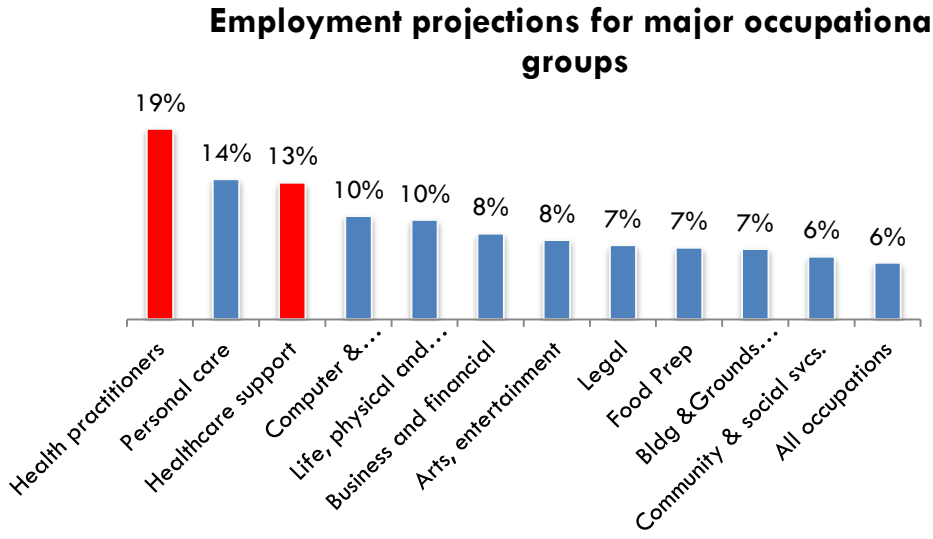
Employment figures shown here are for healthcare practitioners (SOC 29-0000) and healthcare support workers (SOC 31-0000).

*Some data is suppressed per BLS' data quality standards. In disaggregating the workforce by county we are able to account of 98.9% of employment.

[5] One caveat of this type of analysis is that residents in counties with a low share of employment may still have good access to health services—if they are living in close proximity to a hospital system in a neighboring county. This is true for residents of Sagadahoc County, or residents in the southern portions of Oxford and Franklin Counties. York County also has a low share of employment; we believe a much higher proportion of the health workforce resides here, but they are employed in neighboring counties and states.

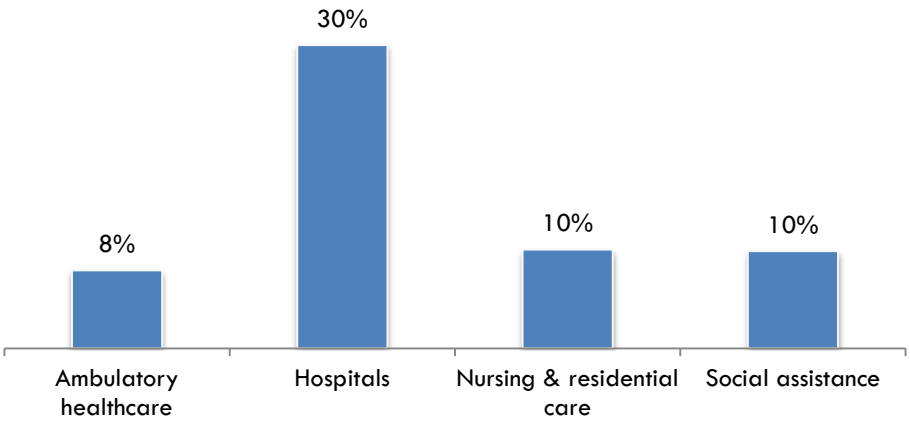
Strategies for promoting greater distribution include service conditioned loan forgiveness programs such as the Finance Authority of Maine's (FAME) Dental Education Loan Repayment Program, which provides loan repayment assistance for those practicing general dentistry in underserved areas. Innovative education and training programs that integrate rural practice into course curricula may also result in graduates practicing in rural regions. The Longitudinal Integrated Clerkship (LIC) program at TUSM-MMC places 3rd year students in a rural community or Portland for nine months where they participate in giving care to a core group of patients over time. The University of New England College of Dental Medicine has 4th year students participate in clinical practices in rural locations, and the Central Maine Medical Center (CMMC) Family Medicine Residency prepares young doctors to be a rural family physician. The CMMC program is unique to New England and only one of five in the Eastern U.S. According to data on the CMMC website, 75 percent of Rural Training Track graduates practice in rural areas.

Going forward, the job outlook remains bright. According to MDOL employment projections, which address the period from 2010 to 2020, health sector employment is expected to increase 16 percent, well above the six percent growth projected for all jobs. Within the sector, jobs for healthcare practitioners and support workers are expected to grow 19 and 13 percent, respectively. These growth rates are among the highest for all major occupational groups, as seen in the figure below.



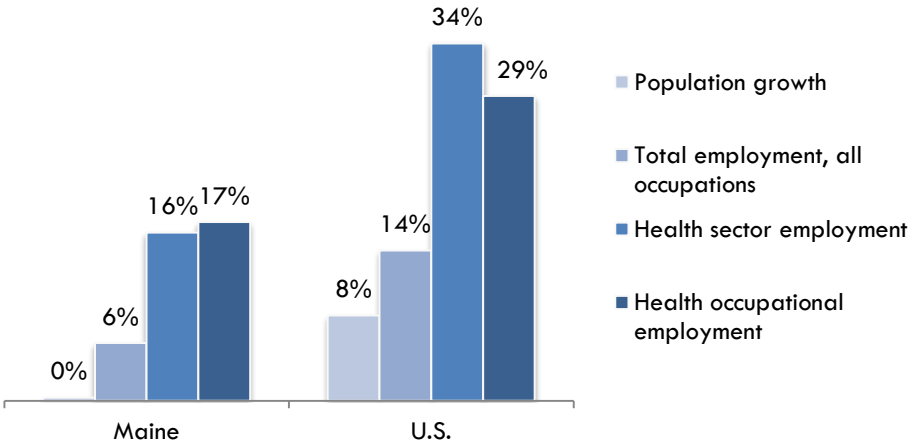
Similar to preceding years, hospitals are expected to contribute the majority of job opportunities. Hospital industry employment is expected to increase 30 percent, well above the rates for the other healthcare industries.

Employment projections for healthcare industries

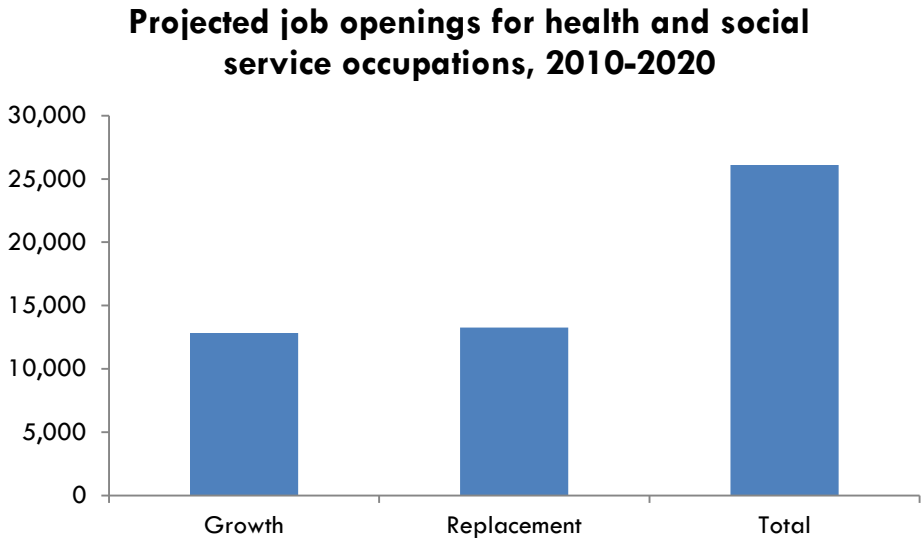


Nationally, the employment outlook for health occupations is even stronger, primarily due to higher population growth forecasts, which foster greater overall economic and industry growth.

2010 - 2020 projections: Maine vs. U.S.



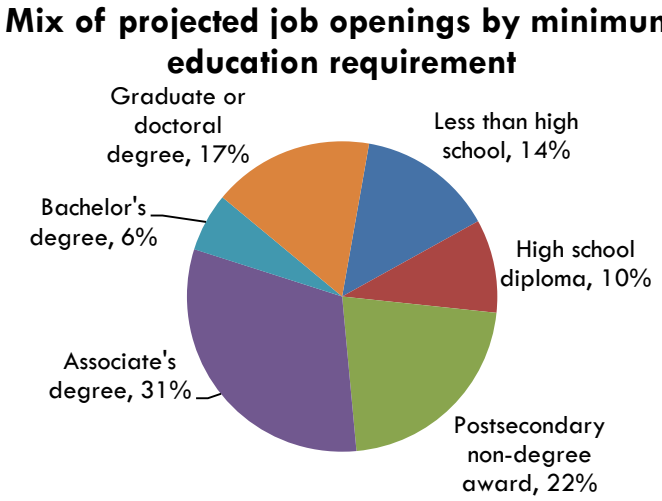
In addition to jobs resulting from new growth, employment opportunities will arise from the need to replace those that retire or otherwise permanently exit the occupation. The demographics of Maine's health workforce are such that nearly one out of five are expected to retire or transition into other occupations by 2020, creating more job openings from replacement needs than from new growth.



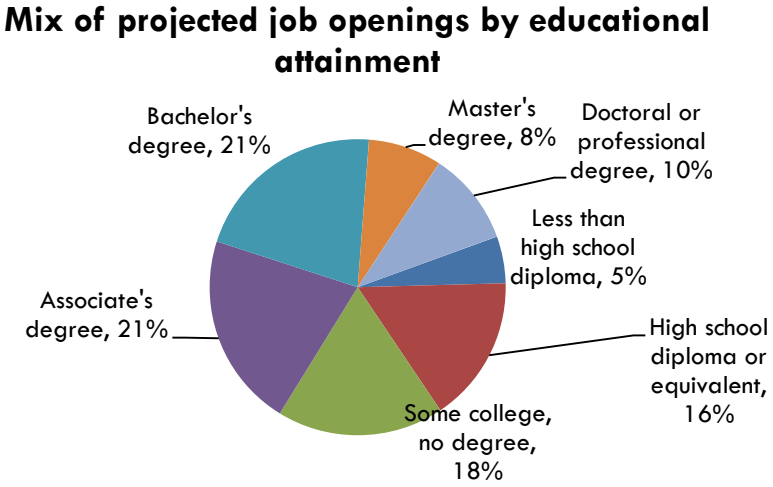
Job opportunities will be spread across a variety of occupations and are a function of an occupation's size, new growth opportunities and replacement needs. A ranking of occupations by projected annual job openings is provided below.

Projected annual job openings by occupation

Most of the job opportunities will require at least some college education. Slightly more than 20 percent will require at least a bachelor's degree.

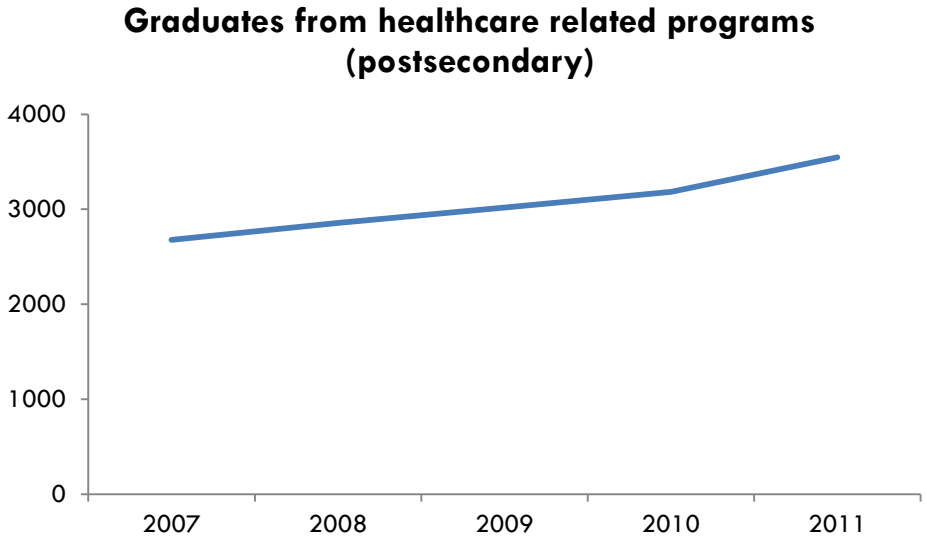


Looking at the mix of projected annual job openings by minimum education required (the chart immediately above) understates the potential demand for future education capacity. This is due to the fact that labor force participants often pursue education levels beyond the minimum in order to enhance their career opportunities. RNs are a prime example: while an associate degree is the minimum requirement for licensing, most practicing RNs have at least a bachelor's degree. The following chart looks at recent educational attainment for each health occupation and applies this to projected job openings.[6] This shows the potential demand for different credentials if those who fill the jobs of the future have the same education levels as those currently practicing in the field. Measured this way, 39 percent of those filling the jobs of the future will need a bachelor's degree or higher.

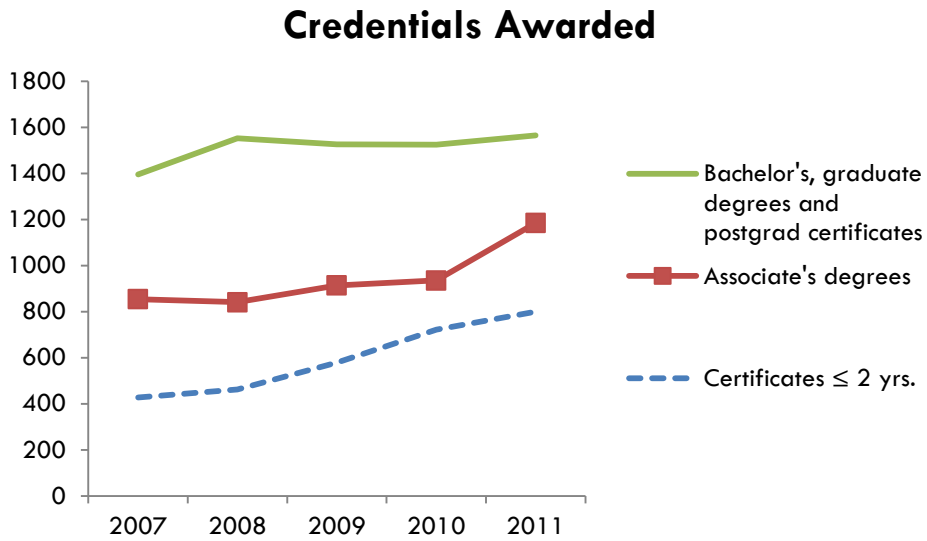


[6] This is educational attainment by occupation according to 2005 – 2009 American Community Survey 5 year data (U.S. data).

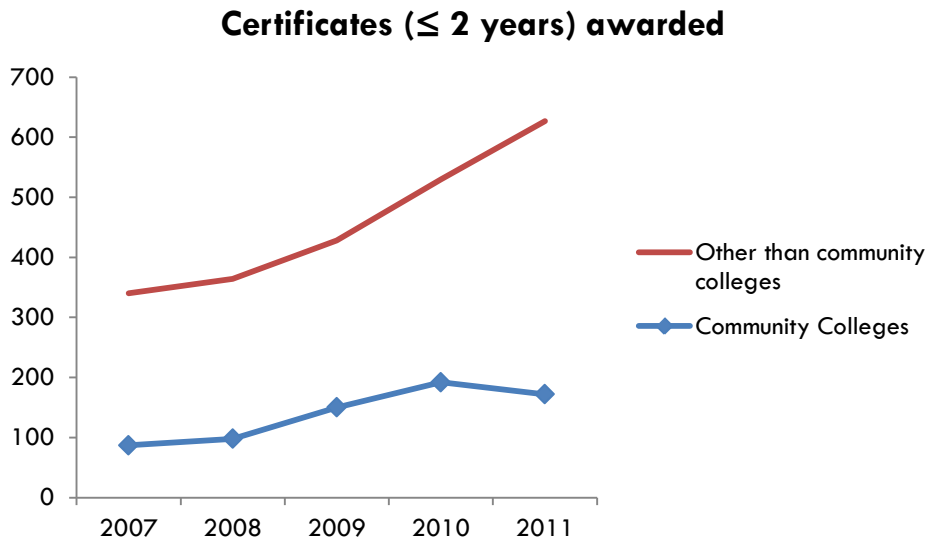
Responding to the health sector's rapid growth, Maine's education capacity increased and broadened. According to statistics from the Integrated Postsecondary Education Data System (IPEDS) and analysis from CWRI, there were 3,500 graduates from postsecondary healthcare programs in Maine in 2011, an increase of more than 30 percent from 2007. As noted earlier on the limitations of the data, IPEDS does not include adult and continuing education programs, and the absence of these statistics results in an incomplete picture of the state's health education programs.



Most of the increase was due to growth in associate's degrees and certificates awarded, which expanded nearly 40 and 90 percent, respectively. Bachelor and graduate degrees awarded increased 11 percent, much slower than for other programs primarily due to limited growth in nursing programs, which were capacity constrained by a dearth of doctoral prepared professors.



The near doubling of certificates awarded was primarily due to growth at schools other than community colleges. Certificates awarded from community colleges increased sharply as well, but off a much smaller base.



Other than community colleges includes Beal College, Intercoast Career Institute, Northeast Technical Institute, St. Joseph's College of Maine, Seacoast Career Schools, University of Maine at Augusta, Spa Tech Institute, Kaplan, and Pierre's School of Cosmetology.

Although overall education capacity increased, some areas of instruction have fewer program completers than the projected annual job openings for the corresponding occupation. While job seekers should find these conditions favorable, employers may experience difficulties filling positions creating upward pressure on wage rates. For consumers, lower availability of qualified health workers will result in diminished access to health services. Barring an economic downturn and an associated decline in job opportunities, closing the gap in these areas will require strategies for increasing program capacity, retaining existing workers for longer, increasing in-migration, or other means for enhancing supply. In areas of instruction where program completers exceed projected demand, job seekers will find the labor market more competitive while employers will enjoy a broader selection of candidates and less upward pressure on wage rates. Candidates with more education and experience will have an advantage in finding employment, all else equal. These dynamics will vary by region as labor supply and demand are unevenly spread throughout the state. Even with an abundance of program completers statewide, regional shortages may exist.

Nursing

Summary Statistics					
Workforce Characteristics	**Registered Nurse**	**Nurse Practitioner**	**Nurse Midwives**	**Nurse Anesthetist**	**Licensed Practical Nurse**
Employment (2012)	14,260	870	30	130	1,440
Employment per 1,000 population	10.7	0.65	0.02	0.10	1.1
Employment per population vs. U.S.	Above avg.	Above avg.	Average	Below avg.	Below avg.
Average starting wage (Maine)	$48,990	$68,190	$83,150	$124,170	$33,460
Median annual wage (Maine)	$59,790	$87,160	$93,230	$163,570	$40,990
U.S. median annual wage	$65,470	$89,960	$89,600	$148,160	$41,540
Median wage, all occupations in Maine	$32,590	$32,590	$32,590	$32,590	$32,590
Minimum Education Requirement	Associate's degree	Master's degree	Master's degree	Master's degree	Postsecondary non-degree
Job Growth Projections (2010-2020)*	20%	20%	20%	20%	8%
National Median Age	45	45.4	n/a	n/a	43.2
Top Industry of Employment	Hospitals	Ambulatory health care services	Hospitals	Hospitals	Nursing & residential care facilities
Licensing Board	Maine Board of Nursing	Maine Board of Nursing	Maine Board of Nursing	Maine Board of Nursing	Maine Board of Nursing

*Job growth expectations for RNs, nurse anesthetists, practitioners and midwives are grouped together by BLS.

Key points:

- Employment of RNs—Maine's largest health occupation—is expected to increase 20 percent through 2020. Demand for nurses with a bachelor's of science degree in nursing (BSN) should grow faster than average.
- Recruiting nurse faculty with masters and PhDs has been particularly difficult for Maine's higher education institutions, and this has limited the growth in nursing graduates. The number completing RN programs at Maine's schools has been flat (2007–2011).
- Although the number graduating with RN credentials each year exceeds MDOL's projected annual job openings, the number graduating with BSNs may be insufficient to meet demand.

- The New England region has 30 percent more RNs per thousand residents compared to the nation. Maine has an average number of RNs per population compared to other states in the region (but nearly 30 percent more than that of the nation).

29-1141 Registered Nurses

Occupation description

Assess patient health problems and needs, develop and implement nursing care plans, and maintain medical records. Administer nursing care to ill, injured, convalescent, or disabled patients. May advise patients on health maintenance and disease prevention or provide case management. Licensing is required. Includes Clinical Nurse Specialists. Excludes "Nurse Anesthetists" (29-1151), "Nurse Midwives" (29-1161), and "Nurse Practitioners" (29-1171).

Illustrative examples: Coronary Care Unit Nurse, Hospice Registered Nurse, Psychiatric Nurse

Education requirements

Nationally, registered nurses usually take one of three education paths: a bachelor's of science degree in nursing (BSN), an associate's degree in nursing (ADN), or a diploma from an approved nursing program. In Maine there are no diploma programs for RNs. Licensure of RNs and advanced practice nurses is governed by the Maine Board of Nursing.

All programs include supervised clinical experience in hospital departments such as pediatrics, psychiatry, maternity, and surgery. Bachelor's degree programs usually include more training in the physical and social sciences, communication, leadership, and critical thinking, which is becoming more important as nursing practice becomes more complex. They also offer more clinical experience in nonhospital settings. A bachelor's degree or higher is often necessary for administrative positions, research, consulting, and teaching.

Employment & Wages

In 2012 there were more than 14,000 RNs employed in Maine earning a median annual wage of nearly $60,000. Although the median wage was less than the national median, this is still a relatively high paying occupation, offering remuneration well above the average for all jobs in this state. Three industries—hospitals, ambulatory health care and nursing and residential care facilities—employed nearly 90 percent of RNs.

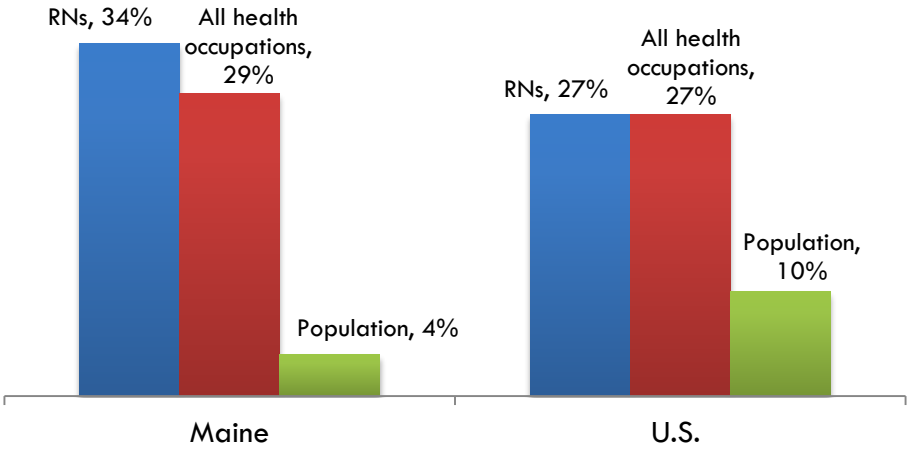
2012 Employment & Wage Statistics

	Average Employment	Where are they Employed?	What do they Earn (Median)?
Registered Nurses	**14,260**		**$59,790**
Hospitals		63%	$61,630
Ambulatory Health Care Services		13%	$59,110
Nursing and Residential Care Facilities		11%	$52,720

Source: 2012 Occupational Employment Statistics, CWRI

RN employment increased 34 percent from 2000 to 2012, above the 29 percent increase for all health occupations and well above Maine's 4 percent population increase. Nationally, the RN workforce increased 27 percent, in-line with the increase for all health occupations and above the 10 percent population increase. In comparing RN employment with prior periods it is important to note that the SOC changed the way RNs are coded in 2012. Prior to 2012, RNs (29-1111) included advance practice nurses (nurse anesthetists, nurse practitioners, nurse midwives). Beginning in 2012 advance practice nurses are classified separately. In order to compare 2012 RN data with previous years, advance practice nurses are added back into 2012 RN employment.

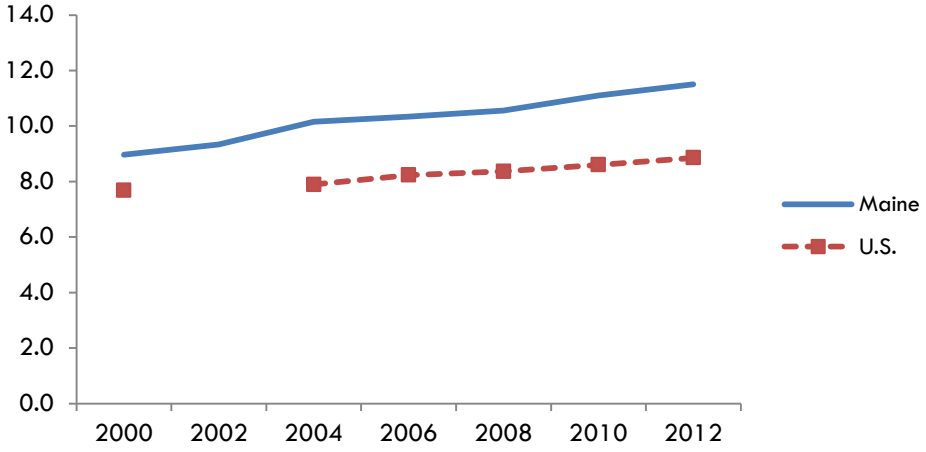
Employment and population growth, 2000 - 2012



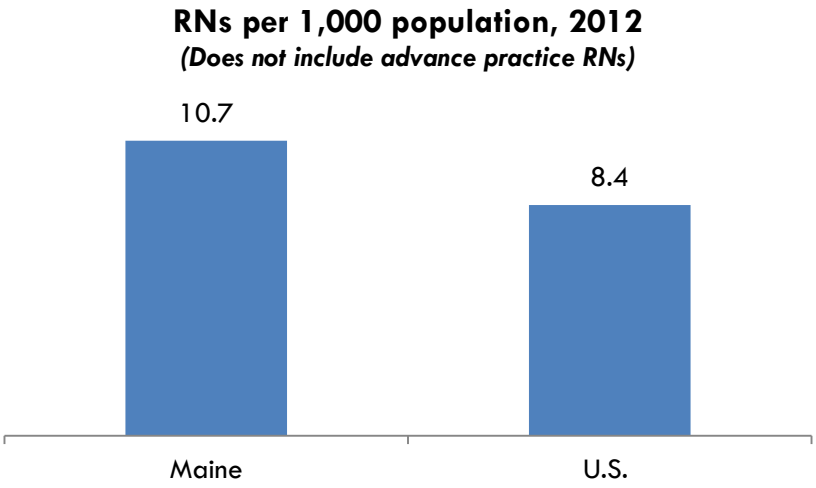
Maine has historically had more RNs per thousand residents than the nation. In 2000, Maine had 17 percent more RNs per thousand residents than the nation; in 2012, 30 percent more. Note: these figures include advance practice RNs.

Employed RNs per 1,000 Population

(includes advance practice nurses)



Excluding advance practice nurses, Maine had 10.7 RNs per thousand residents in 2012, 28 percent more than the U.S.



Maine's relatively high number of nurses per population has a regional context. New England has historically been the U.S. region most reliant on healthcare employment, and this is reflected in higher numbers of nurses per population. As seen in the table below, the number or RNs per thousand residents in Maine are comparable to that of New England.

RNs per 1,000 population, 2012		
	Employed RNs	Employed RNs per 1,000 residents
Massachusetts	79,570	12.0
Rhode Island	11,840	11.3
Maine	**14,260**	**10.7**
Vermont	6,310	10.1
Connecticut	34,820	9.7
New Hampshire	12,530	9.5
New England	159,330	10.9
U.S.	2,633,980	8.4

Source: CWRI analysis of OES & Census data

Maine's relatively high numbers of RNs also reflect a trend of incorporating better educated and more skilled nurses into patient care within the health delivery system. Whereas other states have more extensively used nurses with lower levels of licensure, namely licensed practical nurses (LPNs), Maine was at the forefront in terms of increasing utilization of RNs. Thus, while RN employment increased rapidly from 2000 to 2012, LPN employment declined 41percent. And while Maine has a higher number of RNs per population, this is balanced by

50 percent fewer LPNs (per population). On a combined basis, Maine has 10 percent more nurses (RN and LPN) per thousand residents than the nation.

Distribution of employment

The distribution of RN employment is uneven and concentrated around the state's large hospital systems. As seen in the following table, Cumberland, Penobscot and Kennebec Counties maintain a disproportionately large share of employment (59 percent) relative to their share of the population (42 percent), resulting in 30 to 60 percent more RNs per population than the state average. More rural counties tend to have a much lower share of employment.[7]

This concentration of RN employment is part of a larger trend of jobs becoming more geographically centralized in Maine. The decline in manufacturing jobs in many outlying communities has left a lack of economic opportunity in these areas. At the same time, employment and economic activity have become more concentrated in the state's more densely populated regions. This changing economic landscape presents a challenge to achieving a distributed healthcare workforce.

Distribution of Employment

	Number Employed	Pct. (%) Total RN Employment	Pct. (%) of Total Maine Population	Number Employed per 1,000 Population
Androscoggin County	1,430	10%	8%	13.3
Aroostook County	740	5%	5%	10.4
Cumberland County	4,650	33%	21%	16.4
Franklin County	360	3%	2%	11.8
Hancock County	360	3%	4%	6.6
Kennebec County	1,670	12%	9%	13.7
Knox	n/a	n/a	3%	n/a
Lincoln County	180	1%	3%	5.3
Oxford County	340	2%	4%	5.9
Penobscot County	2,020	14%	12%	13.1
Piscataquis County	160	1%	1%	9.3
Sagadahoc County	50	0%	3%	1.4
Somerset County	430	3%	4%	8.3
Waldo County	260	2%	3%	6.7
Washington County	260	2%	2%	8.0
York County	1,070	8%	15%	5.4
Total	**14,260**	**98%**	**100%**	**10.7**
U.S.				**8.4**

Source: CWRI analysis of OES & Census data

[7] Distribution of employment is not a perfect measure for access to healthcare services, as some counties with a low share of RN employment have good access to hospitals located in neighboring counties. This is true for residents of Sagadahoc County, for example.

Knox County data is suppressed per BLS confidentiality standards.

Demographic, economic and social characteristics of the workforce

Demographic profile

The RN population in Maine is predominantly female (93 percent) and white (98 percent). For reference, 95 percent of the overall population in Maine is white. The national nursing population has a comparable gender mix (91 percent female) but is more racially diverse (76 percent white).

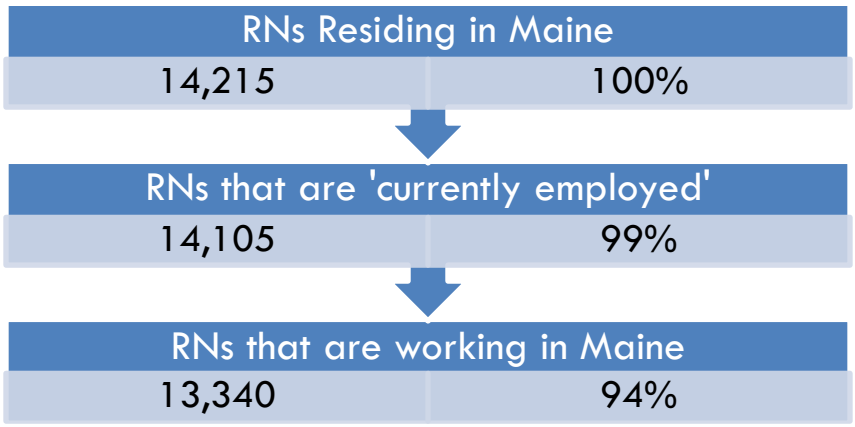
Demographic Characteristics of the Nurse Population

	Total		Race and Ethnicity			
			White alone		All Other	
	Maine	U.S.A.	Maine	U.S.A.	Maine	U.S.A.
Total	14,215	2,639,750	13,940	1,997,830	275	641,920
Percent	100%	100%	98%	76%	2%	24%
Male	7%	9%	7%	6%	0%	3%
Female	93%	91%	91%	70%	2%	22%

Source: EEO Tabulation 2006-2010 ACS file, CWRI

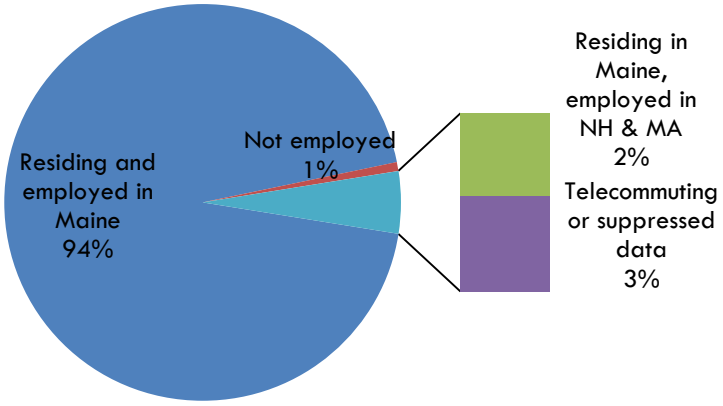
Employment status

Of the RNs residing in Maine, nearly all (99 percent) were working at the time of survey and 94 percent were working in state (as opposed to other states).



Nearly half of those working out of state resided in York County and were employed in New Hampshire (NH) and Massachusetts (MA). Nearly one out of every five nurses residing in York County was employed in other states. A small number of RNs living in NH and MA—45—were employed in York County.

RN Residence and Place of Work



Age distribution

Forty-three and 12 percent of the RN workforce in Maine were above 50 and 60 years, respectively. Nationally, 38 and 10 percent were above 50 and 60 years. The U.S. nursing population has a greater proportion of younger nurses (36 percent below 40 years compared to 27 percent for Maine). Comparing age distribution by gender, Maine has a much higher proportion of male RNs above 50 years than the nation (44 versus 31 percent).

Age Distribution, RNs Working in Maine

	Total	%	Male	%	Female	%
16 to 39 years	3,555	27%	290	29%	3,265	26%
40 to 44 years	1,855	14%	95	10%	1,760	14%
45 to 49 years	2,130	16%	155	16%	1,975	16%
50 to 54 years	2,195	16%	100	10%	2,095	17%
55 to 59 years	1,930	14%	185	19%	1,745	14%
60 to 69 years	1,505	11%	140	14%	1,365	11%
70 years and over	170	1%	10	1%	160	1%
Total	13,340	100%	975	100%	12,365	100%

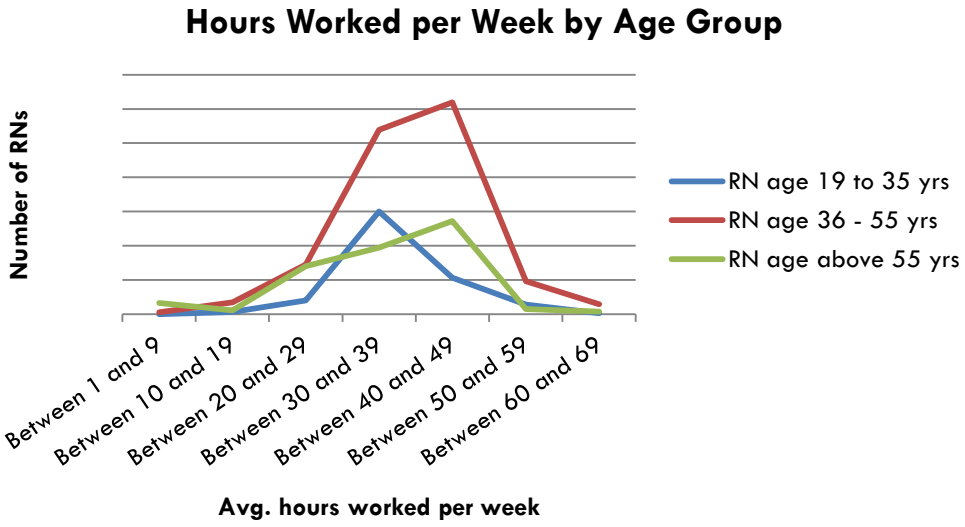
Source: EEO Tabulation 2006-2010 ACS file, CWRI

Age Distribution, RNs Working in U.S.A.						
	Total	%	Male	%	Female	%
16 to 39 years	899,970	36%	91,430	41%	808,545	35%
40 to 44 years	318,350	13%	32,555	15%	286,095	12%
45 to 49 years	370,355	15%	31,105	14%	339,450	15%
50 to 54 years	393,620	16%	30,950	14%	362,675	16%
55 to 59 years	299,625	12%	23,545	11%	276,080	12%
60 to 69 years	216,920	9%	12,770	6%	204,150	9%
70 years and over	23,950	1%	915	0%	23,035	1%
Total	2,522,790	100%	223,270	100%	2,300,030	100%

Source: EEO Tabulation 2006-2010 ACS file, CWRI

Average workweek

Hours worked per week by Maine's oldest nurses were in line or above that of younger cohorts. Of the RNs above 55 years old, 40 percent worked between 40 and 49 hours per week, on average.



Educational attainment

Educational attainment for RNs in Maine is comparable to the U.S. average.[8]

Educational Attainment, Maine RNs			
	Total	**Male**	**Female**
Not a HS graduate	**0%**	0%	0%
HS graduate	**3%**	3%	3%
Some college or Associate	**45%**	49%	44%
Bachelor's degree	**43%**	33%	43%
Graduate or professional	**10%**	15%	10%
Total	**100%**	**100%**	**100%**

Source: EEO Tabulation 2006-2010 ACS file, CWRI

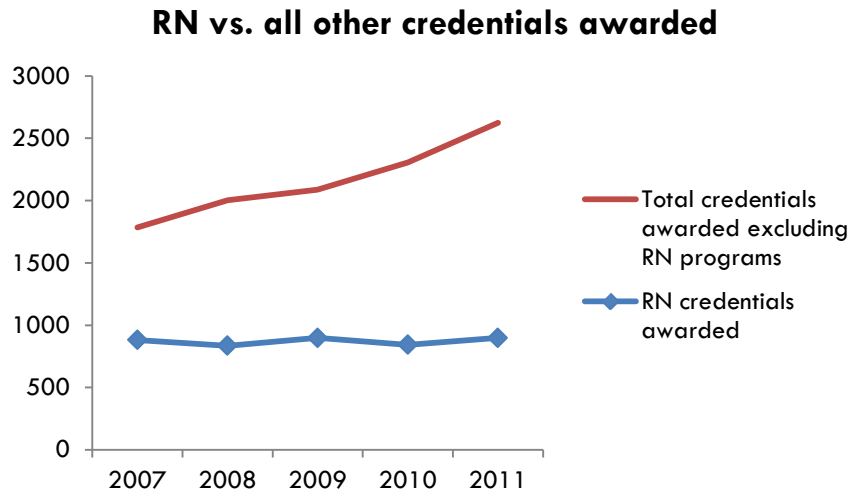
Educational Attainment, U.S. RNs			
	Total	**Male**	**Female**
Not a HS graduate	**0%**	0%	0%
HS graduate	**1%**	1%	1%
Some college or Associate	**44%**	39%	45%
Bachelor's degree	**45%**	48%	45%
Graduate or professional	**10%**	12%	10%
Total	**100%**	**100%**	**100%**

Source: EEO Tabulation 2006-2010 ACS file, CWRI

Schools offering training and number completing

From 2007 through 2011 there were 800 to 900 students graduating from Maine's nursing programs each year, with nearly half earning bachelor degrees. Overall growth in RN credentials awarded has been flat, in part due to difficulties recruiting masters and doctoral prepared teaching staff. By contrast, all other credentials awarded for postsecondary health related instruction increased nearly 50 percent.

[8] These statistics are very similar to nursing workforce survey data made available by OMNE, which show 54 percent of Maine's RNs as having at least a baccalaureate degree; *Update Maine Nursing Workforce Data*, OMNE Annual Meeting October, 2013, Lisa Harvey-McPherson, Susan Sepples.



Fourteen different schools offered nursing programs from 2009 through 2011; eight offered associate degree programs; 7 offered bachelor degrees; five offered master's level programs and one offered a doctoral program. Slightly more than half of the undergraduate degrees conferred were bachelor degrees.

Education Programs & Annual Graduates

School	CIP Code	CIP Title	Completer Title	2007	2008	2009	2010	2011
Associate's Degree								
Central Maine Community College	513801	Registered Nursing/ Registered Nurse	Associate's Degree	23	21	25	27	30
Eastern Maine Community College	513801	Registered Nursing/ Registered Nurse	Associate's Degree	22	27	28	24	27
Eastern Maine Community College	511601	Nursing - Registered Nurse Training	Postsec. Awards/Cert./ Diplomas; 2-4yrs.		1			
Kennebec Valley Community College	513801	Registered Nursing/ Registered Nurse	Associate's Degree	38	32	35	40	39
Northern Maine Community College	513801	Registered Nursing/ Registered Nurse	Associate's Degree	37	20	43	38	24
Southern Maine Community College	513801	Registered Nursing/ Registered Nurse	Associate's Degree	51	41	52	54	59
University of Maine at Augusta	513801	Registered Nursing/ Registered Nurse	Associate's Degree	77	49	81	41	84
University of New England	513801	Registered Nursing/ Registered Nurse	Associate's Degree	67	57	45	43	52

Central Maine Medical Center College of Nursing and Health Professions	513899	Registered Nursing, Nursing Administration, Nursing Research and Clinical Nursing, Other	Associate's Degree	42	38	52	41	51
Subtotal				**357**	**286**	**361**	**308**	**366**
Bachelor's Degree								
Husson University	513801	Registered Nursing/ Registered Nurse	Bachelor's Degree	50	38	39	31	36
Saint Joseph's College of Maine	513801	Registered Nurs-ing/Registered Nurse	Bachelor's Degree	67	71	56	73	57
University of Maine	513801	Registered Nursing/ Registered Nurse	Bachelor's Degree	88	94	90	84	79
University of Maine at Fort Kent	513801	Registered Nursing/ Registered Nurse	Bachelor's Degree	38	52	43	40	
University of Maine at Fort Kent	513808	Nursing Science	Bachelor's Degree					59
University of New England	513801	Registered Nursing/ Registered Nurse	Bachelor's Degree		12	14	19	18
University of Southern Maine	513801	Registered Nursing/ Registered Nurse	Bachelor's Degree	145	172	168	165	164
Subtotal				**388**	**439**	**410**	**412**	**413**
Post-Baccalaureate Certificate								
Saint Joseph's College of Maine	513802	Nursing Administration	Post-Baccalaureate Certificates		1		1	1
Subtotal				**0**	**1**	**0**	**1**	**1**
Master's Degree								
University of Maine	513801	Registered Nursing/ Registered Nurse	Master's Degree	15	3	6	14	6
Saint Joseph's College of Maine	513802	Nursing Administration	Master's Degree	27	41	44	31	27
University of Southern Maine	513803	Adult Health Nurse/Nursing	Master's Degree				6	3
University of Southern Maine	513805	Family Practice Nurse/Nursing	Master's Degree				15	21
University of Southern Maine	513810	Psychiatric/ Mental Health Nurse/Nursing	Master's Degree				12	6
University of Southern Maine	513820	Clinical Nurse Leader	Master's Degree				5	5
University of Southern Maine	511601	Nursing - Registered Nurse Training	Master's Degree	27	28	36		
University of New England	511604	Nurse Anesthetist	Master's Degree	32	26	22	22	29
Husson College	511699	Nursing, Other	Master's Degree	1				

Husson University	511605	Family Practice Nurse/Nurse Practitioner	Master's Degree	16	8	6	6	13
Husson University	511610	Psychiatric/ Mental Health Nurse/Nursing	Master's Degree	8		3	3	
Subtotal				**126**	**106**	**117**	**114**	**110**
Post-Master's Certificates								
University of Maine	513801	Registered Nursing/ Registered Nurse	Post-Master's Certificates				1	1
University of Southern Maine	513810	Psychiatric/ Mental Health Nurse/Nursing	Post-Master's Certificates			2	2	1
University of Southern Maine	511605	Family Practice Nurse/Nurse Practitioner	Post-Master's Certificates	1		1	1	1
Husson College	511605	Family Practice Nurse/Nurse Practitioner	Post-Master's Certificates	2				
Husson College	511610	Psychiatric/ Mental Health Nurse/Nursing	Post-Master's Certificates	1				
Subtotal				**4**	**0**	**3**	**4**	**3**
Doctoral Degrees								
University of Maine	511601	Nursing Registered Nurse Training	Doctor's Degrees			1		
Total				**875**	**832**	**892**	**839**	**893**

Source: IPEDS, CWRI

Outlook

Driven by technological advances, an aging population and heightened attention to preventative care, the outlook for RN employment is bright. Nationally, employment of RNs is expected to expand 26 percent from 2010 to 2020, well above the 14 percent growth projected for all occupations. In Maine, RN employment is expected to increase 20 percent, faster than the six percent growth expected for all occupations. Growth is expected to be strong across a variety of employment settings.

The U.S. Bureau of Labor Statistics (BLS) provides the following assessment of major trends affecting employment:

> *Faster than average growth is expected in traditional hospital settings, as well as in non-hospital settings, such as physician's offices and home healthcare services.*
>
> *Growth is expected to be much faster than average in outpatient care centers, where patients do not stay overnight, such as those that provide same-day chemotherapy, rehabilitation, and surgery. Also, an increased number of procedures, as well as more sophisticated procedures once done only in hospitals, are being done in physicians' offices.*
>
> *The financial pressure on hospitals to discharge patients as soon as possible should mean more people admitted to extended and long-term care facilities and more need for home*

healthcare. As the baby boomers grow older, there will be greater demand for home healthcare.

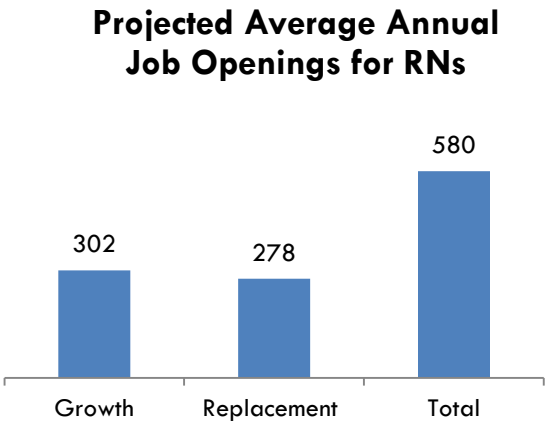
In addition, because many older people want to be treated at home or in residential care facilities, registered nurses will be in demand in those settings. Job growth is also expected in facilities that provide long-term rehabilitation for stroke and head injury patients, as well as facilities that treat people with Alzheimer's disease (memory loss, dementia).

In Maine, hospitals employ nearly two thirds of RNs and are projected to grow 30 percent. This growth will be a tailwind for nursing employment. Across industries, 580 RN job openings are expected annually, 300 from growth in demand and 280 from the need to replace those retiring or otherwise leaving the occupation. These figures represent the minimum measure for annual training needs.[9]

Employment of RNs* in Maine, 2010 and Projected 2020

Average Employment		Change in Employment (2010-2020)		Projected Annual Openings Resulting from New Growth
2010	2020	Net	Percent	
15,335	18,358	3,023	19.7%	302

* Projections include advanced practice nurses
Source: CWRI 2010-2020 Employment Projections



These projections assume that the utilization of RNs will increase in most employment settings as organizations seek to contain costs. These assumptions are outlined below.[10]

[9] Total annual job openings are considered a minimum number of the workers that need to be trained each year due to the fact that not all who complete training enter the occupation and replacement openings are based on net as opposed to gross flow of workers in an out of the occupation.

[10] These nursing utilization assumptions are based on national estimates. As such, a bias may result due to the extent that Maine's trends may be different from national trends.

Factors affecting nursing utilization	
Offices of physicians	A small increase is expected as registered nurses are increasingly performing tasks of higher paid workers when appropriate in order to contain costs.
General medical and surgical hospitals; local	
General medical and surgical hospitals; private	
Home health care services	A small decrease is expected as registered nurses take on other responsibilities and are replaced with more cost-effective home health aides.

The projections also assume that 18 percent of the RN workforce will need to be replaced from 2010 to 2020 due to workers retiring or otherwise permanently leaving the occupation. The replacement rate is based on analysis of employment patterns of the U.S. nurse workforce. Since Maine's RNs are older than the nation's using a replacement rate that is based on national trends may be too low.

CWRI analyzed the impact that higher replacement rates would have on projected job openings for RNs in Maine. The analysis showed that for every two percentage point increase in the rate of retirements, the estimated number of annual job openings would increase by approximately 30 (a 20 percent replacement ratio equates to 307 replacement job openings per year or 610 total job openings; a 22 percent ratio results in 337 replacement openings for a total of 640 job openings, etc.). Replacement and total job openings resulting from different replacement ratios are provided below. These figures are useful for analyzing different scenarios of supply vs. demand.

Impact of Replacement Rates on Projected RN Job Openings

Replacement Rate	Annual Job Openings due to Replacement Needs	Annual Job Openings due to Growth	**Total Job Openings**
16%	245	302	**547**
18%	278	302	**580**
20%	307	302	**609**
22%	337	302	**639**
24%	368	302	**670**

Highlighted area indicates current BLS assumptions.

Finally, it is also important to note that employment projections do not incorporate assumptions about how the health delivery system may change as a result of the Affordable Care Act (ACA), as the regulations were not complete when the estimates were created. For further discussion on the

limitations of the data, please refer to the section, *Data sets and limitations*, at the beginning of this report.

Supply vs. Projected Demand

As the largest healthcare occupation, RNs play a central role in the delivery of services and care. And reflecting increased utilization and industry growth, robust demand is projected for the coming decade. Maine's RN education capacity has been flat in recent years, and coupled with the prospect of pending retirements of existing nurses, the issue of whether or not capacity will be sufficient to meet demand is paramount. This is a complex and difficult question to answer given the range of factors that will affect the supply and demand for nurses in coming years including, but not limited to, changes in access, evolving models of care and delivery, changing patterns of net-migration and the willingness of existing practitioners to remain in the workforce.

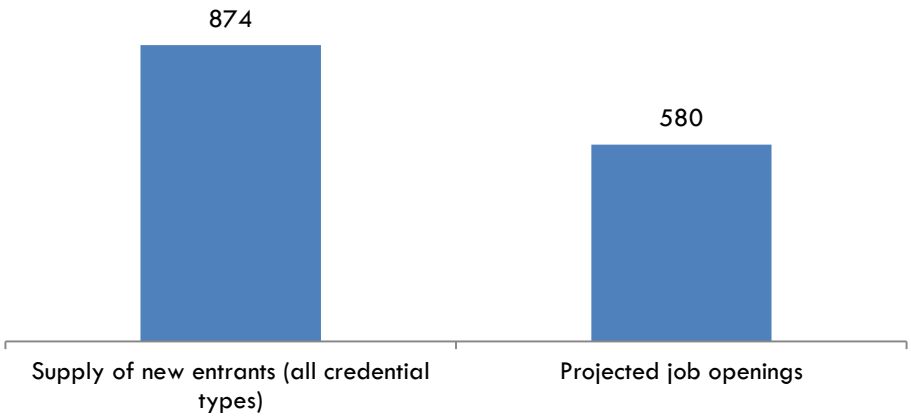
For a basic framework to assess the issue we used projected annual job openings and average annual program completers (three year average) as proxies for demand and supply. As noted above, projected job openings assume 20 percent growth in demand for RNs and an 18 percent replacement rate, and these estimates do not incorporate assumptions about how the health delivery system may change as a result of the ACA. On the supply side, the more than 800 graduates from Maine's education programs represent the overwhelming majority of incremental supply each year. For the purposes of this analysis, additional sources of supply including the in-migration of nurses from other states and foreign countries and re-activations of licenses from nurses that let them expire are assumed to offset RNs that leave the state for employment or other reasons. Moreover, the analysis assumes that nurses that train in Maine will seek employment here.[11]

Given these simplifying assumptions, for all degree programs combined, total capacity for RN education in Maine appears sufficient to meet projected job openings. According to these figures, the annual supply of new entrants would be sufficient to absorb a material increase in retirement rates, a meaningful portion of the graduates leaving the state each year or a substantial increase in job opportunities resulting from stronger than expected economic growth; or some combination of the above. There are limitations to this type of analysis. Not all who are licensed will necessarily seek employment and some only part-time. Also, new entrants typically lack the experience of those retiring. Readers are encouraged to review the limitations of the data as noted in the beginning of this report.

[11] Basic sources of supply are new graduates, in-migration of nurses from other states, an influx of foreign trained nurses and re-activations of licenses from nurses that let them expire. The workforce could be depleted by existing nurses or new graduates opting to leave the state for employment or for other reasons, and license expirations due to retirements or departure from the occupation. ACS data reveals that five percent of Maine's existing RN workforce was employed out of state; for the purposes of this analysis it is assumed that the incremental number of nurses opting to leave Maine each year offsets those coming in as well as license re-activations. Retirement rate assumptions are captured in projected openings. Research indicates that, at least for RNs, the overwhelming majority that graduate from Maine's programs find employment in this state.

Although the number of new graduates each year is a reasonable proxy for incremental supply, new entrants typically lack the experience of workers they will be replacing. In general, employers prefer to hire experienced nurses; graduates could have difficulties finding employment without the needed experience.

Annual Nursing Completers vs. Projected Job Openings



Although total program capacity exceeds projected annual job openings, it's also important to consider supply and demand by credential. As care giving becomes more complex and the role of RNs within the health delivery system expands the need for bachelor trained nurses will increase. To better equip nurses to meet these increased responsibilities the Institute of Medicine recommends that the proportion of nurses with baccalaureate degrees be increased to 80 percent by 2020.[12] Approximately 55 percent of RNs in Maine have a bachelor's degree or higher.[13]

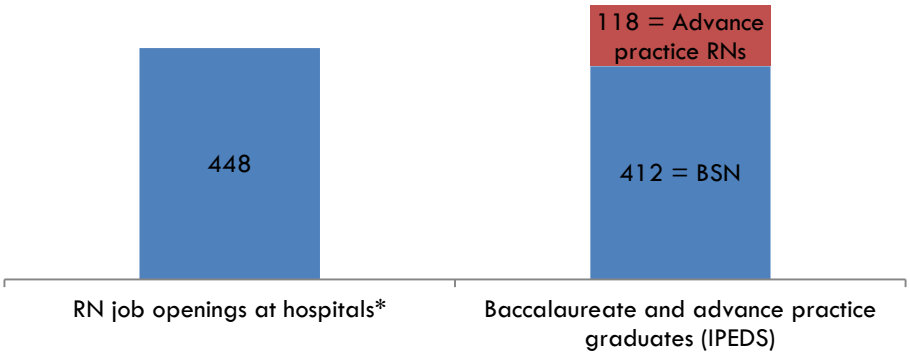
How does Maine's BSN program capacity compare to projected demand? MDOL's employment projections are for RNs of all credential types combined, which makes it difficult to quantify demand for bachelor's trained nurses specifically. We do know that hospitals are on the leading edge of incorporating better educated nurses into the delivery system and are predisposed toward hiring BSNs over those with associate credentials, all else equal.[14] Moreover, given their size and projected growth, hospitals are expected to represent the majority of RN hiring demand in coming years—three out of four RNs hired are expected to be at a hospital. If hospitals opt to fill their nurse vacancies each year only with those that have a BSN, they could absorb the entire supply of graduates from Maine's schools each year.

[12] National Academy of Sciences, Institute of Medicine, The Future of Nursing: Focus on Education, on the Internet at http://www.iom.edu/Reports/2010/The-Future-of-Nursing-Leading-Change-Advancing-Health/Report-Brief-Education.aspx (visited December 03, 2013).

[13] Update Maine Nursing Workforce Data, OMNE Annual Meeting October 2013, Lisa Harvey-McPherson, Susan Sepples. The 2006- 2010 ACS shows similar figures.

[14] Hospitals seeking magnet status and employers guided by the Institute of Medicine's objectives—which call for nurses to achieve higher levels of education in order to fill their expanding role within healthcare—may opt to hire more BSNs over those with associate credentials.

Estimated Annual Job Openings for RNs at Hospitals & Supply of Baccalaureate and Advance Practice Nurses



*Estimate assumes the replacement rate for RNs at hospitals is the industry average. RN job opening estimates are for all forms of RNs.

This perspective indicates a tighter balance between the supply and demand for bachelors prepared nurses. Note that this analysis does not include demand from other industries (e.g., ambulatory clinics, nursing and residential care facilities) that may also utilize BSNs. On the other hand, not all hospitals may seek to hire BSNs disproportionately.

A limited pool of doctoral-prepared teaching faculty and steep competition for these professionals from higher paying industry employers has been a barrier to capacity growth, both locally and nationally. According to an American Association of Colleges of Nursing (AACN) survey of nursing programs at 662 institutions around the country, eight percent of full-time nursing faculty positions and seven percent of part-time positions were vacant during the 2012–2013 academic year.[15] Recruiting nurse faculty with masters and PhDs has been particularly difficult for Maine's higher education institutions.

[15] *Special Survey on Vacant Faculty Positions*, released October 2012 from the American Association of Colleges of Nursing (AACN).

29-1171 Nurse Practitioners

Occupation description

Diagnose and treat acute, episodic, or chronic illness, independently or as part of a healthcare team. May focus on health promotion and disease prevention. May order, perform, or interpret diagnostic tests such as lab work and x rays. May prescribe medication. Must be registered nurses who have specialized graduate education.

Illustrative examples: Gerontological Nurse Practitioner, Family Practice Nurse Practitioner, Cardiology Nurse Practitioner

Education requirements

Nurse Practitioners (NPs) are Registered Nurses with graduate education in nursing. Most NPs have a master's degree, which requires two years of full-time study beyond the bachelor's degree in nursing. Also, there is a growing national movement to require all NPs to earn a Doctor of Nursing Practice (DNP) degree. This degree is called a practice doctorate and is similar to the academic credentials earned by dentists (DDS), physicians (MD/DO), clinical psychologists (PsyD or PhD), clinical pharmacists (PharmD) and other health care providers. DNP programs require three to four years study beyond a bachelor's degree in nursing.

Employment & Wages

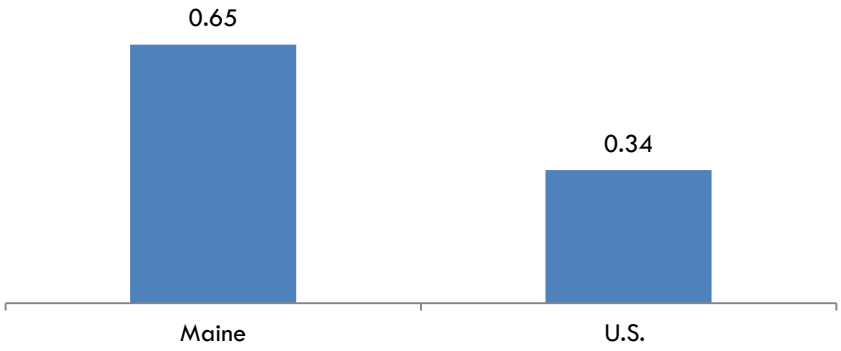
In 2012 there were an estimated 870 nurse practitioners employed in Maine earning a median annual wage of nearly $90,000. These wages are comparable to the national average and significantly above the median wage for all jobs in Maine. Nurse practitioners are employed within various outpatient settings and hospitals.

2012 Employment & Wage Statistics

	Average Employment	Median Annual Salary
Maine	870	$87,160
Industries with Highest Share of Employment (% total)		
Ambulatory Health Care Services	59%	$85,890
Hospitals	29%	$89,280
Social Assistance	3%	$77,370

Employment of NPs in Maine and the U.S. equate to .65 and .34 nurse practitioners per thousand residents. Accordingly, Maine had nearly twice the number of NPs than the nation on a per population basis.

Nurse Practitioners per 1,000 Population, 2012



Distribution of employment

Similar to RNs, the distribution of NP employment is uneven and concentrated in counties with the state's largest hospital systems; 64 percent are employed in 3 counties that represent 42 percent of the Maine population (Cumberland, Penobscot and Kennebec).

Distribution of Employment

	Number Employed	Pct. (%) total RN employment	Pct. (%) of total Maine Population	Number employed per thousand population
Cumberland County	290	33%	21%	1.0
Penobscot County	180	21%	12%	1.2
Kennebec County	90	10%	9%	0.7
Androscoggin County	80	9%	8%	0.7
Aroostook County	60	7%	5%	0.8
York County	50	6%	15%	0.3
Waldo County	40	5%	3%	1.0
Hancock County	30	3%	4%	0.5
Washington County	30	3%	2%	0.9
Oxford County	20	2%	4%	0.3
Maine	870			0.65
USA				0.34

Source: CWRI analysis of OES & Census data

Some counties have suppressed data per BLS confidentiality standards.

Demographic, economic and social characteristics of the workforce

NOTE—The ACS combines nurse practitioners and nurse midwives together. The following data is for both occupations combined. All other data provided is only for nurse practitioners unless otherwise stated.

Demographics

Maine' NP and midwife population is 84 percent female and 99 percent white. The proportion of male nurse practitioners and midwives is more than twice the national average (16 vs. 7 percent).

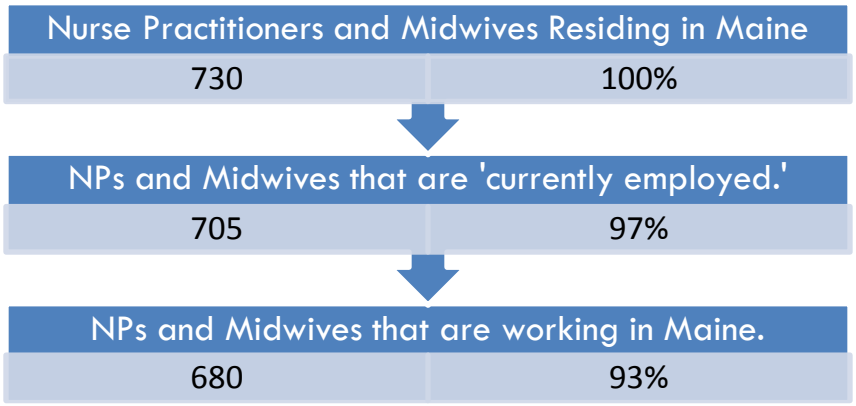
Demographic Characteristics of the Nurse Practitioner and Midwife Population

	Total		Race and Ethnicity			
			White alone		All Other	
	Maine	U.S.A.	Maine	U.S.A.	Maine	U.S.A.
Total	730	81,805	720	70,150	10	11,655
Percent	100%	100%	99%	86%	1%	14%
Male	16%	7%	16%	6%	0%	1%
Female	84%	93%	83%	80%	1%	13%

Source: CWRI analysis of ACS 2006-2010 5 year file

Employment status

Nearly all of the NPs and midwives were employed at the time of survey. A small portion was working outside of Maine.



Age distribution

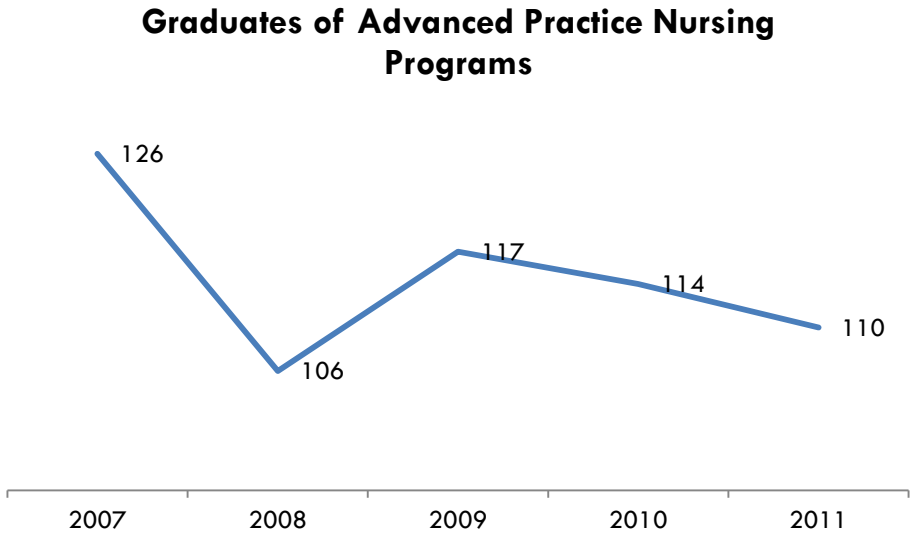
Fifty and seven percent of Maine's nurse practitioners and midwives were above 50 and 60 years old, respectively. Nationally, 41 and 12 percent were above 50 and 60 years.

Age Distribution, Nurse Practitioners & Midwives		
	Maine (%)	U.S. (%)
16 to 39 years	22.8%	29.6%
40 to 44 years	10.3%	15.2%
45 to 49 years	16.9%	14.0%
50 to 54 years	14.7%	14.6%
55 to 59 years	27.9%	14.4%
60 to 69 years	7.4%	10.9%
70 years and over	0.0%	1.2%
Total	100%	100%

Source: EEO Tabulation 2006-2010 ACS file, CWRI

Schools offering training and number completing

In 2011 there were 110 nursing graduates with master's degree from five schools. St. Joseph's, University of Maine, University of New England, Husson and University of Southern Maine offered graduate level programs in nursing.



Education Programs & Annual Graduates

School	CIP Code	CIP Title	Completer Title	2007	2008	2009	2010	2011
Master's Degree								
University of Maine	513801	Registered Nursing/Registered Nurse	Master's Degree	15	3	6	14	6
Saint Joseph's College of Maine	513802	Nursing Administration	Master's Degree	27	41	44	31	27
University of Southern Maine	513803	Adult Health Nurse/Nursing	Master's Degree				6	3
University of Southern Maine	513805	Family Practice Nurse/Nursing	Master's Degree				15	21
University of Southern Maine	513810	Psychiatric/Mental Health Nurse/Nursing	Master's Degree				12	6
University of Southern Maine	513820	Clinical Nurse Leader	Master's Degree				5	5
University of Southern Maine	511601	Nursing -Registered Nurse Training	Master's Degree	27	28	36		
University of New England	511604	Nurse Anesthetist	Master's Degree	32	26	22	22	29
Husson College	511699	Nursing, Other	Master's Degree	1				
Husson University	511605	Family Practice Nurse/Nurse Practitioner	Master's Degree	16	8	6	6	13
Husson University	511610	Psychiatric/Mental Health Nurse/Nursing	Master's Degree	8		3	3	
Subtotal				**126**	**106**	**117**	**114**	**110**
Post-Master's Certificates								
University of Maine	513801	Registered Nursing/Registered Nurse	Post-Master's Certificates				1	1
University of Southern Maine	513810	Psychiatric/Mental Health Nurse/Nursing	Post-Master's Certificates			2	2	1
University of Southern Maine	511605	Family Practice Nurse/Nurse Practitioner	Post-Master's Certificates	1		1	1	1
Husson College	511605	Family Practice Nurse/Nurse Practitioner	Post-Master's Certificates	2				
Husson College	511610	Psychiatric/Mental Health Nurse/Nursing	Post-Master's Certificates	1				
Subtotal				**4**	**0**	**3**	**4**	**3**
Doctoral Degrees								
University of Maine	511601	Nursing -Registered Nurse Training	Doctor's Degrees			1		
Total				**875**	**831**	**892**	**839**	**893**

Source: IPEDS, CWRI

Outlook

The employment outlook for nursing is bright. In particular, the demand for advanced practice nurses, including nurse practitioners will be high, especially in underserved areas such as rural locations and inner cities.

Detailed occupational employment projections for nurse practitioners are not yet broken out by MDOL—they are part of RN employment projections. For more detail, see the 'Outlook' for RNs.

Ambulatory health services and the hospital industry employ 90 percent of NPs and these industries are expected to experience employment gains of 8 and 30 percent, respectively.

29-1161 Nurse Midwives

Occupation description

Diagnose and coordinate all aspects of the birthing process, either independently or as part of a healthcare team. May provide well-woman gynecological care. Must have specialized, graduate nursing education.

Illustrative example: Certified Nurse Midwife (CNM)

Education requirements

The Certified Nurse Midwife (CNM)/Certified Midwife (CM) degree is earned by completing a nationally accredited program and then passing the national certification exam. There are currently 42 programs accredited by the American College of Nurse-Midwives (ACNM) in the United States. Four of these are post-baccalaureate certificate programs and 39 are graduate programs. Completion of a graduate degree is required for entry into clinical practice throughout the United States.

Almost all programs require applicants to hold a bachelor's degree. The majority also require that applicants be a registered nurse (RN), although there are a growing number of programs geared toward students who hold a non-nursing bachelor's degree. Some, but not all, require that entering RNs hold a bachelor's degree in nursing (BSN).

If your degree is not in nursing (BA/BS), you will become a certified midwife. If your degree is in nursing (BSN), you will become a certified nurse-midwife. In most cases, RNs who don't have a bachelor's degree are required to complete a bachelor's degree before attending a CNM program. Some programs offer a flexible option that enables nurses with associate degrees to complete their bachelor's studies in the course of the CNM program.

The CNM and CM certification is different from the Certified Professional Midwife (CPM) designation, which does not require one to have an advanced degree or be a registered nurse. Whereas CNM programs are accredited by the ACNM, CPM programs are associated with the Midwives Alliance of North America (MANA). Compared to CPMs, CNMs and CMs have a broader and more comprehensive scope of practice. According to the Standard Occupational Classification system, the definition of nurse midwives excludes CPMs. CPMs are classified in another occupational category.[16]

CNMs are licensed in all 50 states and the District of Columbia. The Maine Board of Nursing governs the licensure of nurse midwives in Maine. CMs must meet the same rigorous standards of practice as CNMs, but because this is a relatively new option for preparation, CMs are only licensed to practice in New York, New Jersey and Rhode Island.

In terms of the clinical services they provide, there is virtually no difference between a CNM and a CM. There also is no significant difference between a certificate- and master's-prepared CNM.

[16] CWRI has yet to see the CPM title from a survey respondent. Coding of CPMs would depend on the primary occupation. If the CPM is an RN or LPN, they would be classified as such. Alternatively they could be grouped into a residual category, such as health diagnosing and treating practitioners, all other (29-1199) or health technologists and technicians, all other (29-2099).

Employment & Wages

In 2012 there were an estimated 30 nurse midwives employed in Maine earning an annual median wage of $93,000. These wages were comparable to the national average and well above the median wage for all jobs in Maine. Nurse midwives are typically employed by hospital systems.

2012 Employment & Wage Statistics		
	Average Employment	Median Annual Salary
Maine	30	$93,230

In Maine and the U.S. there are approximately the same number of midwifes per population—0.02 per thousand residents or one for every 50,000 people.

Demographic, economic and social characteristics of the workforce

Note: ACS data for nurse midwives is combined with nurse practitioners. See the nurse practitioner section for the data presentation.

Schools offering training and number completing

There are no nurse midwife (CNM or CM) programs in Maine. The Birthwise Midwifery School, which has had 5 graduates per year on average, offers a CPM credential. As noted above, the CPM is different from the CNM and CM.

Outlook

The outlook for nursing is bright. In particular, the demand for advanced practice nurses is expected to be high, especially in underserved areas such as rural locations and inner cities.

The hospital industry—which is the majority employer of midwives—is expected to be a significant driver of employment growth. Hospital industry employment is expected to increase by 30 percent from 2010 to 2020, well above the mid-single digit growth expected for all industries.

Detailed occupational employment projections for nurse midwives are not yet broken out by MDOL—they are part of RN employment projections. For more detail, see the 'Outlook' for RNs.

29-1151 Nurse Anesthetists

Occupation description

Administer anesthesia, monitor patient's vital signs, and oversee patient recovery from anesthesia. May assist anesthesiologists, surgeons, other physicians, or dentists. Must be registered nurses who have specialized graduate education.

Illustrative example: Certified Registered Nurse Anesthetist (CRNA)

Education requirements

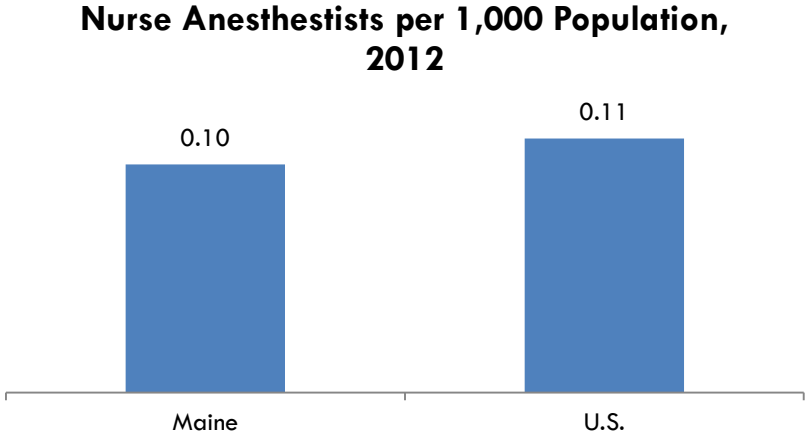
In order to be accepted into an accredited nurse anesthesia program, one must be a currently licensed RN with a Bachelor of Science in Nursing (BSN) or other appropriate baccalaureate degree and at least one year of experience in an acute care setting. CRNA programs, which lead to a master's or doctoral degree, take two to three years and include clinical training in university-based or large community hospitals. Following graduation, one must pass the national certification exam before beginning to practice. However, certification is not a one-time accomplishment: In order to maintain their certification standing, CRNAs must obtain a minimum of 40 hours of continuing education every two years.

Employment & Wages

In 2012 there were an estimated 130 nurse anesthetists employed in Maine earning a median annual wage over $160,000, which was 10 percent above the national average and substantially above the median wage for all occupations in this state. Anesthetists are typically employed by hospital systems.

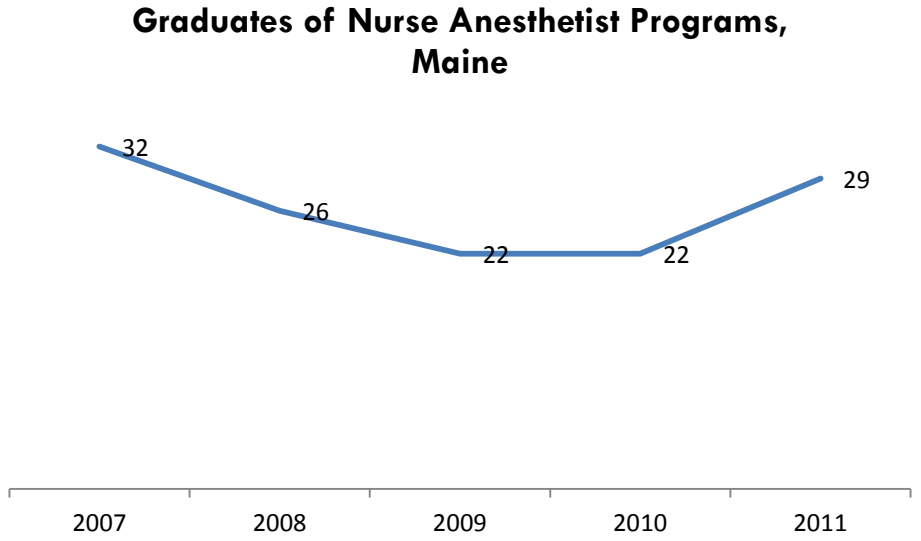
2012 Employment & Wage Statistics			
	Average Employment	Where are they employed?	What do they earn (median)?
Nurse Anesthetists	**130**		**$163,570**
Hospitals		92%	$165,280

Maine has 10 percent fewer nurse anesthetists than the nation, per thousand residents.



Schools offering training and number completing

The University of New England (UNE) offers the only nurse anesthetist program in Maine. The Class of 2011 had 29 graduates.



Outlook

The outlook for nursing in general is bright. In addition, BLS notes the demand for advanced practice nurses, including nurse anesthetists will be high, especially in underserved areas such as rural locations and inner cities.

Hospitals are the majority employer of anesthetists and are expected to experience robust growth. Hospital industry employment is expected to increase by 30 percent from 2010 to 2020, well above the mid-single digit growth expected for all industries.

Detailed occupational employment projections for nurse anesthetists are not yet broken out by MDOL—they are part of RN employment projections. For more detail, see the 'Outlook' for RNs.

29-2061 Licensed Practical Nurses

Occupation description

Care for ill, injured, or convalescing patients or persons with disabilities in hospitals, nursing homes, clinics, private homes, group homes, and similar institutions. May work under the supervision of a registered nurse. Licensing required.

Illustrative examples: LPN, LVN, Pediatric Licensed Practical Nurse

Education requirements

LPNs must complete an accredited program, which takes about 1 year. These programs are commonly in technical schools and community colleges. They may occasionally be in high schools and hospitals as well. Practical nursing programs combine classroom learning in subjects such as nursing, biology, and pharmacology, with supervised clinical experience. These programs give certificates in practical nursing.

Employment & Wages

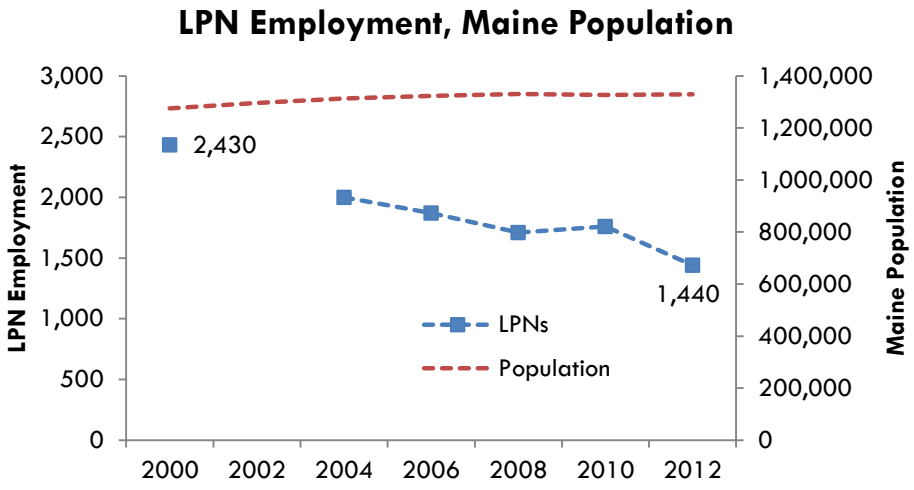
In 2012 there were more than 1,400 LPNs employed in Maine earning a median annual wage of nearly $41,000, which was in-line with the national average. The primary industry for LPN employment is the nursing & residential care industry, and to a lesser extent hospitals and ambulatory care. RNs, by contrast, are primarily employed at hospitals and within ambulatory care.

2012 Employment & Wage Statistics

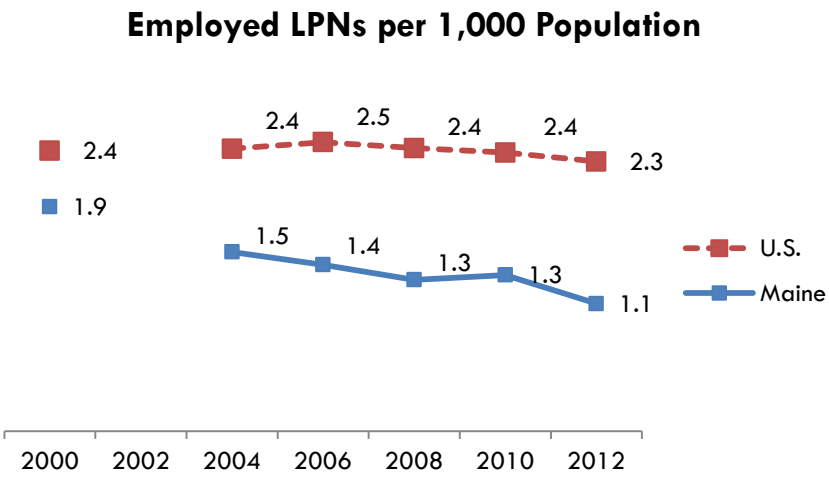
	Average Employment	Median Annual Salary
Maine	1,440	$40,990
Industries with Highest Share of Employment (% total)		
Nursing and Residential Care Facilities	46%	$40,460
Hospitals	26%	$42,210
Ambulatory Health Care Services	15%	$38,760

Source: 2012 Occupational Employment Statistics, CWRI

Since 2000, LPN employment in Maine has fallen by 40 percent. At the same time, Maine's population increased four percent. These factors have led to a steady decline in LPNs per thousand residents, as seen in the figures below.



In 2012, Maine had less than half the LPNs per population compared to the nation.



These employment statistics reflect a trend of RNs being utilized more extensively within Maine's healthcare system (please see this discussion in the profile for RNs). LPNs still play an important role in the workforce, filling an important niche between CNAs and RNs. The value proposition of LPNs is particularly appealing to nursing and residential care facilities, where many of these nurses are employed.

Distribution of employment

Rural counties tend to have a disproportionately high share of LPN employment. This is particularly true of Aroostook, Franklin and Washington Counties, where the number of LPNs per thousand residents is significantly above the state average. LPNs are in higher demand in these areas, particularly with long term care employers, as they are a lower cost alternative than RNs and more skilled than CNAs.

Distribution of Employment				
	Number Employed	Pct. (%) total LPN employment	Pct. (%) of total Maine Population	Number employed per thousand Population
Androscoggin County	120	8%	8%	1.1
Aroostook County	130	9%	5%	1.8
Cumberland County	490	34%	21%	1.7
Franklin County	60	4%	2%	2.0
Hancock County	50	3%	4%	0.9
Kennebec County	140	10%	9%	1.1
Knox County	n/a	n/a	3%	n/a
Lincoln County	n/a	n/a	3%	n/a
Oxford County	40	3%	4%	0.7
Penobscot County	170	12%	12%	1.1
Piscataquis County	n/a	n/a	1%	n/a
Sagadahoc County	n/a	n/a	3%	n/a
Somerset County	70	5%	4%	1.3
Waldo County	60	4%	3%	1.5
Washington County	60	4%	2%	1.8
York County	60	4%	15%	0.3
Maine	**1,440**			**1.1**
U.S.	**718,800**			**2.3**

Source: CWRI analysis of OES & Census data

Some counties have suppressed data per BLS confidentiality standards.

Demographic, economic and social characteristics of the workforce

Demographic profile

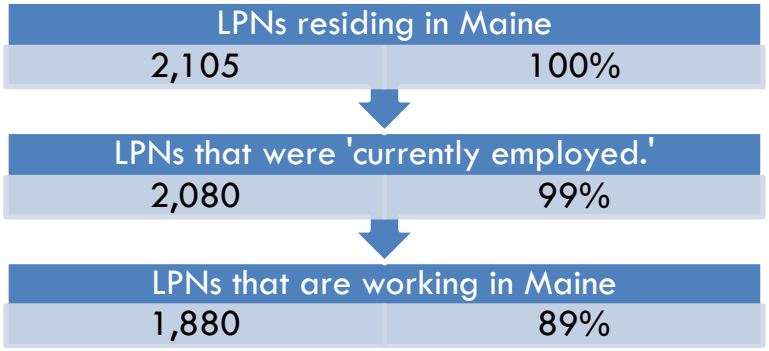
Although the gender mix of LPNs in Maine and the nation are similar, the U.S. LPN/LVN population is much more racially diverse.

Demographic Characteristics of the LPN Population						
	Total		Race and Ethnicity			
			White alone		All Other	
	Maine	U.S.A.	Maine	U.S.A.	Maine	U.S.A.
Total	2,105	680,495	2,020	434,975	85	245,970
Percent	100%	100%	96%	64%	4%	36%
Male	3%	7%	2%	4%	1%	3%
Female	96%	93%	94%	60%	3%	33%

Source: CWRI analysis of ACS 2006-2010 5 year file

Employment status

Of the LPNs residing in Maine, 99 percent were employed at the time of survey and 89 percent were working in Maine. 10 percent of the LPNs living in Maine were working outside the state.



Age distribution

Forty-seven and 19 percent of Maine's LPNs are above 50 and 60 years, respectively. The figures below indicate that LPN's in Maine's population has a higher median age than that of the national population.

Age Distribution, LPNs				
	Maine	Maine (%)	U.S.	U.S. (%)
16 to 39 years	525	28%	254,060	40%
40 to 44 years	175	9%	78,060	12%
45 to 49 years	290	15%	83,330	13%
50 to 54 years	260	14%	85,805	13%
55 to 59 years	285	15%	73,140	11%
60 to 69 years	260	14%	55,525	9%
70 years and over	85	5%	7,470	1%
Total	**1,880**	**100%**	**637,390**	**100%**

Source: EEO Tabulation 2006-2010 ACS file, CWRI

Educational attainment

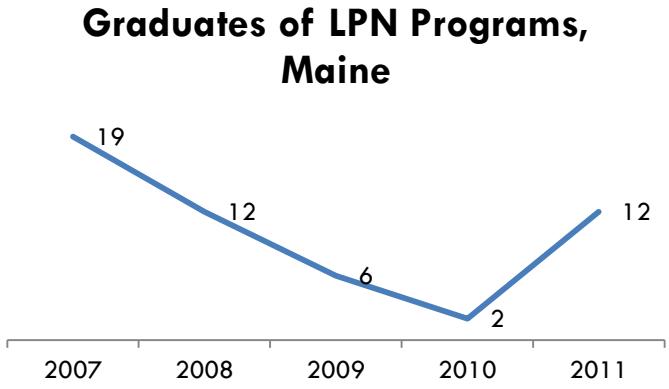
Educational attainment is comparable for LPNs in Maine and the U.S.

Educational Attainment, LPNs	Maine	U.S.A.
Not a HS graduate	1%	1%
HS graduate	21%	20%
Some college or Associate	74%	73%
Bachelor's degree	2%	4%
Master's degree	1%	1%
Doctoral or Professional degree	1%	2%
Total	**100%**	**100%**

Source: EEO Tabulation 2006-2010 ACS file, CWRI

Schools offering training and number completing (IPEDS data)

Central Maine Community College offers the only program for LPNs.



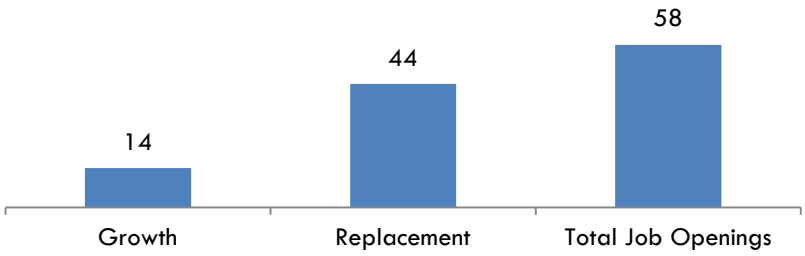
Outlook

Nationally, employment of LPNs and LVNs is expected to grow 22 percent from 2010 to 2020. In Maine, employment of LPNs is forecast to grow 8 percent, below the national pace but still above the 5.5 percent growth expected for all occupations. The nursing and residential care facility industry, which employs nearly half of all LPNs, is expected to be the primary driver of LPN employment in coming years. Job prospects will be bolstered by the large number or retirements that are expected. In fact, three fourths of all LPN job openings are expected to be replacement openings.

Employment of LPNs in Maine 2010 and Projected 2020				
Average Employment		Change in Employment (2010-2020)		Projected Annual Openings Resulting from New Growth
2010	2020	Net	Percent	
1,666	1,804	138	8.3%	14

Source: CWRI 2010-2020 Employment Projections

Projected Annual Job Openings for LPNs



Physicians & Surgeons

Summary Statistics								
Workforce Characteristics	**Anesthesiologists**	**Family & General Practitioners**	**Internists, general**	**OB/GYN**	**Pediatricians**	**Psychiatrists**	**Surgeons**	**Physicians & Surgeons, All other**
Employment (2012)	80	710	170	10	170	140	220	1,900
Employment per 1,000 population	0.06	0.53	0.13	0.08	0.13	0.11	0.17	1.43
versus U.S.	Below avg.	Above avg.	Below avg.	Above avg.	Above avg.	Above avg.	Above avg.	Above avg.
Average starting wage (Maine)	$206,990	$126,170	$136,750	$114,750	$125,590	$180,850	n/a	$184,310
Median annual wage (Maine)	≥ $187,199*	$168,610	$183,100	≥ $187,199*	$155,120	≥ $187,199*	≥ $187,199*	≥ $187,199*
U.S. median annual wage	n/a	$172,020	n/a	$216,760	$154,650	$177,520	n/a	n/a
Median wage for all occupations in Maine	$32,590	$32,590	$32,590	$32,590	$32,590	$32,590	$32,590	$32,590
Minimum Education Requirement	Doctorate	Doctorate	Doctorate	Doctorate	Doctorate	Doctorate	Doctorate	Doctorate
Job Growth Projections	n/a	13%	15%	17%	9%	6%	16%	20%
Nat'l Median Age*	46.9	46.9	46.9	46.9	46.9	46.9	46.9	46.9
Top Industry of Employment	Hospitals	Ambulatory health care services	Hospitals	Hospitals	Ambulatory health care services	Ambulatory health care services	Hospitals	Ambulatory health care services
Licensure Board	Board of Licensure in Medicine, Board of Osteopathic Licensure	Board of Licensure in Medicine, Board of Osteopathic Licensure	Board of Licensure in Medicine, Board of Osteopathic Licensure	Board of Licensure in Medicine, Board of Osteopathic Licensure	Board of Licensure in Medicine, Board of Osteopathic Licensure	Board of Licensure in Medicine, Board of Osteopathic Licensure	Board of Licensure in Medicine, Board of Osteopathic Licensure	Board of Licensure in Medicine, Board of Osteopathic Licensure

*This wage is equal to or greater than $90.00 per hour or $187,199 per year.

Key points

- There were an estimated 4,006 physicians and surgeons working in Maine in 2010, including the self-employed. Employment is expected to increase 17 percent through 2020.
- Maine has an average number of physicians and surgeons per population for a New England state—Rhode Island and Vermont have more and New Hampshire and Connecticut have fewer. Compared to the nation, Maine and the New England region have 36 percent more physicians and surgeons per thousand residents.
- Forty-four and 17 percent of the workforce was above 50 and 60 years old, respectively.
- The distribution of employment within Maine is uneven. More than 40 percent of the workforce is employed in Cumberland County.

Occupation descriptions

29-1061 Anesthesiologists: Physicians who administer anesthetics prior to, during, or after surgery, or other medical procedures.

Illustrative example: Obstetrical Anesthesiologist

29-1062 Family and General Practitioners: Physicians who diagnose, treat, and help prevent diseases and injuries that commonly occur in the general population. May refer patients to specialists when needed for further diagnosis or treatment.

Illustrative example: Family Practice Physician

29-1063 Internists, General: Physicians who diagnose and provide non-surgical treatment of diseases and injuries of internal organ systems. Provide care mainly for adults who have a wide range of problems associated with the internal organs. Subspecialists, such as cardiologists and gastroenterologists, are included in "Physicians and Surgeons, All Other" (29-1069).

Illustrative example: Internal Medicine Physician

29-1064 Obstetricians and Gynecologists: Physicians who provide medical care related to pregnancy or childbirth and those who diagnose, treat, and help prevent diseases of women, particularly those affecting the reproductive system. May also provide general medical care to women.

Illustrative examples: OB/GYN, OB Specialist

29-1065 Pediatricians, General: Physicians who diagnose, treat, and help prevent children's diseases and injuries.

Illustrative examples: Primary Care Pediatrician, Pediatrist

29-1066 Psychiatrists: Physicians who diagnose, treat, and help prevent disorders of the mind.

Illustrative examples: Neuropsychiatrist, Geriatric Psychiatrist, Addiction Psychiatrist

29-1067 Surgeons: Physicians who treat diseases, injuries, and deformities by invasive, minimally-invasive, or non-invasive surgical methods, such as using instruments, appliances, or by manual manipulation. Excludes "Oral and Maxillofacial Surgeons" (29-1022).

Illustrative examples: Thoracic Surgeon, Plastic Surgeon, Orthopedic Surgeon, Cardiovascular Surgeon

29-1069 Physicians and Surgeons, All Other: All physicians and surgeons not listed separately.

Illustrative examples: Ophthalmologist, Dermatologist, Gastroenterologist, Cardiologist

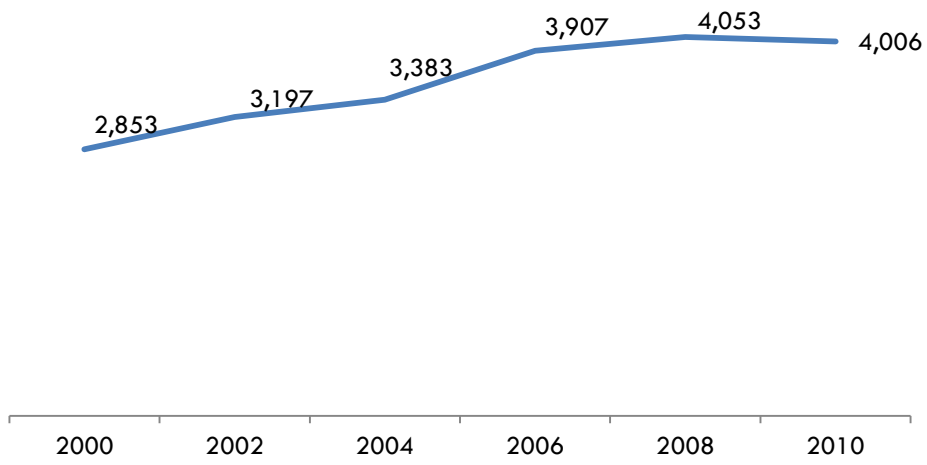
Education Requirements

Physicians and surgeons have demanding education and training requirements. Almost all physicians complete at least four years of undergraduate school, four years of medical school, and three to eight years in internship and residency programs, depending on their specialty.

Employment & Wages

In 2012, there were an estimated 3,400 physicians employed in Maine. These figures are taken from OES and do not include the self-employed. According to employment projections data, which include self-employment, there were 4,006 physicians and surgeons in 2010, up 40 percent from 2000. As noted earlier in this report, these estimates do not indicate whether a person is working full or part-time. As such, these figures may overstate physician workforce supply in terms of full-time equivalents. Also, creating estimates for the self-employed involves more subjectivity. Please see the discussion on the limitations of data at the beginning of this report. Readers with access to different data sets may have different statistics.

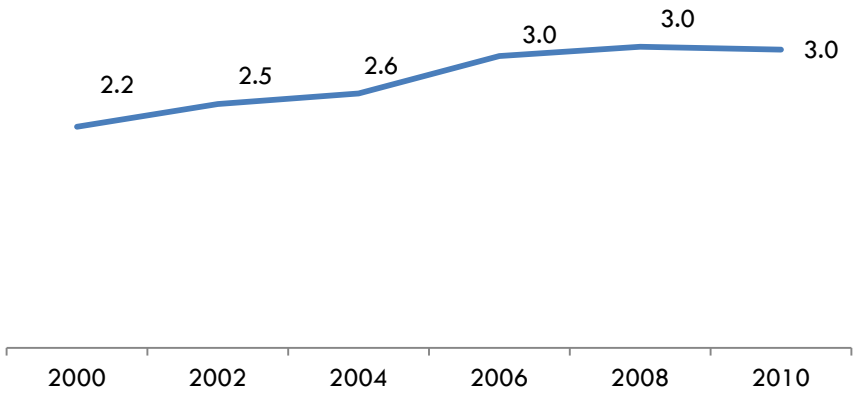
Physician & Surgeons practicing in Maine



Source: Employment Projections system, CWRI

From 2000 to 2010, physicians and surgeons per thousand population increased 35 percent to 3.0.

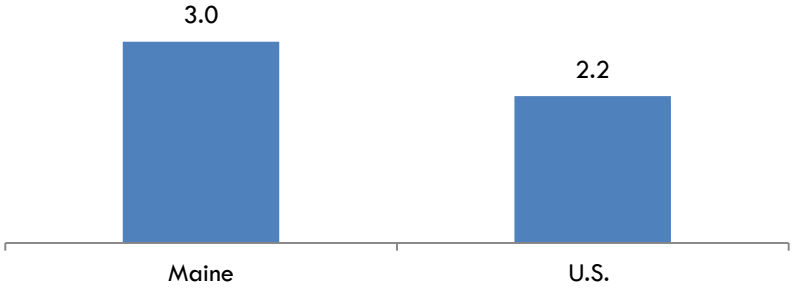
Physicians & Surgeons per 1,000 Population



Source: Employment Projections system, Census data, CWRI

In 2010 Maine had 37 percent more physicians and surgeons per 1,000 residents than the nation.

Physicians and Surgeons per 1,000 Population, 2010



Maine's relatively high count of practitioners per population is similar to the rest of New England. New England has historically been the region most reliant on healthcare employment in the U.S., and this is reflected in greater concentrations of health workers per population.

Physicians & Surgeons per 1,000 Population, 2010

	Number of Practitioners	Practitioners per 1,000 population
New Hampshire	2,885	2.2
Vermont	2,660	4.3
Connecticut	8,140	2.3
Massachusetts	20,510	3.1
Rhode Island	5,040	4.8
Maine	**4,006**	**3.0**
New England	**43,241**	**3.0**
U.S.	691,000	2.2

Source: Employment projections & Census data

Distribution of Employment

Cumberland County employs a disproportionately large share of Maine's physicians and surgeons, resulting in practitioner per population figures that are twice the state average. More rural counties tend to have a much lower distribution of employment. Employment figures for a number of other counties are suppressed per BLS confidentiality standards.

An aging population contributes to the trend of centralization in employment—as the population ages more specialty physicians are required and they are typically employed in large hospital centers.

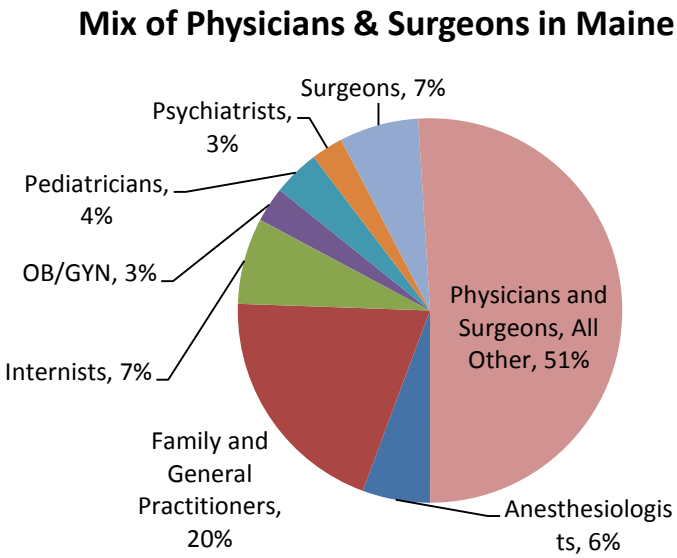
	Number Employed	Pct. (%) total Physician Employment	Pct. (%) of total Maine Population	Employed per 1,000 Population
Cumberland County	1,470	42%	21%	5.2
Kennebec County	240	7%	9%	2.0
Aroostook County	180	5%	4%	2.5
York County	180	5%	15%	0.9
Penobscot County	150	4%	12%	1.0
Androscoggin County	90	3%	8%	0.8
Hancock County	30	1%	4%	0.5
Oxford County	30	1%	4%	0.5
Washington County	20	1%	2%	0.6
Subtotal	**2,390**	**68%**	**79%**	
Maine	**3,500**	**100%**		**2.6**
U.S.				**1.9**

OES, CWRI

Some counties have suppressed data per BLS confidentiality and data quality requirements. Counties with suppressed data are not shown.

Mix of employment by occupation

Family and general practitioners represented 20 percent of the workforce and surgeons and internists seven percent.



Source: 2010 Employment Projections, CWRI

Using a different data set (OES) we obtain more recent (2012) and more specific employment data (wages, industry of employment) at the detailed occupational level. These figures do not include estimates for the self-employed.

2012 Employment & Wage Statistics			
	Average Employment	Where are they Employed?	What do they Earn (Median)?
Anesthesiologists	80		≥ 187,199
Hospitals		63%	n/a
Ambulatory Health Svcs.		37%	n/a
Family & General Practitioners	710		$168,610
Hospitals		39%	$179,190
Ambulatory Health Svcs.		59%	$162,110
Internists	170		$183,100
Hospitals		53%	n/a
Ambulatory Health Svcs.		47%	$157,760
OB/GYN	110		≥ 187,199
Hospitals		55%	n/a
Ambulatory Health Svcs.		45%	$117,330
Pediatricians	170		$155,120
Hospitals		29%	$175,680
Ambulatory Health Svcs.		76%	$146,830
Psychiatrists	140		≥ 187,199
Hospitals		29%	n/a
Ambulatory Health Svcs.		64%	n/a
Surgeons	220		≥ 187,199
Hospitals		59%	n/a
Ambulatory Health Svcs.		45%	n/a
Physicians & Surgeons, all other	1900		≥ 187,199
Hospitals		29%	n/a
Ambulatory Health Svcs.		62%	n/a
Public Administration		6%	n/a

Source: Occupational Employment Statistics Program, CWRI, BLS

Demographic, economic and social characteristics of the workforce

NOTE: the ACS—from which this data was taken—groups all physician and surgeon occupations together. The following information is for all physicians and surgeons.

Demographic profile

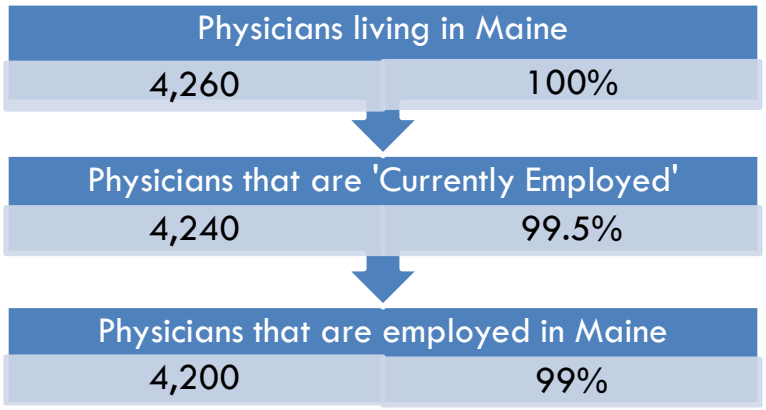
Maine's physician population is predominantly male (71 percent) and white (95 percent). The national physician population has a similar gender mix (68 percent male) but is more racially diverse (69 percent white).

Demographic Characteristics of the Physician Population						
	Total		Race and Ethnicity			
	Maine	U.S.A.	White alone		All Other	
			Maine	U.S.A.	Maine	U.S.A.
Total	4,260	834,265	4,025	575,355	235	258,910
Percent	100%	100%	95%	69%	6%	31%
Male	71%	68%	67%	49%	4%	19%
Female	29%	32%	28%	20%	2%	12%

Source: CWRI analysis of ACS 2006-2010 5 year file

Employment status

Of the physicians residing in Maine, nearly all were working in this state.



Age distribution

Forty-four and 17 percent of Maine's physician and surgeon workforce were above 50 and 60 years old, respectively. Nationally, 40 and 16 percent were above these age levels.

Age Distribution, Physicians & Surgeons Working in Maine						
	Total	**%**	**Male**	**%**	**Female**	**%**
16 to 39 years	1,175	28%	710	24%	465	38%
40 to 44 years	520	12%	315	11%	200	16%
45 to 49 years	665	16%	475	16%	190	16%
50 to 54 years	565	13%	375	13%	195	16%
55 to 59 years	600	14%	505	17%	100	8%
60 to 69 years	570	14%	510	17%	60	5%
70 years and over	105	3%	90	3%	15	1%
Total	**4,200**	**100%**	**2,980**	**100%**	**1,225**	**100%**

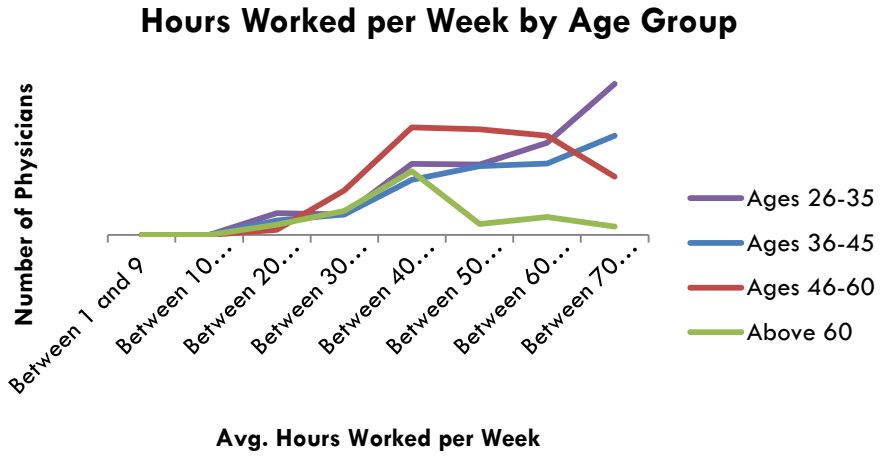
Source: EEO Tabulation 2006-2010 ACS file, CWRI

Age Distribution, Physicians & Surgeons Working in U.S.A.						
	Total	%	Male	%	Female	%
16 to 39 years	274,415	34%	152,730	28%	121,685	47%
40 to 44 years	110,180	14%	71,015	13%	39,165	15%
45 to 49 years	105,645	13%	72,160	13%	33,485	13%
50 to 54 years	105,625	13%	76,670	14%	28,955	11%
55 to 59 years	89,720	11%	69,185	13%	20,530	8%
60 to 69 years	97,825	12%	82,465	15%	15,360	6%
70 years and over	29,150	4%	26,955	5%	2,200	1%
Total	**812,560**	**100%**	**551,180**	**100%**	**261,380**	**100%**

Source: EEO Tabulation 2006-2010 ACS file, CWRI

Average Workweek

Physicians and surgeons tend to work fewer hours per week as they age. Forty-seven percent of practitioners above 60 years old reported to work between 40 and 49 hours per week, and 28 percent reported to work in excess of 50 hours per week. By contrast, an estimated 70 percent of physicians and surgeons younger than 60 years old reported average work weeks in excess of 50 hours.



Educational attainment

Educational attainment for physicians in Maine is as one would expect—nearly all declare to have a doctorate.

Schools offering training and number completing

Two medical school programs are available in Maine—the new Maine Medical Center-Tufts University School of Medicine medical school program and the University of New England's College of Osteopathic Medicine.

The MMC-TUSM medical school program is a partnership between Maine Medical Center (MMC) and the Tufts University School of Medicine. The program offers a unique curriculum that emphasizes rural and small town practice and grants doctor of medicine degrees (M.D.). Students also have the option to pursue dual degrees, such as MD/MBA, MD/PHD and MD/MPH. Students spend the first two years

at Tufts and year three and portions of year four at MMC. Twenty of the 36 undergraduate openings each year are reserved for Mainers at subsidized rates. Scholarships will effectively lower the tuition to the equivalent of an in-state public university medical school program. First graduates are expected in 2013.

The UNE College of Osteopathy grants the Doctor of Osteopathy medicine (D.O.) degree. According to the university website, about two thirds or recent graduates have pursued careers in primary care.

Program Completers				Number of Completers				
School	CIP	CIP Title	Completer Title	2007	2008	2009	2010	2011
University of New England	511901	Osteopathic Medicine/ Osteopathy	First-Professional Degrees	106	126	119	109	113

Source: Integrated Post-Secondary Education Statistics, CWRI

Outlook

Nationally, employment of physicians and surgeons is expected to grow by 24 percent from 2010 to 2020, faster than the average for all occupations. In Maine, jobs for physicians and surgeons are expected to increase by 17 percent.

Job growth will occur due to the continued expansion of healthcare-related industries. The growing and aging population is expected to drive overall growth in the demand for physician services as consumers continue to seek high levels of care that uses the latest technologies, diagnostic tests, and therapies. Many medical schools are increasing their enrollments based on perceived higher demand for physicians.

Although the demand for physicians and surgeons should continue, some factors will likely reduce growth. New technologies will allow physicians to treat more patients in the same amount of time, thereby reducing the number of physicians who would be needed to complete the same tasks. Physician assistants and nurse practitioners can do many of the routine duties of physicians and may increasingly be used to reduce costs at hospitals and outpatient care facilities. For more information, see the profiles on physician assistants and registered nurses.

Furthermore, demand for physicians' services is sensitive to changes in healthcare reimbursement policies. Consumers may demand fewer physician services if changes to health coverage result in higher out-of-pocket costs for them.

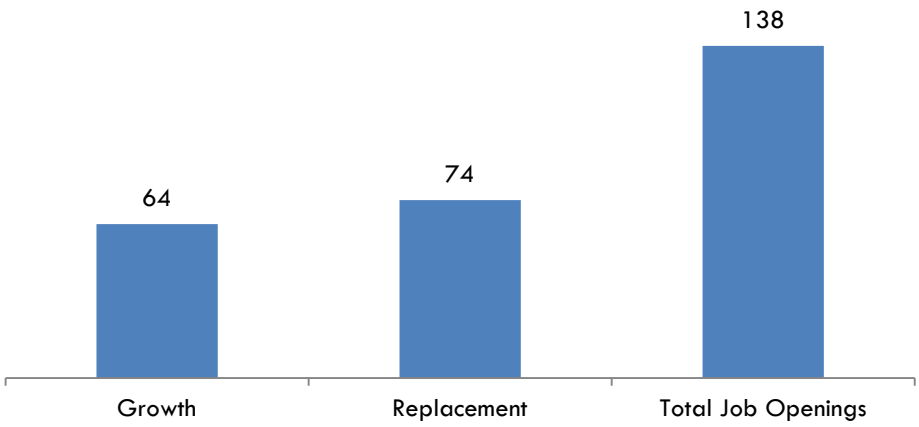
Job prospects should be good for physicians who are willing to practice in rural and low-income areas, because these areas tend to have difficulty attracting physicians. Job prospects also should be good for physicians in specialties dealing with health issues that largely affect aging baby boomers. For example, physicians specializing in cardiology and radiology will be needed because the risks for heart disease and cancer increase as people age.

Job opportunities will also result from the need to replace currently practicing physicians that are expected to retire. In total, nearly 140 job openings per year are anticipated, 74 from replacement needs and 64 from growth in demand.

Employment and Job Openings for Physicians & Surgeons in Maine in 2010 and Projected 2020								
SOC Code	Occupation	Average Employment		Change in Employment		Average Annual Openings		
		2010	2020	Net	Percent	Growth	Replacement	Total
00-0000	***Total, All Occupations***	***641,551***	***676,779***	***35,228***	***5.5%***	***4,361***	***15,146***	***19,507***
	ALL Physicians and Surgeons	**3,778**	**4,415**	**637**	**16.9%**	**64**	**74**	**138**
29-1062	Family and General Practitioners	796	900	104	13.1%	10	16	26
29-1063	Internists, General	290	333	43	14.8%	4	6	10
29-1064	Obstetricians and Gynecologists	118	138	20	16.9%	2	2	4
29-1065	Pediatricians, General	157	171	14	8.9%	1	3	4
29-1066	Psychiatrists	108	114	6	5.6%	1	2	3
29-1067	Surgeons	266	308	42	15.8%	4	5	9
29-1069	Physicians and Surgeons, All Other	2,043	2,451	408	20.0%	41	40	81

Source: CWRI, BLS. Employment figures include estimates for the self-employed.
Employment and projections do not include anesthesiologist data as this has been suppressed for confidentiality.

Projected Annual Job Openings for Physicians & Surgeons



Physician Assistants

Summary Statistics	
Workforce Characteristics	**Physician Assistants**
Employment (2012)	900
Employment per 1,000 population	0.7
versus U.S.	Above avg.
Average starting wage (Maine)	$77,800
Median annual wage (Maine)	$93,160
U.S. median annual wage	$90,930
Median wage for all occupations in Maine	$32,590
Minimum Education Requirement	Master's degree
Job Growth Projections	15%
National Median Age	39.6
Top Industry of Employment	Ambulatory Health Services
Licensing Board	Board of Licensure in Medicine, Board of Osteopathic Licensure

Key points:

- Physician assistants (PAs) could see an expanded role in primary care, particularly as the population ages and more physicians focus on specialty areas of medicine.
- The number of physician assistants (PAs) employed in Maine is twice the national average (per thousand residents).
- Forty-four percent of the PAs employed in Maine are working in Cumberland County.

29-1071 Physician Assistants

Occupation description

Provide healthcare services typically performed by a physician, under the supervision of a physician. Conduct complete physicals, provide treatment, and counsel patients. May, in some cases, prescribe medication. Must graduate from an accredited educational program for physician assistants. Excludes "Emergency Medical Technicians and Paramedics" (29-2041), "Medical Assistants" (31-9092), "Registered Nurses" (29-1141), “Nurse Anesthetists” (29-1151), “Nurse Midwives” (29-1161), and “Nurse Practitioners” (29-1171).

Education requirements

Physician assistants (PAs) typically need a master's degree. Most applicants to master's programs already have a bachelor's degree and some work experience. Then, they must complete an accredited educational program for physician assistants. That usually takes at least two years of full-time study and typically leads to a master's degree. All states require physician assistants to be licensed. The licensure of PAs in Maine is governed by the Board of Licensure in Medicine and the Board of Osteopathic Licensure.

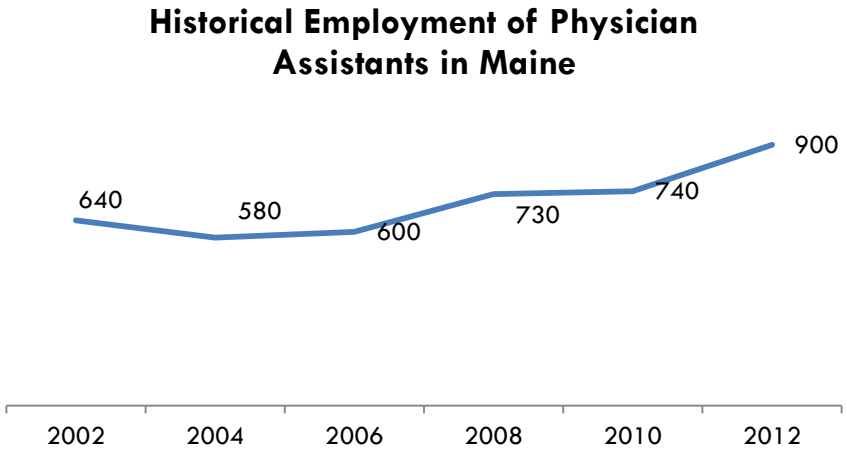
Employment & Wages

In 2012 there were 900 employed PAs in Maine earning a median annual wage of $93,000. PAs are predominantly employed at offices of physicians, clinics and within hospital settings.

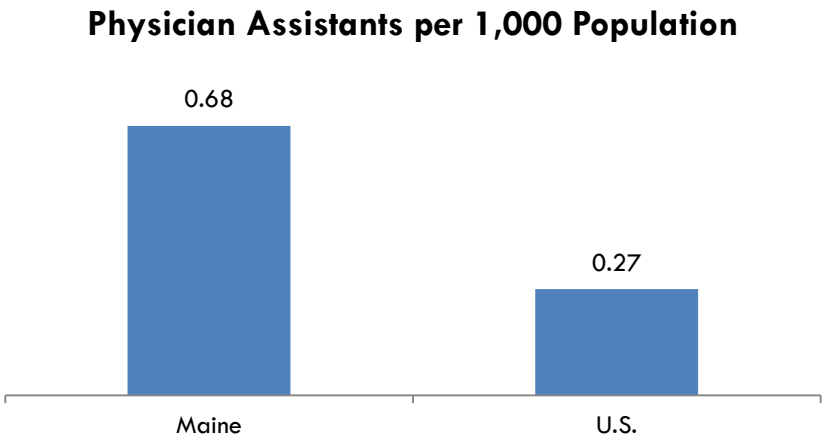
2012 Employment & Wage Statistics	Average Employment	Median Annual Salary
Maine	900	$93,160
Industries with Highest Share of Employment (% total)		
Ambulatory Healthcare Services	48%	$94,330
Hospitals	42%	$95,280
Public Administration	3%	$89,450

Source: 2012 Occupational Employment Statistics, CWRI

Employment was relatively flat from 2002 to 2006, but increased rapidly since then. In 2012, there were 40 percent more PAs employed in Maine than in 2002. As noted earlier in this report, this data does not indicate whether a person was employed full or part-time, making it difficult to assess the true growth in supply.



Maine has more than double the PAs per thousand residents than the nation.



Distribution of employment

Ninety-six percent of Maine's PAs are employed in eight counties that represent 79 percent of the state's population. A large share (44 percent) of PAs is employed in Cumberland County. Somerset and Kennebec Counties also have disproportionately high shares of PAs relative to their share of Maine's population.

The remaining counties for which we do not have data—Franklin, Hancock, Knox, Lincoln, Piscataquis, Sagadahoc, Waldo, Washington—represent 21 percent of Maine's population and employ only four percent of the PAs in this state.

Distribution of Employment				
	Number Employed	Pct. (%) total PA employment	Pct. (%) Maine Population	Number employed per thousand population
Androscoggin County	50	6%	8%	0.5
Aroostook County	60	7%	5%	0.8
Cumberland County	400	44%	21%	1.4
Franklin County	*n/a*	*n/a*	2%	
Hancock County	*n/a*	*n/a*	4%	
Kennebec County	120	13%	9%	1.0
Knox County	*n/a*	*n/a*	7%	
Lincoln County	*n/a*	*n/a*	1%	
Oxford County	20	2%	4%	0.3
Penobscot County	120	13%	12%	0.8
Piscataquis County	*n/a*	*n/a*	1%	
Sagadahoc County	*n/a*	*n/a*	0%	
Somerset County	60	7%	4%	1.2
Waldo County	*n/a*	*n/a*	3%	
Washington County	*n/a*	*n/a*	2%	
York County	30	3%	15%	0.2
Maine	**900**	**96%**	**100%**	**0.7**
US	**83,640**			**0.3**

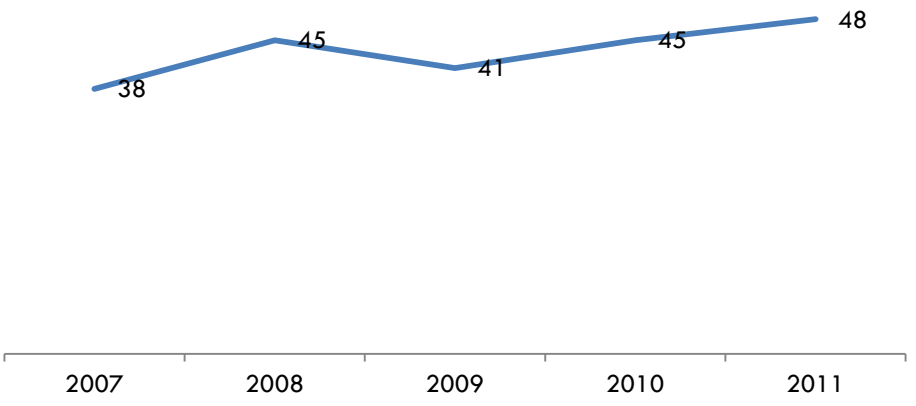
Source: CWRI analysis of OES and Census data

Some counties have suppressed data per BLS confidentiality standards

Schools offering training and number completing

University of New England offers the only physician assistant program in Maine. In 2011 there were 48 graduates, up 26 percent from the level in 2007.

Physician Assistant Program Completers



Education Programs & Annual Graduates								
School	CIP Code	CIP Title	Completer Title	2007	2008	2009	2010	2011
University of New England	510912	Physician Assistant	Master's Degree	38	45	41	45	48

Source: IPEDS, CWRI

Outlook

Nationally, employment of physician assistants is expected to increase 30 percent from 2010 to 2020, much faster than the average for all occupations. In Maine, employment is expected to increase 15 percent, well above the six percent rate expected for all jobs.

As more physicians enter specialty areas of medicine, there will be a greater need for primary healthcare providers, such as physician assistants. Because physician assistants are more cost-effective than physicians, they are expected to have an increasing role in giving routine care.

In addition, employment growth is expected because the large baby-boom generation is getting older. As they age, baby boomers will be increasingly susceptible to ailments and conditions such as heart attack, stroke, and diabetes. Physician assistants are expected to have an increasing role in keeping these people healthy and caring for them when they get ill.

Healthcare providers are also expected to use more physician assistants in new ways as states continue to allow assistants to do more procedures.

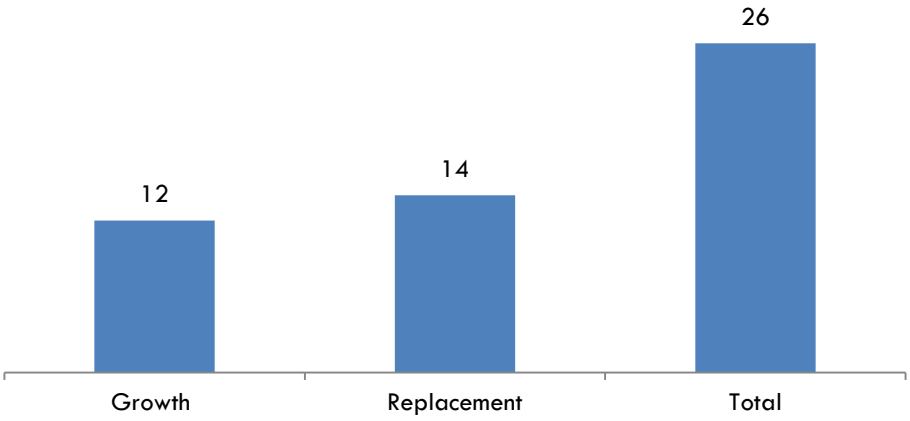
Good job prospects are expected. This should be particularly true for physician assistants working in rural and medically underserved areas, as well as physician assistants working in primary care.

From 2010 to 2020, nearly 120 new physician assistant jobs are projected for Maine, or 12 per year. In addition, the need to replace existing PAs that are expected to retire should result in an additional 14 job openings per year through 2020.

Employment of Physicians Assistants in Maine, 2010 and Projected 2020				
Average Employment		Change in Employment (2010-2020)		Projected Annual Openings Resulting from New Growth
2010	2020	Net	Percent	
764	882	118	15.4%	12

Source: CWRI 2010-2020 Employment Projections

Projected Annual Job Openings, Physicians Assistants



Dentists, Hygienists, Dental Assistants

Summary Statistics			
Workforce Characteristics	**Dentists, General**	**Dental Hygienists**	**Dental Assistants**
Employment (2012)	587*	1,050	1,130
Employment per 1,000 population	0.44	0.79	0.85
versus U.S.	Average	Above avg.	Below avg.
Average annual starting wage (Maine)	$121,530	$52,610	$29,840
Median annual wage (Maine)	$184,260	$67,450	$37,650
U.S. median annual wage	$145,240	$70,210	$34,500
Median wage for all occupations in Maine	$32,590	$32,590	$32,590
Minimum Education Requirement	First professional degree	Associate's degree	Postsecondary non-degree award
Job Growth Projections	4%	14%	9%
National Median Age	51.7	41.4	36.5
Top Industry of Employment	Ambulatory Health Services	Ambulatory Health Services	Ambulatory Health Services
Licensure Board	Board of Dental Examiners	Board of Dental Examiners	Board of Dental Examiners**

* includes the self-employed
** For expanded function dental assistants (EFDAs)

Key points

- In 2010 there were approximately 600 dentists practicing in Maine, with a high proportion of being self-employed. Compared to the nation, Maine had a comparable number of dentists per thousand residents.
- The dentist workforce is unevenly distributed, with Cumberland, Kennebec and Penobscot Counties maintaining a disproportionately high share of employment (68 percent) relative to their combined share of the population (42 percent).
- Approximately 30 percent of the workforce may need to be replaced over the coming decade due to retirements and those otherwise exiting the occupation. Maine's workforce is older than that of the nation which could result in even higher retirement rates. Nearly one third of Maine's dentists are above 60 years old. Nationally, 20 percent are above 60.

- Dentists are increasing the utilization of hygienists, assistants and technology in order to see more patients and enhance productivity.
- The University of New England's College of Dental Medicine, the first dental school in northern New England, opened in fall 2013. The inaugural entering dental class (Class of 2017) included 64 students, 24 of which were from Maine.

29-1021 Dentists, General

Occupation description

Examine, diagnose, and treat diseases, injuries, and malformations of teeth and gums. May treat diseases of nerve, pulp, and other dental tissues affecting oral hygiene and retention of teeth. May fit dental appliances or provide preventive care. Excludes "Prosthodontists" (29-1024), "Orthodontists" (29-1023), "Oral and Maxillofacial Surgeons" (29-1022) and "Dentists, All Other Specialists" (29-1029).

Illustrative example: Family Dentist

Education requirements

Dentists must be licensed in all states; requirements vary by state. To qualify for a license in most states, applicants must graduate from an accredited dental school and pass written and practical exams. In Maine, the licensure of dentists is governed by the Maine Board of Dental Examiners and dentists must renew their licenses every two years.

Most dental students need at least a bachelor's degree before entering dental school; requirements vary by school. All dental schools require applicants to have completed certain required science courses, such as biology and chemistry. Majoring in a science, such as biology, might increase the chances of being accepted, but no specific major is required to enter most dental programs.

All nine dental specialties require dentists to complete additional training before practicing that specialty. They must usually complete a one- or two-year (and sometimes longer) residency, in a program related to their specialty. While residencies are not required for those entering general practice many opt into a one- or two-year program.

Employment & Wages

In 2012 there were 340 dentists employed in Maine earning a median annual salary of $185,000, which was 27 percent above the national median. One of the factors contributing to higher than average wages in Maine is the limited use of dental managed care. Also, these employment figures are taken from OES and do not include the self-employed. According to employment projections data, which includes the self-employed, there were nearly 600 dentists practicing in Maine in 2010. As noted earlier in this report creating employment estimates for occupations with high proportions of self-employment involve more subjectivity. Please see the discussion under 'Data sets and data limitations' for more detail. The American Community Survey also includes the self-employed and indicates close to 600 dentists practicing in Maine, but this data spans 2006 through 2010. While these data sets are imperfect, they point to a dentist workforce of approximately 600 in 2010. Readers with access to different data sets may have more recent and different statistics.

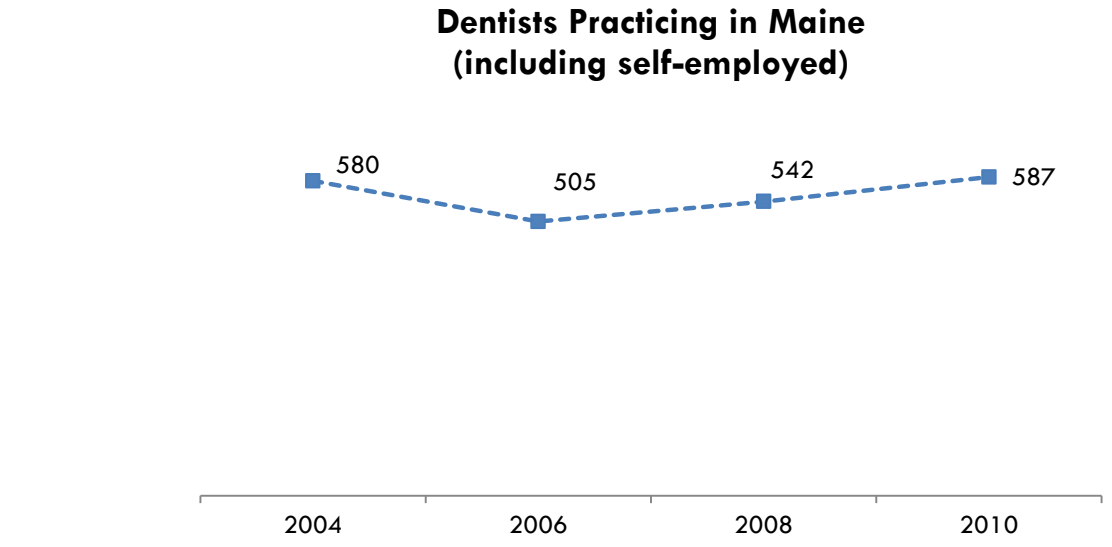
2012 Employment & Wage Statistics		
	Average Employment	What do they earn (median)?
Dentists	**340**	**$184,260**

Source: 2012 Occupational Employment Statistics, CWRI

Data sets that include self-employment indicate that there were nearly 600 dentists in Maine.

Dentist Employment			
Data set	Occupational Employment Estimates (OES)	Employment Projections	American Community Survey (ACS)
Exclusions	No self employed	Includes self employed	Includes self employed
Period	2012	2010	2006-2010
Number of Dentists	**340**	**587**	**575-585**

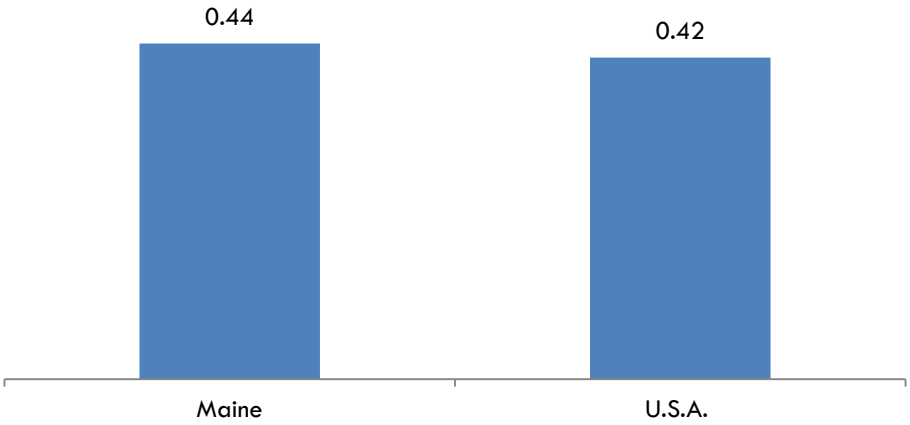
The number of dentists practicing in Maine has been relatively flat in recent years, as seen in the following chart.



Source: Employment projections system, CWRI

In 2010, Maine had approximately the same number of dentists per 1,000 residents as the nation (using 2012 OES data, which does not include the self-employed, Maine had .26 dentists per thousand residents, or 27 percent fewer than that of the nation).

Dentists per 1,000 Population, 2010
(Includes self-employed dentists)



As noted earlier in this report, one of the limitations of using the employment estimates discussed above is that they do not indicate whether a person is full or part-time (see *Data sets and data limitations* for more discussion). Since the majority of Maine's dentists are in the age range where workers traditionally become less attached to the workforce, these employment estimates m overstate the true level of dentist workforce supply in Maine.

Distribution of employment

CWRI has limited data on dentist employment by county. Using OES data, 74 percent of the 340 employed dentists can be accounted for with county level data (some data is suppressed). For dentists that are self-employed, of which there are approximately 250, county level data is not available. As a result, data on the county of employment is available for less than half of all dentists practicing in Maine.

The table below provides data for dentist employment by county (self-employed are not included). Three fourths of dentists that are employed are working in four counties that represent 50 percent of the statewide population. Kennebec County has a particularly high share of employed dentists relative to its population (0.7 practitioners per 1,000 population versus the state average of 0.26).

Distribution of Employment, 2012				
	Number Employed	Pct. (%) total employment	Pct. (%) of total Maine Population	Number employed per 1,000 population
Androscoggin County	20	6%	8%	0.2
Aroostook County	*n/a*	*n/a*	5%	
Cumberland County	90	26%	21%	0.3
Franklin County	*n/a*	*n/a*	2%	
Hancock County	*n/a*	*n/a*	4%	
Kennebec County	80	24%	9%	0.7
Knox County	*n/a*	*n/a*	3%	
Lincoln County	*n/a*	*n/a*	3%	
Oxford County	*n/a*	*n/a*	4%	
Penobscot County	60	18%	12%	0.4
Piscataquis County	*n/a*	*n/a*	1%	
Sagadahoc County	*n/a*	*n/a*	3%	
Somerset County	*n/a*	*n/a*	4%	
Waldo County	*n/a*	*n/a*	3%	
Washington County	*n/a*	*n/a*	2%	
York County	*n/a*	*n/a*	15%	
Maine	**340**	**74%**	**100%**	**0.26**
U.S.				**0.35**

Source: CWRI analysis of OES & Census data; some data suppressed per BLS standards.

Figures represent employed dentists only (self-employed are not included).

Dental hygienists and assistants have relatively minor data suppression issues and lower levels of self-employment, making them good proxies for the distribution of dentists, both employed and self-employed. The table below displays dental hygienist and assistant employment by county. Although data is suppressed for a number of counties, we are nonetheless able to account for 90 and 95 percent of total employment in these occupations, respectively. The data shows that 76 percent of hygienists and 85 percent of dental assistants in Maine are employed in Cumberland, Kennebec, Penobscot and York Counties. The implication is that these are the counties where the significant majority of dentists practice.

Distribution of Employment by County, 2012				
	Hygienists	% employment	Dental Assistants	% employment
Androscoggin County	90	9%	70	6%
Aroostook County	60	6%	40	4%
Cumberland County	370	35%	350	31%
Franklin County	*n/a*	*n/a*	*n/a*	*n/a*
Hancock County	*n/a*	*n/a*	*n/a*	*n/a*
Kennebec County	120	11%	180	16%
Knox	*n/a*	*n/a*	*n/a*	*n/a*
Lincoln County	*n/a*	*n/a*	*n/a*	*n/a*
Oxford County	*n/a*	*n/a*	*n/a*	*n/a*
Penobscot County	150	14%	200	18%
Piscataquis County	*n/a*	*n/a*	*n/a*	*n/a*
Sagadahoc County	*n/a*	*n/a*	*n/a*	*n/a*
Somerset County	*n/a*	*n/a*	*n/a*	*n/a*
Waldo County	*n/a*	*n/a*	*n/a*	*n/a*
Washington County	*n/a*	*n/a*	*n/a*	*n/a*
York County	160	15%	230	20%
Maine	**1,050**	**90%**	**1130**	**95%**

Source: CWRI, OES; some data suppressed per BLS standards.

Dental hygienists and assistants have relatively minor data suppression issues (we can account for 90 and 95 percent of employment in these occupations, respectively, when we look at county level detail) and low levels of self-employment, making them good proxies for the distribution of employed and self-employed dentists.

Demographic, economic and social characteristics of the workforce

Demographic profile

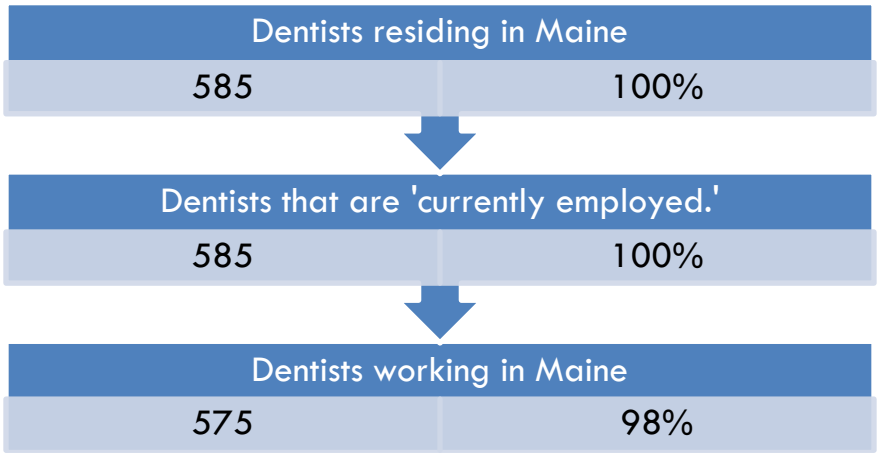
The dentist population in Maine is mostly male (83 percent) and white (93 percent). Nationally, the dentist population has a greater proportion of female dentists (23 percent) and is more racially diverse.

Demographic Characteristics of the Dentist Population						
	Total		**Race and Ethnicity**			
			White alone		**All Other**	
	Maine	U.S.A.	Maine	U.S.A.	Maine	U.S.A.
Total	585	165,835	545	126,200	40	39,635
Percent	100%	100%	93%	76%	7%	24%
Male	83%	77%	81%	63%	2%	14%
Female	17%	23%	12%	14%	5%	10%

Source: CWRI analysis of ACS 2006-2010 5 year file

Employment status

Of the dentists residing in Maine, 98 percent reported to be working in state.



Age distribution

Sixty-five and 30 percent of the dentist workforce in Maine was over 50 and 60 years old, respectively. Nationally, 50 and 20 percent of dentists are above these age levels. As noted earlier in this report, the small sample sizes that result when analyzing occupational data by state and demographic characteristics can result in high margins of error.

Age Distribution, Dentists

	Maine total	%	U.S. total	%
16 to 39 years	90	16%	42,450	26%
40 to 44 years	35	6%	18,650	12%
45 to 49 years	75	13%	20,685	13%
50 to 54 years	65	11%	24,125	15%
55 to 59 years	140	24%	22,700	14%
60 to 69 years	120	21%	25,525	16%
70 years and over	50	9%	7,165	4%
Total	**575**	**100%**	**161,300**	**100%**

Source: EEO Tabulation 2006-2010 ACS file, CWRI

Educational attainment

Educational attainment is comparable between dentists in Maine and those across the nation—nearly all report having a doctorate.

Schools offering training and number completing

The University of New England's College of Dental Medicine opened in fall 2013 and enrolled its inaugural entering dental class (Class of 2017). The dental school is the first in northern New England. The inaugural class of 64 students includes 24 students from Maine, representing 11 counties.

Outlook

Nationally, employment of dentists is expected to grow by 21 percent from 2010 to 2020, faster than the average for all occupations. In Maine, employment of dentists is expected to grow by four percent, below the national rate largely due to lower population growth forecasts for this state (see the introduction of this report for more detail). Also, this forecast for Maine belies much stronger projected growth in self-employment of dentists, which is expected to expand 15 percent.

BLS provides the following assessment of major trends affecting employment of dentists:

> Members of the baby-boom generation will need complicated dental work. In addition, because each generation is more likely to keep their teeth than past generations, more dental care will be needed in the years to come. Dentists will continue to see an increase in public demand for their services as studies continue to link oral health to overall health.
>
> Employment of dentists is not expected to keep pace with the increased demand for dental services. There are still areas of the country where patients have little access to dental care. Whether patients seek care is largely dependent on their insurance coverage. People with new or expanded dental insurance coverage will be more likely to visit a dentist than in the past. Cosmetic dental services, such as teeth-whitening treatments, will become increasingly popular. This trend is expected to continue as new technologies allow for less invasive, faster procedures.
>
> Dentists are likely to hire more hygienists and dental assistants to handle routine services. Productivity increases from new technology should allow dentists to reduce the time needed to see each patient. These factors allow the dentist to see more patients when their practices expand.
>
> Dentists will continue to provide care and instruction aimed at promoting good oral hygiene, rather than just providing treatments such as fillings.

In Maine, 19 job openings are expected per year, 2 from new growth and 17 from replacement needs. New growth will be driven by more dentists opening new practices; nearly 3 per year are expected, and this is projected to be somewhat offset by a slight decline in the number of employed dentists.

The projected annual number of job openings due to replacement needs (17) assumes that 30 percent of the workforce will need to be replaced from 2010 to 2020 due to retirements or practitioners otherwise permanently leaving the occupation. This replacement rate is based on analysis of employment patterns of the U.S. dentist workforce. Since Maine's dentists are older than the nation's using a replacement rate that is based on national trends may be too low. **How would higher retirement rates impact the need for more dentists in Maine?** Analysis shows that for every two percentage point increase in the retirement rate for, 12 more job openings would result over the entire 2010 to 2020 period or slightly more than 1 additional replacement opening per year. If the replacement rate is 32 percent, the annual minimum need for dentists would be 21 per year; if

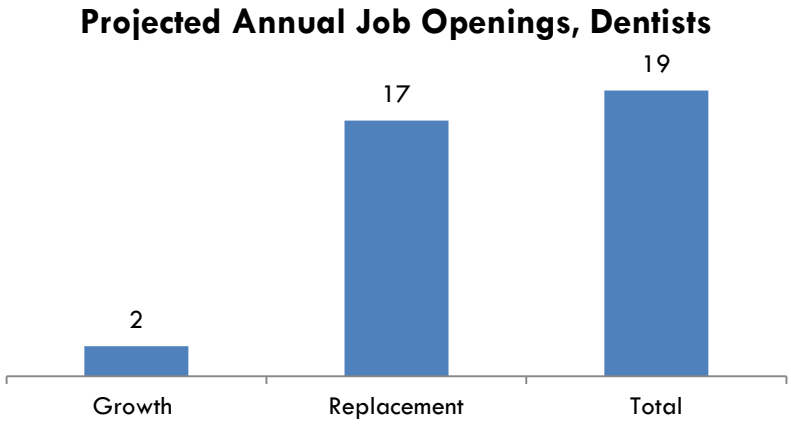
replacement rate is 34 percent, the minimum need would be 22 per year; and so on. See the tables below for more detail.

Growth in dentist employment is expected to increase 4 percent through 2020. This figure belies relatively strong growth projections for self-employed dentists, which is expected to increase 15 percent. Growth in self-employed dentists is expected to be offset by a slight decline in the number of employed dentists. Compared to the nation, Maine is expected to have significantly lower population growth, and this is a gating factor for employment growth.

Employment of Dentists in Maine, 2010 and Projected 2020				
Average Employment		Change in Employment (2010 - 2020)		Projected Annual Openings Resulting from New Growth
2010	2020	Net	Percent	
587	608	21	3.6%	2

Source: CWRI 2010-2020 Employment Projections

In addition to new growth, employment opportunities for dentists will arise from the need to replace those that retire. In Maine, 17 openings per year are expected due to replacement needs. In total, 19 job openings are expected per year.



Job openings due to replacement needs are based on employment patterns of the U.S. dentist workforce. This creates a bias in the estimates for Maine, since practitioners are older here. Actual replacement needs could be higher (in percentage terms) due to the demographic profile of Maine's dentist workforce.

Impact of Replacement Rates on Projected Dentist Job Openings						
Replacement Rate (%)	Total Replacement Need 2010-2020	Replacement Openings per Year	Total Job Openings from Growth 2010-2020	Job Openings from Growth per year	Total Job Openings 2010-2020	Total Job Openings per year
26%	151	15	21	2	**172**	**17**
28%	163	16	21	2	**184**	**18**
30%	174	17	21	2	**195**	**19**
32%	186	19	21	2	**207**	**21**
34%	198	20	21	2	**219**	**22**
36%	210	21	21	2	**231**	**23**
38%	221	22	21	2	**242**	**24**

Yellow highlighted portion indicates base assumption.
Source: CWRI

With a significant portion of the dentists approaching the traditional age for retirement, the need to build a pipeline of practitioners with the skills and education necessary to replace those that may leave the workforce is high. The new dental school will be an important part of this process, because it will give newly trained dentists the option to live and practice in the state where they've trained. The program will also be instrumental in bringing more dentists to rural and underserved areas.

29-2021 Dental Hygienists

Occupation description

Clean teeth and examine oral areas, head, and neck for signs of oral disease. May educate patients on oral hygiene, take and develop x rays, or apply fluoride or sealants.

Illustrative examples: Registered Dental Hygienist, Oral Hygienist

Independent Practice Dental Hygienists (IPDH) licensed by the Maine Board of Dental Examiners may be the proprietor of an independent dental hygiene practice and may provide services without supervision by a dentist to the extent permitted by laws set forth in M.R.S.A. Title 32, Chapter 16 and rules of the Board of Dental Examiners. An IPDH may also be employed by dentists. Only those that are employed are included in OES figures for this occupation.

Education requirements

Dental hygienists typically need an associate's degree in dental hygiene to enter the occupation. Certificates, bachelor's degrees, and master's degrees in dental hygiene are also available but are less common among dental hygienists. In Maine, both associate and baccalaureate degree programs are offered. More information on Maine's dental hygienist education programs is available at the end of this profile. Private dental offices usually require a minimum of an associate's degree or certificate in dental hygiene. A bachelor's or master's degree is usually required for research, teaching, or clinical practice in public or school health programs.

The licensure of dental hygienists (both independent practice dental hygienists and registered dental hygienists) is governed by the Maine Board of Dental Examiners. All hygienists must renew their license every two years and earn 30 hours of continuing education consisting of board-approved courses in the two years preceding renewal.

An IPDH must possess a bachelor's degree from a Commission of Dental Accredited (CODA) dental hygiene program and 2,000 work hours of clinical practice in a private dental practice during the two years preceding the application or possess an associate degree from a CODA accredited dental hygiene program and 6,000 work hours of clinical practice in a private dental practice during the six years preceding the application. They are also required to provide a referral plan to patients in need of additional care by a dentist.[17]

Employment & Wages

In 2012 there were 1,050 dental hygienists in Maine earning a median annual wage of $67,000. It is estimated that less than two percent of the hygienist workforce is self-employed or practicing independently as an IPDH.

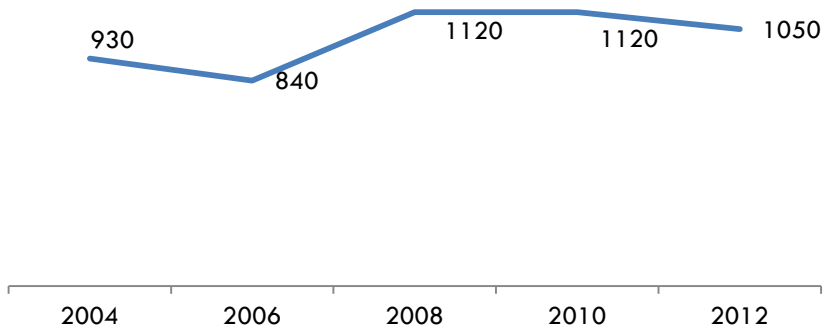
[17] Academy of General Dentistry, "*Dental Hygienist Duties by State.*"

2012 Employment & Wage Statistics			
	Average Employment	Where are they employed?	What do they earn (median)?
Dental Hygienists	**1,050**		**$67,450**
Ambulatory Healthcare Services		98%	$67,620

Source: 2012 Occupational Employment Statistics, CWRI

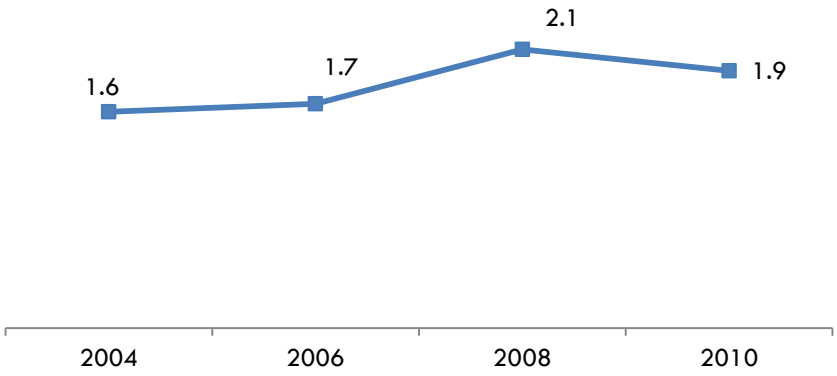
The following chart shows that employment of dental hygienists experienced solid growth from 2004 through 2008, but more recently experienced modest declines. At the same time, anecdotes from industry professionals point to a challenging labor market for hygienists—many recent graduates cannot find work and those who do are underemployed. Older hygienists have similar problems. Due to limitations in OES data, it's possible that the modest employment declines displayed in the chart below belie a more challenging labor market for hygienists. As noted in the discussion under *Data sets and limitations*, OES employment data does not indicate whether a person is employed part or full time. One of the limitations of using this data for time series analysis is that the proportion working part time may change with the economic cycle. In the figure below, it's possible that the proportion working part time may be increasing over the last few years.

Dental Hygienist Employment



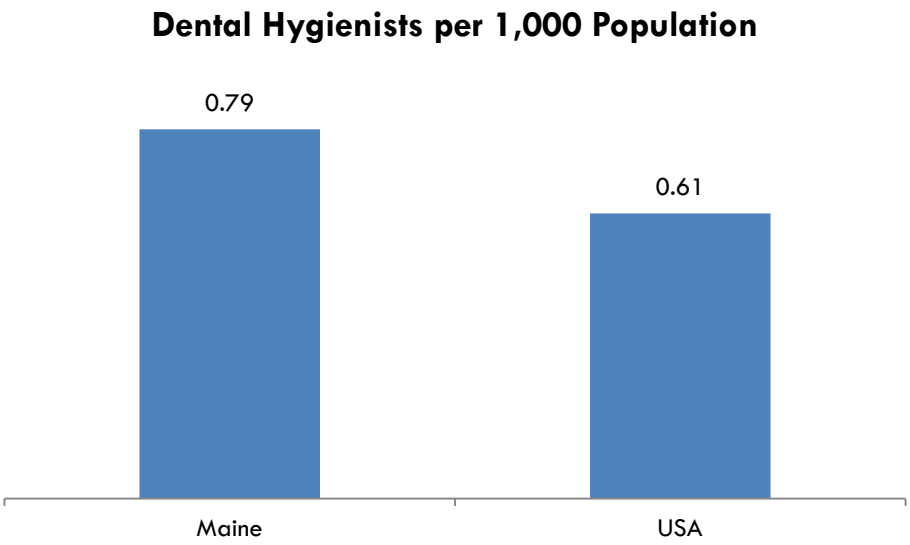
Since 2004 the ratio of hygienists to dentists has increased.

Number of Hygienists per Dentist



Source: OES, employment projections (for total dentists, employed and self-employed), CWRI

Compared to the nation, Maine has greater numbers of dental hygienists per 1,000 residents.



Distribution of employment

Ninety percent of Maine's dental hygienists are employed in 6 counties that represent 70 percent of the population. Approximately one third are employed in Cumberland County.

Distribution of Employment				
	Number Employed	Pct. (%) total employment	Pct. (%) of total Maine Popula-tion	Number employed per 1,000 population
Androscoggin County	90	9%	8%	0.8
Aroostook County	60	6%	5%	0.8
Cumberland County	370	35%	21%	1.3
Franklin County	*n/a*	*n/a*	2%	
Hancock County	*n/a*	*n/a*	4%	
Kennebec County	120	11%	9%	1.0
Knox County	*n/a*	*n/a*	3%	
Lincoln County	*n/a*	*n/a*	3%	
Oxford County	*n/a*	*n/a*	4%	
Penobscot County	150	14%	12%	1.0
Piscataquis County	*n/a*	*n/a*	1%	
Sagadahoc County	*n/a*	*n/a*	3%	
Somerset County	*n/a*	*n/a*	4%	
Waldo County	*n/a*	*n/a*	3%	
Washington County	*n/a*	*n/a*	2%	
York County	160	15%	15%	0.8
Maine	**1,050**	**90%**	**100%**	**0.79**
U.S.				**0.61**

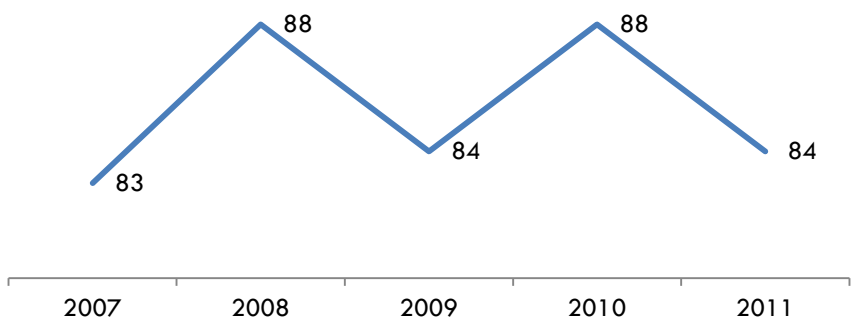
Source: CWRI analysis of OES & Census data

Some counties have suppressed data per BLS confidentiality standards.

Schools offering training and number completing

Two schools in Maine offer dental hygienist programs: University of Maine at Augusta at its Bangor campus and the University of New England at its campus in Portland. Each school offers associates and bachelors programs. Over the last three years, there has been an average of 85 graduates per year.

Dental Hygienist Program Completers



Education Programs & Annual Graduates								
School	CIP Code	CIP Title	Completer Title	2007	2008	2009	2010	2011
University of Maine at Augusta	510602	Dental Hygiene/ Hygienist	Associate's Degree	23	22	24	17	17
University of Maine at Augusta	510602	Dental Hygiene/ Hygienist	Bachelor's Degree		2		3	4
University of New England	510602	Dental Hygiene/ Hygienist	Associate's Degree	60	42	41	47	36
University of New England	510602	Dental Hygiene/ Hygienist	Bachelor's Degree		22	19	21	27
Total				**83**	**88**	**84**	**88**	**84**

Outlook

Nationally, employment of dental hygienists is expected to increase 38 percent from 2010 to 2020, much faster than the average for all occupations. Ongoing research linking oral health and general health will continue to spur the demand for preventative dental services, which dental hygienists often provide. New and increasingly accurate technologies to help diagnose oral health problems are also expected to increase demand. For example, new tests use saliva samples that a hygienist takes to spot early signs of oral cancer.

As their practices expand, dentists will hire more hygienists to perform preventative dental care, allowing the dentist to see more patients. Also, as the large baby boomer population ages and people keep more of their original teeth than previous generations, the need to maintain and treat these teeth will continue to drive the need for hygienists' services.

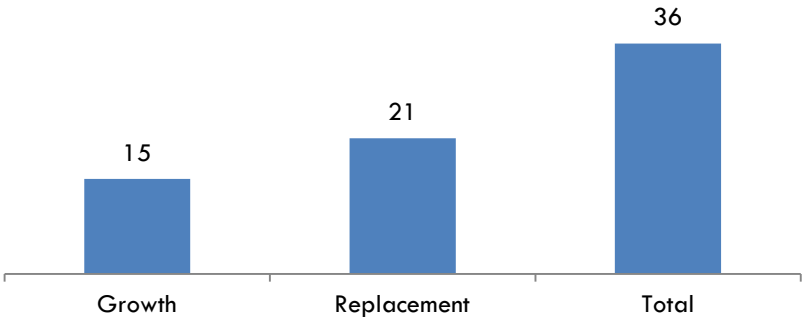
Demand for dental services follows the trends in the economy because the patient or private insurance companies pay for these services. As a result, during slow times in the economy, demand for dental services may decrease. During such times, dental hygienists may have difficulty finding employment or, if they are currently employed, they might work fewer hours.

In Maine, employment of hygienists is expected to grow 14 percent, resulting in 15 new jobs per year. In addition to new job opportunities, an additional 21 job openings are expected to arise each year due to existing workers retiring or exiting the field. In total, 36 job openings per year are expected. For more detailed understanding of employment projections methodology and limitations, please see the section at the beginning of this report, *Data sets and limitations*.

Employment of Dental Hygienist in Maine, 2010 and Projected 2020				
Average Employment		Change in Employment (2010-2020)		Projected Annual Openings Resulting from New Growth
2010	2020	Net	Percent	
1,060	1,207	147	13.9%	15

Source: CWRI 2010-2020 Employment Projections

Projected Annual Job Openings for Dental Hygienists



31-9091 Dental Assistants

Occupation description

Assist dentist, set up equipment, prepare patient for treatment, and keep records.

Illustrative examples: Orthodontic Assistant, Certified Dental Assistant (CDA)

An Expanded Function Dental Assistant (EFDA) may perform certain reversible intraoral procedures (as specified by the laws and rules pertaining to dentistry in Maine) under the direct supervision of a licensed dentist.

Education requirements

There are several tiers of dental assisting in Maine, each with different education and training requirements and a different scope of practice. Dental assistants provide basic supportive dental assistance under the supervision of a licensed dentist. This level of dental assisting has no education or training requirements. Dental assistants who pass the Dental Assistant National Board earn the Certified Dental Assistant (CDA) certification and are qualified to perform additional functions outlined in the Dental Practice Act. To qualify as an EFDA a person must be 18 years of age or older, hold a certified dental assistant certificate or registered dental hygiene license and have completed training in a school or program approved by the Maine Board of Dental Examiners, or be credentialed by another state or province.

Nationally, there are several possible paths to becoming a dental assistant and the education and training paths vary by state. Some states require assistants to graduate from an accredited program and possibly pass a state exam. In other states, there are no formal educational requirements. Dental assistants who do not have formal education in dental assisting may learn their duties through on-the-job training. The dentist or other dental assistants in the office teach the new assistant dental terminology, the names of the instruments, how to do daily tasks, how to interact with patients, and other activities necessary to help keep the dental office running smoothly. Most states regulate what dental assistants may do, but that varies by state.

Some states require assistants to graduate from an accredited program and pass a state exam. Most programs take about one year to complete and lead to a certificate or diploma and are offered by community colleges. Two-year programs, also offered in community colleges, are less common and lead to an associate's degree. The Commission on Dental Accreditation (CODA), part of the American Dental Association, approved more than 285 dental-assisting training programs in 2011.

Employment & Wages

In 2012 there were 1,100 dental assistants in Maine or two for every dentist. The median salary was 10 percent above the U.S. median.

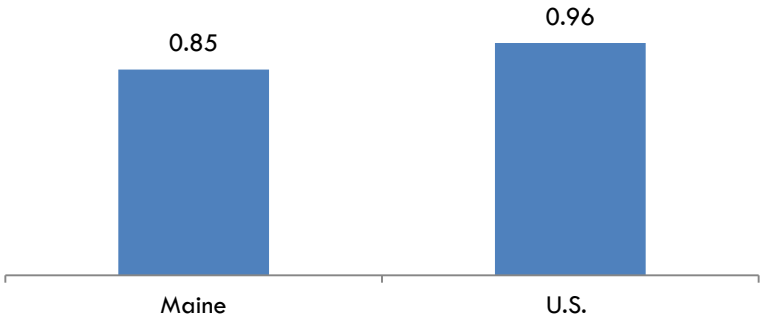
2012 Employment & Wage Statistics

	Average Employment	Where are they Employed?	What do they Earn (median)?
Dental Assistants	**1,130**		**$37,650**
Ambulatory Healthcare Services		97%	$37,670

Source: 2012 Occupational Employment Statistics, CWRI

In 2012 there were 11 percent fewer dental assistants in Maine per thousand residents than the nation.

Dental Assistants per 1,000 Population, 2012



Distribution of employment

Cumberland, Kennebec, Penobscot and York Counties have high shares of dental assistant employment relative to their population levels.

Distribution of Employment

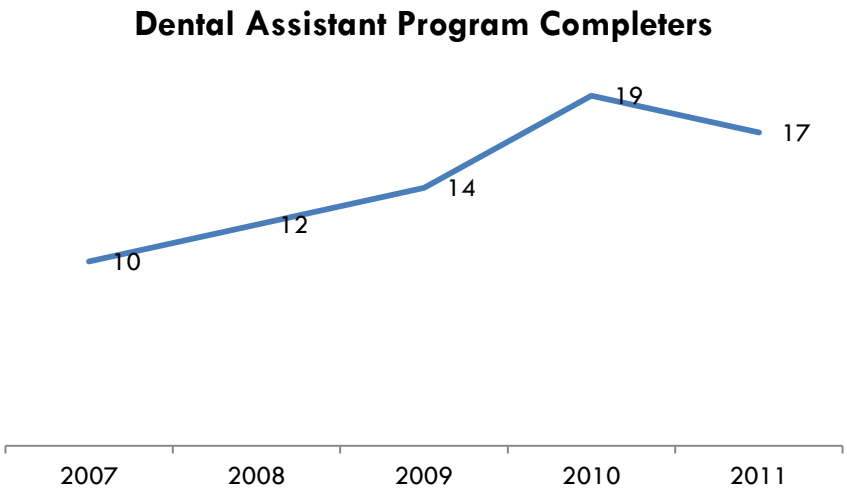
	Number Employed	Pct. (%) Total Employment	Pct. (%) of total Maine Population	Number Employed per 1,000 Population
Androscoggin County	70	6%	8%	0.7
Aroostook County	40	4%	5%	0.6
Cumberland County	350	31%	21%	1.2
Franklin County		*n/a*	2%	
Hancock County		*n/a*	4%	
Kennebec County	180	16%	9%	1.5
Knox		*n/a*	3%	
Lincoln County		*n/a*	3%	
Oxford County		*n/a*	4%	
Penobscot County	200	18%	12%	1.3
Piscataquis County		*n/a*	1%	
Sagadahoc County		*n/a*	3%	
Somerset County		*n/a*	4%	
Waldo County		*n/a*	3%	
Washington County		*n/a*	2%	
York County	230	20%	15%	1.2
Maine	**1,130**	**95%**	**100%**	**0.85**
U.S.				**0.96**

Source: CWRI analysis of OES & Census data

Some counties have suppressed data per BLS confidentiality standards.

Schools offering training and number completing

The University of Maine at Augusta (UMA) offers a certificate program in dental assisting. In 2011, UMA also had 2 graduates from an Associate's degree program in dental assisting. The York County Community College also offers certifications in dental assisting and expanded function dental assisting. These are non-credit courses, however. Data for the York community college programs was not reported to IPEDS as they are non-credit bearing.



Education Programs & Annual Graduates								
School	**CIP Code**	**CIP Title**	**Completer Title**	**2007**	**2008**	**2009**	**2010**	**2011**
Univ. Maine at Augusta	510601	Dental Assisting/ Assistant	Post-sec. Awards/ Cert./Diplomas; 1-2 yrs.	10	12	14	19	15
Univ. Maine at Augusta	510601	Dental Assisting/ Assistant	Associate's Degree					2
Total				**10**	**12**	**14**	**19**	**17**

Outlook

Nationally, employment of dental assistants is expected to grow by 31 percent from 2010 to 2020, much faster than the average for all occupations. Ongoing research linking oral health and general health will likely continue to increase the demand for preventive dental services. Dentists will continue to hire more dental assistants to complete routine tasks, allowing the dentist to see more patients in their practice and spend their time on more complex procedures. As dental practices grow, more dental assistants will be needed.

As the large baby-boom population ages, and as people keep more of their original teeth than did previous generations, the need to maintain and treat teeth will continue to increase the need for dental assistants.

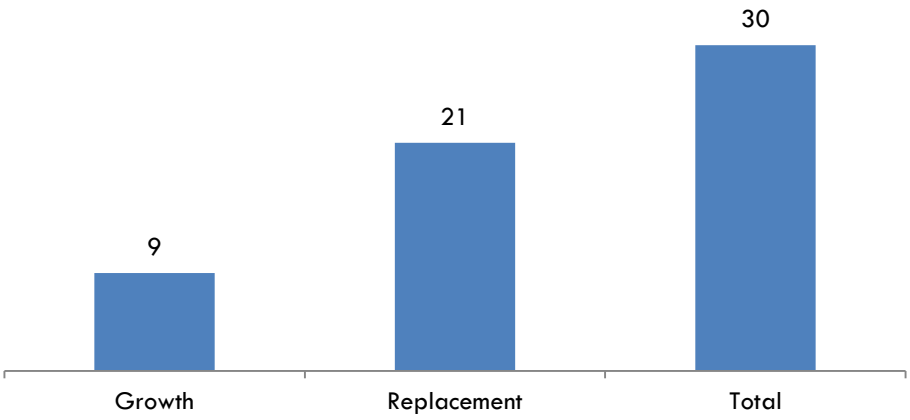
In Maine, employment of dental assistants is expected to increase by nine percent from 2010 to 2020. This growth is expected to result in approximately 89 new jobs, or nine job openings per year.

Employment of Dental Assistants in Maine 2010 and Projected 2020				
Average Employment		Change in Employment (2010-2020)		Projected Annual Openings Resulting from New Growth
2010	2020	Net	Percent	
1,008	1,097	89	8.8%	9

Source: CWRI 2010-2020 Employment Projections

In addition, job openings will result from the need to replace workers that retire or otherwise exit the occupation. In total, there are expected to be 300 job openings for dental assistants from 2010 to 2020, or 30 per year.

Projected Annual Job Openings for Dental Assistants



Other Doctoral Level Healthcare Practitioners

Summary Statistics				
Workforce Characteristics	**Chiropractors**	**Podiatrists**	**Optometrists**	**Audiologists**
Employment (2012)	160	30	130	20
Employment per 1,000 population	0.12	0.02	0.10	0.02
versus U.S.	Above average	Below average	Average	Below average
Avg. annual starting wage (Maine)	$41,850	$104,790	$86,310	$59,930
Median annual wage (Maine)	$63,010	$161,390	$111,070	$71,290
U.S. median annual wage	$66,160	$116,440	$97,820	$69,720
Median wage for all occupations in Maine	$32,590	$32,590	$32,590	$32,590
Minimum Education Requirement	Doctoral or professional degree	Doctoral or professional degree	Doctoral or professional degree	Doctoral or professional degree
Job Growth Projections	-2%	-4%	3%	17%
National Median Age	47.3	NA	NA	NA
Top Industry of Employment	Ambulatory Health Svcs.	Ambulatory Health Svcs.	Ambulatory Health Svcs.	Hospitals
Licensure Board	Board of Chiropractic Licensure	Board of Licensure in Podiatric Medicine	Board of Optometry	Board of Examiners on Speech, Audiology and Hearing

Note: Psychologists and pharmacists also require a doctoral degree, but for the purpose of this report these occupations are grouped with other professions. The SOC classifies psychologists under Life, Physical and Social Science occupations (19-0000) as opposed to health practitioners (29-0000). For this report the psychologist profile is located under Mental Health professions. The pharmacist profile is grouped with pharmacy technicians in their own category.

Key points

- Job opportunities are limited by the small size of these occupations.
- Employment growth in these fields is expected to be stronger nationally than for Maine, due in part to this state's lower population growth as well as lower projected growth for the industry.
- It is estimated that 35 percent of optometrists will need to be replaced over the coming decade due to retirements.

29-1011 Chiropractors

Occupation description

Assess, treat, and care for patients by manipulation of spine and musculoskeletal system. May provide spinal adjustment or address sacral or pelvic misalignment.

Education requirements

Becoming a chiropractor requires earning a Doctor of Chiropractic (D.C.) degree and getting a state license. Doctor of Chiropractic programs take 4 years to complete and require three years of previous undergraduate college education for admission.

Employment & Wages

In 2012 there were 160 chiropractors in Maine, earning a median annual salary of $63,000. These estimates do not include the self-employed. Including the self-employed, there were nearly 240 chiropractors practicing in this state in 2010.

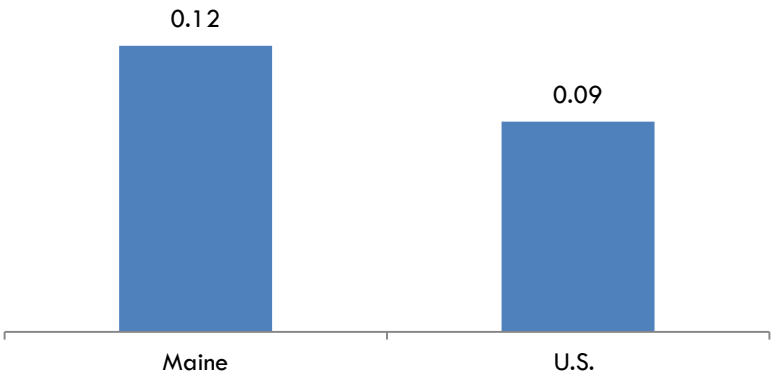
2012 Employment & Wage Statistics

	Average Employment	Median Annual Salary
Maine	160	$63,010
Industries with Highest Share of Employment (% total)		
Ambulatory Healthcare Services	100%	$63,010

Source: 2012 Occupational Employment Statistics, CWRI

Maine had 35 percent more employed chiropractors per thousand residents than the nation.

Chiropractors per 1,000 Population, 2012



Schools offering training and number completing

No programs in Maine.

Outlook

Nationally, employment of chiropractors is expected to increase by 28 percent from 2010 to 2020, faster than the average for all occupations.

People across all age groups are increasingly seeking chiropractic care, because most chiropractors treat patients without performing surgery or prescribing drugs. Chiropractic treatment of the back, neck, limbs, and joints has become more accepted as a result of research and changing attitudes about alternative healthcare.

The aging of the large baby-boom generation will lead to new opportunities for chiropractors, because older adults are more likely to experience musculoskeletal and joint problems.

Demand for chiropractic treatment is related to the ability of patients to pay, either directly or through health insurance. Although more insurance plans now cover chiropractic services, the extent of such coverage varies among plans. Chiropractors must educate communities about the benefits of chiropractic care to establish a successful practice.

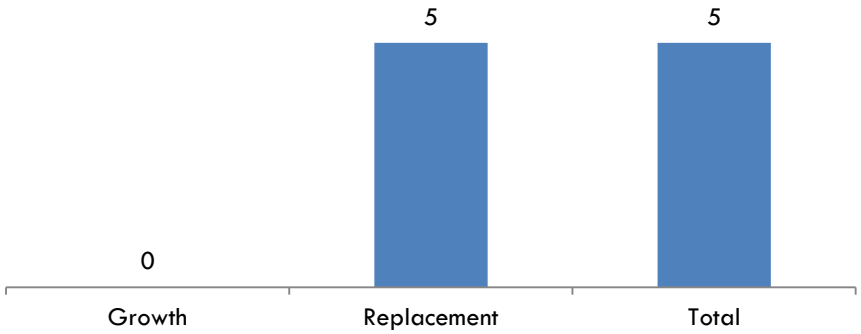
In Maine, employment of chiropractors is expected to decline by 2 percent from 2010 to 2020, much slower than what's expected nationally, primarily due to slower population and industry growth expectations.[18] Despite the slight decline in employment, job opportunities will arise as currently practicing chiropractors retire.

Employment of Chiropractors in Maine, 2010 and Projected 2020

Average Employment		Change in Employment (2010-2020)		Projected Annual Openings Resulting from New Growth
2010	2020	Net	Percent	
238	233	-5	-2.1%	0

Source: CWRI 2010-2020 Employment Projections

Projected Annual Job Openings for Chiropractors



[18] Nationally, employment at "offices of all other health practitioners" (which includes offices of chiropractors) is expected to increase 52 percent from 2010 to 2020. In Maine, this industry is projected to grow 12 percent.

29-1081 Podiatrists

Occupation description

Diagnose and treat diseases and deformities of the human foot.

Education requirements

Becoming a podiatrist requires completing an undergraduate college education, a four-year postgraduate degree, and a three-year medical and surgical residency. Podiatrists also must be licensed.

Employment & Wages

In 2012 there were an estimated 30 podiatrists employed in Maine earning a median annual salary of over $160,000. Including the self-employed, there were approximately 50 podiatrists practicing in Maine in 2010.

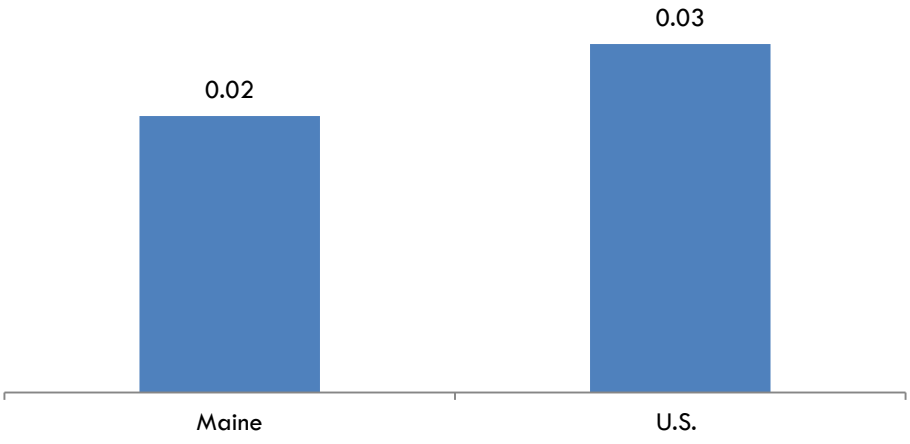
2012 Employment & Wage Statistics

	Average Employment	Median Annual Salary
Maine	30	$161,390
Industries with Highest Share of Employment (% total)		
Ambulatory Healthcare Services	100%	$162,250

Source: 2012 Occupational Employment Statistics, CWRI

The number of employed podiatrists per thousand residents in Maine was 20 percent below that of the nation.

Podiatrists per 1,000 Population, 2012



Schools offering training and number completing

No programs in Maine.

Outlook

Nationally, employment of podiatrists is expected to increase 20 percent from 2010 to 2020, faster than the average for all occupations.

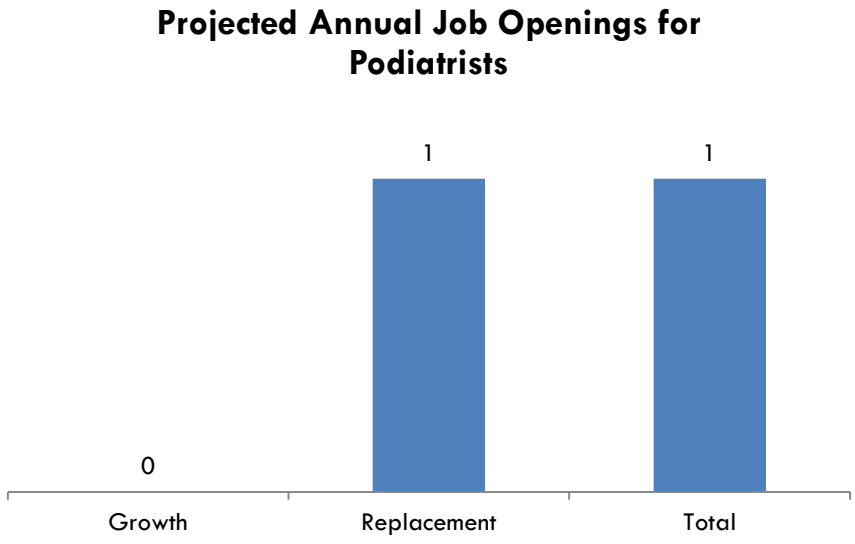
As the U.S. population ages and increases, the number of people expected to have mobility and foot-related problems will rise. More podiatrists will be needed to provide this care. In addition, podiatrists are increasingly working in group practices along with other healthcare professionals. Continued growth in the use of outpatient surgery will create new opportunities for podiatrists, as all podiatrists complete three years of standardized hospital-based residency training.

In Maine, podiatrist employment is expected to decline four percent through 2020. A primary reason for the lower growth in Maine is slower industry growth as well as a declining ratio of podiatrists to overall industry employment. Due to the small size of this occupation, job opportunities from replacement needs will also be limited.

Employment of Podiatrists in Maine, 2010 and Projected 2020

Average Employment		Change in Employment (2010-2020)		Projected Annual Openings Resulting from New Growth
2010	2020	Net	Percent	
47	45	-2	-4.3%	0

Source: CWRI 2010-2020 Employment Projections



29-1041 Optometrists

Occupation description

Diagnose, manage, and treat conditions and diseases of the human eye and visual system. Examine eyes and visual system, diagnose problems or impairments, prescribe corrective lenses, and provide treatment. May prescribe therapeutic drugs to treat specific eye conditions. Ophthalmologists are included in "Physicians and Surgeons, All Other" (29-1069).

Education requirements

Optometrists must complete a Doctor of Optometry program and get a state license. Doctor of Optometry programs take four years to complete after earning an undergraduate degree.

Employment & Wages

In 2012 there were 130 employed optometrists in Maine. Including the self-employed, it is estimated there were 150 optometrists in 2010.

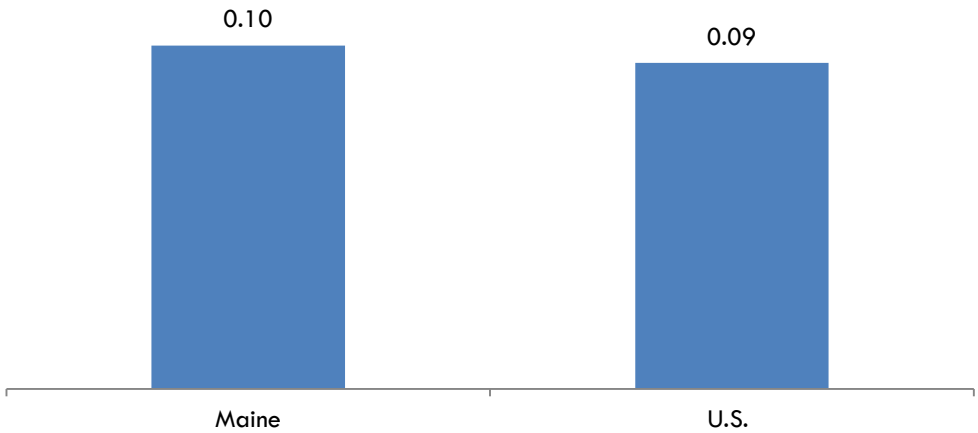
2012 Employment & Wage Statistics

	Average Employment	Median Annual Salary
Maine	130	$111,070
Industries with Highest Share of Employment (% total)		
Ambulatory Healthcare Services	100%	$111,450

Source: 2012 Occupational Employment Statistics, CWRI

The number of employed optometrists per population in Maine and the nation were comparable.

Optometrists per 1,000 Population, 2012



Schools offering training and number completing

No programs in Maine.

Outlook

Nationally, employment of optometrists is expected to grow by 33 percent from 2010 to 2020, much faster than the average for all occupations.

Because vision problems tend to occur more frequently later in life, more optometrists will be needed to meet the health needs of an aging population. Also, the number of people with chronic diseases, such as diabetes, has increased in recent years. These diseases frequently cause vision problems and require treatment from optometrists. In addition, an increasing number of insurance plans, including Medicare and Medicaid, provide some vision or eye-care insurance coverage.

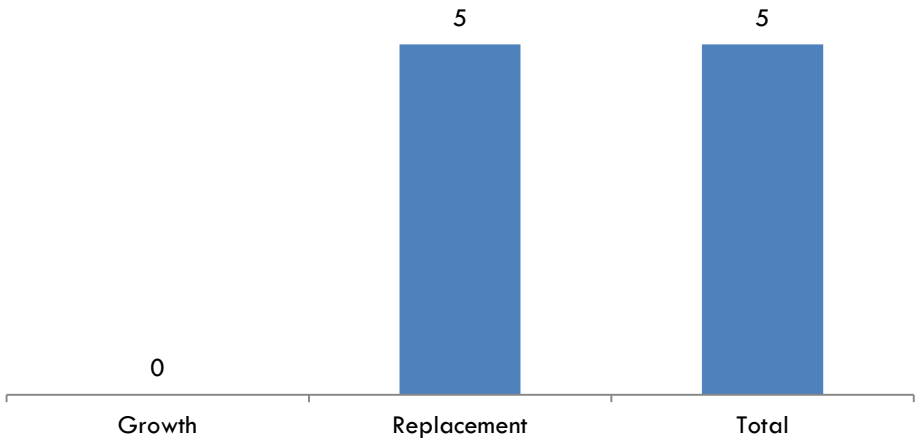
In Maine, slower economic and industry growth will limit optometrist employment growth to three percent from 2010 to 2020. Despite limited growth in employment in Maine, 35 percent currently practicing optometrists are expected to retire or otherwise exit the field in coming years, creating job opportunities for new entrants. In total, five annual job openings are expected.

Employment of Optometrists in Maine 2010 and Projected 2020

Average Employment		Change in Employment (2010-2020)		Projected Annual Openings Resulting from New Growth
2010	2020	Net	Percent	
151	156	5	3.3%	0

Source: CWRI 2010-2020 Employment Projections

Projected Annual Job Openings, Optometrists



29-1181 Audiologists

Occupation description

Assess and treat persons with hearing and related disorders. May fit hearing aids and provide auditory training. May perform research related to hearing problems.

Education requirements

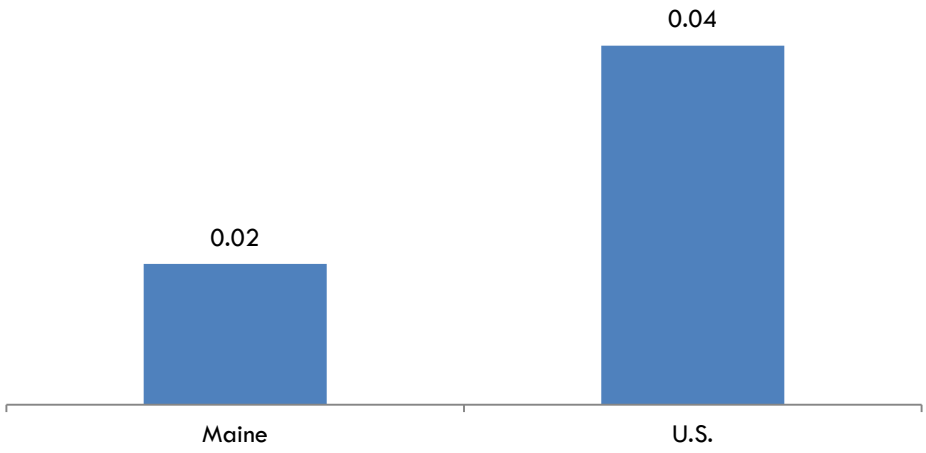
Doctoral or professional degree.

Employment & Wages

2012 Employment & Wage Statistics	Average Employment	Median Annual Salary
Maine	20	$71,290
Industries with Highest Share of Employment (% total)		
Hospitals	50%	$77,160

Source: 2012 Occupational Employment Statistics, CWRI

Audiologists per 1,000 Population



Schools offering training and number completing

No programs in Maine.

Outlook

Nationally, employment of audiologists is expected to grow by 37 percent from 2010 to 2020, much faster than the average for all occupations. In Maine, employment of audiologists is expected to increase 17 percent. Due to this occupation's small size, only five new jobs are expected over the ten

year period. The number of projected annual openings resulting from new growth in the figure below is zero due to rounding.

The early identification and diagnosis of hearing disorders in infants also will spur employment growth. Advances in hearing aid design, such as the reduction of feedback and a smaller size, may make the devices more appealing as a means to minimize hearing loss, leading to more demand for the audiologists who provide hearing aids.

Demand for audiologists may be greater in areas with large numbers of retirees, so audiologists who are willing to relocate may have the best job prospects.

Employment of Audiologists in Maine 2010 and Projected 2020

Average Employment		Change in Employment (2010-2020)		Projected Annual Openings Resulting from New Growth
2010	2020	Net	Percent	
30	35	5	17%	0

Source: CWRI 2010-2020 Employment Projections

No replacement job opportunities are expected in Maine.

Pharmacists & Related

Summary Statistics		
Workforce Characteristics	**Pharmacists**	**Pharmacy Technicians**
Employment (2012)	1,330	2,150
Employment per 1,000 population	1.0	1.6
versus U.S.	Above avg.	Above avg.
Average annual starting wage (Maine)	$112,030	$21,910
Median annual wage (Maine)	$132,460	$28,160
U.S. median annual wage	$116,670	$29,320
Median wage for all occupations in Maine	$32,590	$32,590
Minimum Education Requirement	Doctoral or Professional degree	High school diploma or equivalent
Job Growth Projections	14%	16%
National Median Age	41.2	NA
Top Industry of Employment	Health and personal care stores	Health and personal care stores
Licensure Board	Maine Board of Pharmacy	Maine Board of Pharmacy

Key points

- In 2012, Maine had 10 percent more pharmacists per thousand residents compared to the nation. Median wages in Maine were 14 percent above the national median.
- Employment of pharmacists in Maine is expected to increase 14 percent from 2010 to 2020. In addition, it is expected that 1 out every 4 currently practicing will need to be replaced due to retirements or those otherwise permanently exiting the field.
- Two new pharmacy schools, The University of New England's College of Pharmacy and the Husson University School of Pharmacy had their first graduates in May of 2013. UNE graduated 90 and Husson 47.

29-1051 Pharmacists

Occupation description

Dispense drugs prescribed by physicians and other health practitioners and provide information to patients about medications and their use. May advise physicians and other health practitioners on the selection, dosage, interactions, and side effects of medications.

Education requirements

Pharmacists must have a Doctor of Pharmacy (Pharm.D.) degree from an accredited school. They also must be licensed, which requires passing two exams.

All Doctor of Pharmacy programs require applicants to have taken postsecondary courses such as chemistry, biology, and anatomy. Applicants need at least 2 to 3 years of undergraduate study; for some programs, applicants must have a bachelor's degree. For most programs, applicants also must take the Pharmacy College Admissions Test (PCAT).

Pharm.D. programs usually take four years to finish, although some programs offer a three-year option. A Pharm.D. program includes courses in pharmacology and medical ethics, as well as supervised work experiences in different settings, such as hospitals and retail pharmacies.

Employment & Wages

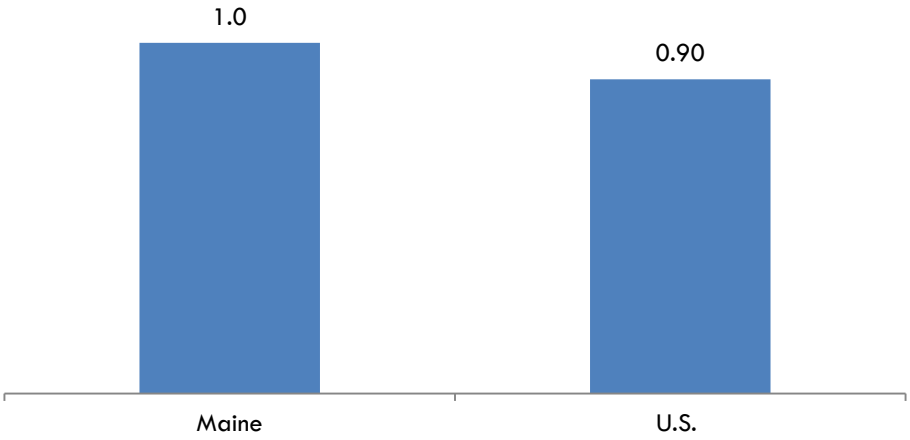
In 2012 there were more than 1,300 employed pharmacists in Maine with a median annual wage of $132,000, which was 14 percent above the national median.

2012 Employment & Wage Statistics

	Average Employment	Median Annual Salary
Maine	1,330	$132,460
Industries with Highest Share of Employment (% total)		
Health and Personal Care Stores	44%	$132,580
Food and Beverage Stores	11%	$133,590
General Merchandise Stores	9%	$137,140
Ambulatory Health Care Services	5%	$128,820
Public Administration	3%	$116,530

Source: 2012 Occupational Employment Statistics, CWRI

Pharmacists per 1,000 Population, 2012



Distribution of employment

Distribution of Employment				
	Number Employed	Pct. (%) total employment	Pct. (%) of total Maine Population	Number employed per thousand population
Androscoggin County	80	6%	8%	0.74
Aroostook County	*n/a*	*n/a*	5%	
Cumberland County	320	24%	21%	1.13
Franklin County	20	2%	2%	0.65
Hancock County	60	5%	4%	1.10
Kennebec County	200	15%	9%	1.64
KnoxCounty	40	3%	3%	1.00
Lincoln County	*n/a*	*n/a*	3%	
Oxford County	20	2%	4%	0.35
Penobscot County	190	14%	12%	1.24
Piscataquis County	*n/a*	*n/a*	1%	
Sagadahoc County	*n/a*	*n/a*	3%	
Somerset County	30	2%	4%	0.57
Waldo County	*n/a*	*n/a*	3%	
Washington County	20	2%	2%	0.62
York County	130	10%	15%	0.65
Maine	**1,330**	**83%**	**100%**	**1.00**

OES, CWRI

Some data is suppressed according to BLS confidentiality and data quality requirements. Suppressed data is shown as "n/a" for not available.

Schools offering training and number completing

The University of New England's College of Pharmacy and the Husson University School of Pharmacy began accepting students in the fall of 2009, when their programs were launched. UNE graduated 90 and Husson 47 in May of 2013.

Outlook

Nationally, employment of pharmacists is expected to increase by 25 percent from 2010 to 2020, faster than the average for all occupations. In Maine, pharmacist employment is expected to increase 14 percent.

Several factors are likely to contribute to growth. Scientific advances will lead to new drug products. More people may get insurance coverage for medications. The number of older people is growing, and older people use more prescription medicines than younger people. As healthcare continues to become more complex and as more people take multiple medications, more pharmacists will be needed to counsel patients on how to use their medications safely.

Demand is also likely to increase for pharmacists in physicians' offices, outpatient care centers, and nursing homes.

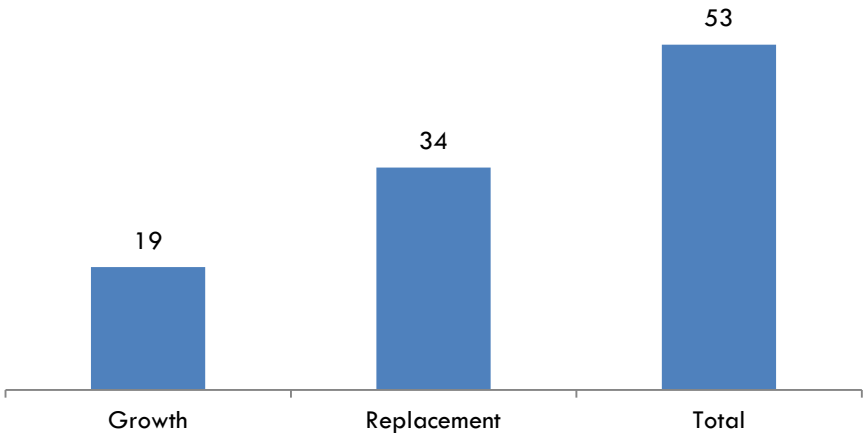
In addition to new growth, job opportunities will result from currently practicing pharmacists retiring or otherwise exiting the field. Because a significant number of pharmacists are expected to retire in the coming decade (25 percent), new pharmacists should expect good job prospects. In total, over 50 job opportunities are expected per year, with over half from replacement needs.

Employment of Pharmacists in Maine 2010 and Projected 2020

Average Employment		Change in Employment (2010-2020)		Projected Annual Openings Resulting from New Growth
2010	2020	Net	Percent	
1,322	1,510	188	14.2%	19

Source: CWRI 2010-2020 Employment Projections

Projected Annual Job Openings, Pharmacists



29-2052 Pharmacy Technicians

Occupation description

Prepare medications under the direction of a pharmacist. May measure, mix, count out, label, and record amounts and dosages of medications according to prescription orders.

Education requirements

Many pharmacy technicians learn how to perform their duties through on-the-job training. Others attend postsecondary education programs in pharmacy technology at vocational schools or community colleges, which award certificates. These programs typically last 1 year or less and cover a variety of subjects, such as arithmetic used in pharmacies, recordkeeping, methods of dispensing medications, and pharmacy law and ethics. Technicians also learn the names, actions, uses, and doses of medications. Many training programs include internships, in which students get hands-on experience in a pharmacy.

Employment & Wages

In 2012 there were over 2,100 pharmacy technicians employed in Maine earning a median annual salary of $28,000, which was slightly below the national median.

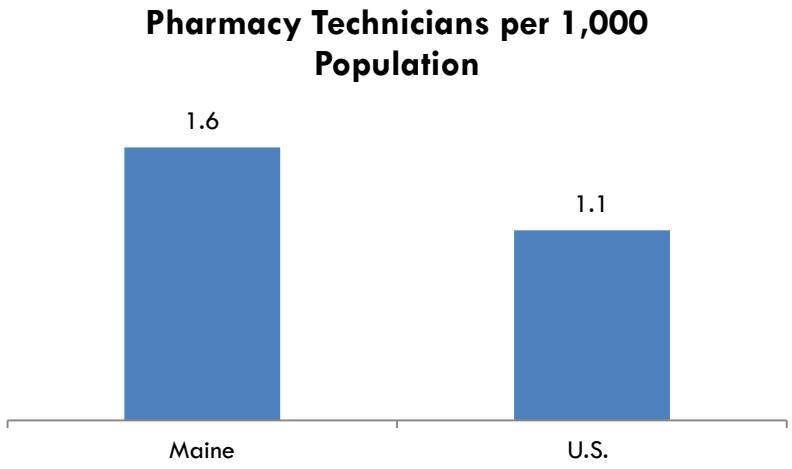
2012 Employment & Wage Statistics

	Average Employment	Median Annual Salary
Maine	2,150	$28,160
Industries with Highest Share of Employment (% total)		
Health and Personal Care Stores	57%	$27,500
Hospitals	15%	$29,670
Food and Beverage Stores	13%	$27,990
General Merchandise Stores	8%	$27,340
Ambulatory Health Care Services	3%	$31,300

Source: 2012 Occupational Employment Statistics, CWRI

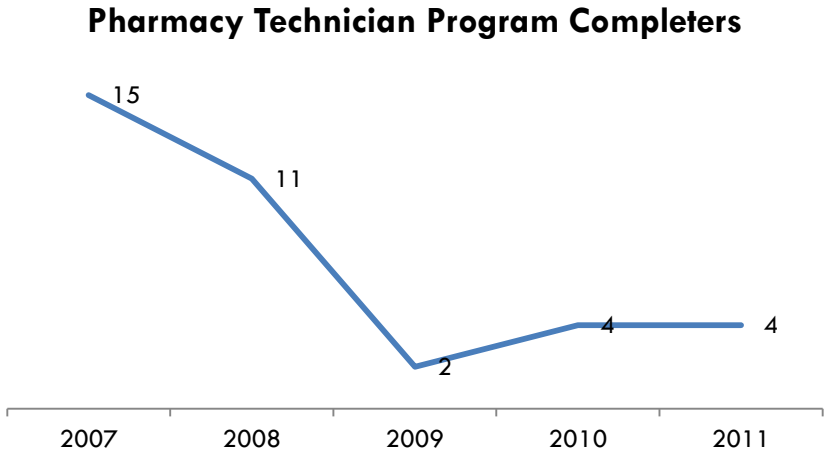
In Maine, there are 1.6 pharmacy technicians employed per pharmacist, well above the national ratio of 1.25.

Maine also had 1.6 pharmacy technicians per thousand residents in 2012. This was 40 percent more than the national average (1.1 per thousand residents).



Schools offering training and number completing

According to IPEDs, InterCoast had the only completers in a pharmacy technician/assistant program in 2011. The number of completers has dwindled in recent years. At one point SMCC also had a program offering but there were no completers in 2011 and the program is no longer listed in the SMCC 2013-2014 catalog.



Education Programs & Annual Graduates								
School	CIP Code	CIP Title	Completer Title	2007	2008	2009	2010	2011
Southern Maine Community College	510805	Pharmacy Technician/Assistant	Associate's Degree	3	1	1	1	
InterCoast-Career Institute -South Portland	510805	Pharmacy Technician/Assistant	Post-Sec. Awards/Cert. / Diplomas;< 1 yr.	12	10	1	3	4
Total				**15**	**11**	**2**	**4**	**4**

Source: IPEDS, CWRI

Outlook

Nationally, employment of pharmacy technicians is expected to grow by 32 percent from 2010 to 2020, much faster than the average for all occupations. In Maine, employment is expected to increase 16 percent over the same time frame.

A primary growth driver of industry and occupational employment is an increasing number of prescription medications per person. This is driven in part by advances in pharmaceutical research—which enables diseases to be fought with prescribed medications—and also an aging of the population (older people use more prescription drugs than younger people).

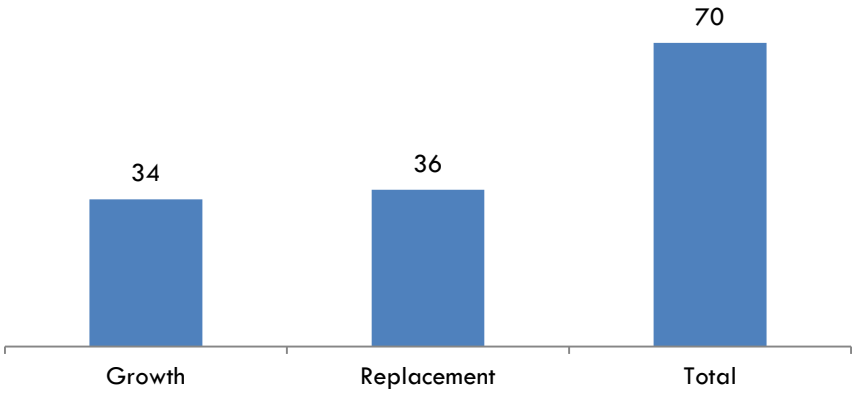
Job prospects should be excellent for pharmacy technicians, particularly those with formal training and those with experience in retail settings.

MDOL projects 70 pharmacy technician job opportunities per year from 2010 to 2020, with approximately half of these coming from new growth.

Employment of Pharmacy Technicians in Maine 2010 and Projected 2020				
Average Employment		Change in Employment (2010-2020)		Projected Annual Openings Resulting from New Growth
2010	2020	Net	Percent	
2,055	2,393	338	16.4%	34

Source: CWRI 2010-2020 Employment Projections

Projected Annual Job Openings, Pharmacy Technicians



Dieticians, Nutritionists & Related

Summary Statistics		
Workforce Characteristics	**Dieticians & Nutritionists**	**Dietetic Technicians**
Employment (2012)	240	130
Employment per 1,000 population	0.2	0.1
versus U.S.	Average	Above avg.
Average annual starting wage (Maine)	$38,600	$22,980
Median annual wage (Maine)	$53,960	$31,450
U.S. median annual wage	$55,240	$26,260
Median wage for all occupations in Maine	$32,590	$32,590
Minimum Education Requirement	Bachelor's degree	High school diploma or equivalent
Job Growth Projections	19%	16%
National Median Age	47.4	NA
Top Industry of Employment	Hospitals	Hospitals
Licensure Board	Board of Licensing of Dietetic Practice	Board of Licensing of Dietetic Practice

Key points

- A growing interest in diet and nutrition and an aging population support relatively strong growth rates for these occupations.
- The national median age of dieticians is 47. According to current BLS projections, thirty-five percent of the workforce may retire or permanently exit the field over the 2010 to 2020 projection period, which is among the highest for all health occupations.

29-1031 Dieticians and Nutritionists

Occupation description

Plan and conduct food service or nutritional programs to assist in the promotion of health and control of disease. May supervise activities of a department providing quantity food services, counsel individuals, or conduct nutritional research.

Illustrative examples: Clinical Dietician, Pediatric Dietician, Public Health Nutritionist

Education requirements

Most dietitians and nutritionists have earned a bachelor's degree and receive supervised training through an internship or as a part of their coursework. Also, many states require dietitians and nutritionists to be licensed. In Maine, licensing of dieticians is governed by the Board of Licensing of Dietetic Practice.

Dietitians and nutritionists typically participate in several hundred hours of supervised training, usually in the form of an internship following graduation from college. However, some programs in dietetics include this training as part of the coursework.

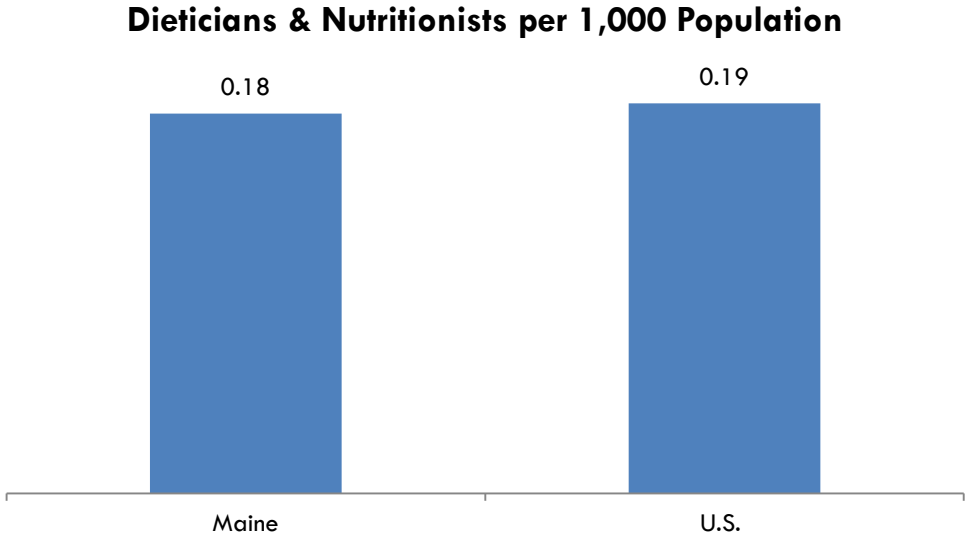
Employment & Wages

In 2012 there were 240 employed dieticians and nutritionists in Maine earning a median salary of $54,000, which was slightly below the national median. More than half were employed at hospitals.

2012 Employment & Wage Statistics

	Average Employment	Median Annual Salary
Maine	240	$53,960
Industries with Highest Share of Employment (% total)		
Hospitals	54%	$55,130
Ambulatory Health Care Services	13%	$57,040
Nursing and Residential Care Facilities	8%	$66,210
Social Assistance	8%	$31,610
Public Administration	8%	$53,990

Source: 2012 Occupational Employment Statistics, CWRI



Distribution of employment

Distribution of Employment				
	Number Employed	Pct. (%) Total Employment	Pct. (%) of total Maine Population	Number Employed per 1,000 Population
Androscoggin County	30	13%	8%	0.28
Aroostook County	20	8%	5%	0.28
Cumberland County	70	29%	21%	0.25
Franklin County	20	8%	2%	0.65
Hancock County	*n/a*	*n/a*	4%	
Kennebec County	40	17%	9%	0.33
Knox	*n/a*	*n/a*	3%	
Lincoln County	*n/a*	*n/a*	3%	
Oxford County	*n/a*	*n/a*	4%	
Penobscot County	30	13%	12%	0.20
Piscataquis County	*n/a*	*n/a*	1%	
Sagadahoc County	*n/a*	*n/a*	3%	
Somerset County	*n/a*	*n/a*	4%	
Waldo County	*n/a*	*n/a*	3%	
Washington County	*n/a*	*n/a*	2%	
York County	30	13%	15%	0.15
Maine	**240**	**100%**	**100%**	**0.18**

Source: CWRI analysis of OES & Census data

Some data is suppressed according to BLS confidentiality and data quality requirements. Suppressed data is shown as "n/a" for not available.

Schools offering training and number completing

The University of Maine at Orono offers a B.S. degree in Food Science and Human Nutrition. Concentrations are offered in Food Science, Human Nutrition and Dietetics, Food Management, and Nutrition Science. The Human Nutrition and Dietetics concentration is designed to give professional preparation to students who want to become dietitians, nutrition scientists, nutrition educators or public health nutritionists in commercial, industrial, and public or private food and health care establishments. Graduates are eligible to apply for an American Dietetic Association accredited dietetic internship leading to state licensure and national registration. The department of Food Science and Human Nutrition offers a dietetic internship in conjunction with the Master of Science degree.

Outlook

Nationally, employment of dietitians and nutritionists is expected to increase 20 percent from 2010 to 2020, faster than average for all occupations. In Maine, 19 percent growth is expected to generate 60 new job opportunities over the ten year span, or six openings per year.

In recent years, there has been increased interest in the role of food in promoting health and wellness, particularly as a part of preventative healthcare in medical settings. The importance of diet in

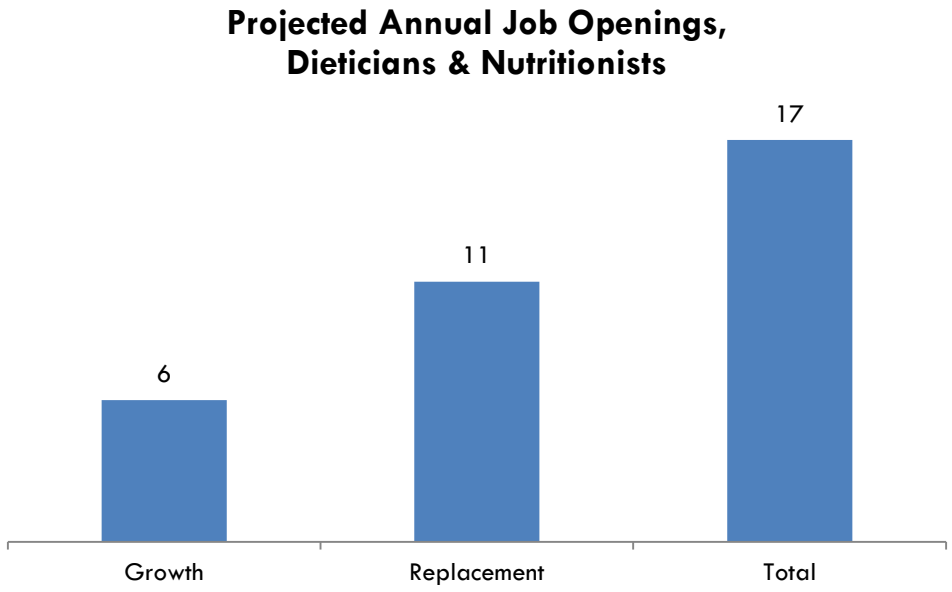
preventing and treating illnesses such as diabetes and heart disease is now well known. More dietitians and nutritionists will be needed to provide care for people with these conditions.

An aging population also will increase the need for dietitians and nutritionists in nursing homes.

Job opportunities will also result from the need to replace currently practicing dieticians that are expected to retire. It is estimated that 35 percent of the workforce will retire over the coming decade. In total, 17 job openings per year are projected with the majority resulting from replacement needs.

Employment of Dieticians and Nutritionists in Maine 2010 and Projected 2020				
Average Employment		Change in Employment (2010-2020)		Projected Annual Openings Resulting from New Growth
2010	2020	Net	Percent	
322	382	60	18.6%	6

Source: CWRI 2010-2020 Employment Projections



29-2051 Dietetic Technicians

Occupation description

Assist in the provision of food service and nutritional programs, under the supervision of a dietitian. May plan and produce meals based on established guidelines, teach principles of food and nutrition, or counsel individuals.

Illustrative examples: Dietary Technician, Registered Diet Technician

Education requirements

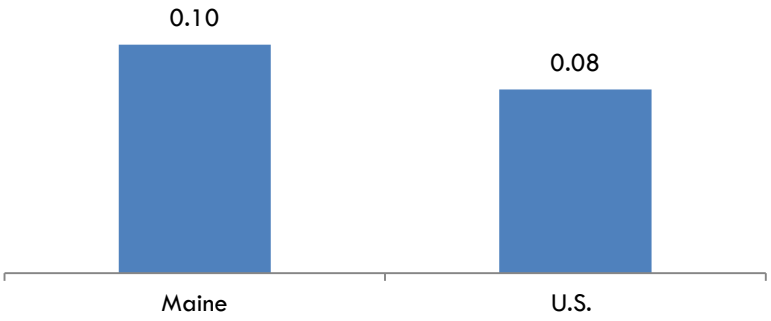
High school diploma or equivalent.

Employment & Wages

2012 Employment & Wage Statistics		
	Average Employment	Median Annual Salary
Maine	130	$31,450
Industries with Highest Share of Employment (% total)		
Hospitals	54%	$29,370

Source: 2012 Occupational Employment Statistics, CWRI

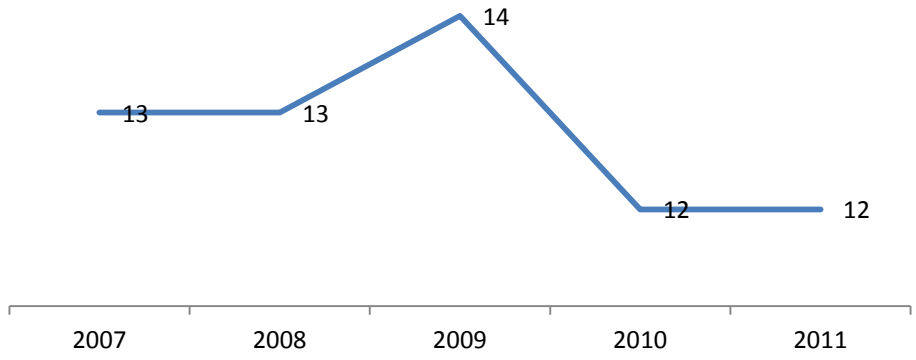
Dietetic Technicians per 1,000 Population



Schools offering training and number completing

SMCC is the only school offering training in this area. In 2011, 12 graduated from the dietetic technician associate degree program at SMCC.

Dietetic Technician (and related) Program Completers



Education Programs & Annual Graduates								
School	**CIP Code**	**CIP Title**	**Completer Title**	**2007**	**2008**	**2009**	**2010**	**2011**
Southern Maine Community College	513103	Dietetic Technician	Associate's Degree	9	12	13	11	12
Southern Maine Community College	513199	Dietetics and Clinical Nutrition Services, Other	Post-Sec. Awards/ Cert./Diplomas; < 1 yr.	1	1	1	1	
Washington County Community College	513104	Dietitian Assistant	Associate's Degree	3				
Total				**13**	**13**	**14**	**12**	**12**
Source: IPEDS, CWRI								

Outlook

In Maine, employment of dietetic technicians is expected to increase 16 percent from 2010 to 2020.

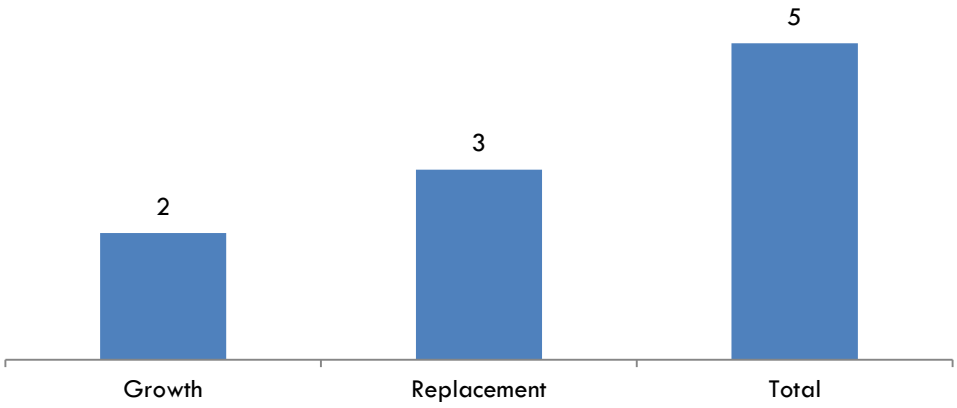
Factors driving employment for dietetic technicians are closely related to those for dietitians and nutritionists. Locally as well as nationally, there has been increased interest in the role of food in promoting health and wellness, particularly as a part of preventative healthcare in medical settings. The importance of diet in preventing and treating illnesses such as diabetes and heart disease is now well known. More dietetic technicians will be needed to assist in providing care for people with these conditions.

In total, five job openings are expected each year, two from growth and three from replacement opportunities.

Employment of Dietetic Technicians in Maine 2010 and Projected 2020				
Average Employment		Change in Employment (2010-2020)		Projected Annual Openings Resulting from New Growth
2010	2020	Net	Percent	
152	177	25	16.4%	2

Source: CWRI 2010-2020 Employment Projections

Projected Annual Job Openings, Dietetic Technicians



Therapists & Related

Summary Statistics									
Workforce Characteristics	**Occupational Therapists**	**Occupational Therapist Assistants**	**Physical Therapists**	**Physical Therapist Assistants**	**Recreational Therapists**	**Radiation Therapists**	**Respiratory Therapists**	**Respiratory Therapy Technicians**	**Speech-Language Pathologists**
Employment (2012)	980	170	1,360	300	80	90	480	30	820
Employment per 1,000 population	0.74	0.13	1.0	0.23	0.06	0.07	0.36	0.02	0.62
versus U.S.	Above avg.	Above avg.	Above avg.	Average	Average	Above avg.	Average	Below avg.	Above avg.
Average annual starting wage (Maine)	$47,100	$39,130	$60,990	$40,000	$31,310	$57,680	$45,080	$40,420	$43,080
Median annual wage (Maine)	$65,740	$45,760	$74,680	$49,500	$37,300	$72,990	$53,860	$53,390	$57,590
U.S. median annual wage	$75,400	$53,240	$79,860	$52,160	$42,280	$77,560	$55,870	$46,760	$69,870
Median wage for all Occupations in Maine	$32,589	$32,590	$32,590	$32,590	$32,590	$32,590	$32,590	$32,590	$32,590
Minimum Education Requirement	Master's degree	Associate's degree	Doctoral or Professional degree	Associate's degree	Bachelor's degree	Associate's degree	Associate's degree	Associate's degree	Master's degree
Job Growth Projections	13%	12%	15%	18%	12%	27%	41%	18%	10%
National Median Age	41.4	NA	39.9	34.8	NA	NA	43.2	NA	41.6
Top Industry of Employment	Ambulatory Healthcare Svcs.	Social Assistance	Ambulatory Healthcare Svcs.	Ambulatory Healthcare Svcs.	Hospitals, Nursing & Residential Care	Hospitals	Hospitals	Hospitals	Educational Services
Licensure Board	Board of Occupation Therapy Practice	Board of Occupation Therapy Practice	Board of Examiners in Physical Therapy	Board of Examiners in Physical Therapy	No Licensing	Dept. of Professional & Financial Regulation Office of Licensing	Board of Respiratory Care Practitioners	Board of Respiratory Care Practitioners	Board of Examiners in Speech, Pathology and Audiology

Key points

- In 2012, the number of occupational and physical therapists and speech pathologists per thousand residents was substantially higher for Maine than for the nation. The distribution of employment is uneven with many counties having fewer practitioners per population compared to the state average. Employment growth is expected to range from 10 percent for speech pathologists to 15 percent for physical therapists.
- Employment of respiratory therapists is expected to increase 41 percent, the second highest of all health occupations. Respiratory therapists are typically employed in hospital settings, where overall employment is also expected to grow at a rapid clip.
- Radiation therapists also have a strong employment outlook (27 percent growth expected) and work in hospitals. In 2011, there were no graduates from the two radiation therapy programs in Maine. Radiation therapy is a relatively small occupation in Maine, which limits the number of job opportunities.

29-1122 Occupational Therapists

Occupation description

Assess, plan, organize, and participate in rehabilitative programs that help build or restore vocational, homemaking, and daily living skills, as well as general independence to persons with disabilities or developmental delays.

Illustrative examples: Registered Occupational Therapist

Education requirements

Occupational therapists need a master's degree from an accredited occupational therapy program. Occupational therapists must also be licensed. In Maine, licensing is governed by the Board of Occupation Therapy Practice.

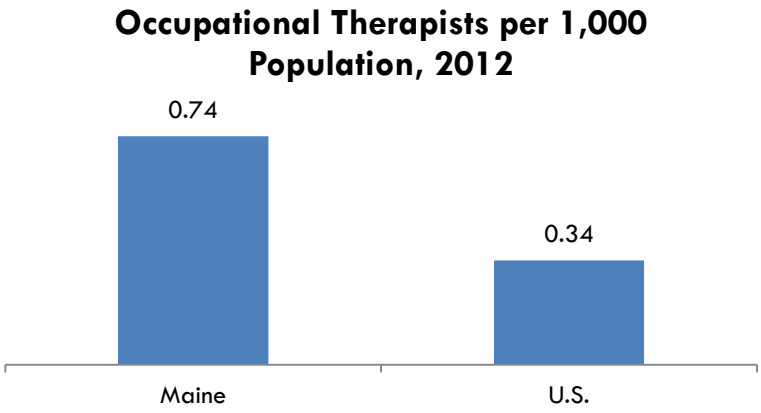
Employment & Wages

In 2012 there were an estimated 980 employed occupational therapists in Maine with a median annual wage of $66,000, which was 13 percent below the national median. Occupational therapists are employed in a variety of settings, including clinics, hospitals and schools.

2012 Employment & Wage Statistics		
	Average Employment	Median Annual Salary
Maine	980	$65,740
Industries with Highest Share of Employment (% total)		
Ambulatory Health Care Services	33%	$70,060
Hospitals	22%	$67,930
Educational Services	17%	$47,530
Social Assistance	12%	$62,690
Nursing and Residential Care Facilities	10%	$73,940

Source: 2012 Occupational Employment Statistics, CWRI

According to 2012 OES data, Maine has more than twice the occupational therapists per thousand residents than that of the nation.



Distribution of employment

Distribution of Employment				
	Number Employed	Pct. (%) Total Employment	Pct. (%) of Total Maine Population	Number Employed per 1,000 population
Androscoggin County	80	8%	8%	0.74
Aroostook County	50	5%	5%	0.71
Cumberland County	330	34%	21%	1.16
Franklin County	*n/a*	n/a	2%	
Hancock County	*n/a*	*n/a*	4%	
Kennebec County	80	8%	9%	0.66
Knox County	*n/a*	*n/a*	3%	
Lincoln County	*n/a*	*n/a*	3%	
Oxford County	20	2%	4%	0.35
Penobscot County	80	8%	12%	0.52
Piscataquis County	*n/a*	*n/a*	1%	
Sagadahoc County	*n/a*	*n/a*	3%	
Somerset County	*n/a*	*n/a*	4%	
Waldo County	*n/a*	*n/a*	3%	
Washington County	*n/a*	*n/a*	2%	
York County	70	7%	15%	0.35
Maine	**980**	**72%**	**100%**	**0.74**

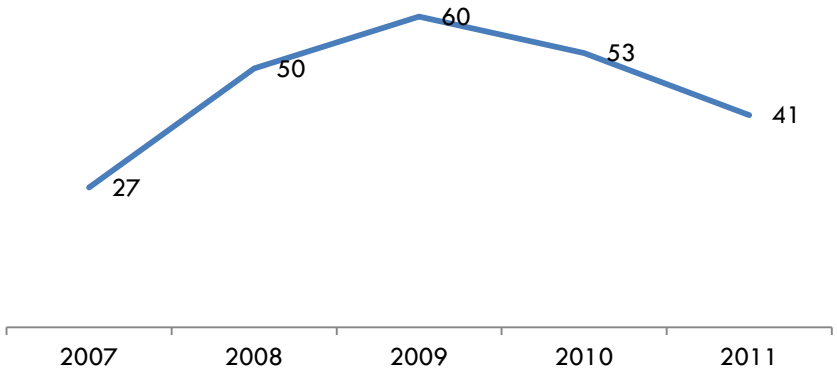
Source: CWRI analysis of OES & Census data

Some data is suppressed according to BLS confidentiality and data quality requirements.

Schools offering training and number completing

Two schools offered degrees in occupational therapy: UNE and USM. According to IPEDs data, the number of UNE graduates dropped significantly in 2011.

Occupational Therapist Program Completers



Education Programs & Annual Graduates

School	CIP Code	CIP Title	Completer Title	2007	2008	2009	2010	2011
Husson University	512306	Occupational Therapy/Therapist	Master's Degree	6	12	14	9	16
University of New England	512306	Occupational Therapy/Therapist	Master's Degree	12	23	32	29	4
University of Southern Maine	512306	Occupational Therapy/Therapist	Master's Degree	9	15	14	15	21
Total				**27**	**50**	**60**	**53**	**41**

Source: IPEDS, CWRI

Outlook

Nationally, employment of occupational therapists is expected to increase 33 percent from 2010 to 2020, much faster than the average for all occupations. In Maine, occupational therapist employment is projected to increase 13 percent, below the national rate in part due to lower population growth rates for this state.

Occupational therapy will continue to be an important part of treatment for people with various illnesses and disabilities, such as Alzheimer's disease, cerebral palsy, autism, or the loss of a limb. The need for occupational therapists will increase as the large baby-boom population ages and people remain active later in life. Specifically, occupational therapists help senior citizens maintain their independence by recommending home modifications and strategies that make daily activities easier.

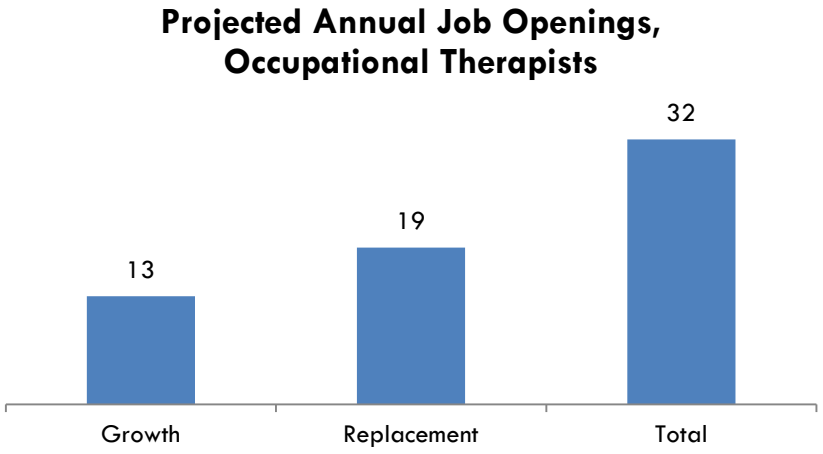
Occupational therapists also play a large role in the treatment of many conditions commonly associated with aging, such as osteoarthritis and Parkinson's disease. Patients will continue to seek noninvasive outpatient treatment for long-term disabilities and illnesses, either in their homes or in residential care environments. In addition, medical advances now enable more patients with critical problems to survive—patients who ultimately may need extensive therapy.

Job opportunities should be good for licensed occupational therapists in all settings, particularly in acute hospital, rehabilitation, and orthopedic settings because the elderly receive most of their

treatment in these settings. Occupational therapists with specialized knowledge in a treatment area also will have increased job prospects. In Maine, more than 30 job openings per year are expected with more than half resulting from the need to replace existing therapists that may retire or otherwise exit the occupation.

Employment of Occupational Therapists in Maine 2010 and Projected 2020				
Average Employment		Change in Employment (2010 - 2020)		Projected Annual Openings Resulting from New Growth
2010	2020	Net	Percent	
1,004	1,135	131	13.0%	13

Source: CWRI 2010-2020 Employment Projections



31-2011 Occupational Therapist Assistants

Occupation description

Assist occupational therapists in providing occupational therapy treatments and procedures. May, in accordance with State laws, assist in development of treatment plans; carry out routine functions, direct activity programs, and document the progress of treatments. Generally requires formal training.

Illustrative examples: Certified Occupational Therapy Assistant, Licensed Occupational Therapist Assistant

Education requirements

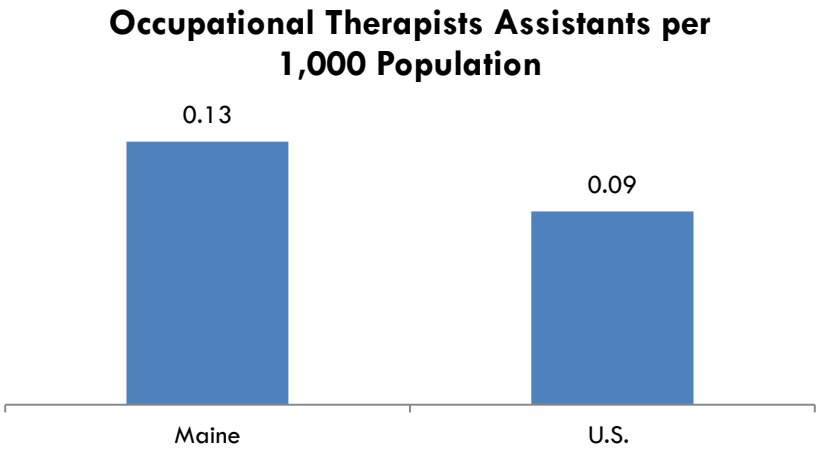
An associate's degree is required to become an occupational therapy assistant. They must also be licensed in most states. Occupational therapy aides typically have a high school diploma or equivalent. In Maine, an occupational therapist assistant must renew their license annually. According to the Board of Occupation Therapy Practice, a Certified Occupational Therapy Assistant is one who has passed the certification examination of the National Board for Certification in Occupational Therapy for an occupational therapy assistant or who was certified as an Occupational Therapy Assistant prior to June 1977 and who is licensed to practice Occupational Therapy under the supervision of an Occupational Therapist.

Employment & Wages

2012 Employment & Wage Statistics

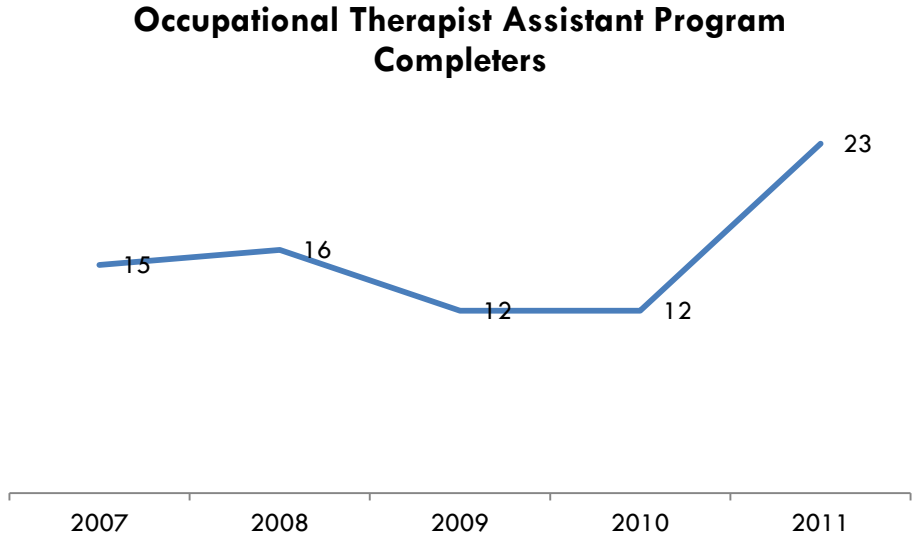
	Average Employment	Median Annual Salary
Maine	170	$45,760
Industries with Highest Share of Employment (% total)		
Social Assistance	35%	$46,290
Hospitals	24%	$44,060
Ambulatory Health Care Services	n/a	$50,670
Nursing and Residential Care Facilities	n/a	$42,620

Source: 2012 Occupational Employment Statistics, CWRI



Schools offering training and number completing

According to IPEDS data, Kennebec Valley Community College (KVCC) is the only school offering training for occupational therapist assistants. This is an associate's degree program.



Education Programs & Annual Graduates

School	CIP Code	CIP Title	Completer Title	2007	2008	2009	2010	2011
Kennebec Valley Community College	510803	Occupational Therapist Assistant	Associate's Degree	15	16	12	12	23

Source: IPEDS, CWRI

Outlook

Nationally, employment of occupational therapy assistants is expected to increase 43 percent from 2010 to 2020, much faster than the average for all occupations. In Maine, employment is expected to increase 12 percent.

Demand for occupational therapy is expected to rise significantly over the coming decade in response to the health needs of the aging baby-boom generation and a growing elderly population. Older adults are especially prone to conditions such as arthritis that affect their everyday activities. Occupational therapy assistants will be needed to assist occupational therapists in caring for these people. Occupational therapy will also continue to be used for treating children and young adults with developmental disabilities like autism.

Demand for occupational therapy assistants is also expected to come from occupational therapists employing more assistants to reduce the cost of occupational therapy services. After the therapist has evaluated a patient and designed a treatment plan, the occupational therapy assistant can provide many aspects of the treatment that the therapist prescribed.

Occupational therapy assistants and aides with experience working in an occupational therapy office or other healthcare setting should have the best job opportunities. In addition to overall employment growth, job openings will also result from the need to replace occupational therapy assistants and aides who leave the occupation.

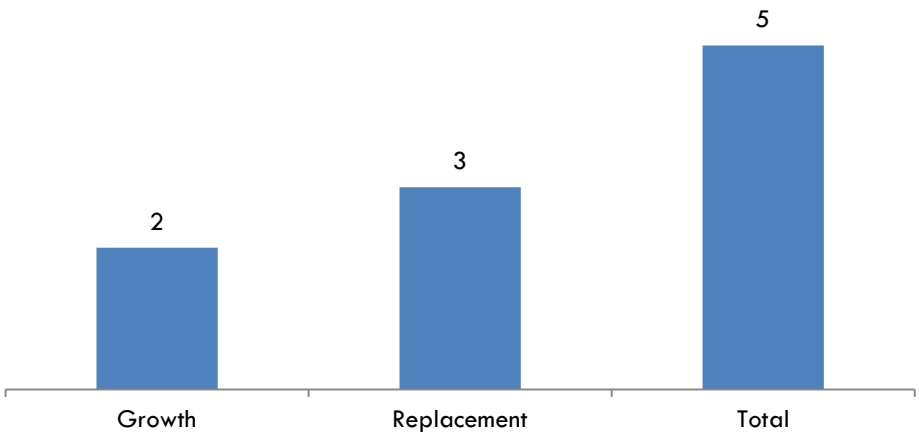
In Maine, five job opportunities are expected each year; two from new growth and three from replacement needs.

Employment of Occupational Therapy Assistants in Maine 2010 and Projected 2020

Average Employment		Change in Employment (2010 - 2020)		Projected Annual Openings Resulting from New Growth
2010	2020	Net	Percent	
176	197	21	11.9%	2

Source: CWRI 2010-2020 Employment Projections

Projected Annual Job Openings, OT Assistants



29-1123 Physical Therapists

Occupation description

Assess, plan, organize, and participate in rehabilitative programs that improve mobility, relieve pain, increase strength, and improve or correct disabling conditions resulting from disease or injury.

Illustrative examples: Geriatric Physical Therapist, Physiotherapist, Pulmonary Physical Therapist

Education requirements

Physical therapists are required to have a postgraduate professional degree. Physical therapy programs usually award a Doctor of Physical Therapy (DPT) degree, although a small number award a Master of Physical Therapy (MPT) degree. Doctoral programs typically last three years; MPT programs require two to three years of study. Most programs, either DPT or MPT, require a bachelor's degree for admission, and many require specific prerequisites, such as anatomy, physiology, biology, and chemistry.

According to the Maine Board of Physical Therapy, an applicant for license must be a graduate of an accredited program for the physical therapist. Accreditation must be by an agency recognized by the United States Commissioner of Education or the Council on Post-Secondary Accreditation, or both, and approved by the board. Applicants from other countries must present evidence of graduation from an accredited school of physical therapy and must be proficient in English, both written and spoken.

Employment & Wages

In 2012 there were nearly 1,400 physical therapists (PTs) in Maine earning a median wage of $75,000. PTs are employed in a range of industries including ambulatory care, hospitals, social assistance and education.

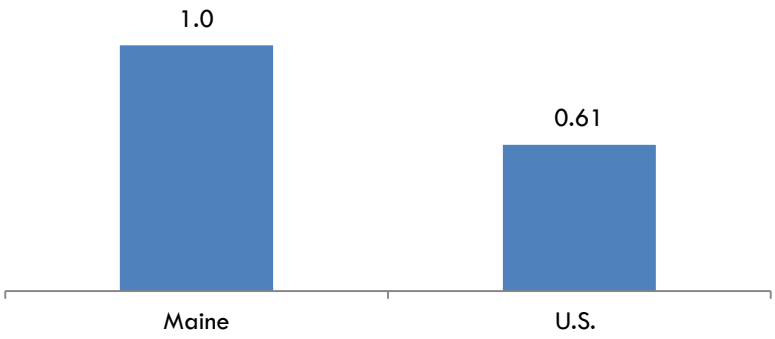
2012 Employment & Wage Statistics

	Average Employment	Median Annual Salary
Maine	1,360	$74,680
Industries with Highest Share of Employment (% total)		
Ambulatory Health Care Services	54%	$74,980
Hospitals	27%	$72,480
Nursing and Residential Care Facilities	7%	$78,970
Social Assistance	7%	$84,300
Educational Services	n/a	$42,420

Source: 2012 Occupational Employment Statistics, CWRI

In Maine and the U.S., the number of physical therapists per thousand residents in 2012 was 1.0 and .61, respectively.

Physical Therapists per 1,000 Population



Distribution of employment

Distribution of Employment	Number Employed	Pct. (%) Total Employment	Pct. (%) of Total Maine Population	Number Employed per 1,000 Population
Androscoggin County	80	6%	8%	0.74
Aroostook County	40	3%	5%	0.56
Cumberland County	530	39%	21%	1.87
Franklin County	*n/a*	n/a	2%	
Hancock County	*n/a*	*n/a*	4%	
Kennebec County	100	6%	9%	0.82
Knox County	*n/a*	*n/a*	3%	
Lincoln County	30	2%	3%	0.88
Oxford County	30	2%	4%	0.52
Penobscot County	140	10%	12%	0.91
Piscataquis County	*n/a*	*n/a*	1%	
Sagadahoc County	*n/a*	*n/a*	3%	
Somerset County	40	3%	4%	0.77
Waldo County	*n/a*	*n/a*	3%	
Washington County	20	1%	2%	0.62
York County	150	11%	15%	0.75
Maine	**1,360**	**84%**	**100%**	**1.0**

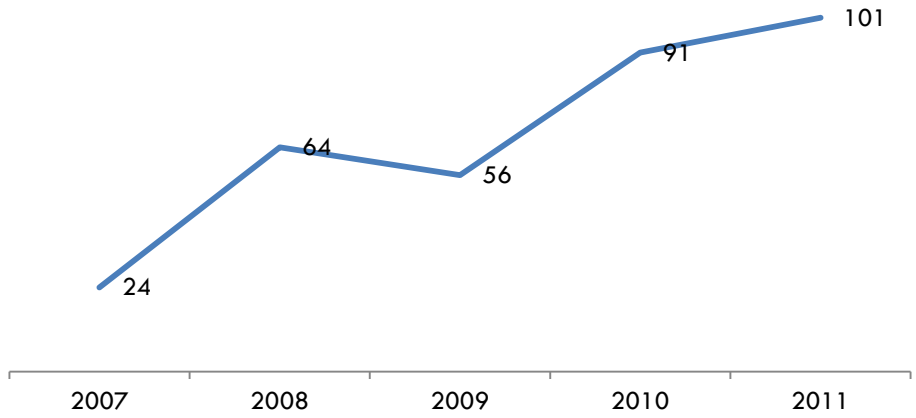
Source: CWRI analysis of OES & Census data

Some data is suppressed according to BLS confidentiality and data quality requirements. Suppressed data is shown as "n/a" for not available.

Schools offering training and number completing

Two schools offer programs for physical therapists—Husson University and UNE. Graduates from each program have been rising, as seen below.

Physical Therapist Program Completers



Education Programs & Annual Graduates

School	CIP Code	CIP Title	Completer Title	2007	2008	2009	2010	2011
Husson University	512308	Physical Therapy/ Therapist	First-Professional Degrees				49	53
Husson University	512308	Physical Therapy/ Therapist	Unidentified		19	16		
Husson University	512308	Physical Therapy/ Therapist	Master's Degree	17	22	1		
University of New England	512308	Physical Therapy/ Therapist	First-Professional Degrees	7	23	39	42	48
Total				**24**	**64**	**56**	**91**	**101**

Outlook

Nationally, employment of physical therapists is expected to increase 39 percent from 2010 to 2020, much faster than the average for all occupations. In Maine, employment of physical therapists is expected to increase 15 percent.

Demand for physical therapy services will come, in large part, from the aging baby boomers, who are staying active later in life than previous generations did. Older persons are more likely to suffer heart attacks, strokes, and mobility-related injuries that require physical therapy for rehabilitation.

Advances in medical technology have increased the use of outpatient surgery to treat a variety of injuries and illnesses. Physical therapists will continue to play an important role in helping these patients recover more quickly from surgery.

Medical and technological developments also are expected to permit a greater percentage of trauma victims and newborns with birth defects to survive, creating additional demand for rehabilitative care. In addition, the incidence of chronic diseases, such as diabetes, has increased in recent years, and more physical therapists will be needed to help patients manage the effects of these diseases.

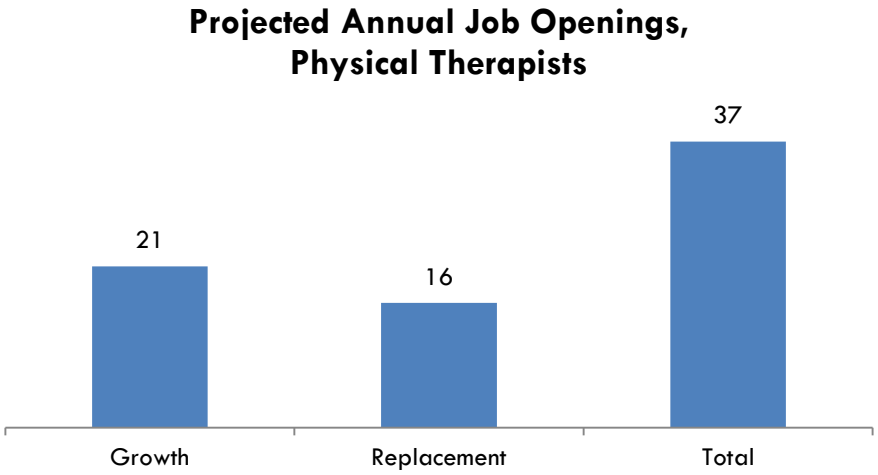
Job opportunities will likely be good for licensed physical therapists in all settings. Job opportunities should be particularly good in acute hospitals, skilled nursing, and orthopedic settings, where the elderly are most often treated. Job prospects should be especially favorable in rural areas because many physical therapists live in highly populated urban and suburban areas.

Across industries, 37 job opportunities are expected each year, with more than half of these resulting from new growth.

Employment of Physical Therapists in Maine 2010 and Projected 2020

Average Employment		Change in Employment (2010-2020)		Projected Annual Openings Resulting from New Growth
2010	2020	Net	Percent	
1,397	1,604	207	14.8%	21

Source: CWRI 2010-2020 Employment Projections



31-2021 Physical Therapist Assistants

Occupation description

Assist physical therapists in providing physical therapy treatments and procedures. May, in accordance with State laws, assist in the development of treatment plans, carry out routine functions, document the progress of treatment, and modify specific treatments in accordance with patient status and within the scope of treatment plans established by a physical therapist. Generally requires formal training.

Illustrative examples: Licensed Physical Therapy Assistant, Physiotherapy Assistant

Physical therapist assistants compared to physical therapist aides

The Occupational Outlook Handbook draws the following distinctions between physical therapist assistants and aides:

> Both physical therapist assistants and physical therapist aides work under the direction of physical therapists. They help patients who are recovering from injuries, illnesses, and surgeries regain movement and manage pain. Physical therapist assistants are involved in the direct care of patients. Physical therapist aides often do tasks that are indirectly related to patient care, such as cleaning and setting up the treatment area, moving patients, and clerical tasks.
>
> Physical therapist assistants typically do the following:
>
> - Observe patients before and during therapy, noting their status and reporting to a physical therapist
> - Help patients do specific exercises
> - Use a variety of techniques, such as massage and stretching, to treat patients
> - Use devices and equipment, such as walkers, to help patients
> - Educate a patient and family members about what to do after treatment
>
> Physical therapist aides typically do the following:
>
> - Clean treatment areas and set up therapy equipment
> - Help patients move to or from a therapy area
> - Do clerical tasks, such as answering phones or helping patients with insurance paperwork
>
> Physical therapist assistants help physical therapists provide care to patients. Under the direction and supervision of physical therapists, they give therapy through exercise; therapeutic methods, such as electrical stimulation, mechanical traction, and ultrasound; massage; and gait and balance training. Physical therapist assistants record patients' responses to treatment and report the results of each treatment to the physical therapist.
>
> Physical therapist aides help make therapy sessions productive, under the direct supervision of a physical therapist or physical therapist assistant. They usually are responsible for keeping the treatment area clean and organized and for preparing for each patient's therapy. They also help patients who need assistance moving to or from a treatment area.

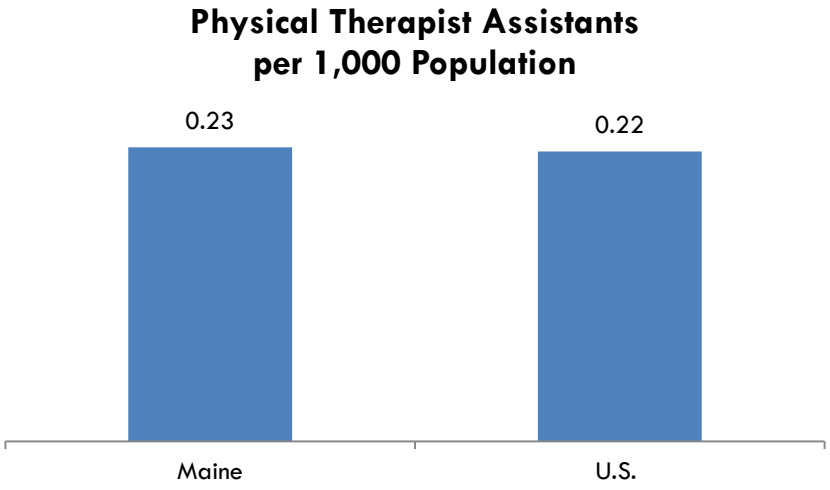
Education requirements

Most states require physical therapist assistants to have an associate's degree from an accredited physical therapist program. With the exception of Hawaii, all states require physical therapist assistants to be licensed. In Maine, applicants for licensure must be a graduate of an accredited physical therapist assistant program that is approved by the Maine Board of Examiners in Physical Therapy. Applicants trained in another country must present evidence of graduation from a school of physical therapy approved or accredited in the country where the school is located and have educational credentials equivalent to those of the United States trained physical therapist assistant. Proficiency in written and spoken English must also be demonstrated.[19] Licenses renew annually.

Employment & Wages

2012 Employment & Wage Statistics		
	Average Employment	Median Annual Salary
Maine	300	$49,500
Industries with Highest Share of Employment (% total)		
Ambulatory Health Care Services	37%	$49,210
Hospitals	30%	$49,030
Social Assistance	23%	$49,900
Nursing and Residential Care Facilities	n/a	$52,320

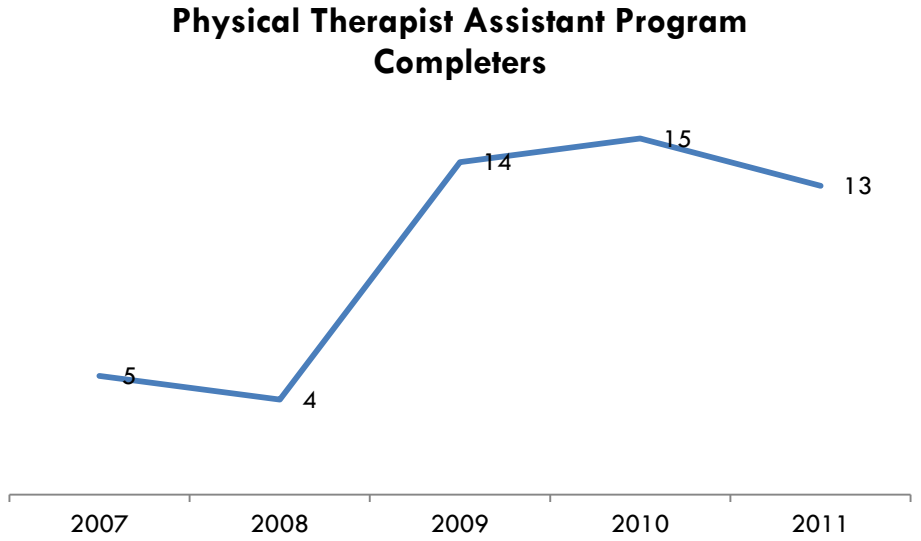
Source: 2012 Occupational Employment Statistics, CWRI



[19] From the Maine Office of Professional and Occupational Regulation.

Schools offering training and number completing

KVCC offers an associate's degree program for physical therapy assistants. This is the only offering in Maine.



Education Programs & Annual Graduates

School	CIP Code	CIP Title	Completer Title	2007	2008	2009	2010	2011
Kennebec Valley Community College	510806	Physical Therapy Technician/Assistant	Associate's Degree	5	4	14	15	13

Source: IPEDS, CRWI

Outlook

Nationally, employment of physical therapist assistants is expected to increase 46 percent from 2010 to 2020, much faster than the average for all occupations. In Maine, employment of physical therapist assistants is expected to increase 18 percent.

Employment of physical therapist assistants is projected to grow faster than that of aides, as assistants deliver therapy services directly.

Demand for physical therapy services is expected to increase in response to the health needs of an aging population, particularly the large baby-boom generation. This group is staying more active later in life than previous generations.

However, baby boomers also are entering the prime age for heart attacks and strokes, increasing the demand for cardiac and physical rehabilitation. Older people are particularly vulnerable to chronic and debilitating conditions that require therapeutic services. These patients often need additional help in their treatment, making the roles of assistants and aides vital.

Medical and technological developments should permit an increased percentage of trauma victims and newborns with birth defects to survive, creating added demand for therapy and rehabilitative services.

Physical therapists are expected to increasingly use assistants and aides to reduce the cost of physical therapy services. Once the physical therapist has evaluated a patient and designed a treatment plan, the physical therapist assistant can provide many parts of the treatment, as directed by the therapist.

In addition, changes to restrictions on reimbursements for physical therapy services by third-party payers will increase patient access to services and increase demand.

Opportunities for physical therapist assistants are expected to be very good. With help from physical therapist assistants, physical therapists can manage more patients.

However, physical therapy aides may face keen competition from the large pool of qualified people.

Job opportunities should be particularly good in acute hospitals, skilled nursing, and orthopedic settings, where the elderly are most often treated. Job prospects should be especially favorable in rural areas, as many physical therapists cluster in highly populated urban and suburban areas.

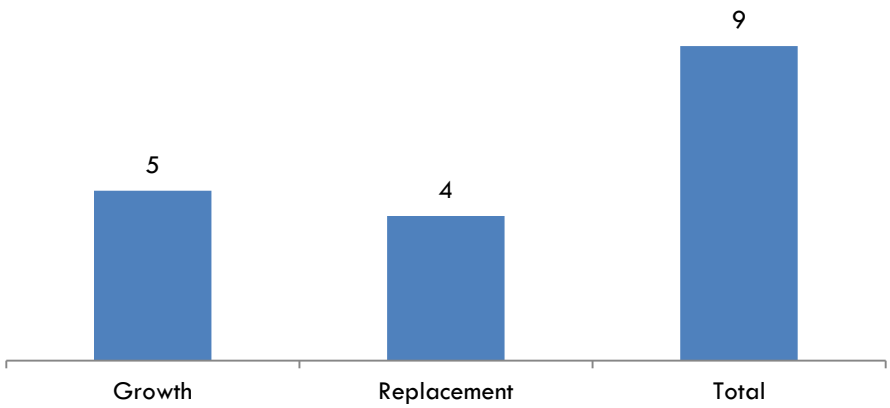
In Maine, nine job opportunities are expected per year, half resulting from new growth and half from the need to replace those that may retire.

Employment of Physical Therapist Assistants in Maine 2010 and Projected 2020

Average Employment		Change in Employment (2010 - 2020)		Projected Annual Openings Resulting from New Growth
2010	2020	Net	Percent	
257	304	47	18.3%	5

Source: CWRI 2010-2020 Employment Projections

Projected Annual Job Openings, Physical Therapist Assistants



29-1125 Recreation Therapists

Occupation description

Plan, direct, or coordinate medically-approved recreation programs for patients in hospitals, nursing homes, or other institutions. Activities include sports, trips, dramatics, social activities, and arts and crafts. May assess a patient condition and recommend appropriate recreational activity. Excludes "Recreation Workers" (39-9032).

Illustrative examples: Certified Recreational Therapist, Drama Therapist, Therapeutic Recreation Specialist

Education requirements

Recreational therapists typically need a bachelor's degree. Though less common, associate's, master's, or doctoral degrees are also available. Most employers require therapists to be certified by the National Council for Therapeutic Recreation Certification (NCTRC).

Therapeutic recreation programs include courses in assessment, human anatomy, medical and psychiatric terminology, characteristics of illnesses and disabilities, and the use of assistive devices and technology. Bachelor's degree programs usually include an internship.

Certification and Licenses

Most employers prefer to hire certified recreational therapists. Hospitals and other clinical settings often require certification by the NCTRC. The council offers the Certified Therapeutic Recreation Specialist (CTRS) credential to candidates who pass a written certification exam and complete a supervised internship of at least 480 hours.

NCTRC also offers specialty certification in five areas of practice: geriatrics, behavioral health, physical medicine/rehabilitation, developmental disabilities, or community inclusion services. Although therapists typically need at least a bachelor's degree in recreational therapy, in some cases therapists may qualify for certification with an alternate combination of education, training, and experience.

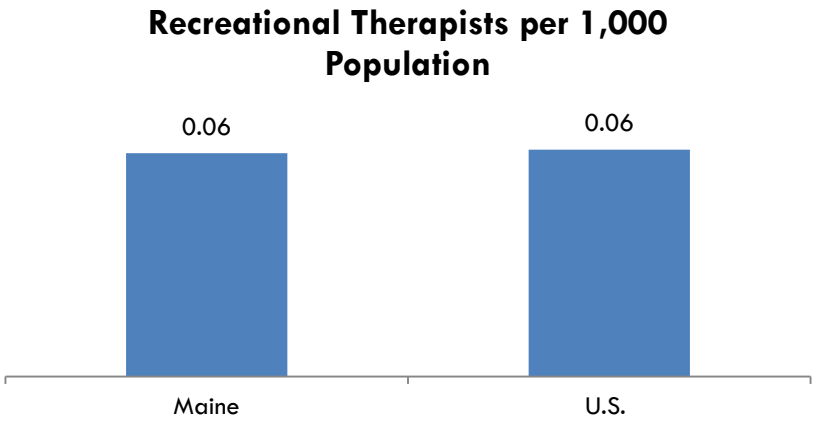
Some states require recreational therapists to be licensed; requirements vary by state. Recreational therapists are not licensed in Maine. As of 2010, only Oklahoma, North Carolina, Utah, and New Hampshire required recreational therapists to hold a license. Most employers require therapists to be certified by the National Council for Therapeutic Recreation Certification (NCTRC).

Employment & Wages

2012 Employment & Wage Statistics

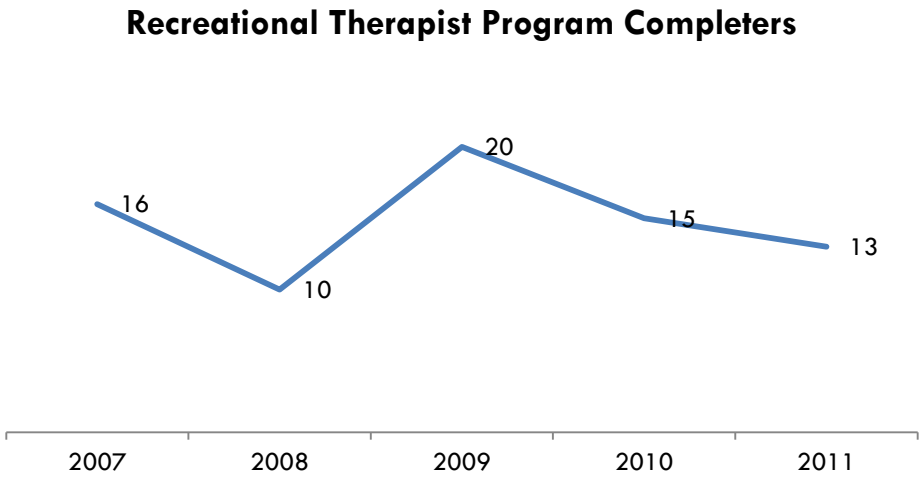
	Average Employment	Median Annual Salary
Maine	80	$37,300
Industries with Highest Share of Employment (% total)		
Hospitals	38%	$37,370
Nursing and Residential Care Facilities	38%	$34,480

Source: 2012 Occupational Employment Statistics, CWRI



Schools offering training and number completing

In 2011, two schools had graduates, with the overwhelming majority coming from USM.



Education Programs & Annual Graduates								
School	**CIP Code**	**CIP Title**	**Completer Title**	**2007**	**2008**	**2009**	**2010**	**2011**
Unity College	512309	Therapeutic Recreation/Recreational Therapy	Bachelor's Degree	5	1	5	2	1
University of Southern Maine	512309	Therapeutic Recreation/Recreational Therapy	Bachelor's Degree	9	8	14	12	12
University of Southern Maine	512309	Therapeutic Recreation/Recreational Therapy	Associate's Degree	2	1	1	1	
Total				**16**	**10**	**20**	**15**	**13**

Source: IPEDS, CWRI

Outlook

Nationally, employment of recreational therapists is expected to grow by 17 percent from 2010 to 2020, about as fast as the average for all occupations. In Maine, employment is expected to grow 12 percent, twice the average that is expected for all occupations.

As the large baby-boom generation ages, they will need recreational therapists to help treat age-related injuries and illnesses, such as strokes. As people age, their declines in general physical ability, and sometimes mental ability, may also be treated with recreational therapy.

Legislation requiring federally-funded services for disabled students will continue to shape the need for recreational therapists in education settings.

Additionally, third party payers will continue to use therapists' services as a way to cut costs in patients' recoveries from injuries or illnesses, moving treatment to outpatient settings rather than more costly hospital settings.

Job prospects will be best for recreational therapists with both a bachelor's degree and certification. Therapists who specialize in working with the elderly or who earn certification in geriatric therapy may have the best job prospects. Nursing and residential care facilities employ more than a third of recreational therapists. As the percentage of older adults continues to grow, employment in nursing and residential care facilities industry will grow as a whole, increasing the need for these workers.

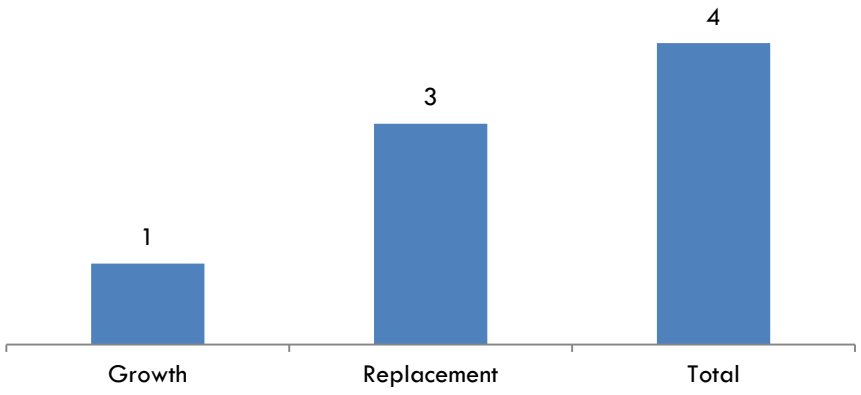
Since this is a small occupation in Maine, most of the job opportunities will arise from replacement needs as opposed to new growth.

Employment of Recreational Therapists in Maine, 2010 and Projected 2020

Average Employment		Change in Employment (2010 - 2020)		Projected Annual Openings Resulting from New Growth
2010	2020	Net	Percent	
94	105	11	11.7%	1

Source: CWRI 2010-2020 Employment Projections

Projected Annual Job Openings, Recreational Therapists



29-1124 Radiation Therapists

Occupation description

Provide radiation therapy to patients as prescribed by a radiologist according to established practices and standards. Duties may include reviewing prescription and diagnosis; acting as liaison with physician and supportive care personnel; preparing equipment, such as immobilization, treatment, and protection devices; and maintaining records, reports, and files. May assist in dosimetry procedures and tumor localization.

Illustrative examples: Dosimetrist, Radiation Therapy Technologist

Education requirements

Radiation therapists need to complete formal education programs. Most programs lead to a bachelor's degree or associate's degree in radiation therapy. Radiation therapists must be licensed in most states; requirements vary by state. In Maine, the licensing of radiation therapists is governed by the Department of Professional and Financial Regulation Office of Licensing.

Although candidates may qualify by completing a 12-month certificate program, employers usually prefer to hire applicants who have an associate's or bachelor's degree in radiation therapy.

Employment & Wages

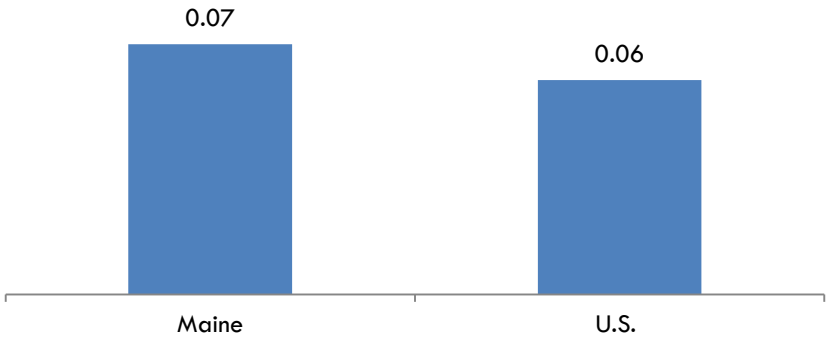
This is a relatively small occupation, with 90 employed statewide. The median wage in 2012 was $73,000, six percent below the national median wage but well above the median wage for all jobs in Maine. Radiation therapists work for hospitals.

2012 Employment & Wage Statistics

	Average Employment	Median Annual Salary
Maine	90	$72,990
Industries with Highest Share of Employment (% total)		
Hospitals	100%	$72,990

Source: 2012 Occupational Employment Statistics, CWRI

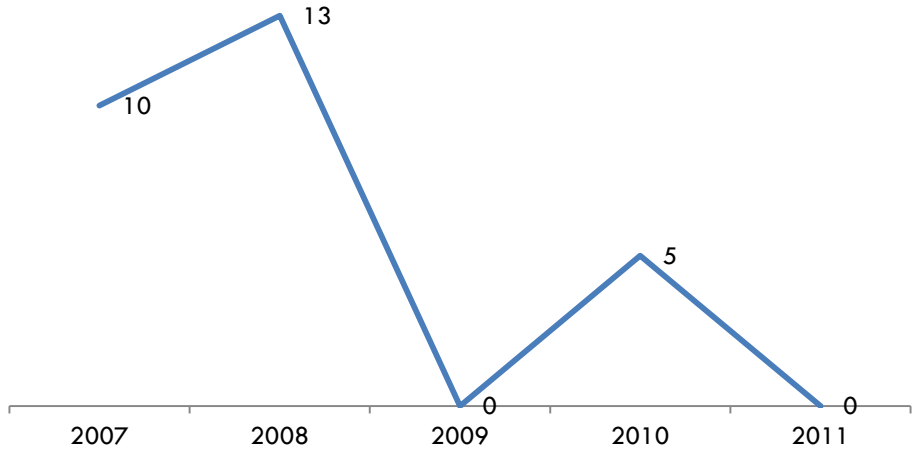
Radiation Therapists per 1,000 Population



Schools offering training and number completing

Southern Maine Community College and St. Joseph's College offer radiation therapy programs and there were no graduates in 2011. USM offered a bachelor of science in radiation therapy—which required students to transfer in with an associate's degree, but no completers were reported to IPEDS and the program is no longer listed in their course catalog.

Radiation Therapy Program Completers



Education Programs & Annual Graduates

School	CIP Code	CIP Title	Completer Title	2007	2008	2009	2010	2011
Southern Maine Community College	510907	Medical Radiologic Technology/Science – Radiation Therapist	Associate's Degree		10		5	
Saint Joseph's College of Maine	510907	Medical Radiologic Technology/Science – Radiation Therapist	Bachelor's Degree	10	3			
Total				**10**	**13**	**0**	**5**	**0**

Source: IPEDS, CWRI

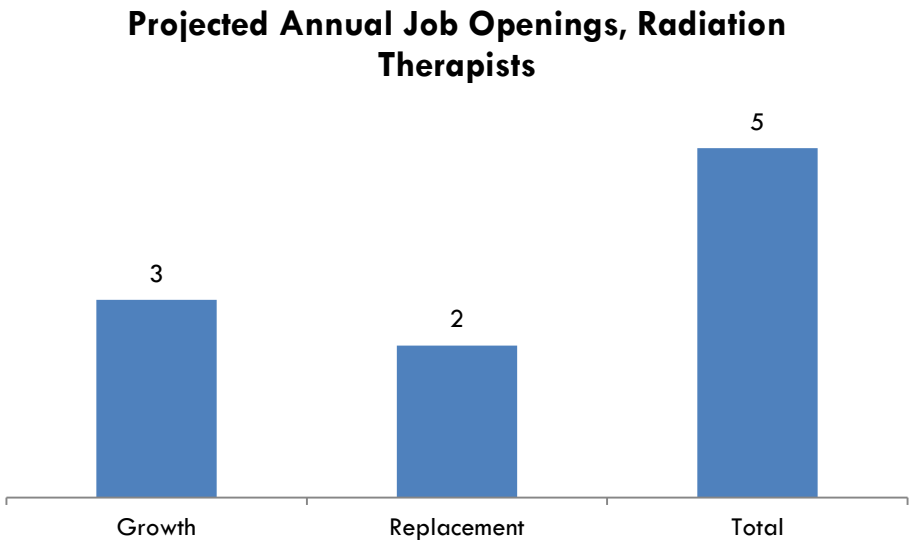
Outlook

Nationally, employment of radiation therapists is expected to grow by 20 percent between 2010 and 2020, faster than the average for all occupations. In Maine, employment of radiation therapists is expected to increase 27 percent, well above the six percent growth expected for all occupations. Although the growth rate is high, because this is a small occupation, the number of job opportunities will be limited. A total of 50 job opportunities—five per year—are expected.

The risk of cancer increases as people age, so an aging population will increase demand for radiation therapists. Early diagnosis and the development of more sophisticated treatment techniques will also increase employment.

Employment of Radiation Therapists in Maine, 2010 and Projected 2020				
Average Employment		Change in Employment (2010-2020)		Projected Annual Openings Resulting from New Growth
2010	2020	Net	Percent	
96	122	26	27%	3

Source: CWRI 2010-2020 Employment Projections



29-1126 Respiratory Therapists

Occupation description

Assess, treat, and care for patients with breathing disorders. Assume primary responsibility for all respiratory care modalities, including the supervision of respiratory therapy technicians. Initiate and conduct therapeutic procedures; maintain patient records; and select, assemble, check, and operate equipment.

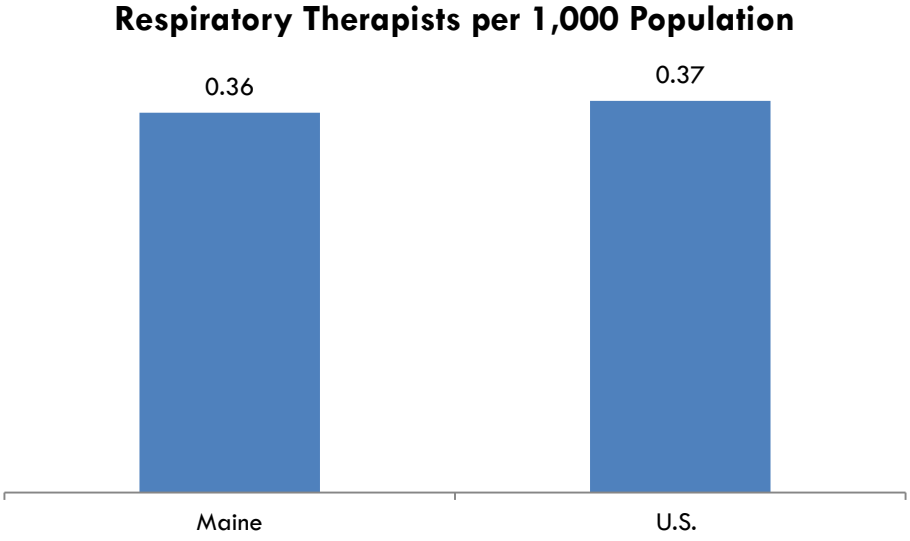
Illustrative examples: Inhalation Therapist, Oxygen Therapist, Registered Respiratory Therapist

Education requirements

Respiratory therapists need at least an associate's degree, but employers look favorably on applicants who have more education. Many colleges and universities, vocational-technical institutes, and the Armed Forces offer training. Most programs award an associate's or bachelor's degree. The Board of Respiratory Care Practitioners governs the licensure of respiratory therapists in Maine.

Employment & Wages

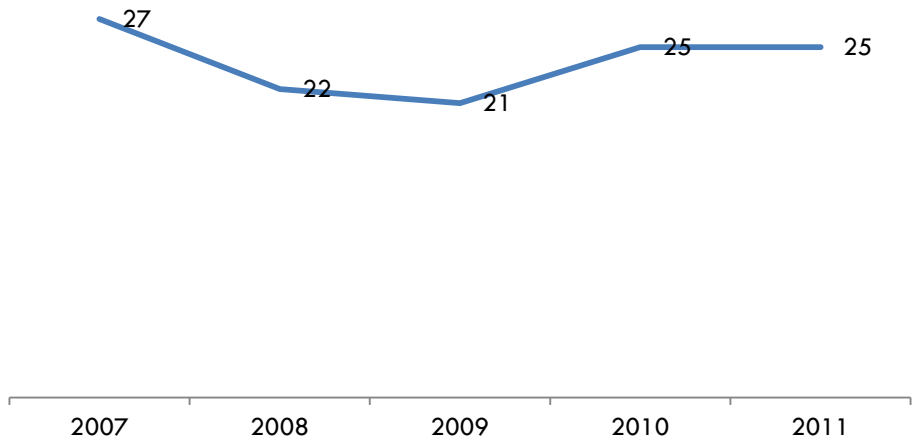
2012 Employment & Wage Statistics		
	Average Employment	Median Annual Salary
Maine	480	$53,860
Industries with Highest Share of Employment (% total)		
Hospitals	94%	$53,690



Schools offering training and number completing

Two schools offer associate's degree programs—SMCC and KVCC. In 2011 there were 25 graduates that were nearly evenly split among the programs.

Respiratory Therapist Program Completers



Education Programs & Annual Graduates

School	CIP Code	CIP Title	Completer Title	2007	2008	2009	2010	2011
Southern Maine Community College	510908	Respiratory Care Therapy/Therapist	Associate's Degree	18	12	15	11	12
Kennebec Valley Community College	510908	Respiratory Care Therapy/Therapist	Associate's Degree	9	10	6	14	13
Total				**27**	**22**	**21**	**25**	**25**

Source: IPEDS, CWRI

Outlook

Nationally, employment of respiratory therapists is expected to grow by 28 percent from 2010 to 2020, faster than the average for all occupations. In Maine, this occupation is expected to increase 41 percent, significantly above the 6 percent increase expected for all occupations.

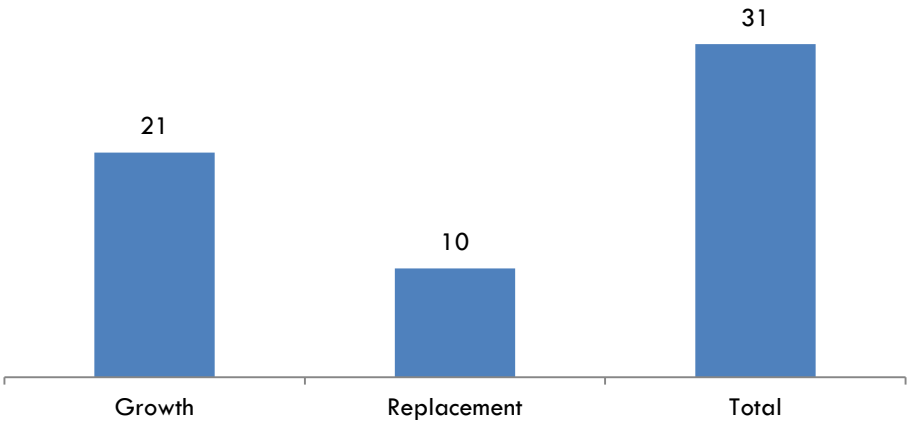
Growth in the middle-aged and elderly population will lead to an increased incidence of respiratory conditions such as emphysema, chronic bronchitis, and pneumonia, respiratory disorders that permanently damage the lungs or restrict lung function. These factors will lead to an increased demand for respiratory therapy services and treatments, mostly in hospitals and nursing homes. In addition, advances in preventing and detecting disease, improved medications, and more sophisticated treatments will increase the demand for respiratory therapists. Other conditions affecting the general population, such as smoking, air pollution, and respiratory emergencies, will continue to create demand for respiratory therapists.

Respiratory therapists with certification or a bachelor's degree will have the best job prospects. Thirty-one job opportunities are expected each year; 21 from new growth and 10 from replacement needs.

Employment of Respiratory Therapists in Maine 2010 and Projected 2020				
Average Employment		Change in Employment (2010 - 2020)		Projected Annual Openings Resulting from New Growth
2010	2020	Net	Percent	
504	711	207	41%	21

Source: CWRI 2010-2020 Employment Projections

Projected Annual Job Openings, Respiratory Therapists



29-2054 Respiratory Therapy Technicians

Occupation description

Provide respiratory care under the direction of respiratory therapists and physicians.

Education requirements

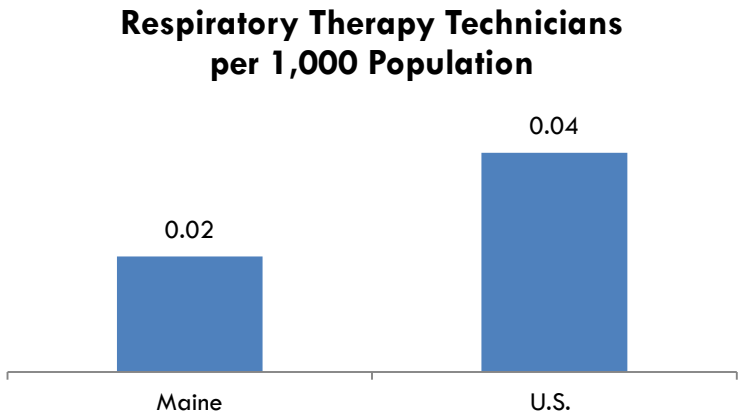
Associate's degree. Respiratory care technicians are licensed in Maine by the Board of Respiratory Care Practitioners.

Employment & Wages

2012 Employment & Wage Statistics

	Average Employment	Median Annual Salary
Maine	30	$53,390
Industries with Highest Share of Employment (% total)		
Hospitals	100%	$53,170

Source: 2012 Occupational Employment Statistics, CWRI



Schools offering training and number completing

Programs at KVCC and SMCC may provide instruction for technicians. SMCC notes that their program produces respiratory therapists.

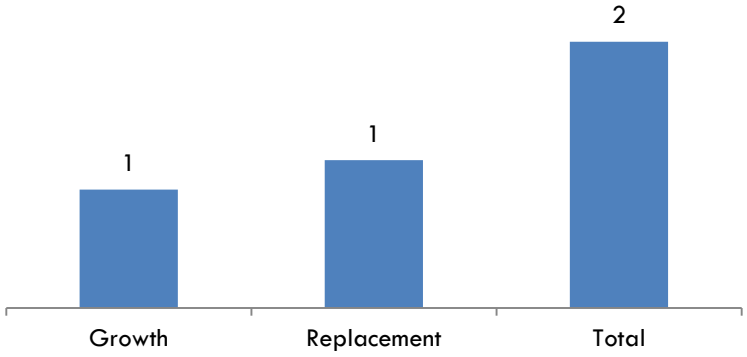
Outlook

In Maine, employment of respiratory therapy technicians is expected to increase 18 percent from 2010 to 2020. The size of this occupation will limit the number of job opportunities. Two job openings are expected per year.

Employment of Respiratory Therapy Technicians in Maine 2010 and Projected 2020				
Average Employment		Change in Employment (2010 - 2020)		Projected Annual Openings Resulting from New Growth
2010	2020	Net	Percent	
44	52	8	18%	1

Source: CWRI 2010-2020 Employment Projections

Projected Annual Job Openings, Respiratory Therapy Technicians



29-1127 Speech-Language Pathologists

Occupation description

Assess and treat persons with speech, language, voice, and fluency disorders. May select alternative communication systems and teach their use. May perform research related to speech and language problems.

Illustrative examples: Public School Speech Therapist, Speech Clinician, Speech Therapist

Education requirements

The standard level of education for speech-language pathologists is a master's degree. Although master's programs do not specify a particular undergraduate degree for admission, certain courses must be taken before entering the program. Required courses vary by institution. Graduate programs often include courses in age-specific speech disorders, alternative communication methods, and swallowing disorders. These programs also include supervised clinical practice in addition to coursework. The Board of Examiners in Speech, Pathology and Audiology govern the licensing of speech pathologists in Maine.

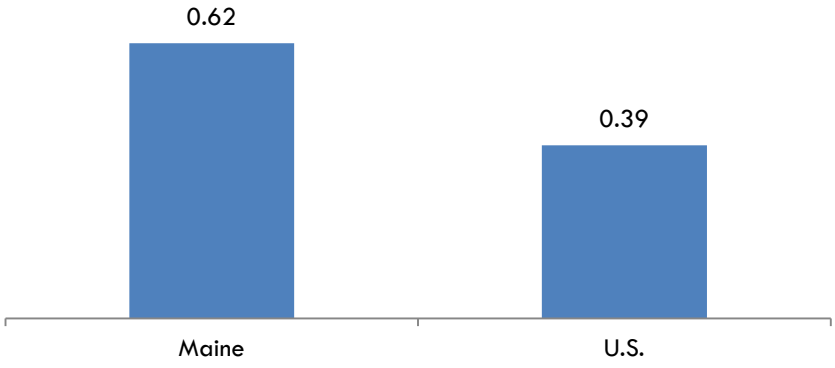
Employment & Wages

2012 Employment & Wage Statistics

	Average Employment	Median Annual Salary
Maine	820	$57,590
Industries with Highest Share of Employment (% total)		
Educational Services	45%	$53,060
Ambulatory Health Care Services	27%	$56,530
Hospitals	15%	$73,600
Nursing and Residential Care Facilities	4%	$77,350

Source: 2012 Occupational Employment Statistics, CWRI

Speech Pathologists per 1,000 Population



Distribution of employment

Distribution of Employment				
	Number Employed	Pct. (%) Total Employment	Pct. (%) of Total Maine Population	Number Employed per 1,000 population
Androscoggin County	70	9%	8%	0.65
Aroostook County	30	4%	5%	0.42
Cumberland County	240	29%	21%	0.85
Franklin County	*n/a*	n/a	2%	
Hancock County	40	5%	4%	0.73
Kennebec County	150	18%	9%	1.23
Knox County	*n/a*	*n/a*	3%	
Lincoln County	*n/a*	*n/a*	3%	
Oxford County	30	4%	4%	0.52
Penobscot County	60	7%	12%	0.39
Piscataquis County	*n/a*	*n/a*	1%	
Sagadahoc County	*n/a*	*n/a*	3%	
Somerset County	30	4%	4%	0.58
Waldo County	*n/a*	*n/a*	3%	
Washington County	40	5%	2%	1.23
York County	80	10%	15%	0.40
Maine	**820**	**94%**	**100%**	**0.62**

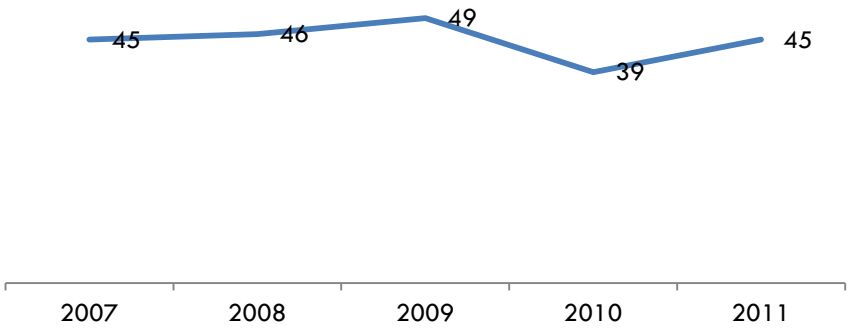
Source: CWRI analysis of OES & Census data

Some county level employment data is suppressed due to BLS confidentiality and data quality requirements.

Schools offering training and number completing

The University of Maine offers Bachelor's and Master's degree programs. Undergraduate degrees typically represent two thirds of the total graduates.

Speech Pathologist Program Completers



Education Programs & Annual Graduates								
School	CIP Code	CIP Title	Completer Title	2007	2008	2009	2010	2011
University of Maine	510201	Communication Sciences and Disorders, General	Bachelor's Degree	26	36	35	25	30
University of Maine	510201	Communication Sciences and Disorders, General	Master's Degree	19	10	14	14	15
Total				**45**	**46**	**49**	**39**	**45**

Source: IPEDS, CWRI

Outlook

Nationally, employment of speech-language pathologists is expected to grow by 23 percent from 2010 to 2020, faster than the average for all occupations. In Maine, employment is expected to grow 10 percent.

As the large baby-boom population grows older, there will be more instances of health conditions that cause speech or language impairments, such as strokes and hearing loss. These increases are expected to add to the number of speech and language disorders in the population and require more speech-language pathologists to treat these patients.

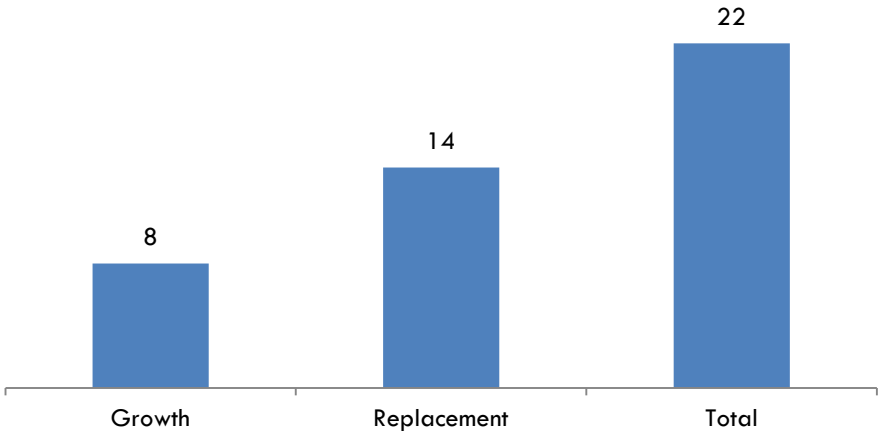
Increased awareness of speech and language disorders, such as stuttering in younger children should also lead to a need for more speech-language pathologists who specialize in treating that age group. In addition, medical advances are improving the survival rate of premature infants and victims of trauma and strokes, many of whom need help from speech-language pathologists.

A number of job opportunities for speech pathologists will arise as those currently practicing exit the workforce. A total of 22 job opportunities per year are expected, 8 from new growth and 14 from replacement needs.

Employment of Speech Pathologists in Maine 2010 and Projected 2020				
Average Employment		Change in Employment (2010 - 2020)		Projected Annual Openings Resulting from New Growth
2010	2020	Net	Percent	
759	838	79	10%	8

Source: CWRI 2010-2020 Employment Projections

Projected Annual Job Openings, Speech Pathologists



Technologists & Technicians

Summary Statistics									
Workforce Characteristics	**Medical Clinical Lab Technologists**	**Medical Clinical Lab Technicians**	**Cardiovascular Technologists & Technicians**	**Diagnostic Medical Sonographers**	**Nuclear Medicine Technologists**	**Radiologic Technologists**	**Psychiatric Technicians**	**EMTs & Paramedics**	**Surgical Technologists**
Employment (2012)	570	730	240	240	120	940	430	1870	590
Employment per 1,000 population	0.43	0.55	0.18	0.18	0.09	0.71	0.32	1.41	0.44
versus U.S.	Below avg.	Above avg.	Above avg.	Average	Above avg.	Above avg.	Above avg.	Above avg.	Above avg.
Average annual starting wage (ME)	$44,040	$28,100	$34,800	$56,870	$58,420	$42,780	$19,020	$22,090	$33,770
Median annual wage (ME)	$54,540	$42,320	$56,370	$69,680	$71,110	$54,590	$25,330	$30,580	$39,950
U.S. median annual wage	$57,580	$37,240	$52,070	$65,860	$70,180	$54,620	$30,050	$31,020	$41,790
Median wage for all occupations in ME	$32,590	$32,590	$32,590	$32,590	$32,590	$32,590	$32,590	$32,590	$32,590

Summary Statistics Continued									
Workforce Characteristics	**Medical Clinical Lab Technologists**	**Medical Clinical Lab Technicians**	**Cardiovascular Technologists & Technicians**	**Diagnostic Medical Sonographers**	**Nuclear Medicine Technologists**	**Radiologic Technologists**	**Psychiatric Technicians**	**EMTs & Paramedics**	**Surgical Technologists**
Minimum Education Requirement	Bachelor's degree	Associate's degree	Associate's degree	Associate's degree	Associate's degree	Associate's degree	Postsecondary non-degree award	Postsecondary non-degree award	Postsecondary non-degree award
Job Growth Projections	18%	16%	35%	50%	23%	37%	20%	31%	24%
National Median Age	44.7	44.7	42.2	42.2	42.2	42.2	34.9	33.8	34.9
Top Industry of Employment	Hospitals	Ambulatory Healthcare Svcs.	Hospitals	Hospitals	Hospitals	Hospitals	Hospitals	Ambulatory Healthcare Svcs.	Hospitals
Licensure Board	No license. Professional cert. available.	No license. Professional cert. available.	No license required.	No license. Professional cert. available.	Radiologic Technology Board of Examiners	Radiologic Technology Board of Examiners	No license required.	ME Board of Emergency Svcs. National registry or certification.	No license required. Professional cert. available.

Key points

- These are among the fastest growing health occupations in Maine and in most cases job opportunities are expected to increase faster here than for the nation.
- Technologist and technician occupations have a high share of employment within hospitals which fosters above average rates of growth.
- The number graduating from Maine's education programs is below projected annual job openings in a number of occupations.

29-2011 Medical and Clinical Laboratory Technologists

Occupation description

Perform complex medical laboratory tests for diagnosis, treatment, and prevention of disease. May train or supervise staff.

Illustrative examples: Blood Bank Laboratory Technologist, Cytogenetic Technologist, Immunohematologist

Education requirements

Medical laboratory technologists (also known as medical lab scientists) typically need a bachelor's degree. Some states require technologists to be licensed. Currently, Maine does not require licensure to work as a Medical laboratory Scientist/Medical Technologist; the national standard is to be certified by the American Society for Clinical Pathology Board of Certification (ASCP BOC).

Universities and hospitals offer medical technology programs. An entry-level job for technologists usually requires a bachelor's degree in medical technology or life sciences.

A bachelor's degree in medical laboratory technology includes courses in chemistry, biology, microbiology, mathematics, and statistics, as well as courses on clinical laboratory skills, management, and education. This degree is sometimes known as a medical laboratory scientist program.

The courses may be offered through a hospital-based program that students attend during their senior year of college. College graduates who major in other sciences and meet a program's prerequisites, such as having completed required courses in biology and chemistry, may also apply to a medical laboratory science program.

Although certification is not required to enter the occupation in all cases, employers typically prefer to hire certified technologists. Medical laboratory technologists can obtain a generalist certification as medical laboratory scientist or a technologist certification in a category such as, molecular biology, blood bank, microbiology, hematology and chemistry. Most credentials require that scientists/technologists complete an accredited program to qualify to sit for a nationally recognized ASCP BOC examination. Since 2004 continuing education is required to maintain certification.

Employment & Wages

In 2012 there were an estimated 570 medical lab scientists employed in Maine earning a median annual wage of $54,000. This wage was slightly below the national median but well above the average wage for all jobs in Maine. Clinical lab technologists are predominantly employed within hospital settings.

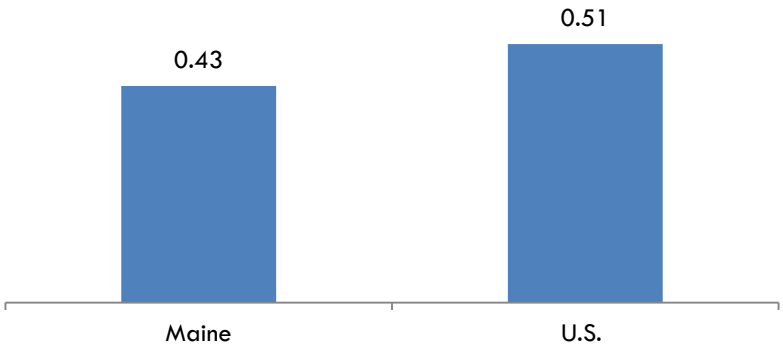
2012 Employment & Wage Statistics

	Average Employment	Median Annual Salary
Maine	570	$54,540
Industries with Highest Share of Employment (% total)		
Hospitals	82%	$54,310
Ambulatory Health Care Services	12%	$54,600

Source: 2012 Occupational Employment Statistics, CWRI

In 2012 there were 16 percent fewer medical/clinical lab technologists in Maine per 1,000 residents than the nation.

Medical Clinical LabTechnologists per 1,000 Population, 2012



Distribution of employment

Distribution of Employment	Number Employed	Pct. (%) Total Employment	Pct. (%) of Total Maine Population	Number Employed per 1,000 population
Androscoggin County	*n/a*	*n/a*	8%	
Aroostook County	*n/a*	*n/a*	5%	
Cumberland County	150	26%	21%	0.53
Franklin County	*n/a*	*n/a*	2%	
Hancock County	*n/a*	*n/a*	4%	
Kennebec County	*n/a*	*n/a*	9%	
Knox County	*n/a*	*n/a*	3%	
Lincoln County	*n/a*	*n/a*	3%	
Oxford County	*n/a*	*n/a*	4%	
Penobscot County	80	14%	12%	0.52
Piscataquis County	*n/a*	*n/a*	1%	
Sagadahoc County	*n/a*	*n/a*	3%	
Somerset County	*n/a*	*n/a*	4%	
Waldo County	*n/a*	*n/a*	3%	
Washington County	*n/a*	*n/a*	2%	
York County	*n/a*	*n/a*	15%	
Maine	**570**	**40%**	**100%**	**0.43**

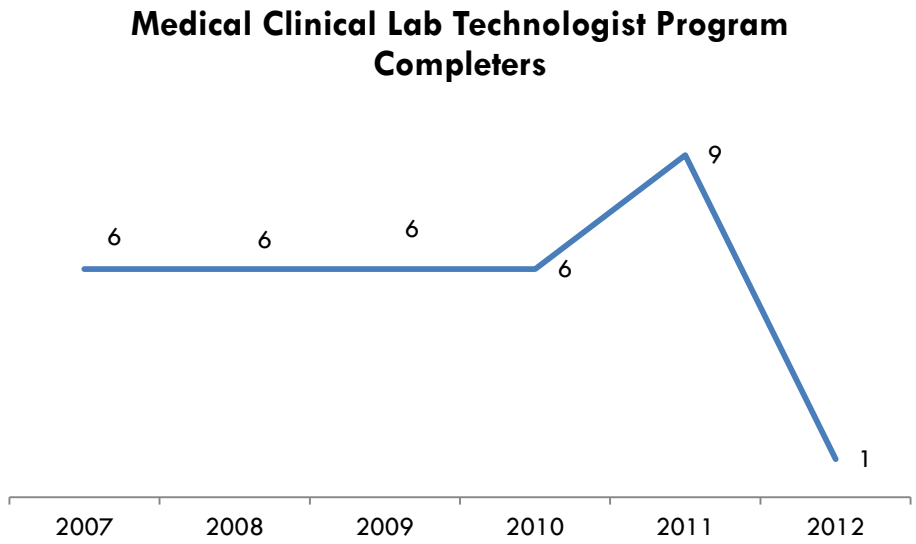
Source: CWRI analysis of OES & Census data

Some data is suppressed according to BLS confidentiality and data quality requirements. Suppressed data is shown as "n/a" for not available.

Schools offering training and number completing

The University of Maine is the only institution in Maine granting a bachelor's degree in clinical lab sciences. Students in the program spend their senior year at Eastern Maine Medical Center (EMMC) in Bangor or can apply to the Scott and White Healthcare facility in Temple, Texas, where University of Maine also has an affiliation. The senior year combines lecture and laboratory experience. After completing the program, students are eligible to take the certifying examination administered by the ASCP.

Completer data for the University of Maine program is displayed below. Readers should note that students graduate from EMMC or the Scott and White Healthcare program in June but degrees are not conferred from University of Maine until August. Since the academic year is defined as July 1 to June 30, those graduating in June are counted as program completers in the following academic year, when the data is reported by the university.



The following table displays program completer data available from IPEDS as reported by the University of Maine. For comparison purposes, graduate data from EMMC is also provided. Note that the number of completers reported by the university are pushed ahead one year due to the timing of when degrees are conferred (August).

Education Programs & Annual Graduates									
School	**CIP Code**	**CIP Title**	**Completer Title**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**
University of Maine	511005	Clinical Laboratory Science/Medical Technology/ Technologist	Bachelor's Degree	6	6	6	6	9	1
Total (IPEDS)				**6**	**6**	**6**	**6**	**9**	**1**
Scott and White Healthcare facility June graduates, Temple, TX							*1*		
EMMC June graduates				6	6	6	8	1	*7*

Source: IPEDS, EMMC, CWRI
University of Maine confers the degrees. Students spend their senior year at EMMC or Scott and White.

Outlook

Nationally, employment of medical laboratory technologists is expected to grow by 11 percent between 2010 and 2020. In Maine, employment is expected to grow 18 percent.

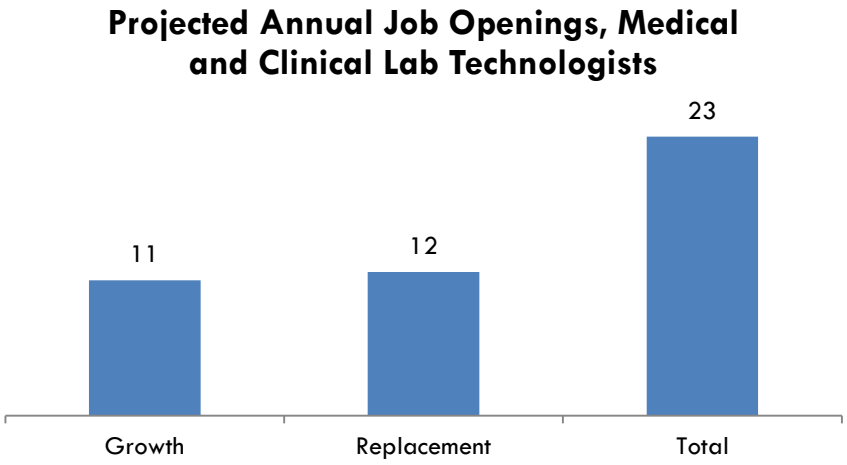
An increase in the aging population will lead to a greater need to diagnose medical conditions, such as cancer or type 2 diabetes, through laboratory procedures. Medical laboratory technologists will be needed to use and maintain the equipment needed for diagnosis and treatment.

230 job opportunities are expected in Maine from 2010 to 2020, or 23 per year. Approximately half of these job openings are expected to result from new growth and half from replacement needs.

Average annual program completers from the University of Maine program are below projected demand. While new graduates should find these conditions favorable for finding employment, employers may experience difficulties filling positions, creating upward pressure on wage rates. Barring an economic downturn and an associated decline in job opportunities, closing the gap in these areas will require strategies for increasing program capacity, retaining existing workers for longer, increasing in-migration, or other means for enhancing supply.

Employment of Medical and Clinical Lab Technologists in Maine 2010 and Projected 2020				
Average Employment		Change in Employment (2010-2020)		Projected Annual Openings Resulting from New Growth
2010	2020	Net	Percent	
641	754	113	18%	11

Source: CWRI 2010-2020 Employment Projections



29-2012 Medical and Clinical Laboratory Technicians

Occupation description

Perform routine medical laboratory tests for the diagnosis, treatment, and prevention of disease. May work under the supervision of a medical technologist.

Illustrative examples: Histology Technician, Pathology Technician, Serology Technician

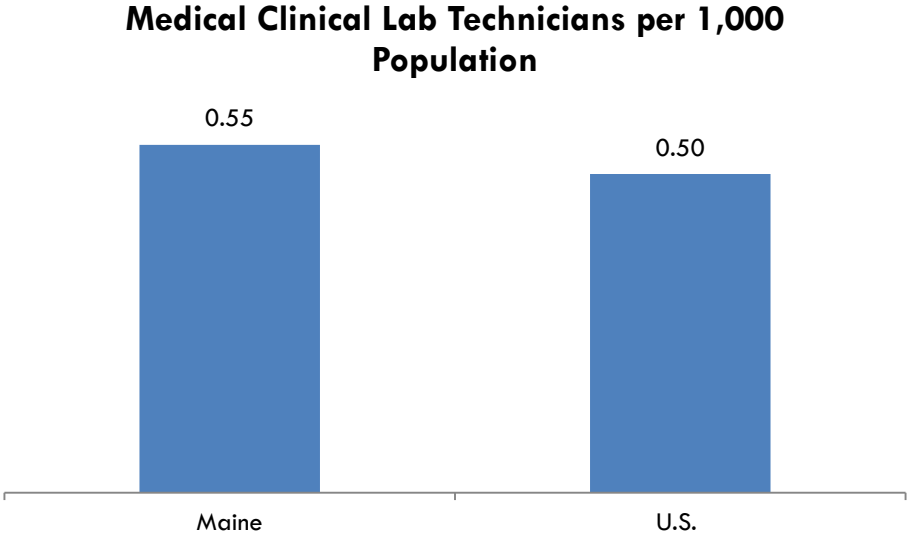
Education requirements

Prospective medical laboratory technicians must complete an associate's degree program that includes science and clinical laboratory science courses. The Armed Forces and vocational or technical schools may also offer certificate programs for medical laboratory technicians. The technician coursework addresses the theoretical and practical aspects of each of the major laboratory disciplines, but the courses are not as in-depth as those that technologists take.

Employment & Wages

2012 Employment & Wage Statistics	Average Employment	Median Annual Salary
Maine	730	$42,320
Industries with Highest Share of Employment (% total)		
Ambulatory Health Care Services	48%	$45,170
Hospitals	48%	$41,110

Source: 2012 Occupational Employment Statistics, CWRI

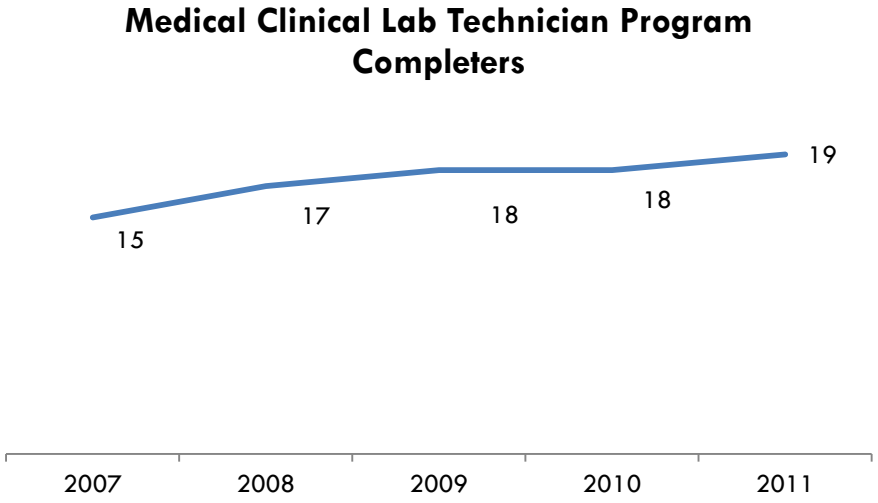


Schools offering training and number completing

The University of Maine at Augusta (UMA) and Presque Isle (UMPI) offer an Associate's Degree program in Medical Lab Technology. The program offering is a collaborative effort between the schools and hospitals that serve as clinical affiliates. Graduates are qualified to sit for the following national exams: American Society for Clinical Pathology Board of Certification and the American Medical Technologist Exam (AMT).

Following two years of fulltime work in all areas of a clinical laboratory, one can apply to a B.S. program so that they may upgrade their certification to Medical Laboratory Scientist (MLS).

The Central Maine Community College (CMCC) program was terminated.



Although this is a joint program, each campus reports completer data to IPEDS under a different Classification of Instruction (CIP). UMA reports the program as "Clinical/Medical Lab Assistant" while UMPI reports it as "Clinical/Medical Lab Technicians."

Education Programs & Annual Graduates

School	CIP Code	CIP Title	Completer Title	2007	2008	2009	2010	2011
University of Maine at Augusta	510802	Clinical/Medical Laboratory Assistant	Associate's Degree	7	7	16	11	13
University of Maine at Presque Isle	511004	Clinical/Medical Laboratory Technician	Associate's Degree	3		1	7	6
Central Maine Community College	511004	Clinical/Medical Laboratory Technician	Associate's Degree	5	10	1		
Total				**15**	**17**	**18**	**18**	**19**

Source: IPEDS, CWRI

Outlook

Nationally, employment of medical laboratory technicians is expected to grow by 15 percent between 2010 and 2020. In Maine, this occupation is expected to grow 16 percent.

An increase in the aging population will lead to a greater need to diagnose medical conditions, such as cancer or type 2 diabetes, through laboratory procedures. Medical laboratory technicians will be needed to use and maintain the equipment needed for diagnosis and treatment.

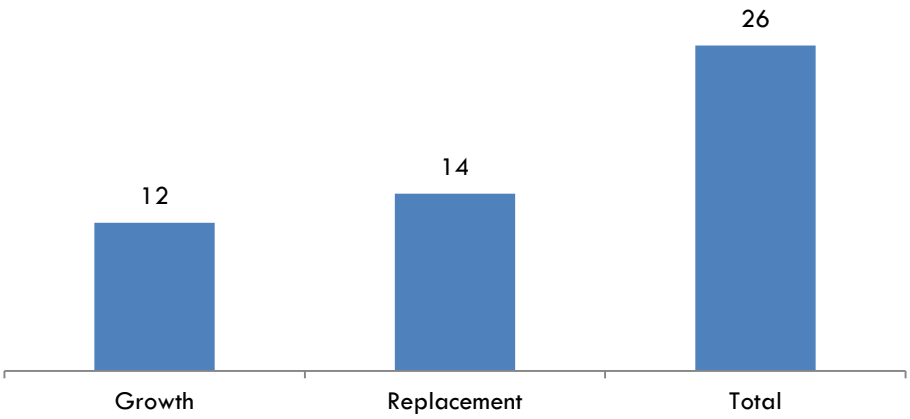
260 job opportunities are expected in Maine from 2010 to 2020, or 26 per year. Slightly more than half of these job openings are expected to result from currently practicing workers that are expected to retire and the remainder from new growth.

Employment of Medical and Clinical Lab Technicians in Maine 2010 and Projected 2020

Average Employment		Change in Employment (2010-2020)		Projected Annual Openings Resulting from New Growth
2010	2020	Net	Percent	
717	834	117	16%	12

Source: CWRI 2010-2020 Employment Projections

Projected Annual Job Openings, Medical and Clinical Lab Technicians



29-2031 Cardiovascular Technologists & Technicians

Occupation description

Conduct tests on pulmonary or cardiovascular systems of patients for diagnostic purposes. May conduct or assist in electrocardiograms, cardiac catheterizations, pulmonary functions, lung capacity, and similar tests. Includes vascular technologists.

Illustrative examples: Cardiac Catheterization Technologist, Echo cardiographer, EKG Technician

Education requirements

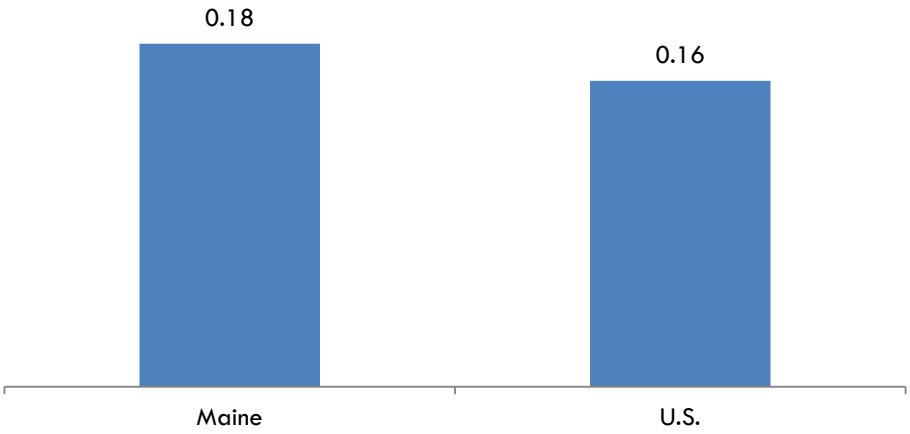
There are several ways to become a cardiovascular technologist or technician or vascular technologist. Although some technologists and technicians are trained on the job, the most common path is formal education that leads to an associate's degree. Many employers also require professional certification. Cardiovascular technologists & technicians are not licensed in Maine.

Employment & Wages

2012 Employment & Wage Statistics		
	Average Employment	Median Annual Salary
Maine	240	$56,370
Industries with Highest Share of Employment (% total)		
Hospitals	88%	$55,260

Source: 2012 Occupational Employment Statistics, CWRI

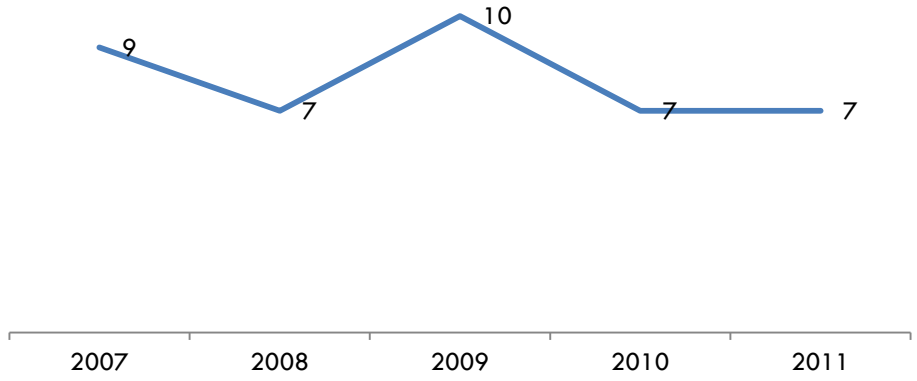
Cardiovascular Technologists & Technicians per 1,000 Population, 2012



Schools offering training and number completing

SMCC offers an associate's degree program.

Cardiovascular Technologists and Technicians
Program Completers



Education Programs & Annual Graduates

School	CIP Code	CIP Title	Completer Title	2007	2008	2009	2010	2011
Southern Maine Community College	510901	Cardiovascular Technology/Technologist	Associate's Degree	9	7	10	7	7

Source: IPEDS, CWRI

Outlook

Nationally, employment of cardiovascular technologists and technicians and vascular technologists is expected to grow by 29 percent from 2010 to 2020, much faster than the average for all occupations. In Maine, employment growth of cardiovascular technologists and technicians is expected to increase 35 percent, well above the 6 percent growth expected for all occupations.

As imaging technology evolves, medical facilities will use it to replace more invasive, costly procedures. Technological advances and less expensive equipment now allow more procedures to be done outside of hospitals. Third-party payers encourage the use of these noninvasive measures over invasive ones.

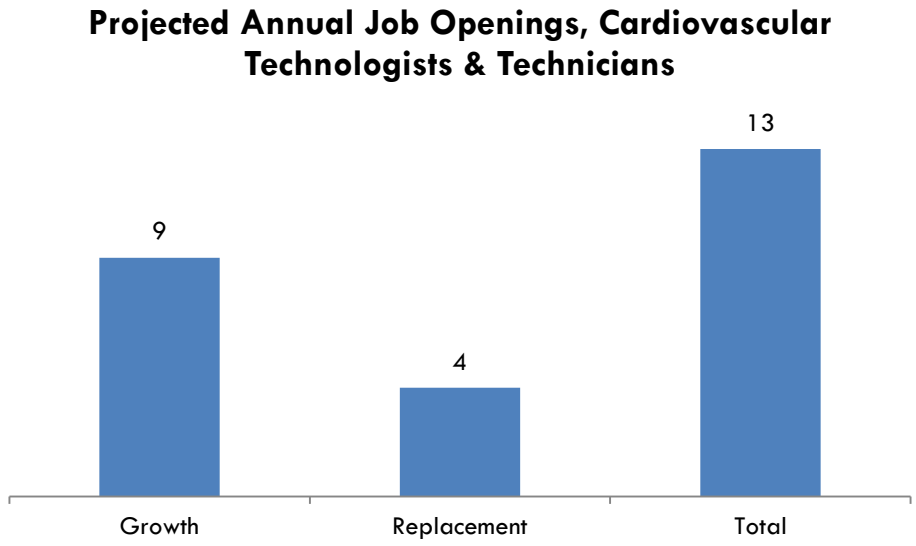
Although hospitals remain the primary employer of cardiovascular technologists and technicians and vascular technologists, employment is expected to grow more rapidly in physicians' offices and in medical and diagnostic laboratories. Employment in these healthcare settings is expected to increase because of a shift toward outpatient care whenever possible.

As the large baby-boom population ages and people remain active later in life, the need to diagnose medical conditions—such as blood clots and tumors—with imaging technology will likely increase. Cardiovascular technologists and technicians and vascular technologists will continue to be needed to use and maintain the equipment needed for diagnosis and treatment.

Job prospects should be best for those who have multiple professional credentials and are trained to do a wide range of procedures. Technologists or technicians who are willing to move or to work irregular hours also should have better opportunities.

Employment of Cardiovascular Technologists & Technicians in Maine 2010 and Projected 2020				
Average Employment		Change in Employment (2010 - 2020)		Projected Annual Openings Resulting from New Growth
2010	2020	Net	Percent	
255	343	88	35%	9

Source: CWRI 2010-2020 Employment Projections



29-2032 Diagnostic Medical Sonographers

Occupation description

Produce ultrasonic recordings of internal organs for use by physicians.

Illustrative examples: Registered Diagnostic Medical Sonographer, Ultrasound Technologist

Education requirements

Diagnostic medical sonographers need formal education, such as an associate's degree or a postsecondary certificate. Many employers also require professional certification.

Colleges and universities offer both Associate's and Bachelor's degree programs in sonography. One-year certificate programs also are available, although these are usually useful only to those who are already employed in related healthcare jobs, such as nursing. Employers prefer a degree or certificate from an accredited institute or hospital program. The accredited programs usually follow a specific course of study and include clinical training. These programs also include courses in medical terminology and interpreting sonographic images. Most programs are divided into the specialized fields that correspond to the relevant certification exams, such as abdominal sonography or breast sonography.

Some sonographers graduate with a degree in radiologic technology or nursing and then receive on-the-job training by their employer. High school students who are interested in diagnostic medical sonography should take courses in anatomy, physiology, and mathematics.

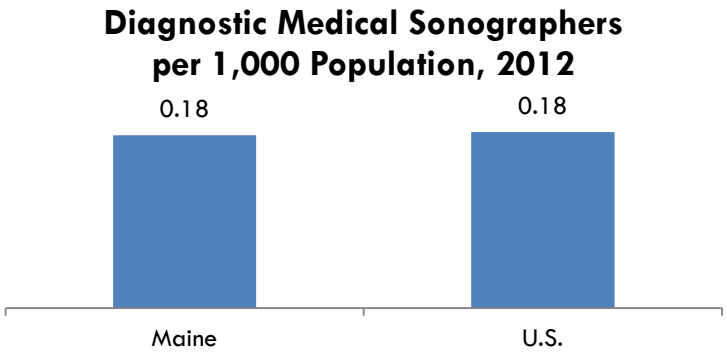
Most employers prefer to hire sonographers who have professional certification. A sonographer can get certification by graduating from an accredited program and passing an exam. Most exams relate to the specialty that the sonographer is most interested in—for example, an exam to become certified in abdominal sonography. A few states require diagnostic medical sonographers to be licensed. Typically, professional certification is required for licensure; other requirements vary by state. Sonographers must take continuing education to keep their certification current. No license is required in Maine.

Employment & Wages

2012 Employment & Wage Statistics

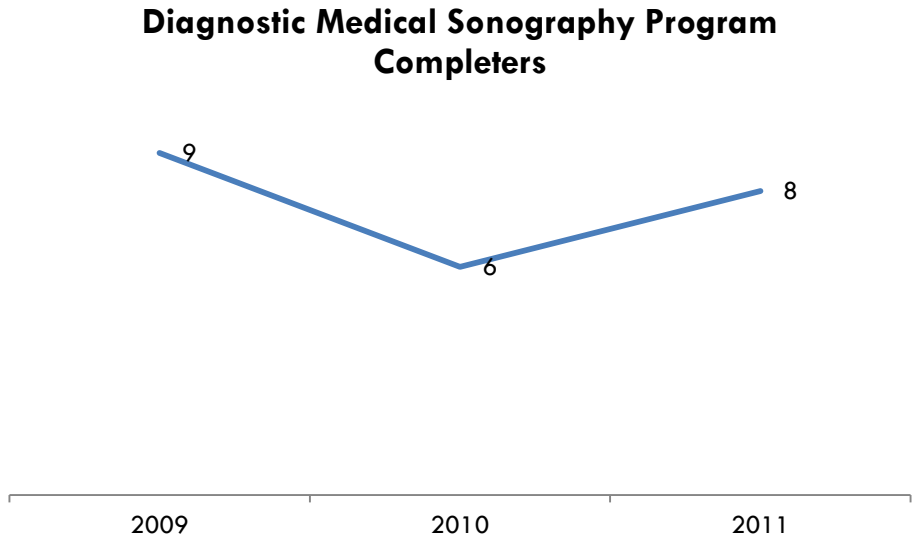
	Average Employment	Median Annual Salary
Maine	240	$69,680
Industries with Highest Share of Employment (% total)		
Hospitals	88%	$68,870

Source: 2012 Occupational Employment Statistics, CWRI



Schools offering training and number completing

Kennebec Valley Community College (KVCC) has an advanced certificate program in sonography. This is a 16 month program with a majority of the student experience centered on clinical training.



Education Programs & Annual Graduates

School	CIP Code	CIP Title	Completer Title	2007	2008	2009	2010	2011
Kennebec Valley Community College	510910	Diagnostic Medical Sonography/ Sonographer and Ultrasound Technician	Post-Sec. Awards/Cert./ Diplomas; 1-2 yrs.			9	6	8

Source: IPEDS, CWRI

Outlook

Nationally, employment of diagnostic medical sonographers is expected to grow by 44 percent from 2010 to 2020, much faster than the average for all occupations. In Maine, diagnostic medical sonography has the fastest projected growth rate among Maine's health occupations. Employment is expected to increase 50 percent.

As ultrasound imaging technology evolves, it will be used by medical facilities as a substitute for procedures that are costly, invasive, or expose patients to radiation. The use of sonography will continue to increase as patients, when given the option, choose to avoid exposure to radiation or undergo invasive procedures. Although hospitals remain the main employer of diagnostic medical sonographers, employment is expected to grow more rapidly in physicians' offices and in medical and diagnostic laboratories. Employment in these healthcare settings is expected to increase because of the shift toward outpatient care whenever possible. Outpatient care is encouraged by third-party payers as a cost-saving measure and is made possible by technological advances, such as less expensive ultrasound equipment, which allow for more procedures to be done outside of hospitals.

As the large baby-boom population ages and remains active later in life, the need to diagnose medical conditions, such as blood clots and tumors, with imaging technology should increase. Diagnostic medical sonographers will be needed to use and maintain the imaging equipment.

Sonographers who are certified in more than one specialty are expected to have better job opportunities.

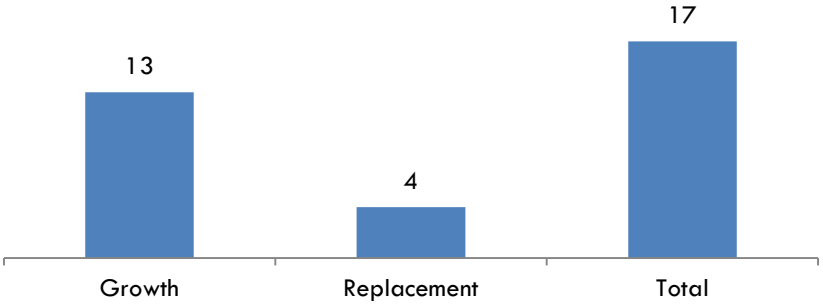
Seventeen job opportunities are expected each year; 13 resulting from new growth and four from replacement needs.

Employment of Diagnostic Medical Sonographers in Maine, 2010 and Projected 2020

Average Employment		Change in Employment (2010-2020)		Projected Annual Openings Resulting from New Growth
2010	2020	Net	Percent	
262	392	130	50%	13

Source: CWRI 2010-2020 Employment Projections

Projected Annual Job Openings, Diagnostic Medical Sonographers



29-2033 Nuclear Medicine Technologists

Occupation description

Prepare, administer, and measure radioactive isotopes in therapeutic, diagnostic, and tracer studies using a variety of radioisotope equipment. Prepare stock solutions of radioactive materials and calculate doses to be administered by radiologists. Subject patients to radiation. Execute blood volume, red cell survival, and fat absorption studies following standard laboratory techniques.

Illustrative examples: Certified Nuclear Medicine Technologist, Nuclear Cardiology Technologist, Radioisotope Technologist

Education requirements

Nuclear medicine technologists typically need an associate's degree in nuclear medicine technology. Formal education programs in nuclear medicine technology or a related healthcare field lead to a certificate, an associate's degree, or a bachelor's degree. Technologists must be licensed in some states; requirements vary by state. In Maine, the Radiologic Technology Board of Examiners governs the licensure of Nuclear Medicine Technologists. Applicants for licensure must have high school education or its equivalent and must successfully complete a nuclear medicine technology program accredited by the Joint Review Committee in Nuclear Medicine Technology (JRCNMT) or a program approved by the Nuclear Medicine Technology Certification Board (NMTCB) or the American Registry of Radiologic Technologists (ARRT) and achieved a passing score of 75 percent on the NMTCB exam or the ARRT exam in nuclear medicine. Applicants must also be certified by NMTCB and by ARRT in nuclear medicine.

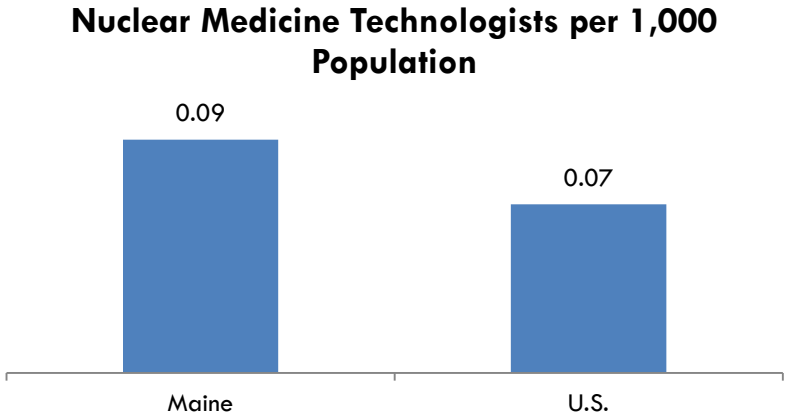
In Maine, the Radiologic Technology Board of Examiners may also issue a special permit to practice as a nuclear medicine technologist to a Maine-licensed radiographer whose license is current and in good standing. Such a license may be granted if the availability of a licensed nuclear medicine technologist is limited in the locality and people are being denied adequate medical care as a result.

Employment & Wages

2012 Employment & Wage Statistics

	Average Employment	Median Annual Salary
Maine	120	$71,110
Industries with Highest Share of Employment (% total)		
Hospitals	83%	$69,830

Source: 2012 Occupational Employment Statistics, CWRI



Schools offering training and number completing

Central Maine Medical Center (CMMC) offers an 18 month program in Nuclear Medicine Technology including Computed Tomography (CT).

Education Programs & Annual Graduates

School	CIP Code	CIP Title	Completer Title	2007	2008	2009	2010	2011
Central Maine Medical Center College of Nursing and Health Professions	510905	Nuclear Medical Technology/ Technologist	Post-Sec. Awards/Cert./ Diplomas; 1-2 yrs.					2

Source: IPEDS, CWRI

Outlook

Nationally, employment of nuclear medicine technologists is expected to grow by 19 percent from 2010 to 2020, about as fast as the average for all occupations. In Maine, employment is expected to increase 23 percent. Because this is a small occupation, the number of job opportunities will be limited, however. Approximately 50 job opportunities are expected from 2010 to 2020, or five per year.

Nuclear medicine technologists work mostly with adult patients, although procedures may be performed on children. A larger aging population should lead to the need to diagnose and treat medical conditions that require imaging, such as heart disease. Nuclear medicine technologists will be needed to administer radioactive drugs and maintain the imaging equipment required for diagnosis.

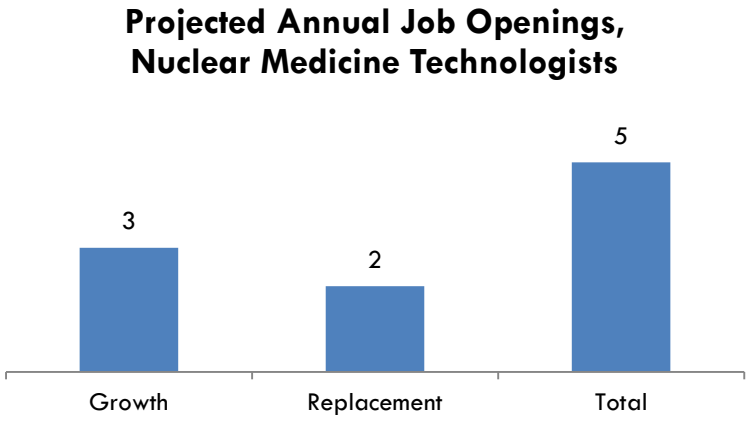
Overall employment growth is expected to be driven by rapidly growing industries, including physicians' offices and diagnostic laboratories, which employed about 31 percent of nuclear medicine technologists in 2010.

Nuclear medicine technologists can improve their job prospects by getting a specialty certification. A technologist can earn a certification in positron emission tomography (PET), nuclear cardiology (NCT), magnetic resonance imaging (MRI), or computed tomography (CT). The Nuclear Medicine Technology

Certification Board (NMTCB) offers NCT and PET certification exams. The American Registry of Radiologic Technologists (ARRT) offers the CT and MRI certification exams.

Employment of Nuclear Medicine Technologists in Maine 2010 and Projected 2020				
Average Employment		Change in Employment (2010-2020)		Projected Annual Openings Resulting from New Growth
2010	2020	Net	Percent	
124	153	29	23%	3

Source: CWRI 2010-2020 Employment Projections



29-2034 Radiologic Technologists

Occupation description

Take x rays and CAT scans or administer nonradioactive materials into patient's blood stream for diagnostic purposes. Includes technologists who specialize in other scanning modalities. Excludes "Diagnostic Medical Sonographers"(29-2032) and "Magnetic Resonance Imaging Technologists" (29-2035).

Illustrative examples: Computed Tomography (CT) Scanner Operator, X-Ray Technician

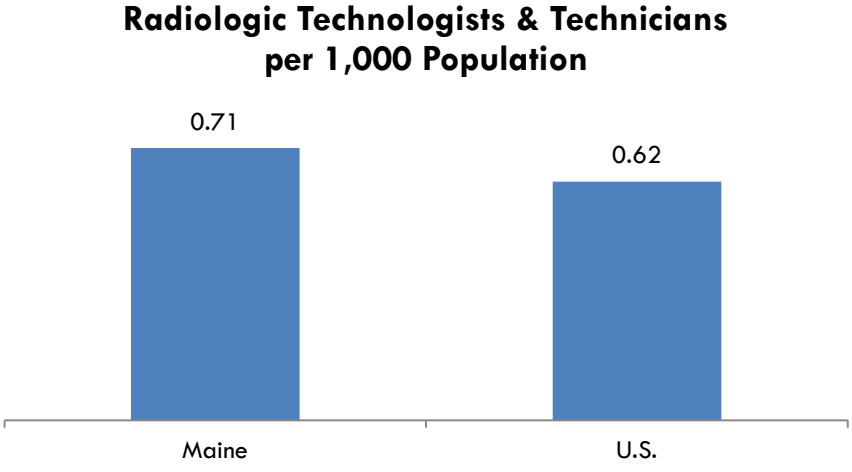
Education requirements

An associate's degree is the most common educational path for radiologic technologists. Technologists must be licensed or certified in most states; requirements vary by state. The Radiologic Technology Board of Examiners governs licensing in Maine.

Employment & Wages

2012 Employment & Wage Statistics	Average Employment	Median Annual Salary
Maine	940	$54,590
Industries with Highest Share of Employment (% total)		
Hospitals	83%	$54,940
Ambulatory Health Care Services	15%	$53,390

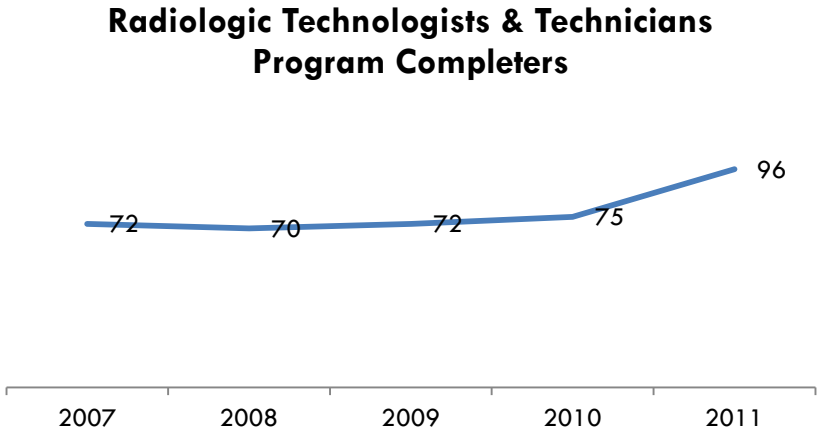
Source: 2012 Occupational Employment Statistics, CWRI



Schools offering training and number completing

According to the Joint Review Committee on Education in Radiologic Technology (JCERT) there are four associate's degree granting programs in Maine with accreditation in radiography: Central Maine

Medical Center College of Nursing and Radiography, SMCC, KVCC and EMCC. Although EMCC reported their program with the CIP code 510907, which is more representative of radiation therapy, the college website describes this as a medical radiography program. As noted earlier in this report, the way programs of instruction are reported to IPEDS sometimes results in the misclassification of data.



Education Programs & Annual Graduates								
School	CIP Code	CIP Title	Completer Title	2007	2008	2009	2010	2011
Central Maine Medical Center College of Nursing and Health Professions	510911	Radiologic Technology/ Science – Radiographer	Associate's Degree					21
Kennebec Valley Community College	510911	Radiologic Technology/ Science – Radiographer	Associate's Degree	21	20	18	19	19
Southern Maine Community College	510911	Radiologic Technolo-gy/Science – Radiographer	Associate's Degree	19	16	17	11	35
Eastern Maine Community College	510907	Medical Radiologic Technology/ Science – Radiation Therapist	Associate's Degree	12	16	18	11	19
Saint Joseph's College of Maine	510911	Radiologic Technology/ Science – Radiographer	Bachelor's Degree					2
Kennebec Valley Community College	510911	Radiologic Technology/ Science – Radiographer	Post-Sec. Awards/Cert./ Diplomas; < 1 yr.				10	
Kennebec Valle Community College	510911	Radiologic Technology/ Science – Radiographer	Post-Sec. Awards/Cert./ Diplomas; 1-2 yrs.				11	
Central Maine Medical Center School of Radiologic Technology	510911	Radiologic Technology/ Science – Radiographer	Post-Sec. Awards/Cert./ Diplomas; 2-4yrs.	11	11	13	13	
Mercy Hospital School of Radiologic Technology	510911	Radiologic Technology/ Science – Radiographer	Post-Sec. Awards/Cert./ Diplomas; 2-4yrs.	9	7	6		
Total				**72**	**70**	**72**	**75**	**96**

Source: IPEDS, CWRI

Outlook

Nationally, employment of radiologic technologists is expected to grow by 28 percent between 2010 and 2020, faster than the average for all occupations. In Maine, employment is expected to increase 37 percent.

An aging population will have more medical conditions, such as breaks and fractures caused by osteoporosis, which require imaging to diagnose and treat. Radiologic technologists will be needed to maintain and use the diagnostic equipment.

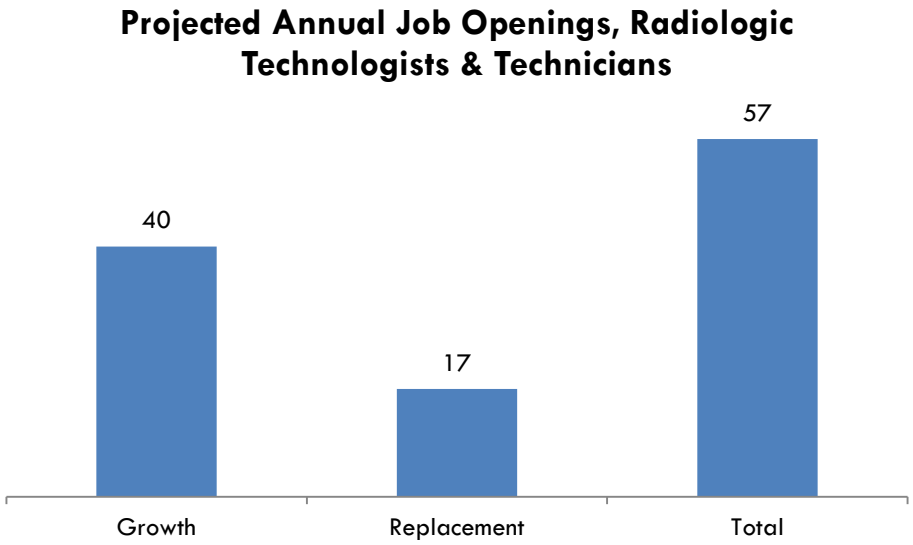
Although hospitals will remain the main employer of radiologic technologists, a number of new jobs will be in physicians' offices and in imaging centers. Employment in these healthcare settings is expected to increase because of the shift toward outpatient care whenever possible. Outpatient care is encouraged by third-party payers as a cost-saving measure and is made possible by technological

advances, such as less expensive equipment, which allow for more procedures to be done outside of hospitals.

Radiologic technologists with multiple certifications will have the best job prospects. Nearly 60 job opportunities are expected annually. Most of the job openings will be from new growth in demand.

Employment of Radiologic Technologists & Technicians in Maine 2010 and Projected 2020				
Average Employment		Change in Employment (2010 - 2020)		Projected Annual Openings Resulting from New Growth
2010	2020	Net	Percent	
1,072	1,467	395	37%	40

Source: CWRI 2010-2020 Employment Projections



29-2041 Emergency Medical Technicians and Paramedics

Occupation description

Assess injuries, administer emergency medical care, and extricate trapped individuals. Transport injured or sick persons to medical facilities.

Illustrative examples: EMT, Flight Paramedic

Education requirements

All emergency medical technicians (EMTs) and paramedics must complete a formal training program. All states require EMTs and paramedics to be licensed; requirements vary by state. Licensing in Maine is governed by the Maine Board of Emergency Medical Services.

Employment & Wages

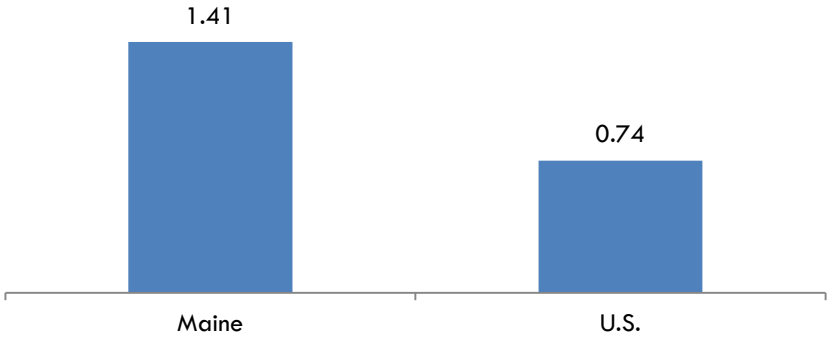
In 2012 there were 1,870 EMTs employed in ambulance services, public administration and hospitals. There is, however, some variability involved in the reporting of EMTs which could result in the under reporting of employment in this occupation. Some respondents in public administration break out firefighters and EMT separately and others do not. The uncertainty lies in the Standard Occupation Classification (SOC) definition of firefighter, which in part states "Duties may include fire prevention, emergency medical service, hazardous material response, search and rescue, and disaster assistance." Also, many communities rely heavily upon volunteers to staff their emergency medical services. Volunteers are actually paid by their respective cities/towns, sometimes hourly and sometimes by call. If an EMT worked during the survey reference week and is covered under Maine unemployment insurance tax law, MDOL asks that they be reported in responses to surveys.

2012 Employment & Wage Statistics

	Average Employment	Median Annual Salary
Maine	1,870	$30,580
Industries with Highest Share of Employment (% total)		
Ambulatory Health Svcs.	42%	$30,520
Public Administration	34%	$33,140
Hospitals	23%	$27,830

Source: 2012 Occupational Employment Statistics, CWRI

EMTs & Paramedics
per 1,000 Population, 2012



Distribution of employment

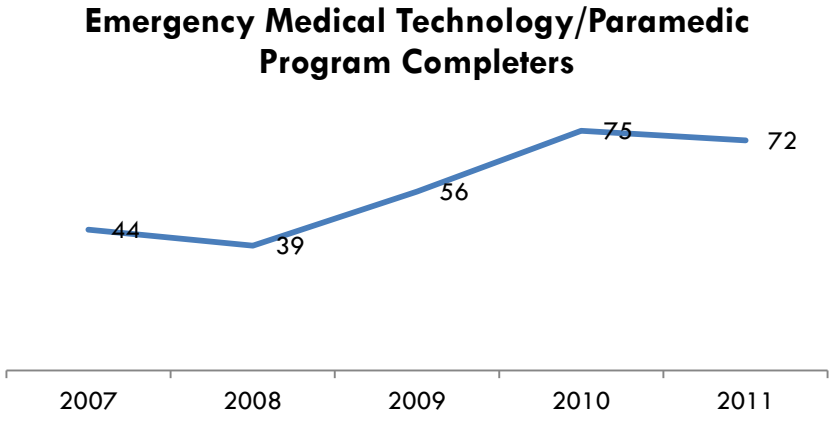
Distribution of Employment				
	Number Employed	Pct. (%) Total Employment	Pct. (%) of Total Maine Population	Number Employed per 1,000 Population
Androscoggin County	220	12%	8%	2.04
Aroostook County	100	5%	5%	1.41
Cumberland County	300	16%	21%	1.06
Franklin County	*n/a*	n/a	2%	
Hancock County	160	9%	4%	2.60
Kennebec County	140	7%	9%	1.15
Knox County	*n/a*	*n/a*	3%	
Lincoln County	*n/a*	*n/a*	3%	
Oxford County	130	7%	4%	2.26
Penobscot County	170	9%	12%	1.10
Piscataquis County	*n/a*	*n/a*	1%	
Sagadahoc County	*n/a*	*n/a*	3%	
Somerset County	130	7%	4%	2.50
Waldo County	*n/a*	*n/a*	3%	
Washington County	*n/a*	n/a	2%	
York County	140	7%	15%	0.70
Maine	**1,870**	**80%**	**100%**	**1.41**

Source: CWRI analysis of OES & Census data

Some data is suppressed according to BLS confidentiality and data quality requirements. Suppressed data is shown as "n/a" for not available.

Schools offering training and number completing

A variety of credentials are available from different schools, from one year certificate to associate degree programs. Some courses are less than a year long.



Education Programs & Annual Graduates								
School	CIP Code	CIP Title	Completer Title	2007	2008	2009	2010	2011
Kennebec Valley Community College	510904	Emergency Medical Technology/Technician (EMT Paramedic)	Post-Sec. Awards/Cert./ Diplomas; < 1 yr.			26	32	30
Eastern Maine Community College	510904	Emergency Medical Technology/Technician (EMT Paramedic)	Post-Sec. Awards/Cert./ Diplomas; 1-2 yrs.		1			1
Kennebec Valley Community College	510904	Emergency Medical Technology/Technician (EMT Paramedic)	Post-Sec. Awards/Cert./ Diplomas; 1-2 yrs.	23	25	14	15	14
Northern Maine Community College	510904	Emergency Medical Technology/Technician (EMT Paramedic)	Post-Sec. Awards/Cert./ Diplomas; 1-2 yrs.	1		4	6	3
Kennebec Valley Community College	510904	Emergency Medical Technology/Technician (EMT Paramedic)	Associate's Degree	4	1	3	3	3
Northern Maine Community College	510904	Emergency Medical Technology/Technician (EMT Paramedic)	Associate's Degree		1	2	1	5
Eastern Maine Community College	510904	Emergency Medical Technology/Technician (EMT Paramedic)	Associate's Degree	1			2	5
Southern Maine Community College	510904	Emergency Medical Technology/Technician (EMT Paramedic)	Associate's Degree	15	11	7	16	11
Total				**44**	**39**	**56**	**75**	**72**

Source: IPEDS, CWRI

Outlook

Nationally, employment of emergency medical technicians (EMTs) and paramedics is expected to grow by 33 percent from 2010 to 2020, much faster than the average for all occupations. In Maine, growth in this occupation is expected to be 31 percent, above the 6 percent growth expected for all occupations.

Emergencies such as car crashes, natural disasters, and violence will continue to create demand for EMTs and paramedics. There will also continue to be demand for part-time, volunteer EMTs and paramedics in rural areas and smaller metropolitan areas.

Growth in the middle-aged and elderly population will lead to an increase in the number of age-related health emergencies, such as heart attacks or strokes. This, in turn, will lead to an increase in the demand for EMTs and paramedic services. An increase in specialized medical facilities will require more EMTs and paramedics to transfer patients with specific conditions to these facilities for treatment.

In recent years, companies that build ambulances have started to update and redesign their interiors to keep EMTs, paramedics, and patients safer during transport. These companies are hiring EMTs and paramedics as consultants to learn their ideas about such updates and designs.

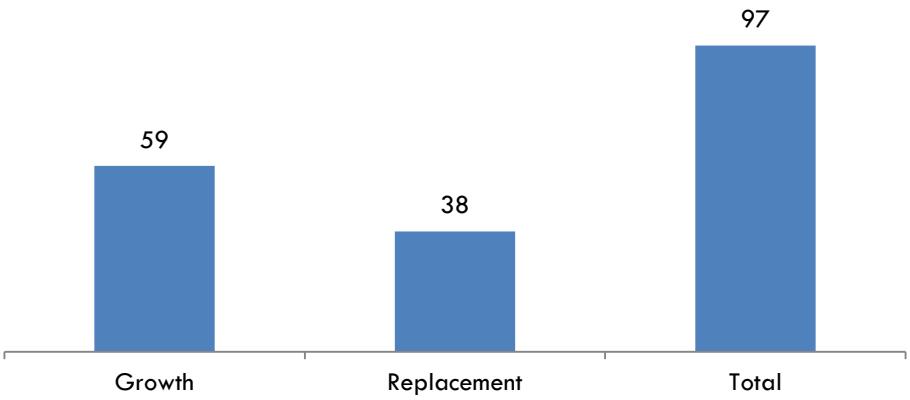
Close to 100 job openings per year are expected in Maine, 59 from new growth and 38 from replacement needs.

Employment of EMTs & Paramedics in Maine, 2010 and Projected 2020

Average Employment		Change in Employment (2010-2020)		Projected Annual Openings Resulting from New Growth
2010	2020	Net	Percent	
1,902	2,489	587	31%	59

Source: CWRI 2010-2020 Employment Projections

Projected Annual Job Openings, EMTs & Paramedics



29-2053 Psychiatric Technicians

Occupation description

Care for individuals with mental or emotional conditions or disabilities, following the instructions of physicians or other health practitioners. Monitor patients' physical and emotional well-being and report to medical staff. May participate in rehabilitation and treatment programs, help with personal hygiene, and administer oral or injectable medications.

Illustrative examples: Behavioral Health Technician, Mental Health Technician

Education requirements

Psychiatric technicians typically enter the occupation with a postsecondary certificate. Programs in psychiatric or mental health technology are commonly offered by community colleges and technical schools. Programs for psychiatric technicians range in length from one semester to two years, and they may award a certificate or an associate's degree.

Psychiatric technicians and aides typically must participate in on-the-job training before they can work without direct supervision. This training may last for a few weeks or for several months.

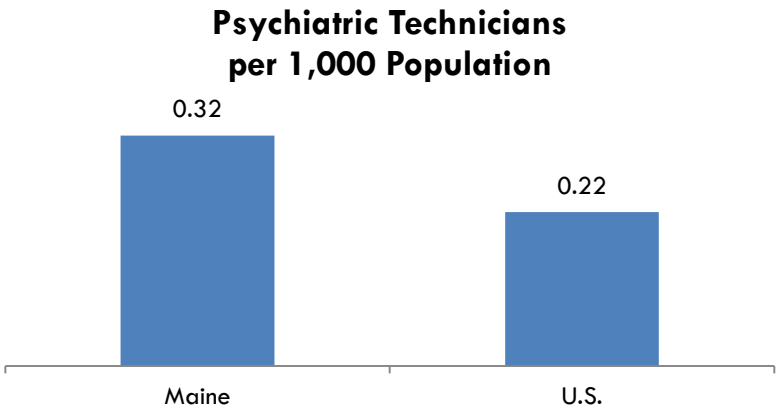
Training may include gaining hands-on experience while working under the supervision of an experienced technician or aide. Technicians and aides may also attend workshops, lectures, or in-service training.

The occupation, Mental Health Rehabilitation Technician-1 is discussed further in the section on direct care workers, under the profile for Psychiatric Aides.

Employment & Wages

2012 Employment & Wage Statistics		
	Average Employment	Median Annual Salary
Maine	430	$25,330
Industries with Highest Share of Employment (% total)		
Hospitals	93%	$25,030

Source: 2012 Occupational Employment Statistics, CWRI



Schools offering training and number completing

A postsecondary certificate is typically required. KVCC offers an Associate in Applied Science degree in Mental Health, which, according to the school's website, "will prepare students for entry-level and above positions in areas of substance abuse, mental health rehabilitation, developmental disability services, and gerontology. Students who complete the five MHT100-level courses listed in the program can apply to the Muskie School Center for Learning for the Provisional MHRT-Community Certification. Students who then complete the remaining five MHT200-level courses listed in the program can apply to the Muskie School Center for Learning for the Full MHRT-Community Certification."

Education Programs & Annual Graduates

School	CIP Code	CIP Title	Completer Title	2007	2008	2009	2010	2011
Kennebec Valley Community College	511599	Mental and Social Health Services and Allied Professions, Other	Associate's Degree	1	6	6	17	18
Kennebec Valley Community College	511599	Mental and Social Health Services and Allied Professions, Other	Post-Sec. Awards/Cert./ Diplomas; 1-2 yrs.	1				
Southern Maine Community College	511599	Mental and Social Health Services and Allied Professions, Other	Post-Sec. Awards/Cert./ Diplomas; < 1 yr.				3	

Source: IPEDS, CWRI

Outlook

Nationally, employment of psychiatric technicians is expected to increase 15 percent from 2010 to 2020, about as fast as the average for all occupations. In Maine, employment is expected to increase 20 percent.

As the nation's population ages and people live longer, there is likely to be an increase in the number of people with cognitive mental diseases, such as Alzheimer's disease. Demand for psychiatric technicians and aides in residential facilities are expected to rise as a result.

More psychiatric technicians and aides will also be needed in residential treatment facilities for people with developmental disabilities, mental illness, and substance abuse problems. There is a long-term trend toward treating psychiatric patients outside of hospitals, because it is more cost-effective and allows patients greater independence. Also, an increasing number of mentally disabled adults who were cared for by their parents will need help as their parents become too old to provide that care.

In addition, an aging prison population has increased the need for psychiatric technicians and aides working in correctional facilities.

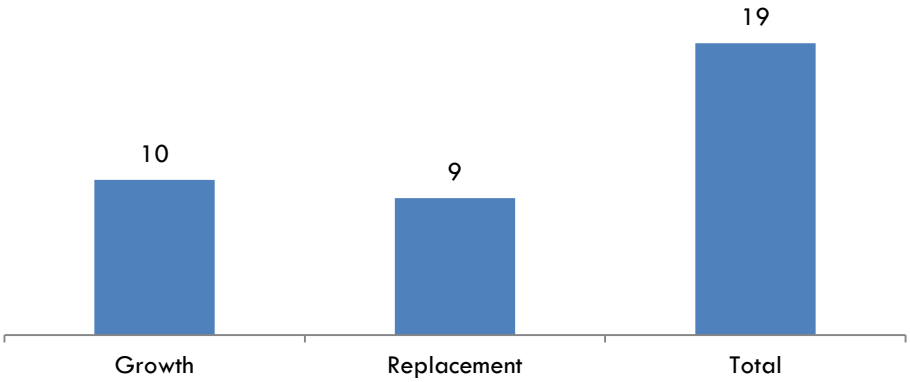
Nineteen job opportunities are expected each year, 10 from new growth in demand and 9 from replacement needs.

Employment of Psychiatric Technicians in Maine, 2010 and Projected 2020

Average Employment		Change in Employment (2010-2020)		Projected Annual Openings Resulting from New Growth
2010	2020	Net	Percent	
523	625	102	20%	10

Source: CWRI 2010-2020 Employment Projections

Projected Annual Job Openings, Psychiatric Technicians



29-2055 Surgical Technologists

Occupation description

Assist in operations, under the supervision of surgeons, registered nurses, or other surgical personnel. May help set up operating room, prepare and transport patients for surgery, adjust lights and equipment, pass instruments and other supplies to surgeons and surgeon's assistants, hold retractors, cut sutures, and help count sponges, needles, supplies, and instruments.

Illustrative examples: Certified Surgical Technologist, Operating Room (OR) Tech, Surgical Scrub Technologist

Education requirements

Surgical technologists typically need a postsecondary certificate or associate's degree. Certification also can help a surgical technologist find a position. A small number of states regulate surgical technologists. No license is required in Maine.

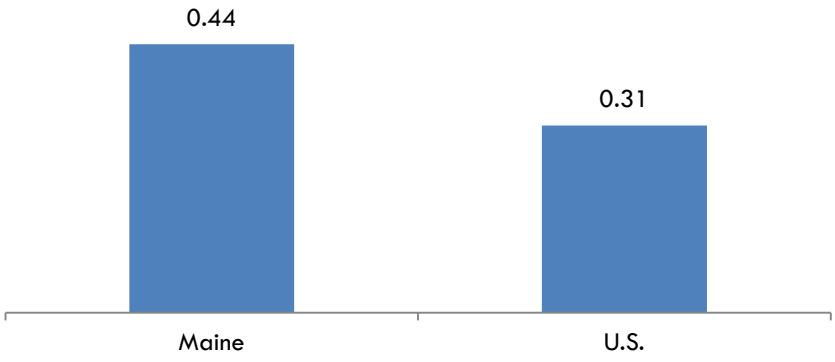
In 2010, accredited training programs were recognized by the Commission on Accreditation of Allied Health Education Programs (CAAHEP).

Employment & Wages

2012 Employment & Wage Statistics	Average Employment	Median Annual Salary
Maine	590	$39,950
Industries with Highest Share of Employment (% total)		
Hospitals	69%	$40,050
Ambulatory Health Services	n/a	$39,010

Source: 2012 Occupational Employment Statistics, CWRI

Surgical Technologists per 1,000 Population



Schools offering training and number completing

Programs are available at Eastern Maine Community College (EMCC), SMCC and The Maine Medical Center School of Surgical Technology. The Maine Medical Center program does not participate in the federal student loan program and is therefore not required to report completer data to the National Center of Education Statistics. This program is accredited and has graduated approximately 30 students per year in their 12 month surgical technology program.

Education Programs & Annual Graduates

School	CIP Code	CIP Title	Completer Title	2007	2008	2009	2010	2011
Eastern Maine Community College	510909	Surgical Technology/ Technologist	Associate's Degree	3	11	9	11	13
Southern Maine Community College	510909	Surgical Technology/ Technologist	Associate's Degree	1	1	4	5	3
Maine Medical Center School of Surgical Technology	Data is not reported.							
Total				**4**	**12**	**13**	**16**	**16**

Source: IPEDS, CWRI

Outlook

Nationally, employment of surgical technologists is expected to increase 19 percent from 2010 to 2020. In Maine, surgical technologist employment is expected to increase 24 percent.

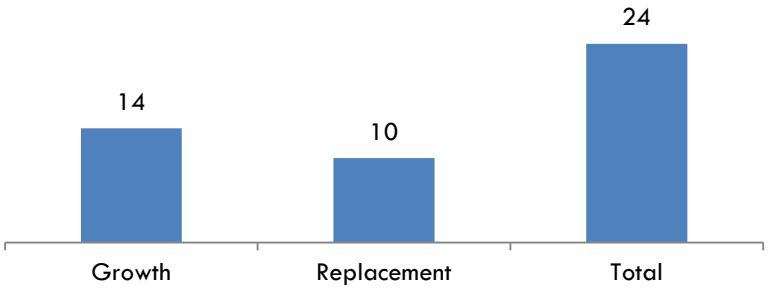
Advances in medical technology have made surgery safer, and more operations are being done to treat a variety of illnesses and injuries. The aging of the large number of baby boomers also is expected to increase the need for surgical technologists because older people usually require more operations, including joint replacements and heart-related procedures. Hospitals will continue to be the primary employer of surgical technologists, reducing costs by employing technologists, instead of higher paid registered nurses in operating rooms.

Job prospects should be best for surgical technologists who have completed an accredited education program and who maintain their professional certification. In total, 24 job openings per year are expected, with most of those resulting from growth in demand.

Employment of Surgical Technologists in Maine, 2010 and Projected 2020				
Average Employment		Change in Employment (2010-2020)		Projected Annual Openings Resulting from New Growth
2010	2020	Net	Percent	
558	693	135	24%	14

Source: CWRI 2010-2020 Employment Projections

Projected Annual Job Openings, Surgical Technologists



Direct Care Workers

Summary Statistics					
Workforce Characteristics	**Home Health Aides**	**Personal Care Aides**	**Psychiatric Aides**	**Nursing Assistants**	**Orderlies**
Employment (2012)	3,670	7,030	2,050	9,240	140
Employment per 1,000 population	2.8	5.30	1.50	7.0	0.11
versus U.S.	Average	Above avg.	Above avg.	Above avg.	Below avg.
Average annual starting wage (Maine)	$19,310	$17,370	$19,920	$20,080	$18,970
Median annual wage (Maine)	$22,290	$21,050	$23,890	$23,550	$25,280
U.S. median annual wage	$20,820	$19,910	$24,580	$24,420	$23,990
Median wage for all occupations in Maine	$32,590	$32,590	$32,590	$32,590	$32,590
Minimum Education Requirement	Less than high school***	Less than high school***	High school diploma or equivalent***	Postsecondary certificate or award	At least a high school diploma
Job Growth Projections	24%	22%	7%	10.4%*	10.4%*
National Median Age**	40.6	40.6	40.6	40.6	40.6
Top Industry of Employment	Nursing and residential care facilities	Social Assistance	Nursing and residential care facilities	Nursing and residential care facilities	Hospitals
Licensing Board	No license required.	No license required.	No license required.	No license required. Must be on state registry.	No license required.

* Nursing aides, orderlies and attendants

**Nursing, psychiatric, and home health aides

***Training courses are required by the State of Maine; please see the occupational profile for more detail.

Key points

- Direct care represents a large and rapidly growing segment of the workforce.
- Job prospects for home health and personal care aides are particularly bright. These large and rapidly growing occupations are expected to add many jobs.
- Distribution of employment is far from uniform, particularly for personal and home care aides. Cumberland and Kennebec Counties have nearly twice the aides per population compared to the state average. Overall, 93 percent of this workforce is employed in 8 counties representing 76 percent of the Maine population, leaving a disproportionately low share of aides (7 percent) for the remaining 8 counties.
- The combination of strong demand coupled with low pay and high emotional and physical demands in these occupations may lead to shortages of workers. Nearly half the workforce

has levels of educational attainment beyond the minimum required, which may contribute to turnover.

About Direct Care Workers

Direct care covers a range of occupations that deal with providing important support services to people who need care. Direct Support Professionals, Personal Support Specialists, Home Health Aides, Certified Nursing Assistants (CNAs) and Personal Care Attendants are some of the industry titles used under direct care. For a more complete list of titles used in Maine, please see the Maine Direct Service Worker website, http://www.maine.gov/dhhs/mainedirectserviceworker/index.shtml

Many of the titles used for direct service workers in the field don't match Standard Occupation Classification System (SOC) definitions, which tend to lag what happens in the industry. When this occurs, MDOL determines which SOC title is most appropriate for those workers. Direct support professional and personal support specialist are examples. These titles are used in the field but they don't align within the scope of the Healthcare Support Occupations (31-0000) of the SOC. When an employer responds to an MDOL employment survey and reports that it employs direct support/personal support workers, how they are coded by MDOL analysts depends on the employment setting and work being performed.

Direct support/personal support workers are usually coded as 31-1011 Home Health Aides, 31-1013 Psychiatric Aides, or as 39-9021 Personal Care Aides (in the Personal Care and Service Occupations 39-0000). When the worker is employed in a group home setting, they are often coded as 31-1011 Home Health Aides due to the residential nature of the employment setting and responsibilities extending beyond that of supporting daily living activities. The 39-9021 Personal Care Aides classification is generally used when the care provider travels to the client residence to perform the service, then leaves to visit another client. The level of care focuses on daily living activities rather than healthcare and dispensing medications. Recent guidance in occupational coding allows use of the 39-9021 Personal Care Aide in a group home setting if the worker does not engage in healthcare support activities or is supervised by healthcare professionals. In the event the worker is dealing with mental disabilities (usually severe), they may be coded as a 31-1013 Psychiatric Aide. The actual classification is determined by where the person works and specifically what they do rather than their job title. Workers in the 31-0000 series are considered healthcare support and they usually are supervised by a nurse or similar healthcare professional.

Home health Aides are typically employed at nursing homes and personal care aides within different social services settings.

31-1011 Home Health Aides

Occupation description

Provide routine individualized healthcare such as changing bandages and dressing wounds, and applying topical medications to the elderly, convalescents, or persons with disabilities at the patient's home or in a care facility. Monitor or report changes in health status. May also provide personal care such as bathing, dressing, and grooming of patient.

Illustrative examples: Home Health Attendant, Home Hospice Aide

The OOH notes the following about home health aides: Home health aides, unlike personal care aides, typically work for certified home health or hospice agencies that receive government funding and therefore must comply with regulations. They work under the direct supervision of a medical professional, usually a nurse. These aides keep records of services performed and of the client's

condition and progress. They report changes in the client's condition to the supervisor or case manager. Aides also work with therapists and other medical staff.[20]

According to the Maine DHHS, a home health aide:

- •Works with people living at home who need assistance with Activities of Daily Living (ADLs)
- •Can work in a client's home
- •Provides assistance with "Activities of Daily Living" (ADLs) including assistance with bathing, skin and hair care; getting in and out of bed; preparing meals; and using the bathroom. An HHA also helps with the client's care and treatment
- •Is supervised by a registered professional nurse[21]

Education requirements

There are no formal education requirements for home health aides, but most have a high school diploma. Most home health aides are trained on the job by nurses, other aides, or supervisors. Those working in certified home health or hospice agencies must get formal training and pass a standardized test.

Aides may be trained in housekeeping tasks, such as cooking for clients who have special dietary needs. They learn basic safety techniques, including how to respond in an emergency.

A competency evaluation may be required to ensure that the aide can perform some required tasks. Clients have their own preferences and aides may need time to become comfortable working with them.

In some states, the only requirement for employment is on-the-job training, which employers generally provide. Other states require formal training, which is available from community colleges, vocational schools, elder care programs, and home health care agencies. In addition, states may conduct background checks on prospective aides. Requirements to work as a home health aide in Maine are listed below.

Without additional training, advancement in this occupation is limited.

In Maine, to become a Home Health Aide the candidate must:

- •Have completed 9th grade (although a high school diploma or GED is preferred)
- •Successfully complete the 180-hour CNA Training Program
- •Be listed on the Maine Registry of Certified Nursing Assistants
- •Receive home health aide orientation provided by the home health agency you work for
- •Receive at least 12 hours of in-service training annually

To learn more:

- •CNA Training (http://www.maine.gov/education/it/directory/hoes/cna.htm)
- •The Maine Registry of Certified Nursing Assistants (CNA Registry) http://www.maine.gov/dhhs/dlrs/cna/home.html

[20] http://www.bls.gov/ooh/healthcare/home-health-aides.htm#tab-2

[21] This information is from the Maine Direct Service Worker webpage (http://www.maine.gov/dhhs/mainedirectserviceworker/HHA.html)

Certification

Home health aides who work for agencies that receive reimbursement from Medicare or Medicaid must get a minimum level of training and pass a competency evaluation or receive state certification. Training includes learning about personal hygiene, reading and recording vital signs, infection control, and basic nutrition. Aides may take a competency exam to become certified without taking any training. These are the minimum requirements by law; additional requirements for certification vary by state.

Aides can be certified by the National Association for Home Care & Hospice (NAHC). Although certification is not always required, employers prefer to hire certified aides. Certification requires 75 hours of training, observation and documentation of 17 skills demonstrating competency, and passing a written exam.

Employment & Wages

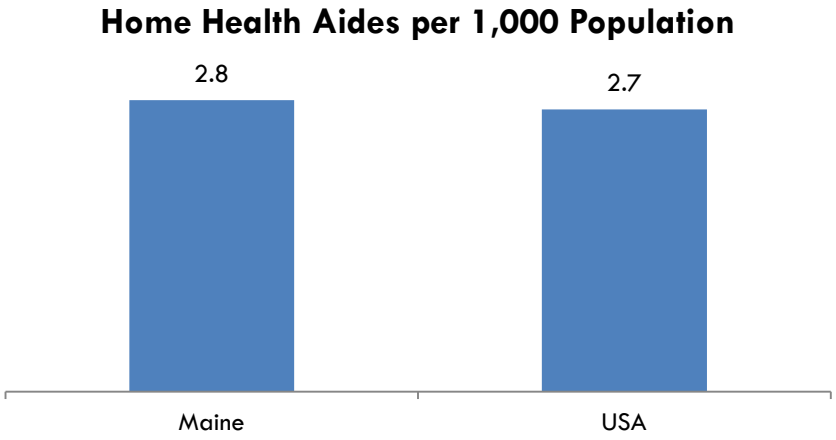
In 2012 there were close to 3,700 employed as home health aides, with a median annual wage of $22,000. Median wages in this state were 7 percent above the national median. Home health aides are mostly employed at nursing and residential care facilities.

2012 Employment & Wage Statistics

	Average Employment	Median Annual Salary
Maine	3,670	$22,290
Industries with Highest Share of Employment (% total)		
Nursing and Residential Care Facilities	70%	$22,040
Ambulatory Health Care Services	15%	$24,750
Social Assistance	11%	$21,800

Source: 2012 Occupational Employment Statistics, CWRI

The number of home health aides in Maine is comparable to that of the nation on a per-1,000-resident basis.



Distribution of employment

Distribution of Employment				
	Number Employed	Pct. (%) Total Employment	Pct. (%) of Total Maine Population	Number Employed per 1,000 Population
Androscoggin County	520	14%	8%	4.8
Aroostook County	360	10%	5%	5.1
Cumberland County	610	17%	21%	2.1
Franklin County	*n/a*	*n/a*	2%	
Hancock County	170	5%	4%	3.1
Kennebec County	360	10%	9%	3.0
Knox	*n/a*	*n/a*	3%	
Lincoln County	*n/a*	*n/a*	3%	
Oxford County	180	5%	4%	3.1
Penobscot County	120	3%	12%	0.8
Piscataquis County	*n/a*	*n/a*	1%	
Sagadahoc County	*n/a*	*n/a*	3%	
Somerset County	*n/a*	*n/a*	4%	
Waldo County	*n/a*	*n/a*	3%	
Washington County	*n/a*	*n/a*	2%	
York County	390	11%	15%	2.0
Maine	**3,670**	**74%**	**100%**	**2.8**

Source: CWRI analysis of OES & Census data

Some county employment data is suppressed according to BLS confidentiality and data quality requirements.

Demographic, economic and social characteristics of the workforce

Note: ACS data combines nursing, psychiatric and home health aides together.

Educational Attainment Nursing, Psychiatric and Home Health Aides		
	Number	%
Not high school graduate	*575*	*5%*
High school graduate (including equivalency)	6,220	51%
Some college or associate degree	4,615	38%
Bachelor's degree	635	5%
Graduate or professional degree	190	2%
Total	12,235	100%

2006-2010 ACS, CWRI

Schools offering training and number completing

In Maine, home health aides are required to successfully complete the 180-hour CNA Training Program and be listed on the Maine Registry of Certified Nursing Assistants. The Maine Medical Center (MMC) offers CNA training and typically graduates 65 persons each year. MMC completer data is not picked up by the National Center for Education Statistics (NCES) and IPEDS, as the center does not participate in federal student aid programs. York County Community College also offers a

non-credit CNA course. CNA training is also available at a variety of adult education and technical schools throughout the state. The curriculum consists of a minimum of 180 program training hours.

Training resources for Maine's direct services occupations may be found with the following link:

http://www.maine.gov/dhhs/mainedirectserviceworker/LinkPages/TrainingResources.html

Outlook

Nationally, employment of home health aides is expected to grow by 69 percent from 2010 to 2020, much faster than the 14 percent increase expected for all occupations. In Maine, home health aide employment is expected to grow 24 percent, above the 6 percent increase expected for all occupations.

As the baby-boom population ages and the elderly population grows, the demand for home health aides to provide assistance and companionship will continue to increase. Older clients often have health problems and need some help with daily activities.

Elderly and disabled clients increasingly rely on home care as a less expensive alternative to nursing homes or hospitals. Clients who need help with everyday tasks and household chores, rather than medical care, can reduce their medical expenses by returning to their homes.

Another reason for home care is that most clients prefer to be cared for in their homes, where they are most comfortable. Studies have found that home treatment is often more effective than care in a nursing home or hospital.

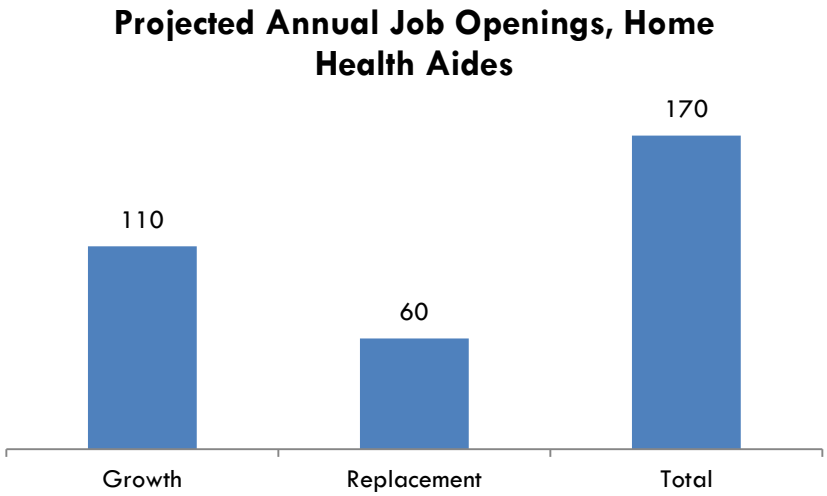
Job prospects for home health aides are excellent. This occupation is large and expected to grow very quickly, thus adding many jobs. In addition, the relatively low pay and high emotional demands cause many workers to leave these occupations, and they will have to be replaced. 170 job openings per year are expected, 110 from growth and 60 from replacement needs.

The dynamics of strong demand coupled with the low pay and often high emotional demands of this occupation may lead to shortages of workers. In particular, the supply of workers willing and available to perform these services may diminish during periods of stronger economic growth as the competition for labor from other sectors of the economy increases.

Employment of Home Health Aides in Maine, 2010 and Projected 2020

Average Employment		Change in Employment (2010-2020)		Projected Annual Openings Resulting from New Growth
2010	2020	Net	Percent	
4,662	5,760	1,098	24%	110

Source: CWRI 2010-2020 Employment Projections


Projected Annual Job Openings, Home Health Aides
110
60
170
Growth
Replacement
Total

39-9021 Personal and Home Care Aides

Occupation description

Assist the elderly, convalescents, or persons with disabilities with daily living activities at the person's home or in a care facility. Duties performed at a place of residence may include keeping house (making beds, doing laundry, washing dishes) and preparing meals. May provide assistance at non-residential care facilities. May advise families, the elderly, convalescents, and persons with disabilities regarding such things as nutrition, cleanliness, and household activities.

Illustrative examples: Blind Escort, Elderly Companion, Geriatric Personal Care Aide

Personal care aides do not provide any type of medical service. This is why this occupation is coded in the SOC major group, Personal Care and Service Occupations (39-0000) as opposed to Healthcare Support (31-0000).

Education requirements

According to BLS, a high school diploma or equivalent is not generally required, but most aides have one before entering the occupation. They are usually trained by nurses, other aides or supervisors.

Aides may be trained in housekeeping tasks, such as cooking for clients who have special dietary needs. They learn basic safety techniques, including how to respond in an emergency.

A competency evaluation may be required to ensure that the aide can perform some required tasks. Clients have their own preferences and aides may need time to become comfortable working with them.

In some states, the only requirement for employment is on-the-job training, which employers generally provide. Other states require formal training, which is available from community colleges, vocational schools, elder care programs, and home health care agencies. Education requirements for different types of direct service workers in Maine are detailed below. In addition, states may conduct background checks on prospective aides. Without additional training, advancement in this occupation is limited.

Education requirements for different types of direct care specialists in Maine are as follows:

For Personal Support Specialists (PSS) a 50 hour training program approved by the Office of Licensing and Regulatory Services is required. An overview of PSS training is available through DHHS (https://gateway.maine.gov/dhhs-apps/assisted/pss_overview.asp).

For Direct Support Specialists 45 hours of College of Direct Support training and have a high school diploma or GED are required.

Consumer Directed Personal Assistants go through on the job training.

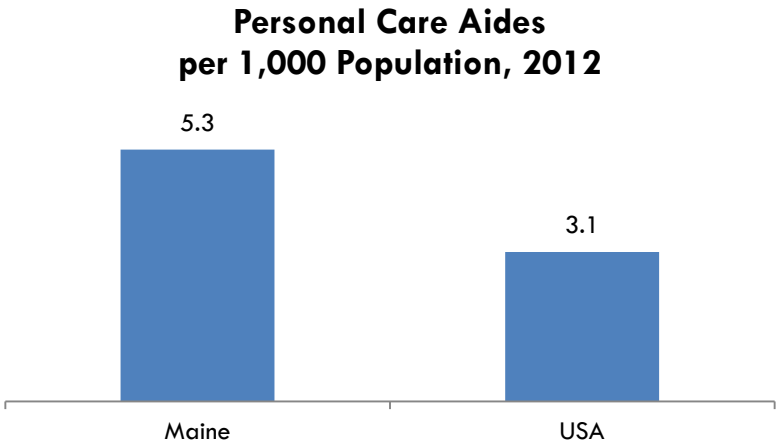
Employment & Wages

In 2012 there were 7,000 employed as personal care aides, with a median wage of $21,000, which was 6 percent above the national median. Personal care aides are employed mostly in different social assistance settings and to a lesser extent nursing and residential care facilities.

2012 Employment & Wage Statistics	Average Employment	Median Annual Salary
Maine	7,030	$21,050
Industries with Highest Share of Employment (% total)		
Social Assistance	71%	$20,820
Nursing and Residential Care Facilities	21%	$21,680
Ambulatory Health Care Services	7%	$21,360

Source: 2012 Occupational Employment Statistics, CWRI

The number of personal care aides employed in Maine per thousand residents was significantly above the U.S. average.



Distribution of employment

Employment of personal care aides per thousand residents in Cumberland and Kennebec Counties is nearly twice the state average. Overall, 93 percent of this workforce is employed in 8 counties representing 76 percent of the Maine population, leaving a disproportionately low share of aides (7 percent) for the remaining 8 counties.

Distribution of Employment				
	Number Employed	Pct. (%) total employment	Pct. (%) of total Maine Population	Number Employed per 1,000 Population
Androscoggin County	510	7%	8%	4.7
Aroostook County	350	5%	5%	4.9
Cumberland County	2640	38%	21%	9.3
Franklin County	*n/a*	*n/a*	2%	
Hancock County	*n/a*	*n/a*	4%	
Kennebec County	1120	16%	9%	9.2
Knox County	160	2%	3%	4.0
Lincoln County	270	4%	3%	7.9
Oxford County	*n/a*	*n/a*	4%	
Penobscot County	920	13%	12%	6.0
Piscataquis County	*n/a*	*n/a*	1%	
Sagadahoc County	*n/a*	*n/a*	3%	
Somerset County	*n/a*	*n/a*	4%	
Waldo County	*n/a*	*n/a*	3%	
Washington County	*n/a*	*n/a*	2%	
York County	570	8%	15%	2.9
Maine	**7,030**	**93%**	**100%**	**5.3**

Source: CWRI analysis of OES & Census data

Some data is suppressed according to BLS confidentiality and data quality requirements. Suppressed data is shown as "n/a" for not available.

Demographic, economic and social characteristics of the workforce

Educational Attainment Personal Care Aides		
	Number	%
Not high school graduate	205	4%
High school graduate (including equivalency)	2,480	48%
Some college or associate degree	1,885	36%
Bachelor's degree	550	11%
Graduate or professional degree	80	2%
Total	5,200	100%

2006-2010 ACS, CWRI

Schools offering training and number completing

Training resources for Direct and Personal Support Specialists and other direct services workers in Maine may be found with the following link:

http://www.maine.gov/dhhs/mainedirectserviceworker/LinkPages/TrainingResources.html

Outlook

Nationally, employment of personal care aides is expected to grow by 70 percent from 2010 to 2020, much faster than the average for all occupations. In Maine, growth of personal care aides is expected to increase 22 percent.

As the baby-boom population ages and the elderly population grows, the demand for personal care aides to provide assistance and companionship will continue to increase. Older clients often have health problems and need some help with daily activities.

Elderly and disabled clients increasingly rely on home care as a less expensive alternative to nursing homes or hospitals. Clients who need help with everyday tasks and household chores, rather than medical care, can reduce their medical expenses by returning to their homes.

Another reason for home care is that most clients prefer to be cared for in their homes, where they are most comfortable. Studies have found that home treatment is often more effective than care in a nursing home or hospital.

Job prospects for personal care aides are excellent. This occupation is large and expected to grow very quickly, thus adding many jobs. In addition, the relatively low pay and high emotional demands cause many workers to leave these occupations, and they will have to be replaced. Across industries, close to 200 job opportunities per year are expected, with most of these resulting from new growth in demand.

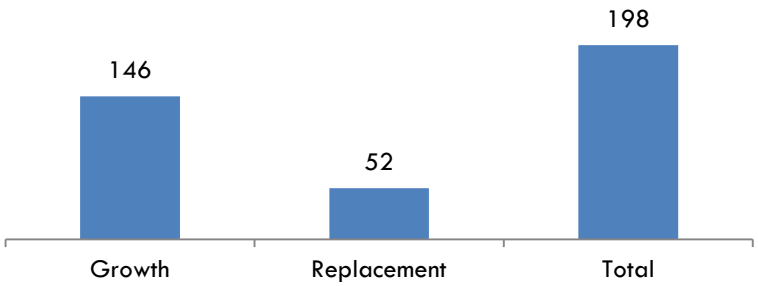
The dynamics of strong demand coupled with the low pay and often high emotional demands of this occupation may lead to shortages of workers. In particular, the supply of workers willing and available to perform these services may diminish during periods of stronger economic growth as competition for labor from other sectors of the economy increases.

Employment of Personal Care Aides in Maine 2010 and Projected 2020

Average Employment		Change in Employment (2010-2020)		Projected Annual Openings Resulting from New Growth
2010	2020	Net	Percent	
6,578	8,033	1,455	22%	146

Source: CWRI 2010-2020 Employment Projections

Projected Annual Job Openings, Personal Care Aides



31-1013 Psychiatric Aides

Occupation description

Assist mentally impaired or emotionally disturbed patients, working under direction of nursing and medical staff. May assist with daily living activities, lead patients in educational and recreational activities, or accompany patients to and from examinations and treatments. May restrain violent patients. Includes psychiatric orderlies.

Illustrative examples: Mental Health Orderlies, Psychiatric Nursing Aide, Psychiatric Technician Assistant

NOTE: Psychiatric technicians (SOC: 29-2053) are reviewed with Technologists and Technicians.

Education requirements

According to the SOC, psychiatric aides typically need a high school diploma or equivalent. Postsecondary courses in psychology or mental health technology may be helpful.

According to the Maine Department of Health and Human Services (DHHS), the minimum qualifications for a Mental Health Rehabilitation Technician -1 (MHRT) are as follows:

- 35 hour Mental health support specialist training
- Approved behavioral intervention program
- 40-hour Certified Residential Medication Aide (CRMA) training
- CPR and first-aid training

For more information on Maine's requirements for MHRT-1, please see http://muskie.usm.maine.edu/cfl/MHRTIOverview.html

Employment & Wages

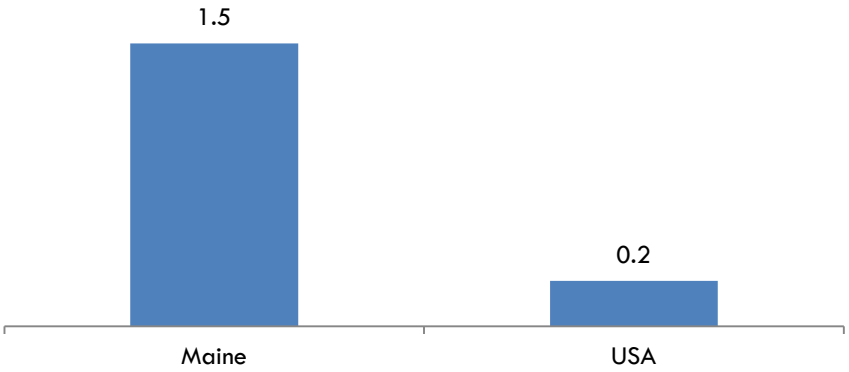
In 2012 there were 2,000 psychiatric aides employed in Maine, with a median annual wage of nearly $24,000. Psychiatric aides are mostly employed at nursing and residential care facilities.

2012 Employment & Wage Statistics

	Average Employment	Median Annual Salary
Maine	2,050	$23,890
Industries with Highest Share of Employment (% total)		
Nursing and Residential Care Facilities	96%	$23,750

Source: 2012 Occupational Employment Statistics, CWRI

Psychiatric Aides per 1,000 Population



Distribution of employment

Distribution of Employment				
	Number Employed	Pct. (%) Total Employment	Pct. (%) of Total Maine Population	Number Employed per 1,000 Population
Androscoggin County	*n/a*	*n/a*	8%	
Aroostook County	180	9%	5%	2.5
Cumberland County	1030	50%	21%	3.6
Franklin County	*n/a*	*n/a*	2%	
Hancock County	*n/a*	*n/a*	4%	
Kennebec County	*n/a*	*n/a*	9%	
Knox County	*n/a*	*n/a*	3%	
Lincoln County	*n/a*	*n/a*	3%	
Oxford County	*n/a*	*n/a*	4%	
Penobscot County	320	16%	12%	2.1
Piscataquis County	*n/a*	*n/a*	1%	
Sagadahoc County	*n/a*	*n/a*	3%	
Somerset County	*n/a*	*n/a*	4%	
Waldo County	*n/a*	*n/a*	3%	
Washington County	*n/a*	*n/a*	2%	
York County	*n/a*	*n/a*	15%	
Maine	**2,050**	**75%**	**100%**	**1.5**

Source: CWRI analysis of OES & Census data

Some data is suppressed according to BLS confidentiality and data quality requirements. Suppressed data is shown as "n/a" for not available.

Demographic, economic and social characteristics of the workforce

Note: ACS combines data for psychiatric aides with nursing and home health aides. Please refer to the profile on home health aides for details on educational attainment.

Schools offering training and number completing

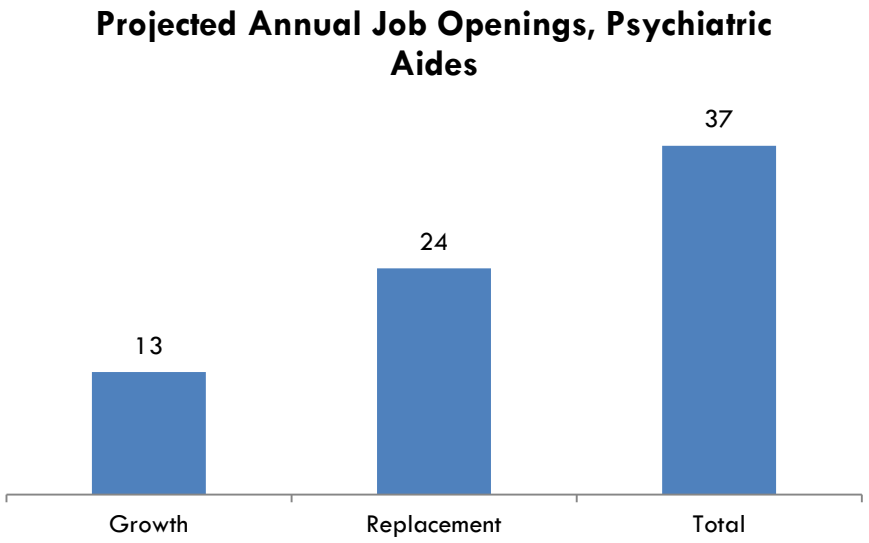
No degree programs are offered or required. Short term on-the-job training may be offered. Training options for the MHRT-1 may be found at the following website, http://www.maine.gov/dhhs/mainedirectserviceworker/LinkPages/TrainingResources.html

Outlook

In Maine, employment of psychiatric aides is expected to increase 7 percent from 2010 to 2020, in line with the average growth rate for all occupations. 37 job opportunities per year are expected, 13 from new growth in demand and 24 from replacement needs.

Employment of Psychiatric Aides in Maine, 2010 and Projected 2020				
Average Employment		Change in Employment (2010-2020)		Projected Annual Openings Resulting from New Growth
2010	2020	Net	Percent	
1,850	1,980	130	7%	13

Source: CWRI 2010-2020 Employment Projections



31-1014 Nursing Assistants

Occupation description

Provide basic patient care under direction of nursing staff. Perform duties such as feed, bathe, dress, groom, or move patients, or change linens. May transfer or transport patients. Includes nursing care attendants, nursing aides, and nursing attendants. Excludes "Home Health Aides" (31-1011), "Orderlies" (31-1015), "Personal Care Aides" (39-9021), and "Psychiatric Aides" (31-1013).

Illustrative examples: Certified Nursing Aide, Certified Nursing Assistant (CNA), Nursing Care Attendant

Education requirements

Nursing aides and attendants must earn a postsecondary certificate or award, in which they learn the basic principles of nursing and complete supervised clinical work. These programs are found in community colleges, vocational and technical schools, and in hospitals and nursing homes. Some high schools offer nursing aide programs. In Maine, Certified Nursing Assistants must successfully complete a 180 hour CNA training course. A CNA-Medications must complete CNA training plus a Standardized Medications Course.

When they finish their state-required education, nursing aides and attendants take a competency exam. Passing this exam allows them to use state-specific titles. In some states, a nursing aide or attendant is called a Certified Nursing Assistant, but titles vary from state to state.

Nursing aides and attendants who have passed the exam are placed on a state registry. In many states, nursing aides and attendants must be on the state registry to work in a nursing home. For more information on the Maine Registry of Certified Nursing Assistants (CNA Registry), please visit Maine's Division of Licensing and Regulatory Services at http://www.maine.gov/dhhs/dlrs/cna/home.html

Employment & Wages

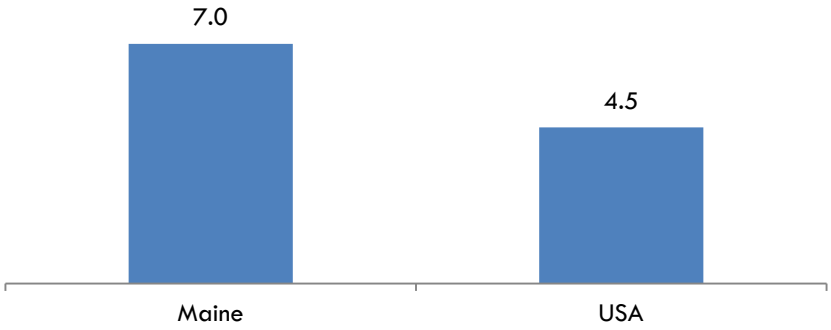
In 2012 there were more than 9,000 nursing assistants employed in Maine, with a median annual wage of $23,500. Nursing assistants are mostly employed at nursing and residential care facilities and to a lesser extent, hospitals.

2012 Employment & Wage Statistics

	Average Employment	Median Annual Salary
Maine	9,240	$23,550
Industries with Highest Share of Employment (% total)		
Nursing and Residential Care Facilities	65%	$22,800
Hospitals	20%	$25,180
Public Administration	9%	$26,590

Source: 2012 Occupational Employment Statistics, CWRI

Nursing Assistants per 1,000 Population, 2012



Distribution of employment

Distribution of Employment	Number Employed	Pct. (%) Total Employment	Pct. (%) of Total Maine Population	Number Employed per 1,000 Population
Androscoggin County	650	7%	8%	6.0
Aroostook County	800	9%	5%	11.3
Cumberland County	2590	28%	21%	9.1
Franklin County	*n/a*	*n/a*	2%	
Hancock County	330	4%	4%	6.0
Kennebec County	1050	11%	9%	8.6
Knox County	*160*	2%	3%	4.0
Lincoln County	*n/a*	*n/a*	3%	
Oxford County	220	2%	4%	3.8
Penobscot County	1100	12%	12%	7.2
Piscataquis County	130	1%	1%	7.5
Sagadahoc County	*n/a*	*n/a*	3%	
Somerset County	*n/a*	*n/a*	4%	
Waldo County	210	2%	3%	5.4
Washington County	340	4%	2%	10.5
York County	390	4%	15%	2.0
Maine	**9,240**	**86%**	**100%**	**7.0**

Source: CWRI analysis of OES & Census data

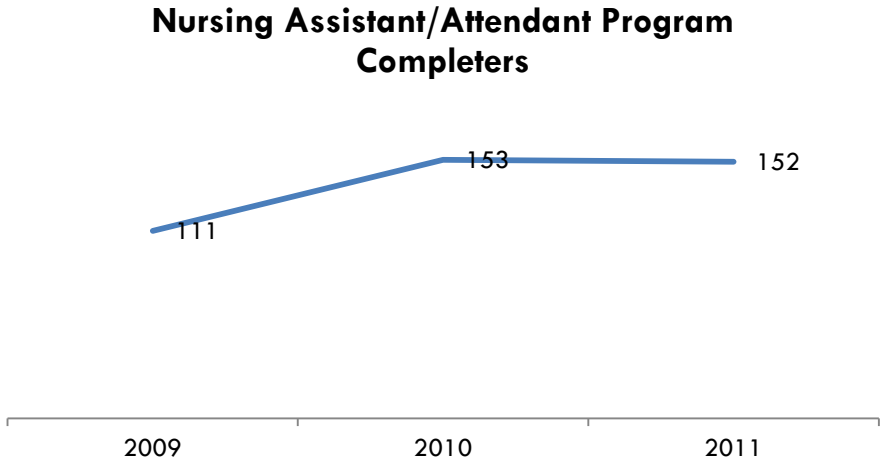
Some data is suppressed according to BLS confidentiality and data quality requirements. Suppressed data is shown as "n/a" for not available.

Demographic, economic and social characteristics of the workforce

Note: ACS combines data for this occupation with home health aides. Please refer to the home health aide profile for details on nursing assistant educational attainment.

Schools offering training and number completing

The Intercoast Career Institute offers a certificate program in nursing assistance/patient care. Maine Medical Center (MMC) also offers CNA training and typically graduates 65 persons each year. MMC completer data is not picked up by the National Center for Education Statistics (NCES) and IPEDS, as the center does not participate in federal student aid programs. York County Community College also offers a non-credit CNA course. CNA training is also available at a variety of adult education and technical schools throughout the state. The curriculum consists of a minimum of 180 program training hours. Training resources for nurse assistants and CNAs may be found at the following DHHS website: http://www.maine.gov/dhhs/mainedirectserviceworker/LinkPages/TrainingResources.html



Education Programs & Annual Graduates								
School	CIP Code	CIP Title	Completer Title	2007	2008	2009	2010	2011
Intercoast Career Institute	511614	Nurse/Nursing Assistant/Aide and Patient Care Assistant	Post-Sec. Awards/Cert./ Diplomas; 1-2 yrs.			46	88	87
Maine Medical Center	not reported by IPEDS			65 graduates per year				
York County Community College	non-credit bearing certificate; data not reported to IPEDS							

Source: IPEDS, MMC, YCCC, CWRI

Outlook

Projections data for nursing assistants are not yet broken out individually. The following discussion and data are for nursing aides, orderlies and attendants, combined.

Nationally, employment of nursing aides, orderlies, and attendants is expected to grow by 20 percent from 2010 to 2020, faster than the average for all occupations. In Maine, employment is expected to grow 10 percent.

Because of the growing elderly population, many nursing aides, orderlies, and attendants will be needed in long-term care facilities, such as nursing homes. Growth in the demand for healthcare services should lead to increased opportunities for nursing aides, orderlies, and attendants in other industries as well, such as hospitals and clinics.

Demand for nursing aides, orderlies, and attendants may be constrained, however, by the fact that many nursing homes rely on government funding, which tends to increase slower than the cost of patient care.

Job prospects for those with formal training should be excellent, particularly in long-term care facilities. Because of the emotional and physical demands of this occupation, many nursing aides, orderlies, and attendants choose to leave the profession to get more training or another job. This creates opportunities for jobseekers who want to become nursing aides.

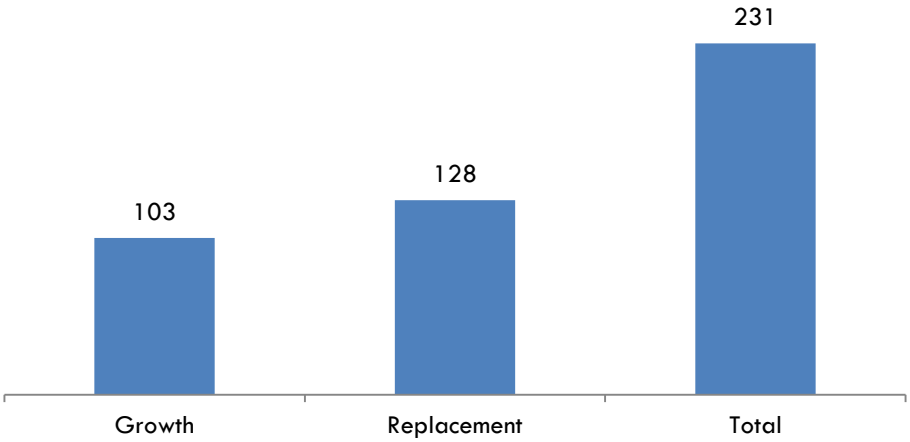
In Maine, 230 job openings per year are anticipated, with more than 100 resulting from new growth in demand and the remainder from replacement job openings.

Employment of Nursing Aides, Orderlies & Attendants in Maine 2010 and Projected 2020

Average Employment		Change in Employment (2010-2020)		Projected Annual Openings Resulting from New Growth
2010	2020	Net	Percent	
9,904	10,935	1,031	10%	103

Source: CWRI 2010-2020 Employment Projections

Projected Annual Job Openings, Nursing Aides, Orderlies & Attendants



31-1015 Orderlies

Occupation description

Transport patients to areas such as operating rooms or x-ray rooms using wheelchairs, stretchers, or moveable beds. May maintain stocks of supplies or clean and transport equipment. Psychiatric orderlies are included in "Psychiatric Aides" (31-1013). Excludes "Nursing Assistants" (31-1014).

Illustrative examples: Hospital Orderly, Medical Orderly, Surgical Orderly

Education requirements

Orderlies typically have at least a high school diploma. Orderlies who are not involved in patient care may be trained on the job.

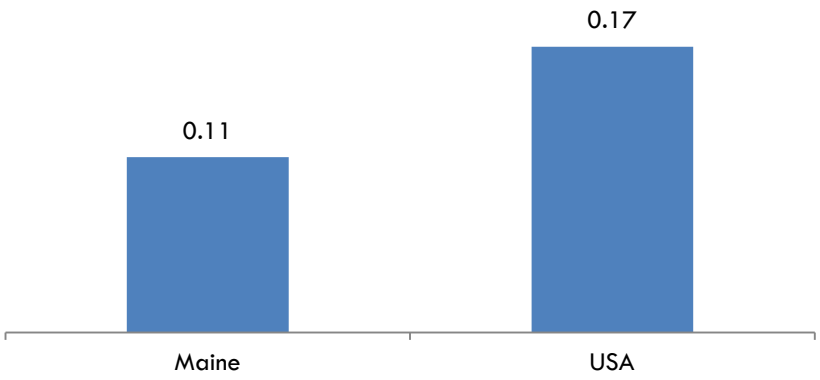
Employment & Wages

2012 Employment & Wage Statistics

	Average Employment	Median Annual Salary
Maine	140	$25,280
Industries with Highest Share of Employment (% total)		
Hospitals	93%	$25,730

Source: 2012 Occupational Employment Statistics, CWRI

Orderlies per 1,000 Population, 2012



Schools offering training and number completing

No degree programs offered or required. Orderlies may receive short term on-the-job training.

Outlook

Projections data for orderlies are not broken out individually—they are included in 'nursing aides, orderlies and attendants.' For more information, see outlook for nursing attendants.

Mental Health Professionals

Summary Statistics						
Workforce Characteristics	**Clinical, Counseling and School Psychologists**	**Child, Family & School Social Workers**	**Healthcare Social Workers**	**Mental Health & Substance Abuse Social Workers**	**Mental Health Counselors**	**Substance Abuse and Behavior Disorder Counselors**
Employment (2012)	360	1,780	660	1,410	540	480
Employment per 1,000 population	0.27	1.34	0.50	1.06	0.41	0.36
versus U.S.	Below avg.	Above avg.	Above avg.	Above avg.	Above avg.	Above avg.
Average starting wage (Maine)	$37,460	$31,500	$36,890	$31,990	$29,770	$31,030
Median annual wage (Maine)	$58,770	$42,110	$45,630	$43,390	$43,340	$42,550
U.S. median annual wage	$67,650	$41,530	$49,830	$39,980	$40,080	$38,520
Median wage for all occupations in Maine	$32,590	$32,590	$32,590	$32,590	$32,590	$32,590
Minimum Education Requirement	Doctoral or professional degree	Bachelor's degree	Master's degree	Bachelor's degree	Master's degree	High School diploma or equivalent
Job Growth Projections	13%	0%	19%	8%	10%	4%
National Median Age*	47	42	42	42	43.9	43.9
Top Industry of Employment	Ambulatory Health Svcs.	Social Assistance, Public Admin.	Hospitals, Social Assistance	Ambulatory Health Svcs., Social Assistance	Ambulatory Health Svcs.	Ambulatory Health Svcs.
Licensing Board	Board of Examiners of Psychologist	State Board of Social Worker Li-censure	State Board of Social Worker Li-censure	State Board of Social Worker Li-censure	State Board of Alcohol and Drug Counselors	State Board of Alcohol and Drug Counselors

*The median age for all social workers combined is 42. The median age for psychologists includes psychologists of all types.

The following profiles cover 6 occupations that provide mental health services. These are psychologist, social worker and counseling occupations that require (with one exception) at least a baccalaureate degree.

Key points

- Maine has 22 percent fewer clinical, counseling and school psychologists per thousand residents than the nation, and nearly 70 percent are over 50 years old. The number graduating from Maine programs with the doctoral credentials necessary to practice in the field is well below projected openings.
- Employment of healthcare social workers is expected to increase 19 percent in Maine, the fastest among the social worker and counseling occupations evaluated.
- Maine has more social workers and counselors per population compared to the nation, although the difference for healthcare social workers and mental health counselors is narrow. Distribution of employment in many of these occupations is concentrated around the large hospital centers. 70 and 69 percent of the healthcare and mental health and substance abuse social workers are employed in Cumberland, Penobscot and Androscoggin Counties.

19-3031 Clinical, Counseling and School Psychologists

Occupation description

Diagnose and treat mental disorders; learning disabilities; and cognitive, behavioral, and emotional problems, using individual, child, family, and group therapies. May design and implement behavior modification programs.

Illustrative examples: Child Psychologist, Geropsychologist, School Psychologist, Vocational Psychologist

Education requirements

Most clinical, counseling, and research psychologists need a doctoral degree. Psychologists can complete a Ph.D. in psychology or a Doctor of Psychology (Psy.D.) degree.

School psychologists need a master's, specialist (Ed. S. degree, which requires a minimum of 60 graduate semester hours), or doctoral degree in school psychology. Because their work addresses education and mental health components of students' development, school psychologists' training includes coursework in both education and psychology.

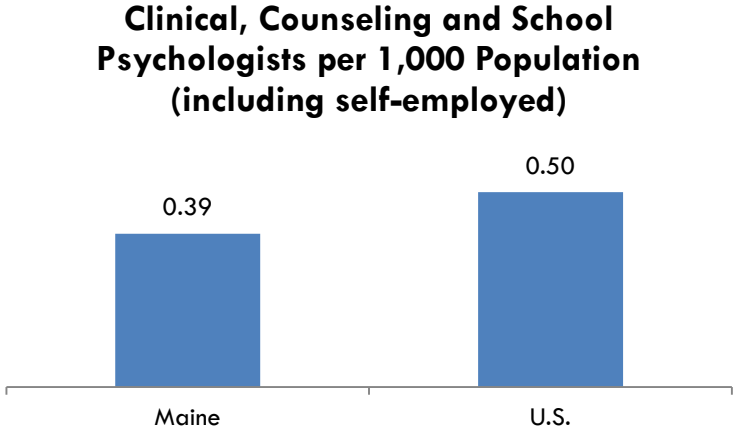
Employment & Wages

In 2012 there were an estimated 360 clinical, counseling and school psychologists employed in Maine earning a median annual wage of $59,000, which was 13 percent below the national median of $67,650. Psychologists working in hospitals had wages 50 percent above the statewide average for the field. These employment figures are taken from OES and do not include the self-employed. According to employment projections data, which includes the self-employed, there were 522 clinical, school and counseling psychologists in 2010. As noted earlier in this report, creating employment estimates for occupations with high proportions of self-employment involve more subjectivity. Please see the discussion under '*Data sets and limitations*' for more detail. Readers with access to different data sets may have more recent and different statistics.

2012 Employment & Wage Statistics		
	Average Employment	Median Annual Salary
Maine	360	$58,770
Industries with Highest Share of Employment (% total)		
Ambulatory Health Care Services	42%	$55,030
Educational Services	31%	$58,700
Hospitals	11%	$89,420
Social Assistance	8%	$31,350

Source: 2012 Occupational Employment Statistics, CWRI

The number of psychologists practicing in Maine per thousand residents was 22 percent below the national average. Figures in the chart below include the self-employed.



Distribution of employment

CWRI has limited data on psychologist employment by county. With OES data we are able to account for 92 percent of the 360 employed practitioners in the state (some data is suppressed per BLS data quality requirements). This data does not include the self-employed.

Distribution of Employment				
	Number Employed	Pct. (%) Total Employment	Pct. (%) of Total Maine Population	Number Employed per 1,000 Population
Androscoggin County	30	8%	8%	0.3
Aroostook County	*n/a*	*n/a*	5%	
Cumberland County	120	33%	21%	0.4
Franklin County	*n/a*	*n/a*	2%	
Hancock County	20	6%	4%	0.4
Kennebec County	40	11%	9%	0.3
Knox	*n/a*	*n/a*	3%	
Lincoln County	*n/a*	*n/a*	3%	
Oxford County	30	8%	4%	0.5
Penobscot County	30	8%	12%	0.2
Piscataquis County	*n/a*	*n/a*	1%	
Sagadahoc County	*n/a*	*n/a*	3%	
Somerset County	*n/a*	*n/a*	4%	
Waldo County	*n/a*	*n/a*	3%	
Washington County	*n/a*	*n/a*	2%	
York County	60	17%	15%	0.3
Maine	**360**	**92%**	**100%**	**0.27**

Source: CWRI analysis of OES & Census data

Figures do not include the self-employed

Some data is suppressed according to BLS confidentiality and data quality requirements. Suppressed data is shown as "n/a" for not available.

Demographic, economic and social characteristics of the workforce

Note: The American Community Survey provides data for psychologists (SOC: 19-3030) which includes clinical, counseling and school psychologists as well as industrial psychologists. The following survey data includes all specializations of psychologist practitioners.

Demographic profile

Maine's psychologist workforce was 42 percent male and 58 percent female.

Demographic Characteristics of the Psychologist Population	
	Maine
Total	1,055
Percent	100%
Male	42%
Female	58%

Source: CWRI analysis of ACS 2006-2010 5 year file

Age distribution

68 and 28 percent of Maine's psychologists were above the age of 50 and 60, respectively. Nationally, 53 and 23 percent of the workforce were above these age levels.

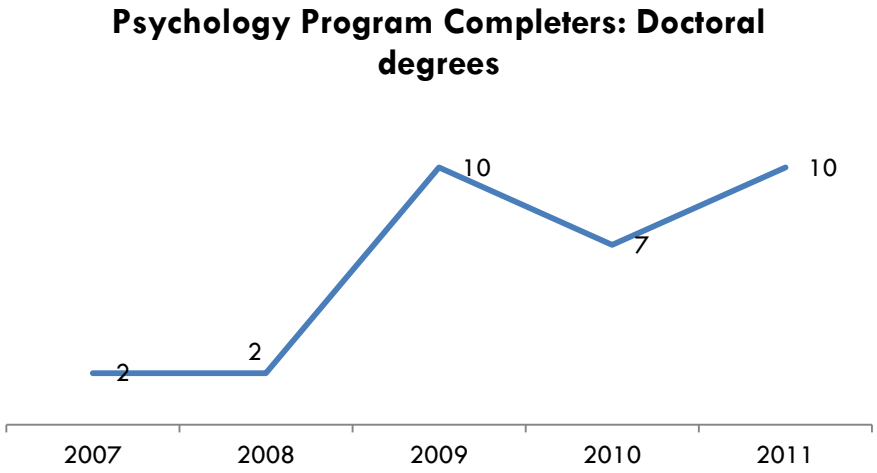
Age Distribution, Psychologists (all types, including industrial and clinical, social and school)

	Maine	%	*MOE*	U.S.	%	*MOE*
16 to 39 years	120	12%	*62*	49,725	28%	*1,418*
40 to 44 years	105	11%	*66*	15,155	9%	*841*
45 to 49 years	95	10%	*62*	17,360	10%	*769*
50 to 54 years	200	20%	*89*	22,910	13%	*956*
55 to 59 years	185	19%	*76*	29,545	17%	*1,062*
60 to 69 years	265	27%	*96*	33,450	19%	*1,095*
70 years and over	15	2%	*18*	7,220	4%	*505*
Total	**985**	100%		**175,365**	100%	

Source: EEO Tabulation 2006-2010 ACS file, CWRI
MOE = Margin of error

Schools offering training and number completing

The University of Maine and University of Southern Maine offer doctoral level programs in psychology. From 2009 to 2011, there were nine graduates per year from these programs, combined.



Education Programs & Annual Graduates								
School	CIP Code	CIP Title	Completer Title	2007	2008	2009	2010	2011
Master's degrees								
University of Maine	420101	Psychology, General	Master's Degree	3	5	5	4	3
Husson University	420601	Counseling Psychology	Master's Degree		1	2	4	2
Husson University	429999	Psychology, Other	Master's Degree				5	5
University of Southern Maine	421701	School Psychology	Master's Degree	6	7	8	9	2
University of Southern Maine	422806	Educational Psychology	Master's Degree			7	5	5
subtotal				**9**	**13**	**22**	**27**	**17**
Doctoral degrees								
University of Maine	420101	Psychology, General	Doctor's Degrees	2	2	10	4	3
University of Southern Maine	422805	School Psychology	Doctor's Degrees				3	7
subtotal				**2**	**2**	**10**	**7**	**10**
Total						**32**	**31**	**20**

Source: IPEDS, CWRI

Outlook

Nationally, overall employment of clinical, counseling, and school psychologists is expected to grow 22 percent, faster than the average for all occupations. Greater demand for psychological services in schools, hospitals, mental health centers, and social services agencies should drive employment growth. In Maine, employment is expected to increase 13 percent, twice the rate expected for all occupations, but below the national rate largely due to lower population growth forecasts for this state (see the introduction of this report for more detail). Also, the overall growth forecast for Maine belies much stronger projected growth in self-employment of psychologists, which is expected to expand 24 percent.

Demand for clinical and counseling psychologists will increase as people continue to turn to psychologists to help solve or manage their problems. More psychologists will be needed to help people deal with issues such as depression and other mental disorders, marriage and family problems, job stress, and addiction. Psychologists also will be needed to provide services to an aging population, helping people deal with the mental and physical changes that happen as they grow older. Through both research and practice, psychologists are also helping other special groups, such as veterans suffering from war trauma, other trauma survivors, and individuals with autism.

Demand for psychologists in the health care industry is also expected to increase, because their work on teams with doctors, social workers, and other healthcare professionals provides patients with comprehensive, interdisciplinary treatments. In addition to treating mental and behavioral health issues, psychologists work on teams to develop or administer prevention or wellness programs.

As the overall number of students grows, more school psychologists will be needed to work with students, particularly those with special needs, learning disabilities, and behavioral issues. Schools also rely on school psychologists to assess and counsel students. Additionally, school psychologists will be needed to study how both in-school and out-of-school factors affect learning, which teachers and administrators can use to improve education.

Job prospects should be best for those who have a doctoral degree in an applied specialty and those with a specialist or doctoral degree in school psychology. Because admission to psychology graduate programs is so selective, job opportunities for doctoral graduates are expected to be fair.

Candidates with a master's degree will face competition for positions, and many master's degree holders will find jobs in a related field outside of psychology.

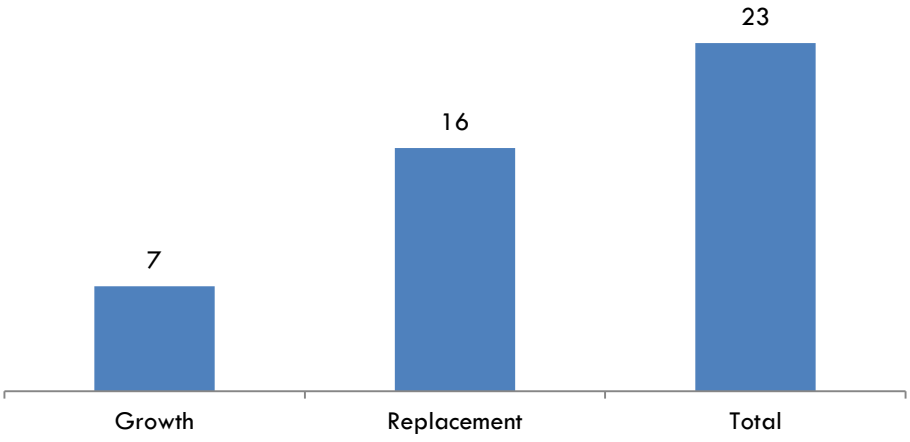
In Maine, the majority of job opportunities will result from replacement needs. The national median age for this occupation is 47 and it is expected that over the coming decade, approximately half of all practicing in the field will retire or otherwise transition out of the occupation. If Maine's psychologists retire at the same rate as that of the national workforce, 16 new psychologists per year will be required. Since Maine's psychologist workforce is older than that of the nation (ACS data), it is possible that even higher numbers of practitioners retire, increasing the replacement need. In addition, practitioners will be required to fill anticipated openings resulting from new growth in demand. The number of graduates with doctoral degrees in psychology from Maine's schools is below projected annual demand, highlighting the need for strategies to enhance supply.

Employment of Clinical, Counseling and School Psychologists in Maine, 2010 and Projected 2020

Average Employment		Change in Employment (2010-2020)		Projected Annual Openings Resulting from New Growth
2010	2020	Net	Percent	
522	591	69	13%	7

Source: CWRI 2010-2020 Employment Projections

Projected Annual Job Openings, Clinical, Counseling and School Psychologists



Social Workers

There are two main types of social workers: direct-service and clinical. The former helps people solve everyday problems and the latter diagnoses and treats mental, emotional and behavioral disorders.

Direct-service positions typically require a bachelor's degree in social work or a related field, although in some circumstances a master's degree is required. While a bachelor's degree is sufficient for entry-level positions, an advanced degree is often the standard in education and healthcare settings. Clinical social workers must have a master's degree in social work (MSW).

All states have licensure or certification requirements. According to the BLS, "Becoming a licensed clinical social worker usually requires a master's degree in social work and 2 years or 3,000 hours of supervised clinical experience after graduation. After completing their supervised experience, clinical social workers must pass an exam to be licensed."[22] In Maine, licensure is governed by the State Board of Social Worker Licensure. The following license types are available:

Licensed Social Worker (LSW), Conditional

This is an entry level social worker license requiring a bachelor's degree that is "sufficiently related to social work or social welfare." Those with a conditional license are working towards another level of licensure. A LSW conditional must obtain four hours per month of supervision.

Licensed Social Worker

An LSW must have a Bachelor of Social Work (BSW) degree. LSWs have a range of functions including gathering and assessing data, performing advocacy functions, formulating plans for clients, and supervising other LSWs and professionals. Those that have been licensed for two years or more are able to provide the consultation required by the LSW Conditional licenses to those licensees.

Licensed Master Social Worker (LMSW)

An LMSW requires a master or doctoral degree in social work or social welfare. According to the Board of Licensure, an LMSW "may perform all of the functions of the LSW License, engage in administration, research, consultation, social planning and teaching related to the functions of social work; engage in non-clinical private practice; and provide consultation required by the LSW and LSW Conditional Licenses."[23]

Licensed Master Social Worker, Conditional Clinical

A master or doctoral degree in social work or social welfare is required. This license is for Master Social Workers who are engaged in clinical practice who have not yet completed the consultation hours required for the Licensed Clinical Social Worker.

Licensed Clinical Social Worker (LCSW)

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[22] Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, 2012-13 Edition, Social Workers, on the Internet at http://www.bls.gov/ooh/community-and-social-service/social-workers.htm (visited November 18, 2013).

[23] Office of Professional and Occupational Regulation, Maine Department of Professional & Financial Regulation, State Board of Social Worker Licensure, on the Internet at http://www.maine.gov/pfr/professionallicensing/professions/social_workers/lm.htm

According to the board of licensure, an LCSW may engage in the practice of clinical social work. A master or doctoral degree in social work or social welfare is required.[24]

Social workers typically have an area of focus, such as a specific population group or work place setting. There are child and family social workers, school social workers, healthcare social workers and those specializing in mental health and substance abuse. These types of social workers are profiled below. Note that the SOC combines child and family social workers with school social workers.

21-1021 Child, Family and School Social Workers

Occupation description

Provide social services and assistance to improve the social and psychological functioning of children and their families and to maximize the family well-being and the academic functioning of children. May assist parents, arrange adoptions, and find foster homes for abandoned or abused children. In schools, they address such problems as teenage pregnancy, misbehavior, and truancy. May also advise teachers.

Illustrative examples: Certified Children, Youth, and Family Social Worker; Child Abuse Worker; Foster Care Worker

Education requirements

Bachelor's degree in a related field or in social work. Licensure is governed by the State Board of Social Worker Licensure.

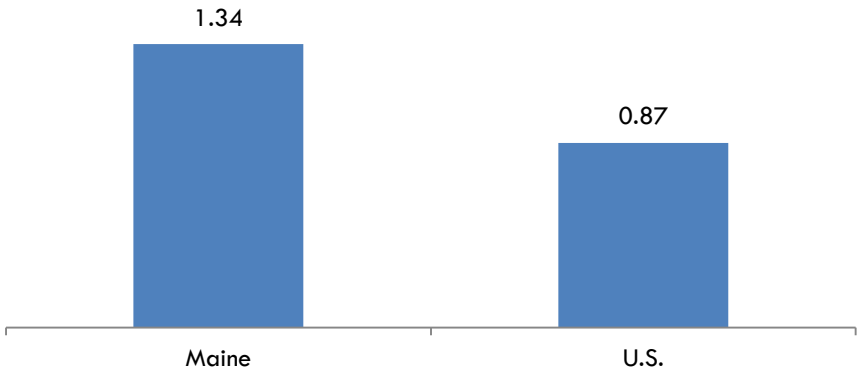
Employment & Wages

2012 Employment & Wage Statistics	Average Employment	Median Annual Salary
Maine	1,780	$42,110
Industries with Highest Share of Employment (% total)		
Social Assistance	30%	$34,340
Public Administration	29%	$44,960
Educational Services	22%	$51,800
Nursing and Residential Care Facilities	10%	$43,000

Source: 2012 Occupational Employment Statistics, CWRI

[24] Excerpts from the Office of Professional and Occupational Regulation, Maine Department of Professional & Financial Regulation, State Board of Social Worker Licensure, on the Internet at http://www.maine.gov/pfr/professionallicensing/professions/social_workers/license_types.htm

Child, Family and School Social Workers per 1,000 Population, 2012



Distribution of employment

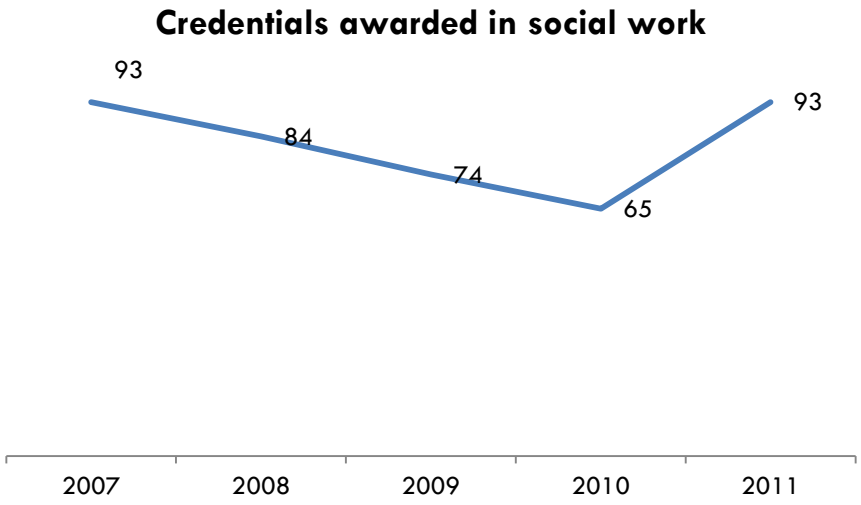
Distribution of Employment	Number Employed	Pct. (%) Total Employment	Pct. (%) of Total Maine Population	Number Employed per 1,000 Population
Androscoggin County	280	16%	8%	2.6
Aroostook County	130	7%	5%	1.8
Cumberland County	490	28%	21%	1.7
Franklin County	*n/a*	*n/a*	2%	
Hancock County	*n/a*	*n/a*	4%	
Kennebec County	330	19%	9%	2.7
Knox County	*n/a*	*n/a*	3%	
Lincoln County	*n/a*	*n/a*	3%	
Oxford County	30	2%	4%	0.5
Penobscot County	200	11%	12%	1.3
Piscataquis County	*n/a*	*n/a*	1%	
Sagadahoc County	20	1%	3%	0.6
Somerset County	110	6%	4%	2.1
Waldo County	*n/a*	*n/a*	3%	
Washington County	70	4%	2%	2.2
York County	40	2%	15%	0.2
Maine	**1,780**	**96%**	**100%**	**1.3**

Source: CWRI analysis of OES & Census data

Some data is suppressed according to BLS confidentiality and data quality requirements. Suppressed data is shown as "n/a" for not available.

Schools offering training and number completing

3 schools offered bachelor degrees in social work: The University of Maine, University of Southern Maine (USM) and University of Maine at Presque Isle. USM, University of Maine and UNE offered master's programs. Bachelor's degrees represent approximately 40 percent of total credentials awarded each year.



Education Programs & Annual Graduates

School	CIP Code	CIP Title	Completer Title	2007	2008	2009	2010	2011
Bachelor degrees								
University of Maine at Presque Isle	440701	Social Work	Bachelor's Degree	13	9	17	10	13
University of Southern Maine	440701	Social Work	Bachelor's Degree	47	46	32	37	51
University of Maine	440701	Social Work	Bachelor's Degree	33	29	25	18	29
subtotal				**93**	**84**	**74**	**65**	**93**
Master's degrees								
University of Southern Maine	440701	Social Work	Master's Degree	27	31	20	25	34
University of Maine	440701	Social Work	Master's Degree	50	53	31	34	58
University of New England	440701	Social Work	Master's Degree	68	54	44	66	48
subtotal				**145**	**138**	**95**	**125**	**140**
Doctoral degrees								
University of Maine	440701	Social Work	Doctor's Degrees	1	0	0	0	0
Total				**239**	**222**	**169**	**190**	**233**

Source: IPEDS, CWRI

Outlook

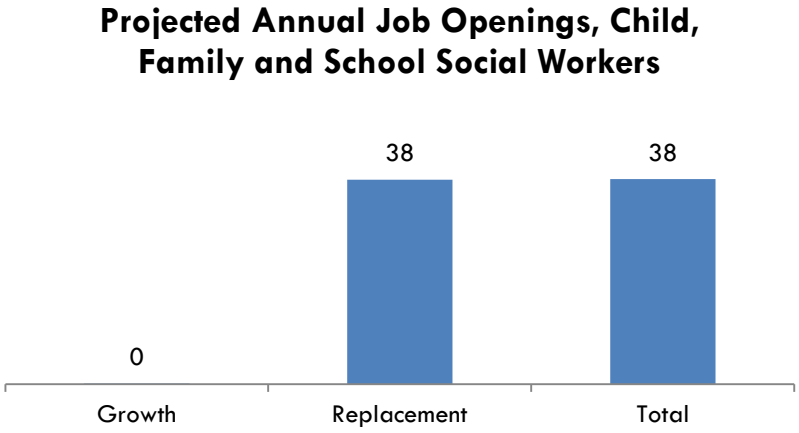
Nationally, employment of child, family, and school social workers is expected to grow by 20 percent from 2010 to 2020, faster than the average for all occupations. In Maine, growth in this occupation is expected to be flat, below that of the nation in part due to lower projected population growth rates. Despite limited growth in new demand, a number of job opportunities will be available due to existing workers retiring or transitioning out of the occupation.

Nationally, demand for child and family social workers should continue to grow because they will be needed to investigate child abuse cases and to place children in foster care and with adoptive families. However, growth in this occupation may be limited by budget constraints at all levels of government. In schools, more social workers will be needed to respond to rising student enrollments. The availability of federal, state, and local funding will be a major factor in determining the actual employment growth in schools.

Employment of Child, Family & School Social Workers in Maine 2010 and Projected 2020

Average Employment		Change in Employment (2010-2020)		Projected Annual Openings Resulting from New Growth
2010	2020	Net	Percent	
1,606	1,607	1	0%	0

Source: CWRI 2010-2020 Employment Projections



21-1022 Healthcare Social Workers

Occupation description

Provide individuals, families, and groups with the psychosocial support needed to cope with chronic, acute, or terminal illnesses. Services include advising family care givers, providing patient education and counseling, and making referrals for other services. May also provide care and case management or interventions designed to promote health, prevent disease, and address barriers to access to healthcare.

Illustrative examples: Hospice Social Worker, Oncology Social Worker, Public health Social Worker

Education requirements

Master's degree in social work. Licensure is governed by the State Board of Social Worker Licensure.

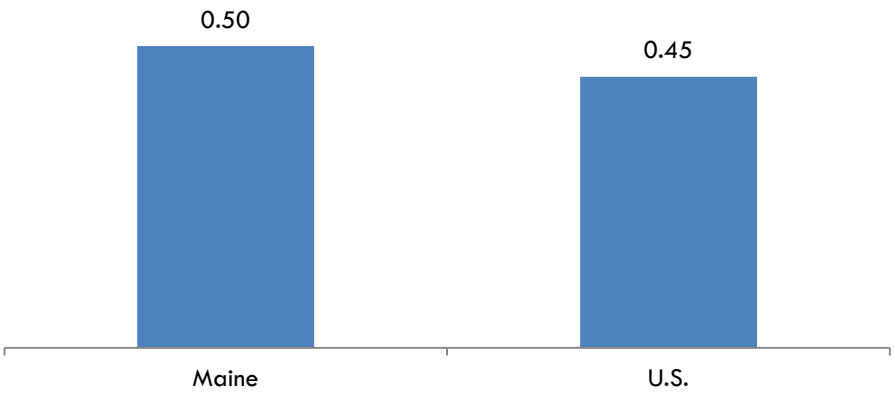
Employment & Wages

2012 Employment & Wage Statistics

	Average Employment	Median Annual Salary
Maine	660	$45,630
Industries with Highest Share of Employment (% total)		
Hospitals	30%	$52,930
Social Assistance	26%	$41,940
Nursing and Residential Care Facilities	20%	$40,310
Ambulatory Health Care Services	15%	$50,050

Source: 2012 Occupational Employment Statistics, CWRI

Healthcare Social Workers per 1,000 Population



Distribution of employment

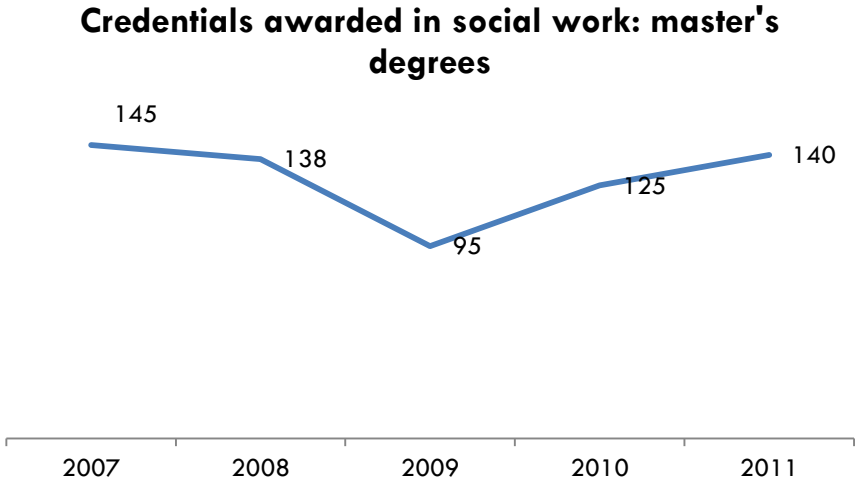
Distribution of Employment	Number Employed	Pct. (%) Total Employment	Pct. (%) of Total Maine Population	Number Employed per 1,000 Population
Androscoggin County	70	11%	8%	0.65
Aroostook County	30	5%	5%	0.42
Cumberland County	220	33%	21%	0.77
Franklin County	20	3%	2%	0.65
Hancock County	*n/a*	*n/a*	4%	
Kennebec County	70	11%	9%	0.57
Knox County	*n/a*	*n/a*	3%	
Lincoln County	*n/a*	*n/a*	3%	
Oxford County	*n/a*	*n/a*	4%	
Penobscot County	170	26%	12%	1.11
Piscataquis County	*n/a*	*n/a*	1%	
Sagadahoc County	*n/a*	*n/a*	3%	
Somerset County	30	5%	4%	0.58
Waldo County	*n/a*	*n/a*	3%	
Washington County	*n/a*	*n/a*	2%	
York County	30	5%	15%	0.15
Maine	**660**	**97%**	**100%**	0.50

Source: CWRI analysis of OES & Census data

Some data is suppressed according to BLS confidentiality and data quality requirements. Suppressed data is shown as "n/a" for not available.

Schools offering training and number completing

The University of Maine, University of Southern Maine and University of New England offer master's level programs in social work. In 2011, 140 graduated with from these programs.



Education Programs & Annual Graduates								
School	**CIP Code**	**CIP Title**	**Completer Title**	**2007**	**2008**	**2009**	**2010**	**2011**
Master's degrees								
University of Southern Maine	440701	Social Work	Master's Degree	27	31	20	25	34
University of Maine	440701	Social Work	Master's Degree	50	53	31	34	58
University of New England	440701	Social Work	Master's Degree	68	54	44	66	48
subtotal				**145**	**138**	**95**	**125**	**140**
Doctoral degrees								
University of Maine	440701	Social Work	Doctor's Degrees	1	0	0	0	0
Total				**146**	**138**	**95**	**125**	**140**

Source: IPEDS, CWRI

Outlook

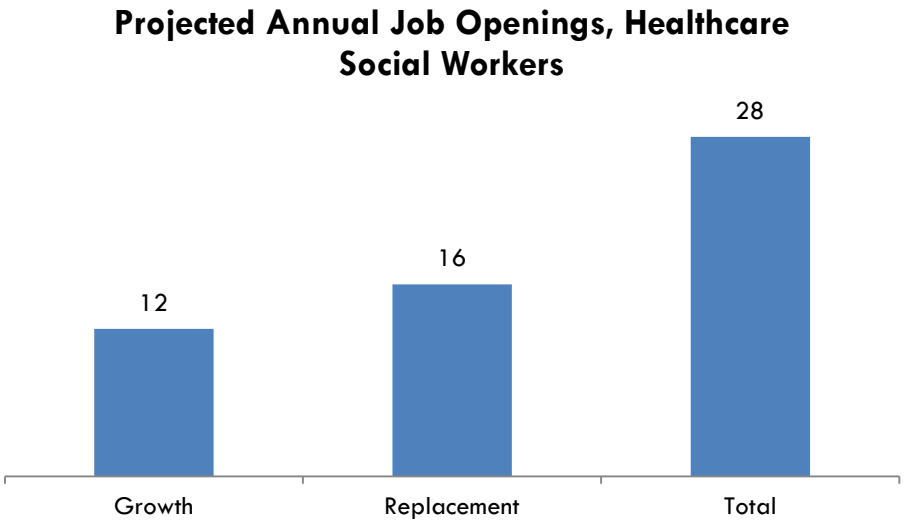
Nationally, employment of healthcare social workers is expected to grow by 34 percent, much faster than the average for all occupations. As the population ages the incidence of chronic disease and illnesses per population rises, demand for healthcare social workers will rise.

In Maine, employment is expected to increase 19 percent, above the 6 percent growth expected for all occupations statewide.

Nearly 30 job opportunities per year are projected, with most of these resulting from replacement needs.

Employment of Healthcare Social Workers in Maine 2010 and Projected 2020				
Average Employment		Change in Employment (2010-2020)		Projected Annual Openings Resulting from New Growth
2010	2020	Net	Percent	
665	788	123	18%	12

Source: CWRI 2010-2020 Employment Projections


Projected Annual Job Openings, Healthcare Social Workers
28
16
12
Growth
Replacement
Total

21-1023 Mental Health and Substance Abuse Social Workers

Occupation description

Assess and treat individuals with mental, emotional, or substance abuse problems, including abuse of alcohol, tobacco, and/or other drugs. Activities may include individual and group therapy, crisis intervention, case management, client advocacy, prevention, and education.

Illustrative examples: Community Mental Health Social Worker, Drug Abuse Social Worker, Psychiatric Social Worker

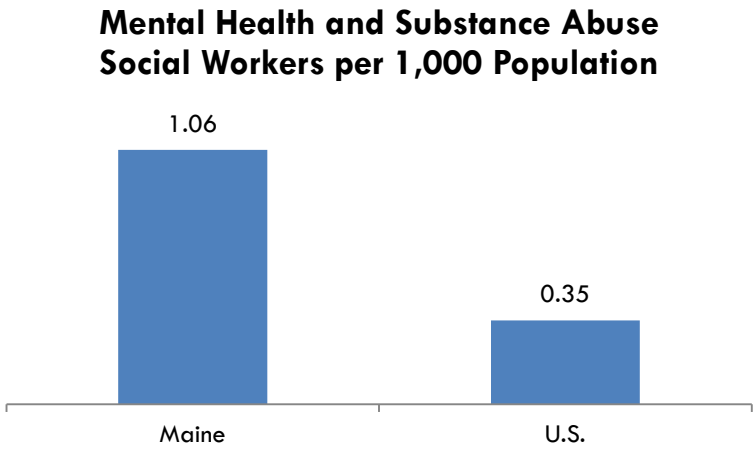
Education requirements

Bachelor's degree in a related field or in social work. Licensure is governed by the State Board of Social Worker Licensure.

Employment & Wages

2012 Employment & Wage Statistics	Average Employment	Median Annual Salary
Maine	1,410	$43,390
Industries with Highest Share of Employment (% total)		
Ambulatory Health Care Services	26%	$44,510
Social Assistance	23%	$42,010
Nursing and Residential Care Facilities	16%	$39,570
Hospitals	15%	$44,280

Source: 2012 Occupational Employment Statistics, CWRI



Distribution of employment

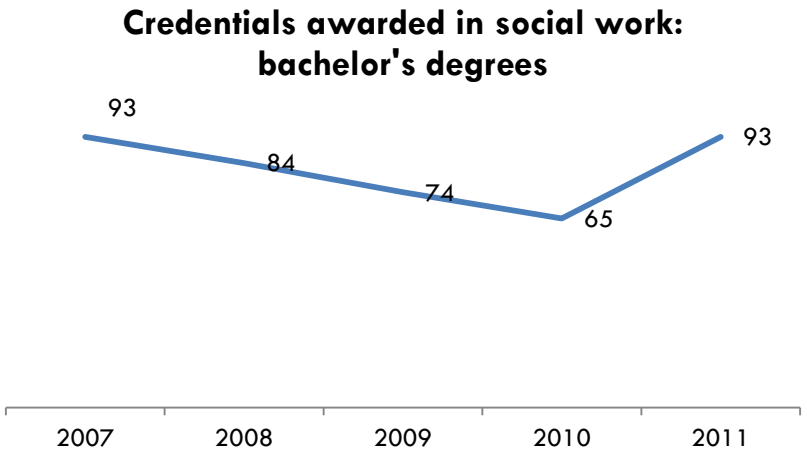
Distribution of Employment				
	Number Employed	Pct. (%) Total Employment	Pct. (%) of Total Maine Population	Number Employed per 1,000 Population
Androscoggin County	180	13%	8%	1.67
Aroostook County	60	4%	5%	0.85
Cumberland County	480	34%	21%	1.69
Franklin County	*n/a*	*n/a*	2%	
Hancock County	*n/a*	*n/a*	4%	
Kennebec County	210	15%	9%	1.72
Knox County	*n/a*	*n/a*	3%	
Lincoln County	*n/a*	*n/a*	3%	
Oxford County	*n/a*	*n/a*	4%	
Penobscot County	310	22%	12%	2.02
Piscataquis County	*n/a*	*n/a*	1%	
Sagadahoc County	*n/a*	*n/a*	3%	
Somerset County	*n/a*	*n/a*	4%	
Waldo County	*n/a*	*n/a*	3%	
Washington County	*n/a*	*n/a*	2%	
York County	70	5%	15%	0.35
Maine	**1,410**	**93%**	**100%**	**1.06**

Source: CWRI analysis of OES & Census data

Some data is suppressed according to BLS confidentiality and data quality requirements. Suppressed data is shown as "n/a" for not available.

Schools offering training and number completing

The University of Maine, University of Maine at Presque Isle and University of Southern Maine offered bachelor degree programs in social work. In 2011, 93 students graduated from these programs. Although not required for entry into the occupation, graduate level programs are also available in Maine.



Education Programs & Annual Graduates								
School	**CIP Code**	**CIP Title**	**Completer Title**	**2007**	**2008**	**2009**	**2010**	**2011**
Bachelor degrees								
University of Maine at Presque Isle	440701	Social Work	Bachelor's Degree	13	9	17	10	13
University of Southern Maine	440701	Social Work	Bachelor's Degree	47	46	32	37	51
University of Maine	440701	Social Work	Bachelor's Degree	33	29	25	18	29
subtotal				**93**	**84**	**74**	**65**	**93**
Master's degrees								
University of Southern Maine	440701	Social Work	Master's Degree	27	31	20	25	34
University of Maine	440701	Social Work	Master's Degree	50	53	31	34	58
University of New England	440701	Social Work	Master's Degree	68	54	44	66	48
subtotal				**145**	**138**	**95**	**125**	**140**
Doctoral degrees								
University of Maine	440701	Social Work	Doctor's Degrees	1	0	0	0	0
Total				**239**	**222**	**169**	**190**	**233**

Source: IPEDS, CWRI

Outlook

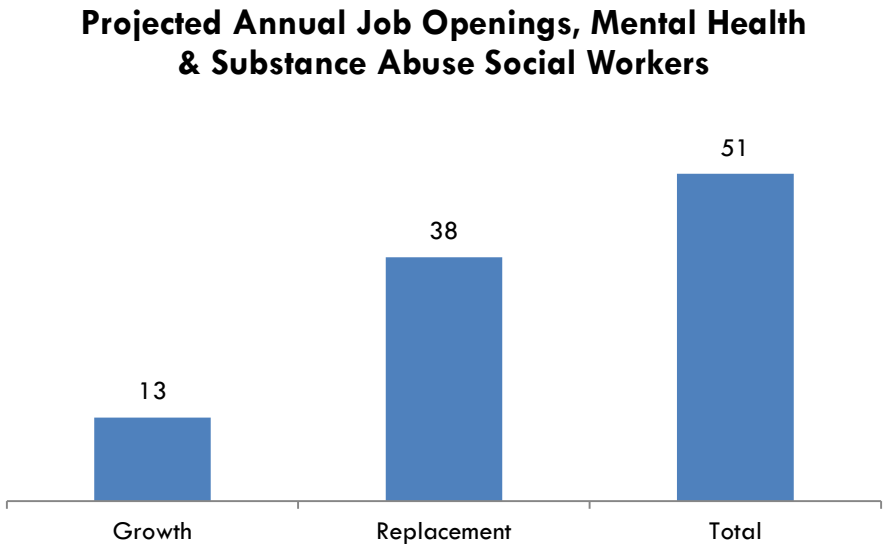
Nationally, employment of mental health and substance abuse social workers is expected to grow by 31 percent, much faster than the average for all occupations. In Maine, 8 percent growth is expected over the same period, slightly above the 6 percent growth expected for all occupations.

Growth is expected as more people seek treatment for mental illness and addiction. In addition, drug offenders are increasingly being sent to treatment programs rather than to jail. As a result, use of substance abuse treatment programs is expected to grow, increasing demand for mental health and substance abuse social workers.

Approximately 50 job opportunities are expected annually in Maine, with the majority of these resulting from the need to replace existing practitioners that will retire or transition out of the occupation.

Employment of Mental Health and Substance Abuse Social Workers in Maine, 2010 and Projected 2020				
Average Employment		Change in Employment (2010 - 2020)		Projected Annual Openings Resulting from New Growth
2010	2020	Net	Percent	
1,607	1,737	130	8%	13

Source: CWRI 2010-2020 Employment Projections



21-1014 Mental Health Counselors

Occupation description

Counsel with emphasis on prevention. Work with individuals and groups to promote optimum mental and emotional health. May help individuals deal with issues associated with addictions and substance abuse; family, parenting, and marital problems; stress management; self-esteem; and aging. Excludes "Social Workers" (21-1021 through 21-1029), "Psychiatrists" (29-1066), and "Psychologists" (19-3031 through 19-3039).

Illustrative examples: Licensed Clinical Mental Health Counselor (LCMHC), Licensed Mental Health Counselor (LMHC)

Education requirements

A master's degree in social work is the minimum education requirement. Licensure is required and governed by the State Board of Alcohol and Drug Counselors. Licensure requires a master's degree and 2,000 to 4,000 hours of supervised clinical experience. In addition, counselors must pass a state-recognized exam and complete annual continuing education classes.[25]

In Maine, two types of counseling licenses are available: Licensed Clinical Professional Counselor (LCPC) and Licensed Professional Counselor (LPC). The LCPC is a clinical license which gives one the ability to diagnose and treat mental health disorders. The LPC is a non-clinical license, but and LPC is still permitted to engage in private practice.

According to the State Board of Alcohol and Drug Counselors, there are three ways to meet the educational requirements for the LCPC license, including the successful completion of a master's program in mental health counseling and a doctoral degree in clinical or counseling psychology.[26]

Employment & Wages

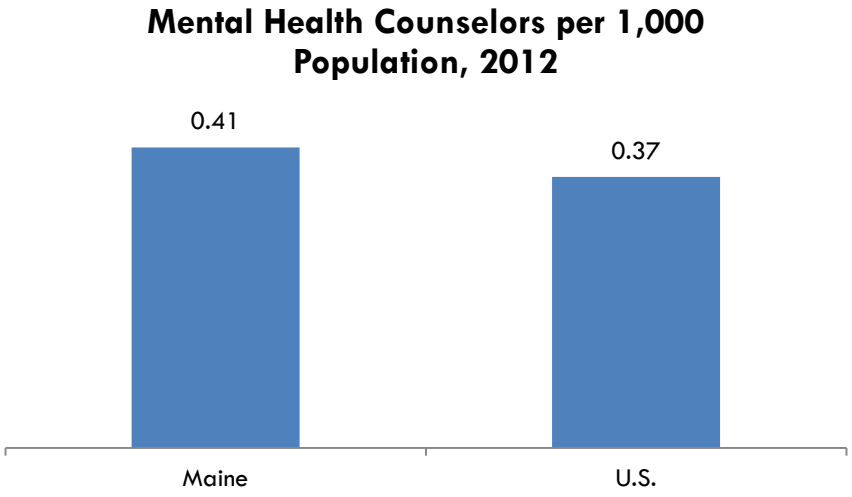
2012 Employment & Wage Statistics

	Average Employment	Median Annual Salary
Maine	540	$43,340
Industries with Highest Share of Employment (% total)		
Ambulatory Health Care Services	46%	$43,210
Social Assistance	22%	$45,550
Nursing and Residential Care Facilities	17%	$31,140
Hospitals	11%	$44,020

Source: 2012 Occupational Employment Statistics, CWRI

[25] Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, 2012-13 Edition, Mental Health Counselors and Marriage and Family Therapists, on the Internet at http://www.bls.gov/ooh/community-and-social-service/mental-health-counselors-and-marriage-and-family-therapists.htm (visited December 19, 2013).

[26] More information on counseling licenses is available at http://www.maine.gov/pfr/professionallicensing/professions/counselors/license_types.htm



Distribution of employment

Distribution of Employment				
	Number Employed	Pct. (%) Total Employment	Pct. (%) of Total Maine Population	Number Employed per 1,000 Population
Androscoggin County	*n/a*	*n/a*	8%	
Aroostook County	*n/a*	*n/a*	5%	
Cumberland County	200	37%	21%	0.7
Franklin County	*n/a*	*n/a*	2%	
Hancock County	*n/a*	*n/a*	4%	
Kennebec County	60	11%	9%	0.5
Knox	*n/a*	*n/a*	3%	
Lincoln County	*n/a*	*n/a*	3%	
Oxford County	*n/a*	*n/a*	4%	
Penobscot County	80	15%	12%	0.5
Piscataquis County	*n/a*	*n/a*	1%	
Sagadahoc County	*n/a*	*n/a*	3%	
Somerset County	*n/a*	*n/a*	4%	
Waldo County	20	4%	3%	0.5
Washington County	*n/a*	*n/a*	2%	
York County	*n/a*	*n/a*	15%	
Maine	**540**	**67%**	**100%**	**0.41**

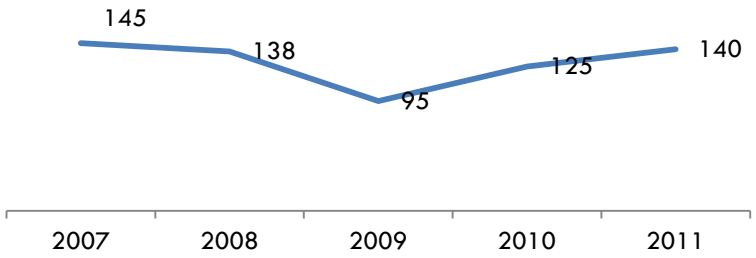
Source: CWRI analysis of OES & Census data

Some data is suppressed according to BLS confidentiality and data quality requirements. Suppressed data is shown as "n/a" for not available.

Schools offering training and number completing

The University of Maine, University of Southern Maine and University of New England offer master's level programs in social work. In 2011, 140 graduated from these programs.

Credentials awarded in social work: master's degrees



Education Programs & Annual Graduates								
School	**CIP Code**	**CIP Title**	**Completer Title**	**2007**	**2008**	**2009**	**2010**	**2011**
Master's degrees								
University of Southern Maine	440701	Social Work	Master's Degree	27	31	20	25	34
University of Maine	440701	Social Work	Master's Degree	50	53	31	34	58
University of New England	440701	Social Work	Master's Degree	68	54	44	66	48
subtotal				**145**	**138**	**95**	**125**	**140**
Doctoral degrees								
University of Maine	440701	Social Work	Doctor's Degrees	1	0	0	0	0
Total				**146**	**138**	**95**	**125**	**140**

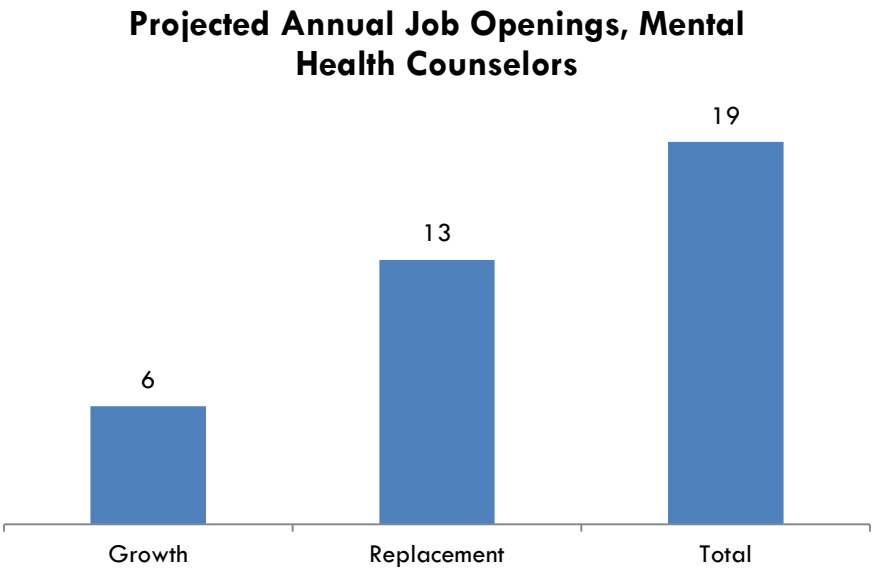
Source: IPEDS, CWRI

Outlook

In Maine, employment of mental health counselors is expected to grow 10 percent from 2010 to 2020. However, the majority of job opportunities are expected to arise from replacement openings.

Employment of Mental Health Counselors in Maine 2010 and Projected 2020				
Average Employment		Change in Employment (2010-2020)		Projected Annual Openings Resulting from New Growth
2010	2020	Net	Percent	
598	656	58	10%	6

Source: CWRI 2010-2020 Employment Projections


Projected Annual Job Openings, Mental Health Counselors
19
13
6
Growth
Replacement
Total

21-1011 Substance Abuse and Behavioral Disorder Counselors

Occupation description

Counsel and advise individuals with alcohol, tobacco, drug, or other problems, such as gambling and eating disorders. May counsel individuals, families, or groups or engage in prevention programs. Excludes “Social Workers" (21-1021 through 21-1029), "Psychologists" (19-3031 through 19-3039), and "Mental Health Counselors" (21-1014) providing these services.

Illustrative examples: Addiction Counselor, Alcohol and Drug Counselor, Chemical Dependency Counselor

Education requirements

Educational requirements range from a high school diploma to a master’s degree, depending on the setting, type of work and level of responsibility. While graduation from a high school or its equivalent is the minimum requirement, workers with more education are able to provide more services to their clients, such as private one-on-one counseling sessions, and they require less supervision than those with less education.

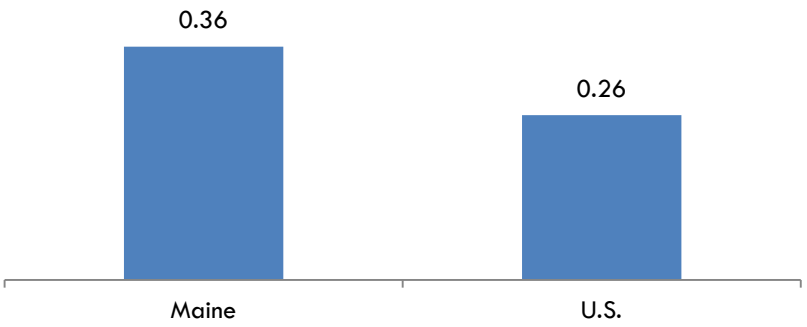
Licensing is governed by the State Board of Alcohol and Drug Counselors. Barring the exemptions noted in subsection 6206 of Title 32, chapter 81, all substance abuse and behavioral disorder counselors must be licensed.

Employment & Wages

2012 Employment & Wage Statistics

	Average Employment	Median Annual Salary
Maine	480	$42,550
Industries with Highest Share of Employment (% total)		
Ambulatory Health Care Services	67%	$40,180
Hospitals	15%	$49,860
Educational Services	4%	$44,140
Social Assistance	4%	$44,640

Source: 2012 Occupational Employment Statistics, CWRI



Distribution of employment

Distribution of Employment				
	Number Employed	Pct. (%) Total Employment	Pct. (%) of Total Maine Population	Number Employed per 1,000 Population
Androscoggin County	*n/a*	*n/a*	8%	
Aroostook County	*n/a*	*n/a*	5%	
Cumberland County	50	10%	21%	0.2
Franklin County	*n/a*	*n/a*	2%	
Hancock County	30	6%	4%	0.5
Kennebec County	80	17%	9%	0.7
Knox County	*n/a*	*n/a*	3%	
Lincoln County	*n/a*	*n/a*	3%	
Oxford County	*n/a*	*n/a*	4%	
Penobscot County	*n/a*	*n/a*	12%	
Piscataquis County	*n/a*	*n/a*	1%	
Sagadahoc County	*n/a*	*n/a*	3%	
Somerset County	*n/a*	*n/a*	4%	
Waldo County	*n/a*	*n/a*	3%	
Washington County	*n/a*	*n/a*	2%	
York County	20	4%	15%	0.1
Maine	**480**	**38%**	**100%**	**0.36**

Source: CWRI analysis of OES & Census data

Some data is suppressed according to BLS confidentiality and data quality requirements. Suppressed data is shown as "n/a" for not available.

Schools offering training and number completing

Graduation from a high school or its equivalent is the minimum education requirement.

Outlook

Nationally, employment of substance abuse and behavioral disorder counselors is expected to grow by 27 percent from 2010 to 2020, faster than the average for all occupations. Growth is expected as more people seek treatment for their addictions or other behaviors and drug offenders are increasingly sentenced to treatment rather than jail time.

In recent years, the criminal justice system has recognized that people committing crimes related to drugs are less likely to offend again if they get treatment for addiction. As a result, sentences for drug offenders often include treatment programs. This practice is expected to increase the use of substance abuse treatment programs and the demand for addiction counselors.

Also, over the projections period, more people are expected to seek treatment for problems with addiction or other problems. As the population grows, the number of individuals entering therapy is expected to increase as well. This is expected to cause a continued demand for counselors in mental health centers, halfway houses, and detox centers.

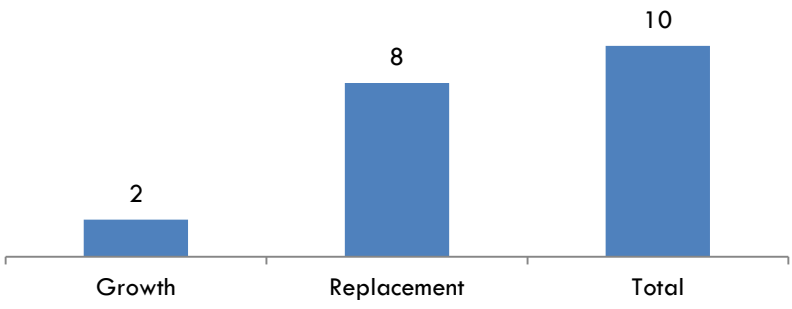
In Maine, employment of substance abuse and behavioral disorder counselors is expected to grow by four percent from 2010 to 2020. Most of the employment opportunities are expected to arise from the need to replace currently practicing workers that exit the field.

Employment of Substance Abuse and Behavioral Counselors in Maine, 2010 and Projected 2020

Average Employment		Change in Employment (2010-2020)		Projected Annual Openings Resulting from New Growth
2010	2020	Net	Percent	
397	414	17	4%	2

Source: CWRI 2010-2020 Employment Projections

Projected Annual Job Openings, Substance Abuse and Behavioral Disorder Counselors



Other Healthcare Occupations

Summary Statistics				
Workforce Characteristics	**Athletic Trainers**	**Massage Therapists**	**Health Diagnosing and Treating Practitioners, AO**	**Medical Records and Health Info Technicians**
Employment (2012)	130	430	70	1,120
Employment per 1,000 population	0.10	0.32	0.05	0.84
versus U.S.	Above avg.	Above avg.	Below avg.	Above avg.
Average starting wage (Maine)	$34,890	$25,610	$46,330	$24,930
Median annual wage (Maine)	$44,160	$36,760	$67,870	$32,180
U.S. median annual wage	$42,090	$35,970	$85,470	$34,160
Median wage for all occupations in Maine	$32,590	$32,590	$32,590	$32,590
Minimum Education Requirement	Bachelor's Degree	Postsecondary non-degree award	Master's degree	Postsecondary non-degree award
Job Growth Projections	19%	10%	16%	17%
National Median Age	n/a	40.4	n/a	45.7
Top Industry of Employment	Educational Svcs.	Personal and Laundry Services	Hospitals	Hospitals
Licensing Board	Athletic Trainers Program, Office of Professional and Occupational Regulation	Massage Therapy Program, Office of Professional and Occupational Regulation	Board of Complementary Health Care Providers*	No license required; Professional certification available

*For acupuncturists and naturopathic physicians

29-9091 Athletic Trainers

Occupation description

Evaluate and advise individuals to assist recovery from or avoid athletic-related injuries or illnesses, or maintain peak physical fitness. May provide first aid or emergency care.

Illustrative example: Certified Athletic Trainer

Education requirements

Athletic trainers need at least a bachelor's degree, although both bachelor's and master's degrees are common. In most states, athletic trainers need a license or certification; requirements vary by state. In Maine, athletic trainers must have passed the National Athletic Trainers' Association Board of Certification examination or be currently certified by the National Athletic Trainers' Association. Athletic trainers renew their license annually.

For most jobs, athletic trainers need a bachelor's degree in athletic training from an accredited college or university; however, master's degrees are also common. The Commission on Accreditation of Athletic Training Education (CAATE) accredits most programs. All programs have both classroom and clinical components. Courses include science and health-related courses, such as anatomy, physiology, nutrition, and biomechanics.

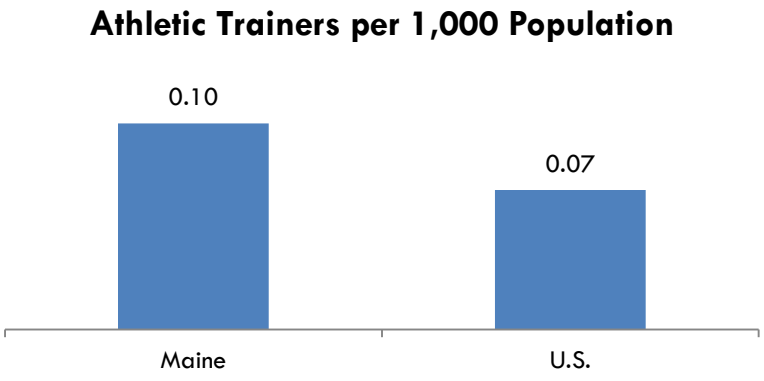
Athletic trainers may need a higher degree to be eligible for some positions, especially trainers in colleges and universities, or to increase their advancement opportunities.

High school students interested in athletic trainer programs should take courses in anatomy, physiology, and physics.

Employment & Wages

2012 Employment & Wage Statistics	Average Employment	Median Annual Salary
Maine	130	$44,160
Industries with Highest Share of Employment (% total)		
Educational Services	54%	$43,960
Ambulatory Health Care Services	n/a	$44,900
Hospitals	8%	n/a

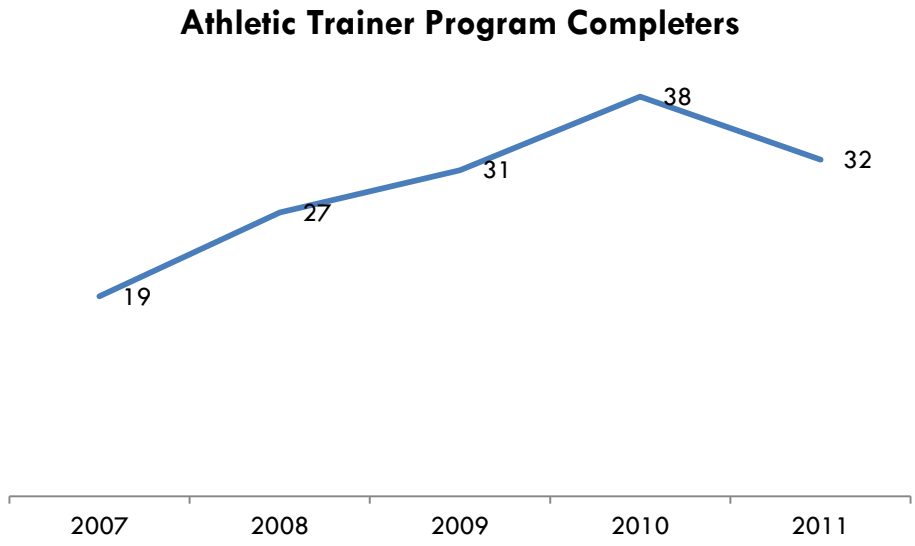
Source: 2012 Occupational Employment Statistics, CWRI



Schools offering training and number completing

According to IPEDS, three schools offer bachelor degree programs in athletic training: The University of Southern Maine, The University of Maine at Presque Isle and The University of New England. The University of Maine at Orono also lists an undergraduate program in athletic training on the

university website but we could not find data on this in IPEDS, and the university did not respond to our request for information on the program.



Education Programs & Annual Graduates								
School	CIP Code	CIP Title	Completer Title	2007	2008	2009	2010	2011
University of Southern Maine	510913	Athletic Training/ Trainer	Bachelor's Degree	4	3	12	11	17
University of Maine at Presque Isle	510913	Athletic Training/ Trainer	Bachelor's Degree	8	5	4	11	9
University of New England	510913	Athletic Training/ Trainer	Bachelor's Degree	7	19	15	16	6
Total				**19**	**27**	**31**	**38**	**32**

Source: IPEDS, CWRI

Outlook

Nationally, employment of athletic trainers is expected to grow by 30 percent from 2010 to 2020, much faster than the average for all occupations. In Maine, 19 percent growth is expected, which is well above the 6 percent growth expected for all occupations statewide. However, because this is a small occupation, the fast growth will result in only about 25 new jobs over the 10-year period. In addition, another 40 job opportunities are expected due to replacement openings. In total, 6 job opportunities are expected per year.

As people become more aware of sports-related injuries at a young age, demand for athletic trainers is expected to increase, most significantly in schools and youth leagues. New research reveals that the effects of concussions are particularly severe and long lasting in child athletes. Although concussions are dangerous to athletes at any age, children's brains are still developing and are at risk for permanent complications, such as fatal brain swelling and learning disabilities. Parents and coaches are becoming educated about these greater risks through community health efforts. Because athletic trainers are usually on site with athletes and are often the first line of defense when injuries occur, the demand for trainers should continue to increase.

Additionally, advances in injury prevention and detection and more sophisticated treatments are projected to increase the demand for athletic trainers. Growth in an increasingly active middle-aged and elderly population will likely lead to an increased incidence of athletic-related injuries, such as sprains. Sports programs at all ages and for all experience levels will continue to create demand for athletic trainers.

Insurance and workers' compensation costs have become a concern for many employers and insurance companies, especially in areas where employees are often injured on the job. For example, military bases hire athletic trainers to help train military personnel in how to properly lift items or to create training programs aimed at keeping injury rates down. More insurance companies are recognizing athletic trainers as healthcare providers and are reimbursing the cost of an athletic trainer's services.

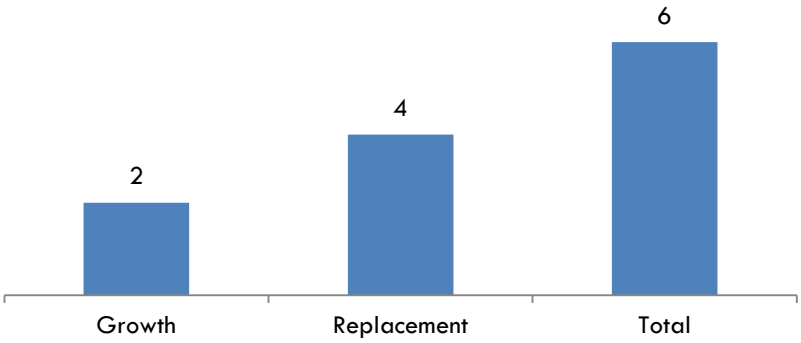
For Maine, six job opportunities are expected each year, two from new growth and four from replacement needs.

Employment of Athletic Trainers in Maine 2010 and Projected 2020

Average Employment		Change in Employment (2010-2020)		Projected Annual Openings Resulting from New Growth
2010	2020	Net	Percent	
124	147	23	19%	2

Source: CWRI 2010-2020 Employment Projections

Projected Annual Job Openings, Athletic Trainers



31-9011 Massage Therapists

Occupation description

Perform therapeutic massages of soft tissues and joints. May assist in the assessment of range of motion and muscle strength, or propose client therapy plans.

Illustrative examples: Deep Tissue Massage Therapist, Licensed massage Therapist, Swedish Masseuse

Education requirements

Massage therapists typically complete a postsecondary education program that can require 500 hours or more of study and experience, although standards and requirements vary greatly by state and locality. Most states regulate massage therapy and require massage therapists to have a license or certificate. In Maine, the minimum requirements for licensure are the successful completion of the examination sponsored by the National Certification Board for Therapeutic Massage and Bodywork or the Federation of State Massage Therapy Boards or their successor or other organizations approved by the Department of Professional and Financial Regulation; or completion of a course of training consisting of 500 or more hours of supervised classroom and clinical instruction. Applicants must be 18 or older and possess a high school diploma or its equivalent.

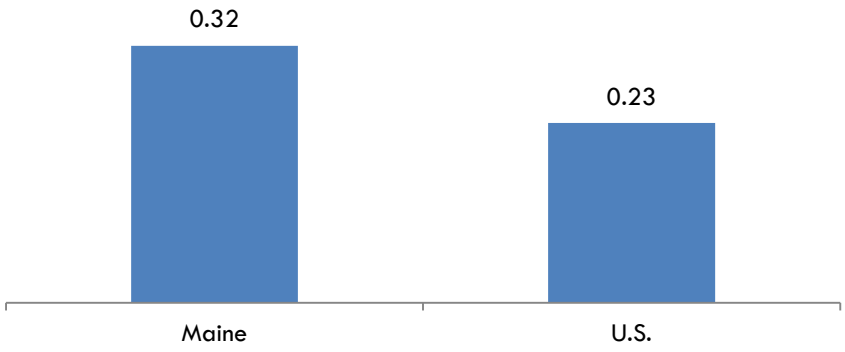
According the Department of Professional Regulation, applicants intending to meet the academic requirements for licensure by passing a national examination may choose, at their own risk, to use distance learning options in preparation for the NCBTMB or the MBLEx.

Employment & Wages

2012 Employment & Wage Statistics		
	Average Employment	Median Annual Salary
Maine	430	$36,760
Industries with Highest Share of Employment (% total)		
Personal and Laundry Services	47%	$34,240
Ambulatory Health Care Services	40%	$36,980
Accommodation	12%	$60,610

Source: 2012 Occupational Employment Statistics, CWRI

Massage Therapists per 1,000 Population, 2012



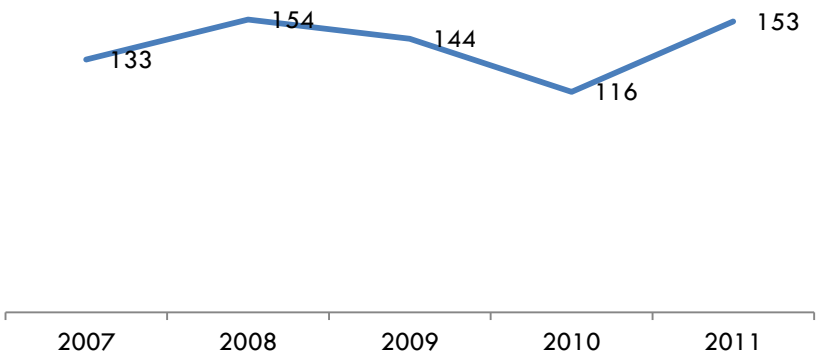
Schools offering training and number completing

The Department of Professional and Financial Regulation provides a list of approved massage therapy programs. The list is reviewed and amended periodically. Current approved programs are listed below.

- Acadia School of Massage, www.acadiaschoolofmassage.com
- Downeast School of Massage, www.downeastschoolofmassage.net
- Kennebec Valley Community College Massage Therapy Program, www.kvcc.me.edu
- New Hampshire Institute for Therapeutic Arts, www.nhita.com
- Seacoast Career Schools Massage Therapy Certificate Program, www.seacoastcareerschools.edu
- Spa Tech Institute Therapeutic Massage Program & Spa Tech Institute Holistic Massage Program, www.spatech.edu
- Therapeutic Bodywork Learning Center, www.mainemassageschool.com

Completer data available from IPEDS does not include all the programs listed above (see the table below). As noted earlier in this report, only schools that participate in federal student loan programs are required to submit completer data to IPEDS.

Massage Therapist Program Completers



Education Programs & Annual Graduates								
School	**CIP Code**	**CIP Title**	**Completer Title**	**2007**	**2008**	**2009**	**2010**	**2011**
Spa Tech Institute – Westbrook	513501	Massage Therapy/ Therapeutic Massage	Post-Sec. Awards/ Cert./Diplomas; < 1 yr.	58	74	81	59	88
Pierre's School of Cosmetology	513501	Massage Therapy/ Therapeutic Massage	Post-Sec. Awards/ Cert./Diplomas; < 1 yr.	27	27			
Empire Beauty School-Maine	513501	Massage Therapy/ Therapeutic Massage	Post-Sec. Awards/ Cert./Diplomas; < 1 yr.			7		
Intercoast Career Institute	513501	Massage Therapy/ Therapeutic Massage	Post-Sec. Awards/ Cert./Diplomas; 1-2 yrs.	4	12			
Kennebec Valley Community College	513501	Massage Therapy/ Therapeutic Massage	Post-Sec. Awards/ Cert./Diplomas; 1-2 yrs.		5	11	3	5
Seacoast Career Schools – Sanford Campus	513501	Massage Therapy/ Therapeutic Massage	Post-Sec. Awards/ Cert./Diplomas; 1-2 yrs.	44	36	45	54	60
Total				**133**	**154**	**144**	**116**	**153**

Source: IPEDS, CWRI

Outlook

Nationally, employment of massage therapists is expected to grow by 20 percent from 2010 to 2020, faster than the average for all occupations. Continued growth in the demand for massage services will lead to new openings for massage therapists. In Maine, employment is projected to increase 10 percent.

The number of spas, which employ a large number of therapists, has increased in recent years. The number of massage clinic franchises has also been increasing, many of which offer more affordable massages than those at spas and resorts, making them available to a wider range of customers.

In addition, as an increasing number of states adopt licensing requirements and standards for therapists, the practice of massage is likely to be respected and accepted by more people as a way to treat pain and to improve overall wellness.

Massage also offers specific benefits to particular groups of people, whose continued demand for massage services will lead to overall growth for the occupation. For example, as workplaces try to distinguish themselves as employee-friendly, providing professional in-office, seated massages for employees is becoming a popular on-the-job benefit.

Older people in nursing homes or assisted-living facilities also are finding benefits from massage, such as increased energy levels and reduced health problems. Demand for massage therapy should grow among older age groups because they increasingly are enjoying longer, more active lives.

Job Prospects

In states that regulate massage therapy, opportunities should be available to those who complete formal training programs and pass a professionally recognized exam. However, new massage

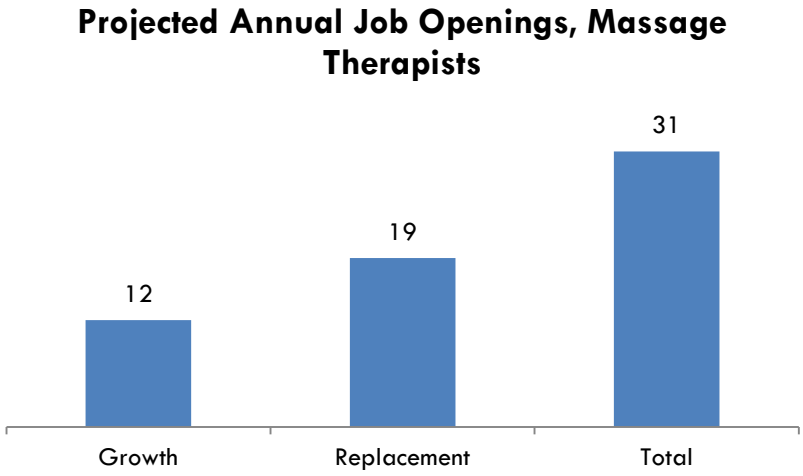
therapists should expect to work only part time in spas, hotels, hospitals, physical therapy centers, and other businesses until they can build their own client base.

Because referrals are a very important source of work for massage therapists, networking will increase the number of job opportunities. Joining a professional association also can help build strong contacts and further increase the likelihood of steady work.

In total, 31 job openings are projected each year for Maine, 12 from new growth and 19 from replacement needs.

Employment of Massage Therapists in Maine 2010 and Projected 2020				
Average Employment		Change in Employment (2010-2020)		Projected Annual Openings Resulting from New Growth
2010	2020	Net	Percent	
1,176	1,297	121	10%	12

Source: CWRI 2010-2020 Employment Projections



29-1199 Health Diagnosing and Treating Practitioners, All Other

Occupation description

All health diagnosing and treating practitioners not listed separately.

Illustrative examples: Acupuncturist, Hypnotherapist, Naturopathic Physician.

Education requirements

A master's degree is the minimum education requirement listed by BLS.

In Maine, the licensure of acupuncturists and naturopathic doctors is governed by the Board of Complementary Health Care Providers. To be licensed as an acupuncturist one must have a baccalaureate degree, a license to practice as a registered nurse or successful completion of the training program and any competency examination required by the Board of Licensure in Medicine to be qualified as a physician's assistant; a minimum of 1,000 hours of classroom instruction in acupuncture and related subjects at an approved institution; a minimum of 300 hours of clinical experience in the field of acupuncture; and certification by the National Commission for the Certification of Acupuncturists and Oriental Medicine, or passage of a written examination approved by the board.

The requirements to be licensed as a naturopathic doctor include possession of a degree from an approved naturopathic medical college and successful completion of a competency-based examination covering the appropriate naturopathic subjects, including basic and clinical sciences. In order to practice naturopathic acupuncture, a naturopathic doctor must obtain a naturopathic acupuncture specialty certification which requires successful completion of an acupuncture program approved by the board that includes 1,000 hours of classroom training and 300 hours of supervised clinical training. In addition, the naturopathic doctor must pass an examination administered by the National Commission for the Certification of Acupuncturists and Oriental Medicine.

Employment & Wages

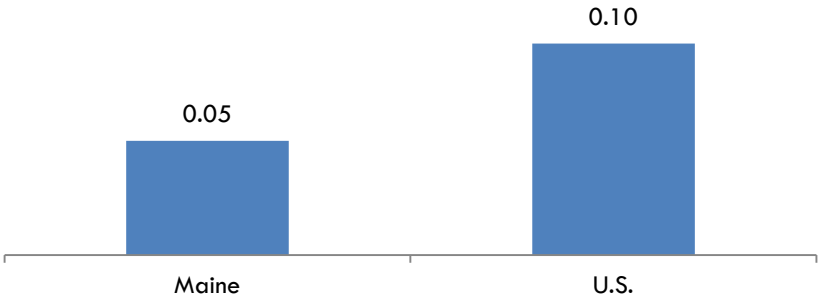
There were an estimated 70 health diagnosing and treating practitioners, all other employed in Maine in 2012. The median annual wage for these occupations across all employment settings was $68,000; those employed in ambulatory clinics had median wages of $165,000. These figures do not include the self-employed. According to employment projections data, which include the self-employed (but is slightly older data), there were an estimated 134 practicing in Maine in 2010. Please see the discussion at the beginning of this report for more information on the limitations of the data.

2012 Employment & Wage Statistics

	Average Employment	Median Annual Salary
Maine	70	$67,870
Industries with Highest Share of Employment (% total)		
Ambulatory Health Care Services	n/a	$164,810
Hospitals	43%	$59,950

Source: 2012 Occupational Employment Statistics, CWRI

Health diagnosing and treating practitioners, all other per 1,000 Population



Schools offering training and number completing

There are no schools offering naturopathic medical education in Maine, nor are there approved programs or schools for acupuncture.

Outlook

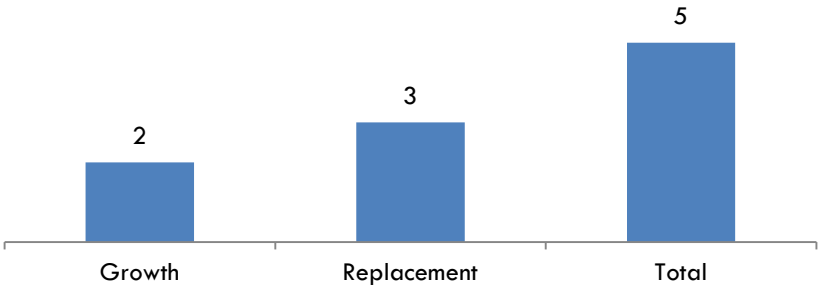
The total number of health diagnosing and treating practitioners, all other, practicing in Maine is expected to increase 16 percent from 2010 to 2020; the number employed and self-employed are projected to increase six and 34 percent, respectively. In total, five job openings per year are anticipated; two from new growth and three from replacement needs.

Employment of Health Diagnosing and Treating Practitioners, all other in Maine, 2010 and Projected 2020

Average Employment		Change in Employment (2010-2020)		Projected Annual Openings Resulting from New Growth
2010	2020	Net	Percent	
134	156	22	16%	2

Source: CWRI 2010-2020 Employment Projections

Projected Annual Job Openings, Diagnosing and Treating Practitioners, all other



29-2071 Medical Records and Health Information Technicians

Occupation description

Compile, process, and maintain medical records of hospital and clinic patients in a manner consistent with medical, administrative, ethical, legal, and regulatory requirements of the health care system. Process, maintain, compile, and report patient information for health requirements and standards in a manner consistent with the healthcare industry's numerical coding system. Excludes "File Clerks" (43-4071).

Illustrative examples: Cancer Registrar, Health Information Coder, Health Information Systems Technician, Medical Records Specialist

Education requirements

Medical records and health information technicians typically need a postsecondary certificate to enter the occupation, although they may have an associate's degree. Many employers also require professional certification.

Postsecondary certificate and associate's degree programs in health information technology typically include courses in medical terminology, anatomy and physiology, health data requirements and standards, classification and coding systems, healthcare reimbursement methods, healthcare statistics, and computer systems. Applicants to health information technology programs increase their chances of admission by taking high school courses in health, computer science, math, and biology.

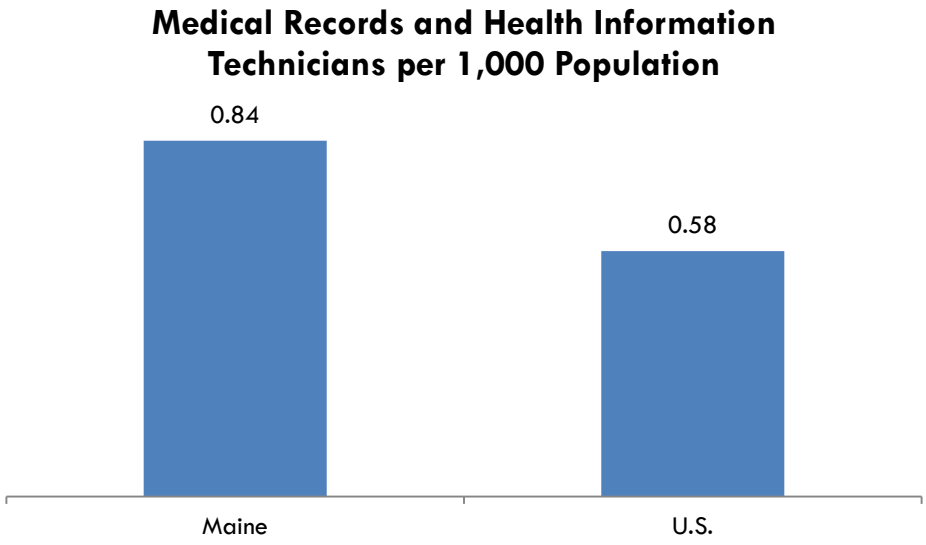
Most employers prefer to hire medical records and health information technicians who have professional certification. A medical records and health information technician can get certification from several organizations. Some organizations base certification on passing an exam. Others require graduation from an accredited program. Once certified, technicians typically must renew their certification regularly and take continuing education courses. Certifications include Registered Health Information Technician (RHIT) and Certified Tumor Registrar (CTR), among others. Many coding certifications require coding experience in a work setting. Some states require cancer registrars to have certification; requirements vary by state.

Licensing is not required in Maine.

Employment & Wages

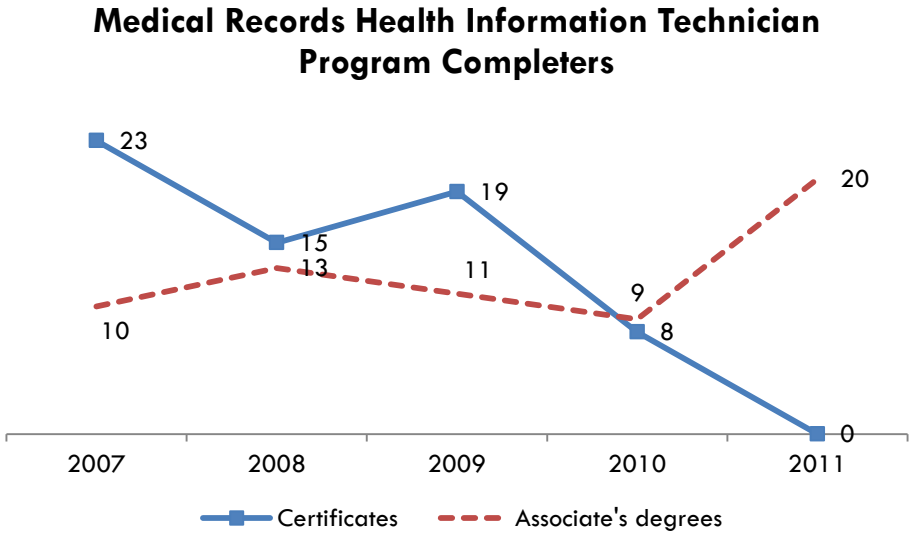
2012 Employment & Wage Statistics	Average Employment	Median Annual Salary
Maine	1,120	$32,180
Industries with Highest Share of Employment (% total)		
Hospitals	65%	$33,380
Ambulatory Health Care Services	20%	$28,840

Source: 2012 Occupational Employment Statistics, CWRI



Schools offering training and number completing

Kennebec Valley Community College and Beal College report completer information to IPEDS under the classification of instruction, "Health Information/Medical Records Technology." Both institutions had graduates in their associate degree programs 2011. There were no program completers in the certificate programs at these schools in 2011.



Education Programs & Annual Graduates								
School	CIP Code	CIP Title	Completer Title	2007	2008	2009	2010	2011
Kennebec Valley Community College	510707	Health Information/ Medical Records Technology/Technician	Post-Sec. Awards/Cert./ Diplomas; 1-2 yrs.	5	1	2	2	
Beal College	510707	Health Information/ Medical Records Technology/Technician	Post-Sec. Awards/Cert./ Diplomas; 1-2 yrs.	18	14	17	6	
sub total				**23**	**15**	**19**	**8**	**0**
Kennebec Valley Community College	510707	Health Information/ Medical Records Technology/Technician	Associate's Degree	10	13	11	9	13
Beal College	510707	Health Information/ Medical Records Technology/Technician	Associate's Degree					7
sub total				**10**	**13**	**11**	**9**	**20**
Total				**33**	**28**	**30**	**17**	**20**

Source: IPEDS, CWRI

Outlook

Nationally, employment of medical records and health information technicians is expected to increase by 21 percent from 2010 to 2020, faster than the average for all occupations. In Maine, employment is expected to increase 17 percent, above the 6 percent growth expected for all occupations statewide but below the national rate. As noted in the introduction of this report, slower population growth for Maine is a contributing factor to lower occupational employment growth.

The demand for health services is expected to increase as the population ages. An aging population will need more medical tests, treatments, and procedures. This will also mean more claims for reimbursement from private and public insurance. Additional records, coupled with widespread use of electronic health records (EHR) by all types of healthcare providers, should lead to an increased need for technicians to organize and manage the associated information in all areas of the healthcare industry. Population aging and the increased need for medical records will drive demand for technicians, and implementation of EHR will change the scope of how work is done.

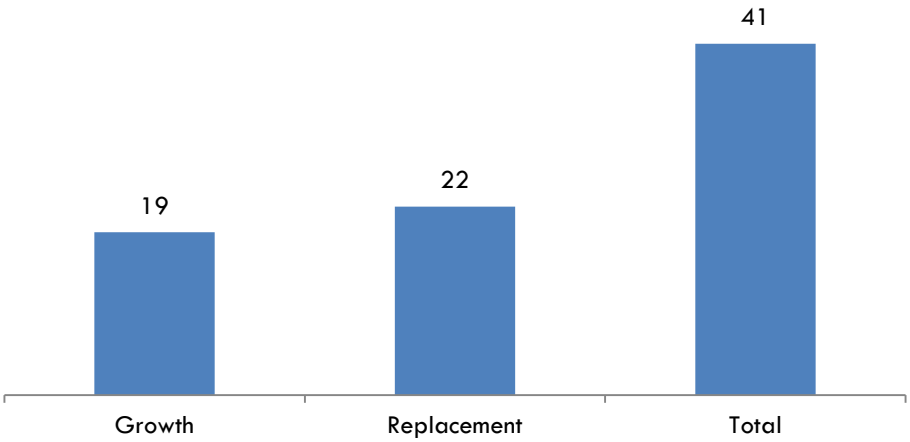
Cancer registrars are expected to continue to be in high demand. As the population ages, there will likely be more types of special purpose registries because many more types of illnesses are detected and treated later in life.

The Job prospects will be best for those with a certification in health information. As EHR systems continue to become more common, technicians with computer skills will be needed to use them. In Maine, 41 job openings per year are expected, 19 from new growth and 22 from replacement needs.

Employment of Medical Records and Health Information Technicians in Maine, 2010 and Projected 2020				
Average Employment		Change in Employment (2010-2020)		Projected Annual Openings Resulting from New Growth
2010	2020	Net	Percent	
1,085	1,273	188	17%	19

Source: CWRI 2010-2020 Employment Projections

Projected Annual Job Openings, Medical Records and Health Information Technicians



Appendix I

Health Sector Employment

Ownership	NAICS Description	NAICS Code	Average Employment 2010	2011	2012
All Ownerships	**Health Care and Social Assistance**	**62**	**104,357**	**104,881**	**105,839**
All Ownerships	**Ambulatory health care services**	**621**	**26,222**	**25,928**	**26,858**
All Ownerships	Offices of physicians	6211	9,893	9,340	9,510
All Ownerships	Offices of physicians, except mental health	621111	9,767	9,212	9,383
All Ownerships	Offices of mental health physicians	621112	127	128	128
All Ownerships	Offices of dentists	6212	3,541	3,563	3,646
All Ownerships	Offices of dentists	621210	3,541	3,563	3,646
All Ownerships	Offices of other health practitioners	6213	3,722	3,793	4,194
All Ownerships	Offices of chiropractors	621310	665	653	632
All Ownerships	Offices of optometrists	621320	748	761	791
All Ownerships	Offices of mental health practitioners	621330	422	417	507
All Ownerships	Offices of specialty therapists	621340	1,461	1,513	1,793
All Ownerships	Offices of podiatrists	621391	139	147	152
All Ownerships	Offices of miscellaneous health practitioners	621399	287	302	319
All Ownerships	Outpatient care centers	6214	2,297	2,369	2,480
All Ownerships	Family planning centers	621410	98	99	98
All Ownerships	Outpatient mental health centers	621420	1,791	1,821	1,942
All Ownerships	HMO medical centers	621491	0	0	0
All Ownerships	Kidney dialysis centers	621492	*	*	218
All Ownerships	Freestanding emergency medical centers	621493	67	74	72
All Ownerships	All other outpatient care centers	621498	131	166	150
All Ownerships	Medical and diagnostic laboratories	6215	1,089	1,116	1,102
All Ownerships	Medical laboratories	621511	884	921	914
All Ownerships	Diagnostic imaging centers	621512	205	195	188
All Ownerships	Home health care services	6216	3,613	3,716	3,998
All Ownerships	Home health care services	621610	3,613	3,716	3,998
All Ownerships	Other ambulatory health care services	6219	2,067	2,030	1,928
All Ownerships	Ambulance services	621910	1,493	1,521	1,541
All Ownerships	Blood and organ banks	621991	220	197	207
All Ownerships	Miscellaneous ambulatory health care services	621999	354	313	180
All Ownerships	**Hospitals**	**622**	**34,551**	**35,143**	**35,186**
All Ownerships	General medical and surgical hospitals	6221	32,317	32,980	33,122
All Ownerships	General medical and surgical hospitals	622110	32,317	32,980	33,122
All Ownerships	Psychiatric and substance abuse hospitals	6222	1,604	1,506	1,406
All Ownerships	Psychiatric and substance abuse hospitals	622210	1,604	1,506	1,406
All Ownerships	Other hospitals	6223	630	658	658
All Ownerships	Other hospitals	622310	630	658	658
All Ownerships	**Nursing and residential care facilities**	**623**	**24,833**	**24,865**	**24,760**
All Ownerships	Nursing care facilities, skilled nursing	6231	12,361	12,110	12,047
All Ownerships	Nursing care facilities, skilled nursing	623110	12,361	12,110	12,047
All Ownerships	Residential mental health facilities	6232	5,751	5,770	5,725
All Ownerships	Residential developmental disability homes	623210	4,023	4,026	4,061
All Ownerships	Residential mental and substance abuse care	623220	1,728	1,744	1,664
All Ownerships	Continuing care, assisted living facilities	6233	5,741	5,931	5,987
All Ownerships	Continuing care retirement communities	623311	939	1,183	1,230
All Ownerships	Assisted living facilities for the elderly	623312	4,802	4,748	4,757
All Ownerships	Other residential care facilities	6239	981	1,055	1,001
All Ownerships	Other residential care facilities	623990	981	1,055	1,001
All Ownerships	**Social assistance**	**624**	**18,750**	**18,946**	**19,036**
All Ownerships	Individual and family services	6241	12,631	13,055	13,219
All Ownerships	Child and youth services	624110	2,186	2,265	2,424
All Ownerships	Services for the elderly and disabled	624120	7,532	7,914	8,086
All Ownerships	Other individual and family services	624190	2,913	2,876	2,709
All Ownerships	Emergency and other relief services	6242	624	641	582
All Ownerships	Community food services	624210	91	104	98
All Ownerships	Temporary shelters	624221	394	428	409
All Ownerships	Other community housing services	624229	27		*
All Ownerships	Emergency and other relief services	624230	113	101	68
All Ownerships	Vocational rehabilitation services	6243	1,728	1,458	1,450
All Ownerships	Vocational rehabilitation services	624310	1,728	1,458	1,450
All Ownerships	Child day care services	6244	3,768	3,791	3,785
All Ownerships	Child day care services	624410	3,768	3,791	3,785

Source: Quarterly Census of Employment and Wages (QCEW)