

L a b o r M a r k e t I n d u s t r y P r o f i l e

*Florida*  
**Life Sciences**  
**Industry**

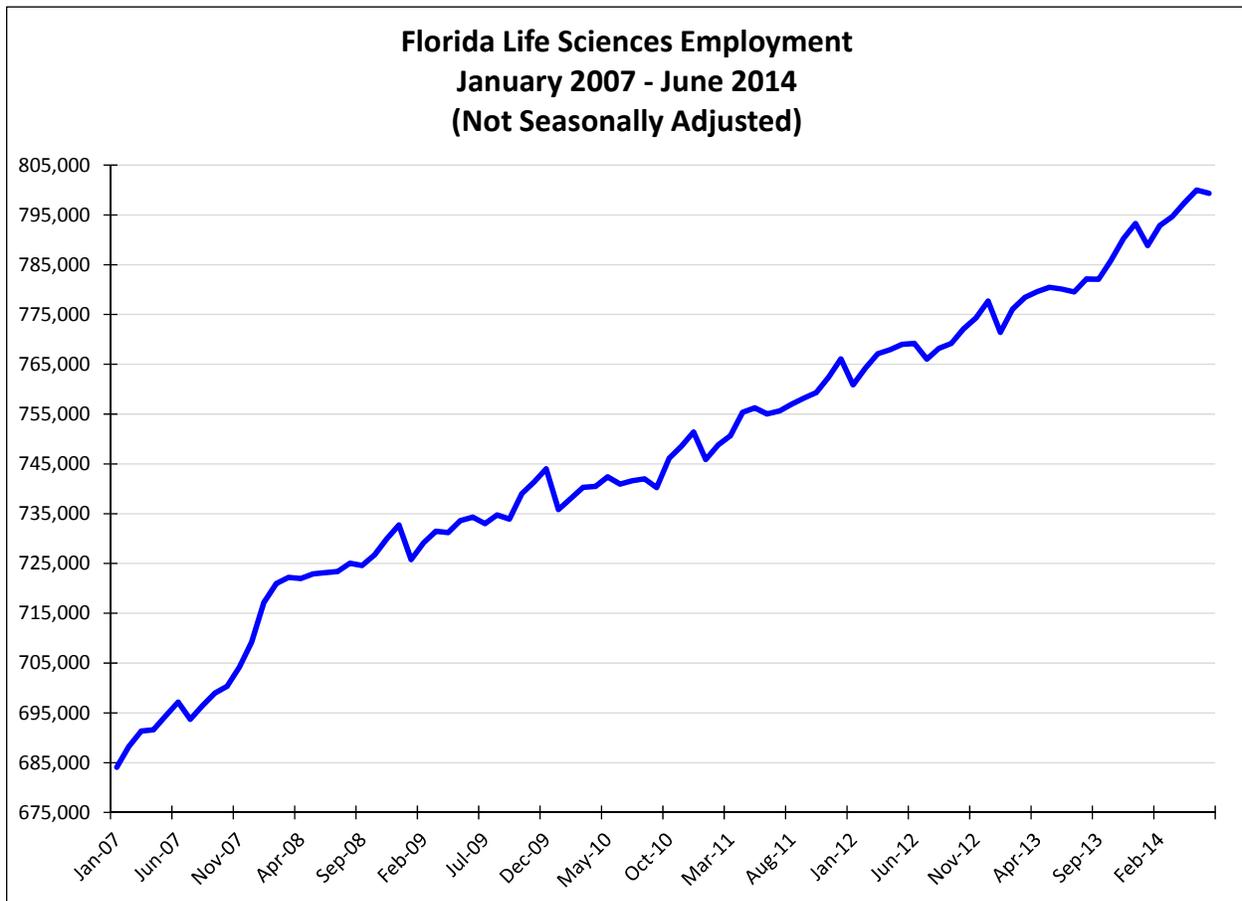
**2015 Edition**



## Florida Life Sciences Industry Cluster

Florida's life sciences industry cluster is comprised of the biosciences industry (Part I) and the health care industry (Part II).

- Some of the largest industry subsectors within the life sciences industry cluster include: pharmaceutical preparation manufacturing; electromedical and electrotherapeutic apparatus manufacturing; surgical and medical instrument manufacturing; surgical appliance and supplies manufacturing; ophthalmic goods manufacturing; ambulatory health care services (physicians, dentists, outpatient care centers, and home health care centers); and hospitals.
- The life sciences industry cluster had 47,695 establishments in June 2014, with employment of 799,355 jobs. Employment was up 19,260 jobs (+2.5 percent) from June 2013. Employment has been on an upward trend from January 2007 to June 2014, gaining 115,274 jobs (+16.9 percent) over this period.

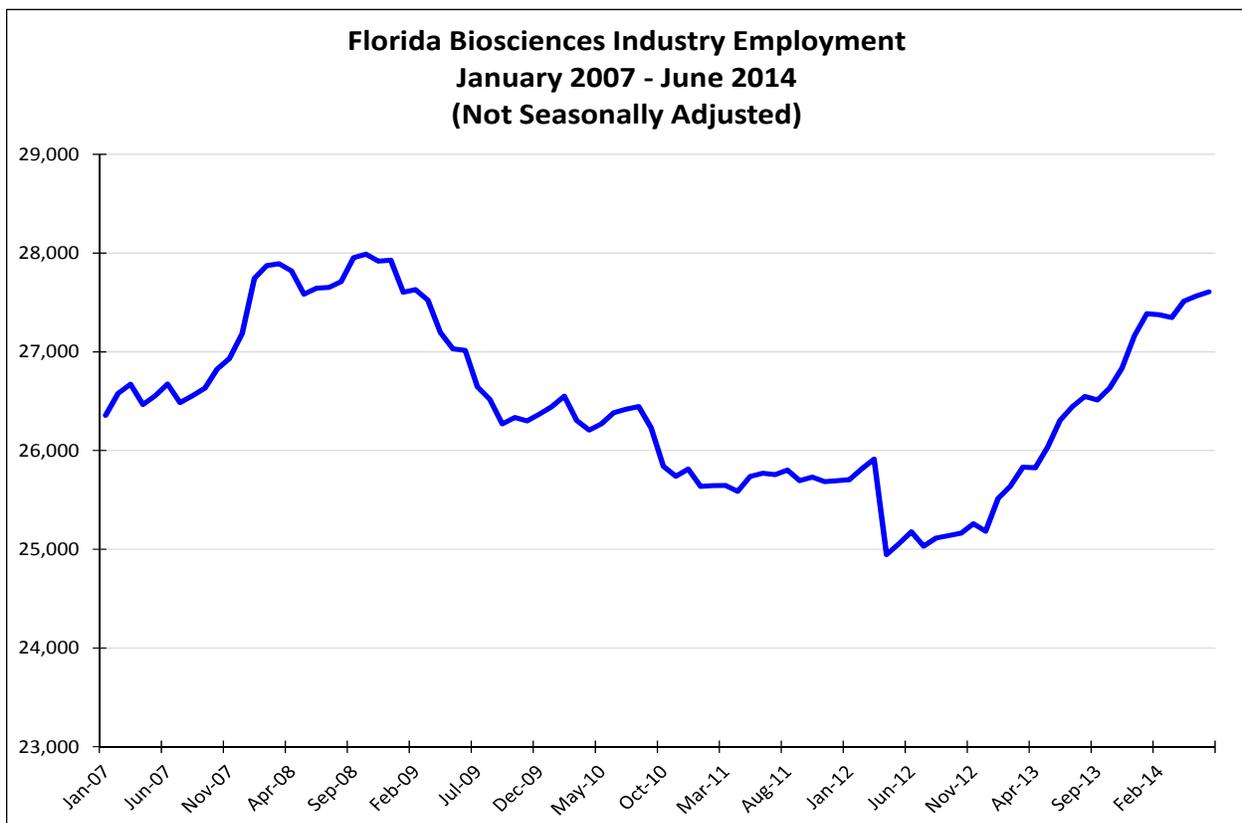


Source: Florida Department of Economic Opportunity, Bureau of Labor Market Statistics, Quarterly Census of Employment and Wages program (QCEW).

## Florida Biosciences Industry, Part I

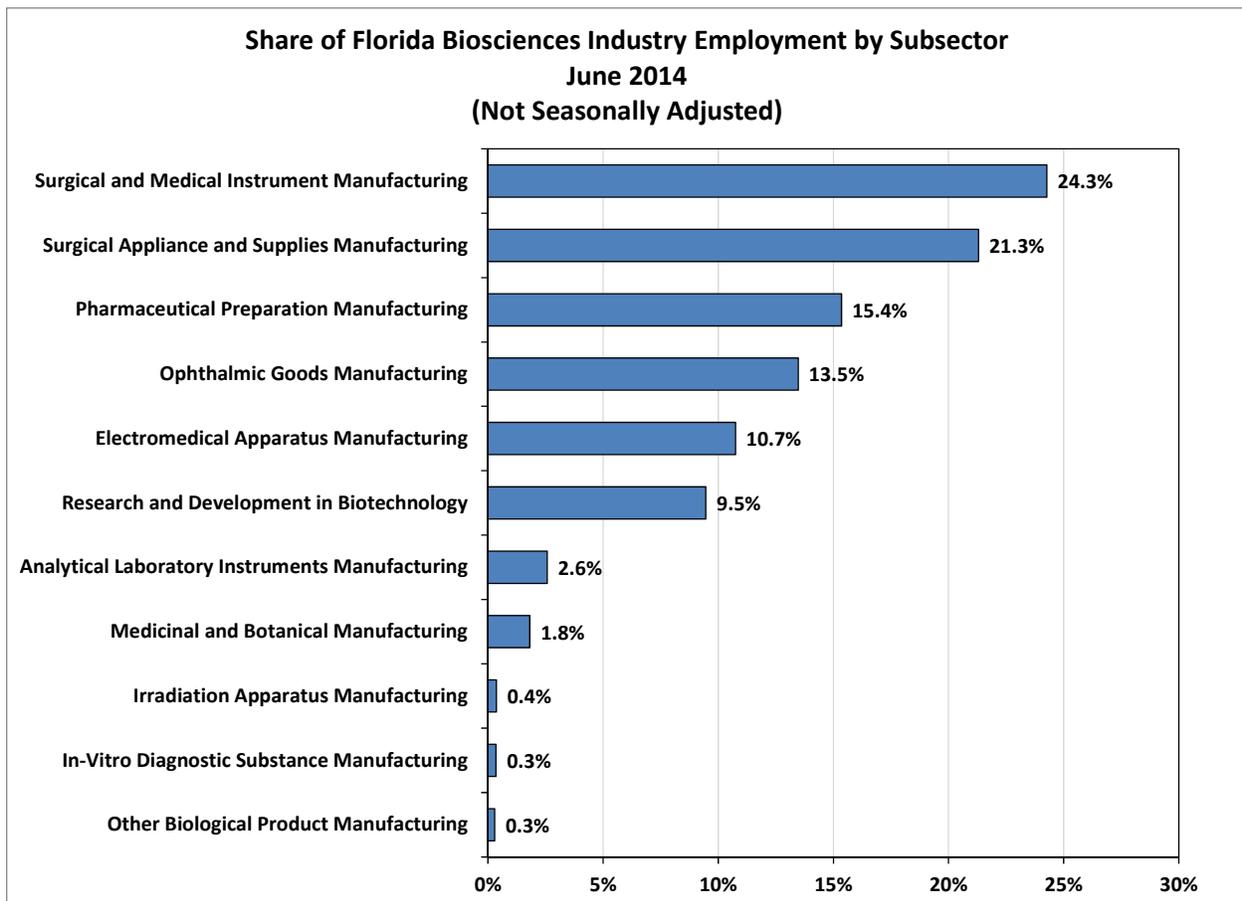
Florida continues to build a world-class biosciences industry since the job losses incurred during 2008 to 2012. This biosciences industry is built on a foundation of strong research universities and leading institutes.

- The biosciences industry includes the following subsectors: medicinal and botanical manufacturing; pharmaceutical preparation manufacturing; in-vitro diagnostic substance manufacturing; other biological product manufacturing; electromedical apparatus manufacturing; analytical laboratory instruments manufacturing; irradiation apparatus manufacturing; surgical and medical instrument manufacturing; surgical appliance and supplies manufacturing; ophthalmic goods manufacturing; and research and development in biotechnology.
- The biosciences industry had 1,193 establishments in June 2014, with employment of 27,608 jobs. Employment was up 1,301 jobs (+4.9 percent) from June 2013. Total jobs for all industries increased by 3.1 percent over the same time period.



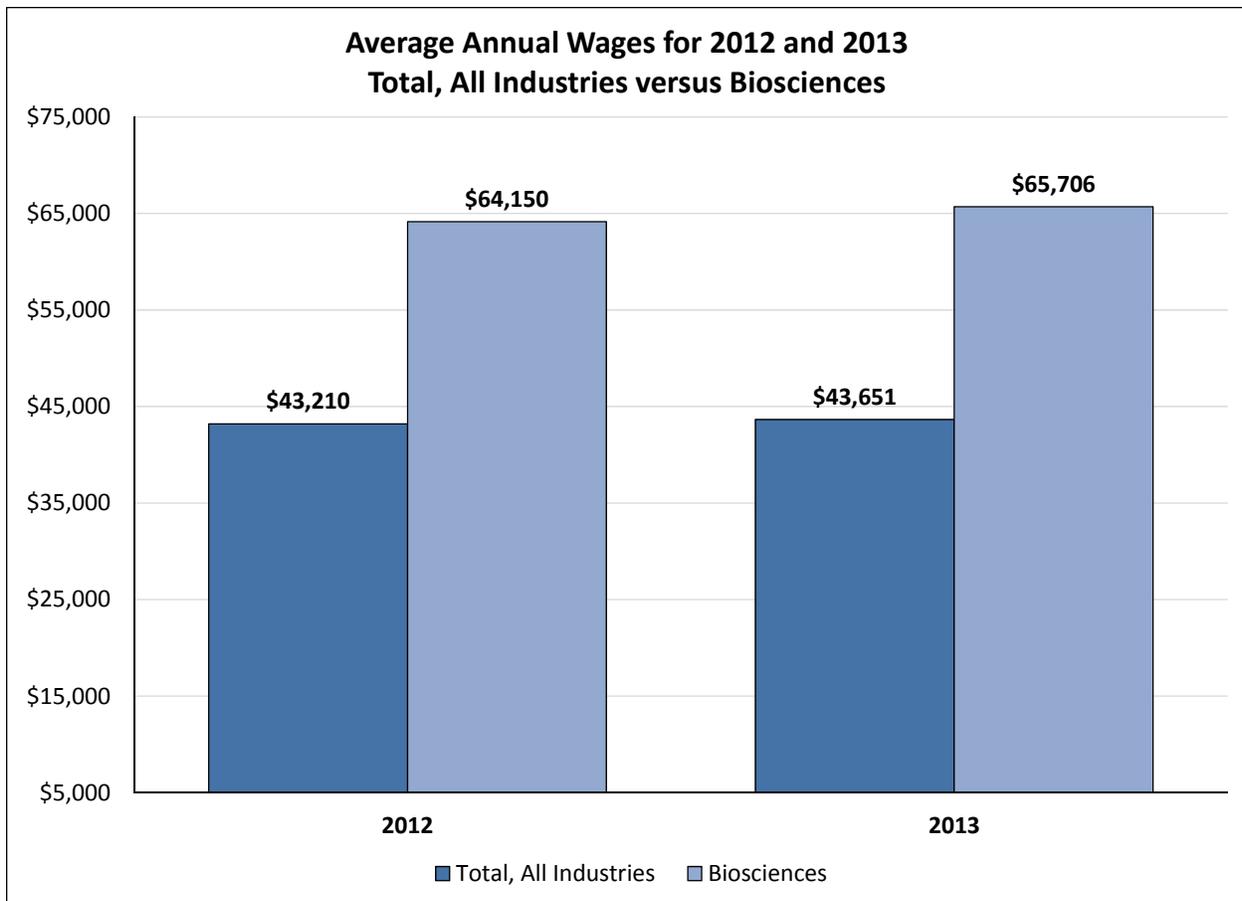
Source: Florida Department of Economic Opportunity, Bureau of Labor Market Statistics, Quarterly Census of Employment and Wages program (QCEW).

- Florida biosciences employment reached a high point of 27,989 jobs in October 2008. From this peak, employment followed a downward trend to a low of 24,947 jobs in April 2012. Employment has been on an upward trend from the April 2012 low to June 2014, rising to 27,608 jobs in June 2014. From its peak in October 2008, biosciences employment was down 381 jobs (-1.4 percent) in June 2014.
- The largest subsectors within biosciences in June 2014 were surgical and medical instrument manufacturing (6,702 jobs); surgical appliance and supplies manufacturing (5,881 jobs); and pharmaceutical preparation manufacturing (4,239 jobs). These three industries made up 60.9 percent of biosciences industry employment.



Source: Florida Department of Economic Opportunity, Bureau of Labor Market Statistics, Quarterly Census of Employment and Wages program (QCEW).

- Within the biosciences industry, the pharmaceutical preparation manufacturing subsector gained the most jobs over the year (+375 jobs, +9.7 percent) and ophthalmic goods manufacturing lost the most jobs over the year (-11 jobs, -0.3 percent).



Source: Florida Department of Economic Opportunity, Bureau of Labor Market Statistics, Quarterly Census of Employment and Wages program (QCEW).

- The 2013 average annual wage for biosciences increased more than the average wage for all industries over the year and grew at a faster rate. The 2013 average annual wage for biosciences was \$65,706, an increase of \$1,556 (+2.4 percent) from 2012. The average annual wage for all industries grew by \$441 (+1.0 percent) over the year.
- The 2013 average annual wage for biosciences exceeded the average annual wage for all industries (\$43,651) by \$22,055 (+50.5 percent). This gap has widened from 2012 when the biosciences average annual wage exceeded the wage for all industries by \$20,940 (+48.5 percent).
- Irradiation apparatus manufacturing had an average annual wage of \$110,800 in 2013, the highest in biosciences and 153.8 percent higher than the average annual wage for all industries. Medicinal and botanical manufacturing had the lowest average annual wage in 2013 (\$49,335). All of the 11 biosciences subsectors had 2013 average annual wages in excess of the average annual wage for all industries. Nine subsectors had average annual wages greater than \$50,000 and eight subsectors had wages higher than

\$60,000. Compared to the average annual wage for all industries in 2013 (\$43,651), most biosciences subsectors had relatively high wages.

## All Education and Training Levels

Top Occupations in the Biosciences Industry for All Training Levels							
Florida Statewide Occupation Title	Employment		Change		% of Industry Total	2014 Average Hourly Wage	Training Requirement
	2014	2022	Total	Percent			
<b>Total, All Biosciences Occupations</b>	<b>55,374</b>	<b>60,307</b>	<b>4,933</b>	<b>8.91</b>			
Dental Laboratory Technicians	2,443	2,496	53	2.17	4.41	\$20.31	PSAV Certificate
Electrical and Electronic Equipment Assemblers	2,244	2,283	39	1.74	4.05	\$16.05	PSAV Certificate
Industrial Engineers	1,780	1,887	107	6.01	3.21	\$35.05	Bachelor's degree
First-Line Supervisors/Managers of Production and Operating Workers	1,598	1,662	64	4.01	2.89	\$27.15	PSAV Certificate
Medical Scientists, Except Epidemiologists	1,303	1,783	480	36.84	2.35	\$39.73	Master's degree and above
Inspectors, Testers, Sorters, Samplers, and Weighers	1,275	1,461	186	14.59	2.30	\$17.76	High school
Software Developers, Applications	822	908	86	10.46	1.48	\$39.68	Associate degree
Electromechanical Equipment Assemblers	711	837	126	17.72	1.28	\$15.67	PSAV Certificate
Chemists	698	760	62	8.88	1.26	\$32.65	Bachelor's degree
Electrical Engineers	684	758	74	10.82	1.24	\$41.47	Bachelor's degree
Mechanical Engineers	644	684	40	6.21	1.16	\$39.30	Bachelor's degree
Software Developers, Systems Software	629	697	68	10.81	1.14	\$44.57	Bachelor's degree
Biochemists and Biophysicists	587	795	208	35.43	1.06	\$36.07	Master's degree and above
Ophthalmic Laboratory Technicians	543	556	13	2.39	0.98	\$15.66	PSAV Certificate
Biological Technicians	496	580	84	16.94	0.90	\$18.65	Associate degree

Source: Florida Department of Economic Opportunity, Bureau of Labor Market Statistics, Long Term Projections program, forecast to 2022. Forecasts to the year 2022 assume economic recovery.

- The 15 largest biosciences-specific occupations comprise 29.7 percent of the total employment in this industry.
- The largest biosciences-specific occupation in 2014 is dental laboratory technicians, which has an average hourly wage of \$20.31.
- Among the fifteen largest biosciences-specific occupations, hourly wages range from a high of \$44.57 for software developers, systems software to a low of \$15.66 for ophthalmic laboratory technicians.
- Ten of the fifteen largest occupations have an average wage greater than \$20.00 per hour.
- All of the fifteen largest occupations are projected to gain employment through 2022.

- Medical scientists, except epidemiologists are projected to gain the most jobs (+480 jobs) and grow the fastest (+36.84 percent) of all of the top 15 biosciences-specific occupations from 2014 to 2022.
- Fourteen of the top 15 biosciences-specific occupations require training beyond high school, with seven requiring a bachelor’s degree or higher. Higher wages are found in occupations with greater training requirements.

### Bachelor’s Degree or Higher

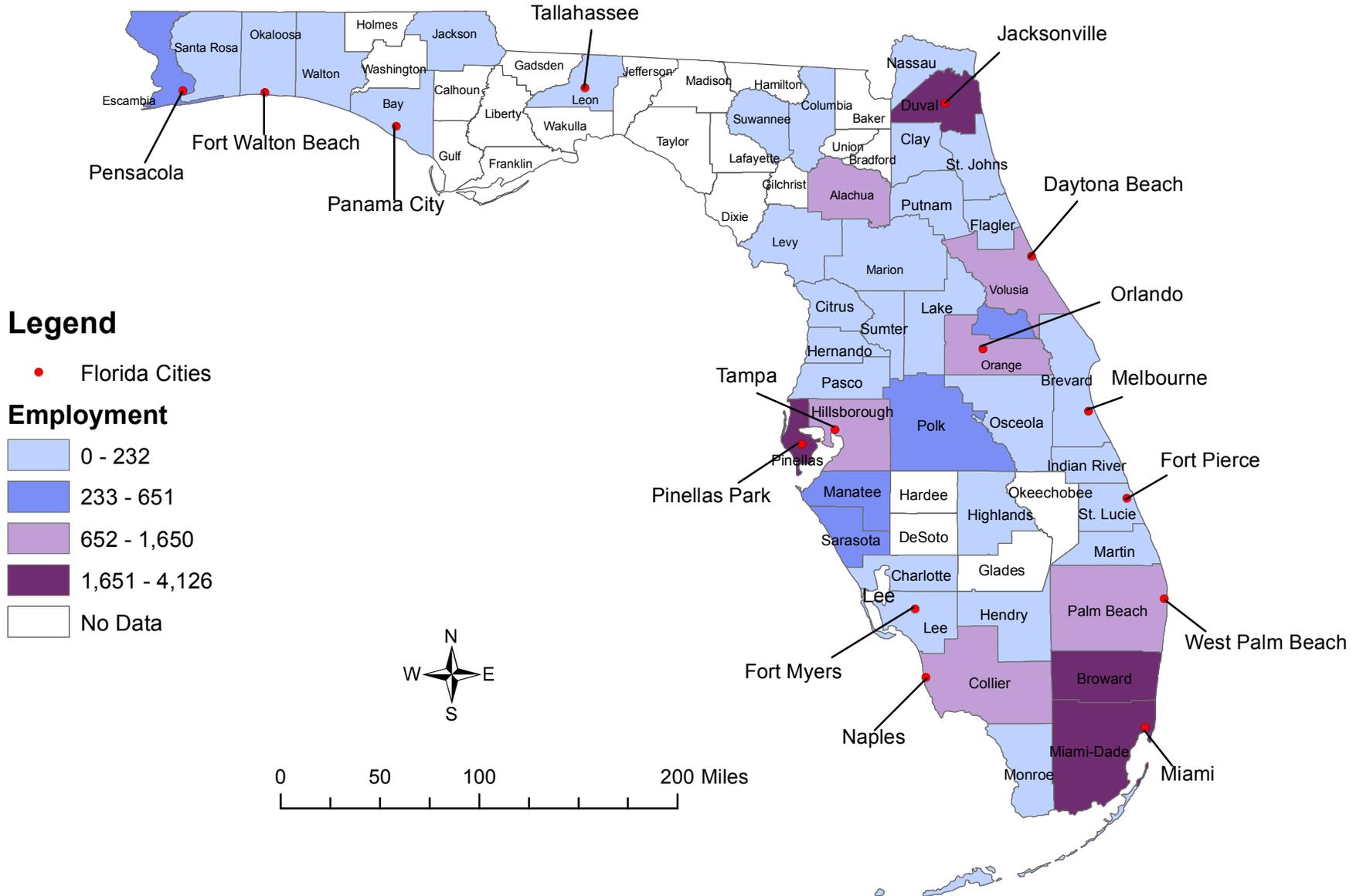
Top Occupations in the Biosciences Industry That Require 4-Year Degree or Higher							
Florida Statewide  Occupation Title	Employment		Change		% of Industry Total	2014 Average Hourly Wage	Training Requirement
	2014	2022	Total	Percent			
	<b>Total, All Biosciences Occupations</b>	<b>55,374</b>	<b>60,307</b>	<b>4,933</b>			
Industrial Engineers	1,780	1,887	107	6.01	3.21	\$35.05	Bachelor's degree
Medical Scientists, Except Epidemiologists	1,303	1,783	480	36.84	2.35	\$39.73	Master's degree and above
Accountants and Auditors	800	862	62	7.75	1.44	\$33.38	Bachelor's degree
Chemists	698	760	62	8.88	1.26	\$32.65	Bachelor's degree
Electrical Engineers	684	758	74	10.82	1.24	\$41.47	Bachelor's degree
Mechanical Engineers	644	684	40	6.21	1.16	\$39.30	Bachelor's degree
Software Developers, Systems Software	629	697	68	10.81	1.14	\$44.57	Bachelor's degree
Engineering Managers	595	626	31	5.21	1.07	\$58.32	Bachelor's degree
Biochemists and Biophysicists	587	795	208	35.43	1.06	\$36.07	Master's degree and above
Electronics Engineers, Except Computer	438	501	63	14.38	0.79	\$43.71	Bachelor's degree
Computer and Information Systems Managers	392	423	31	7.91	0.71	\$64.97	Bachelor's degree
Biomedical Engineers	372	556	184	49.46	0.67	\$37.93	Bachelor's degree
Market Research Analysts and Marketing Specialists	317	392	75	23.66	0.57	\$28.09	Bachelor's degree
Natural Sciences Managers	224	261	37	16.52	0.40	\$52.02	Bachelor's degree
Microbiologists	216	268	52	24.07	0.39	\$31.79	Master's degree and above

Source: Florida Department of Economic Opportunity, Bureau of Labor Market Statistics, Long Term Projections program, forecast to 2022. Forecasts to the year 2022 assume economic recovery.

- Approximately 17.5 percent of the jobs in biosciences are concentrated in the 15 largest high skill occupations in this industry.
- Average hourly wages for the top 15 high skill biosciences occupations range from a high of \$64.97 for computer and information systems managers to a low of \$28.09 for market research analysts and marketing specialists.
- All of the 15 largest high skill biosciences occupations have an average wage greater than \$20.00 per hour.
- All of the top 15 high skill biosciences occupations are projected to gain employment through 2022.

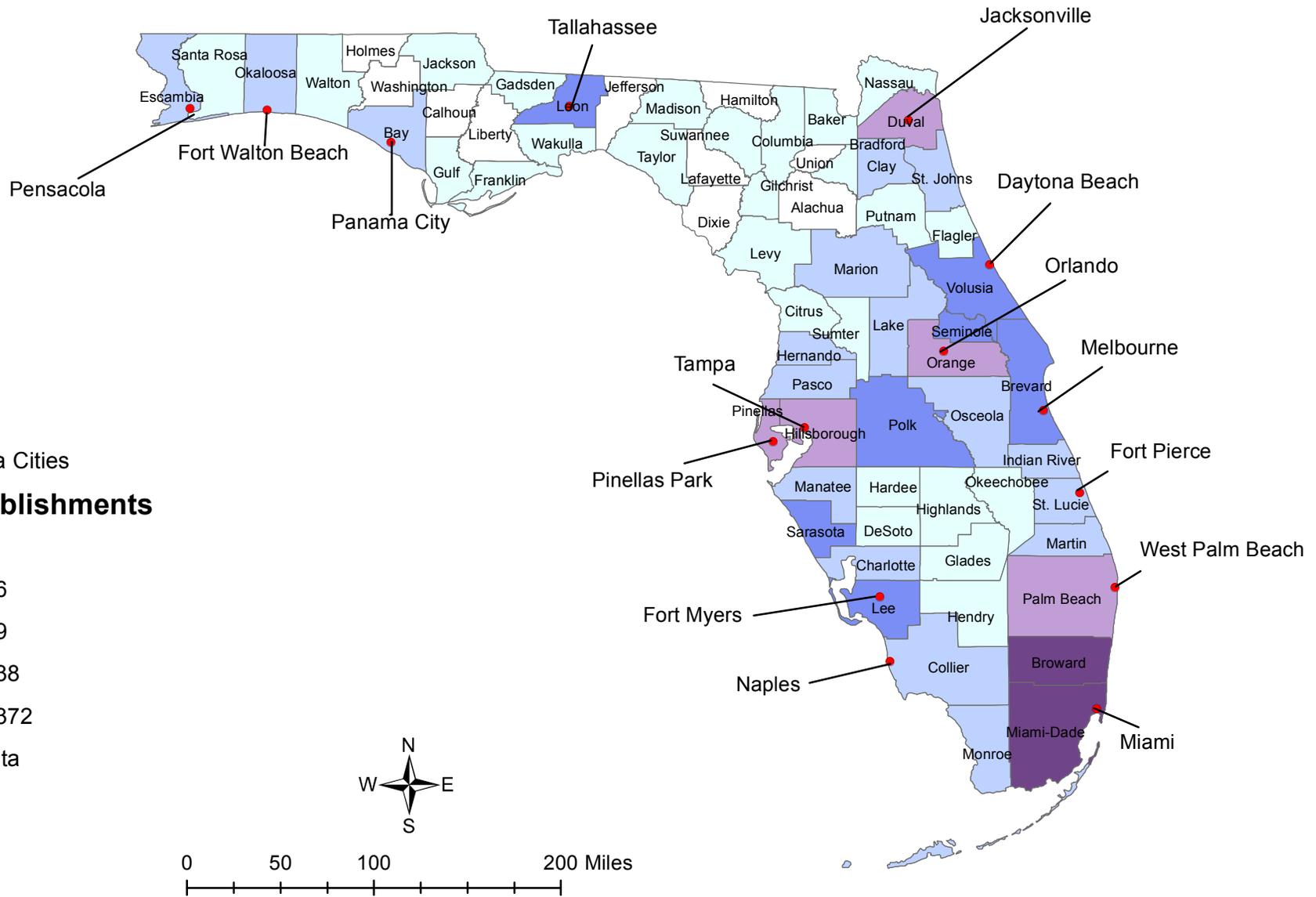
- Medical scientists, except epidemiologists are projected to gain the most jobs (+480 jobs) of all of the top 15 high skill biosciences occupations from 2014 to 2022, while biomedical engineers are projected to grow the fastest (+49.46 percent).
- Twelve of the top 15 high skill biosciences occupations require a bachelor's degree and three require a master's degree or higher.
- Employment in the biosciences industry is concentrated in the southeast, central, and northeast parts of the state. These counties include: Alachua, Broward, Collier, Duval, Hillsborough, Miami-Dade, Orange, Palm Beach, Pinellas, and Volusia.

# Concentration of Biosciences Industry Employment



Source: Florida Department of Economic Opportunity, Bureau of Labor Market Statistics, Quarterly Census of Employment and Wages - 2014, Q2, February 2015.

# Concentration of Biosciences Industry Establishments by Location



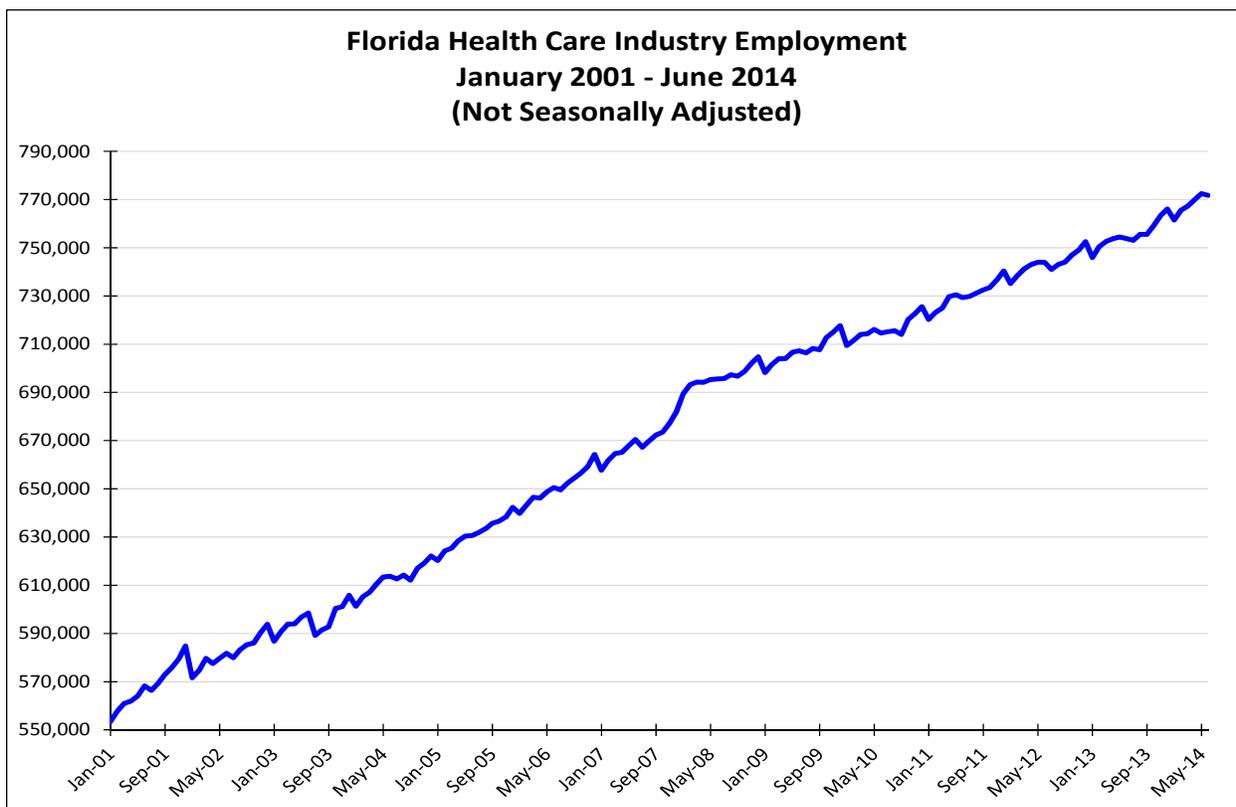
Source: Infogroup, Inc. Employer Database, 2015-1st Edition  
 Prepared by: Florida Department of Economic Opportunity, Bureau of Labor Market Statistics, February 2015.

## Florida Health Care Industry, Part II

The health care industry has two major subsectors: ambulatory health care services and hospitals. Industries in the ambulatory health care services subsector provide health care services directly or indirectly to ambulatory patients and do not usually provide inpatient services. Industries in the hospitals subsector provide medical, diagnostic, and treatment services that include physician, nursing, and other health services to inpatients and the specialized accommodation services required by inpatients.

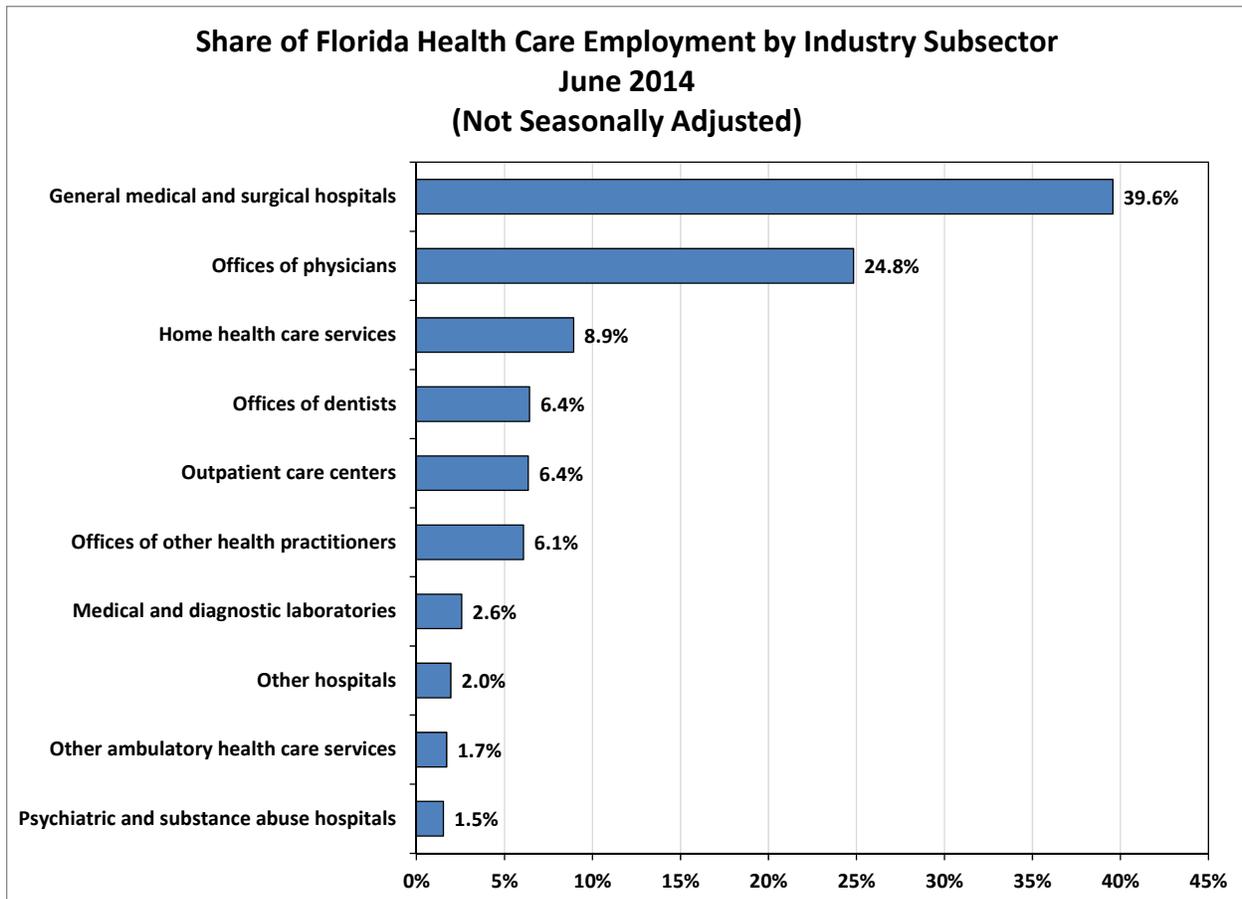
Industry groups within the ambulatory health care services subsector include offices of physicians; offices of dentists; offices of other health practitioners; outpatient care centers; medical and diagnostic laboratories; home health care services; and other ambulatory health care services. Industry groups within the hospitals subsector include general medical and surgical hospitals; psychiatric and substance abuse hospitals; and specialty hospitals.

- The health care industry sector had 46,502 establishments in June 2014 with employment of 771,747. Employment was up 17,959 jobs (+2.4 percent) from June 2013. Total jobs for all industries increased by 3.1 percent over the same time period.



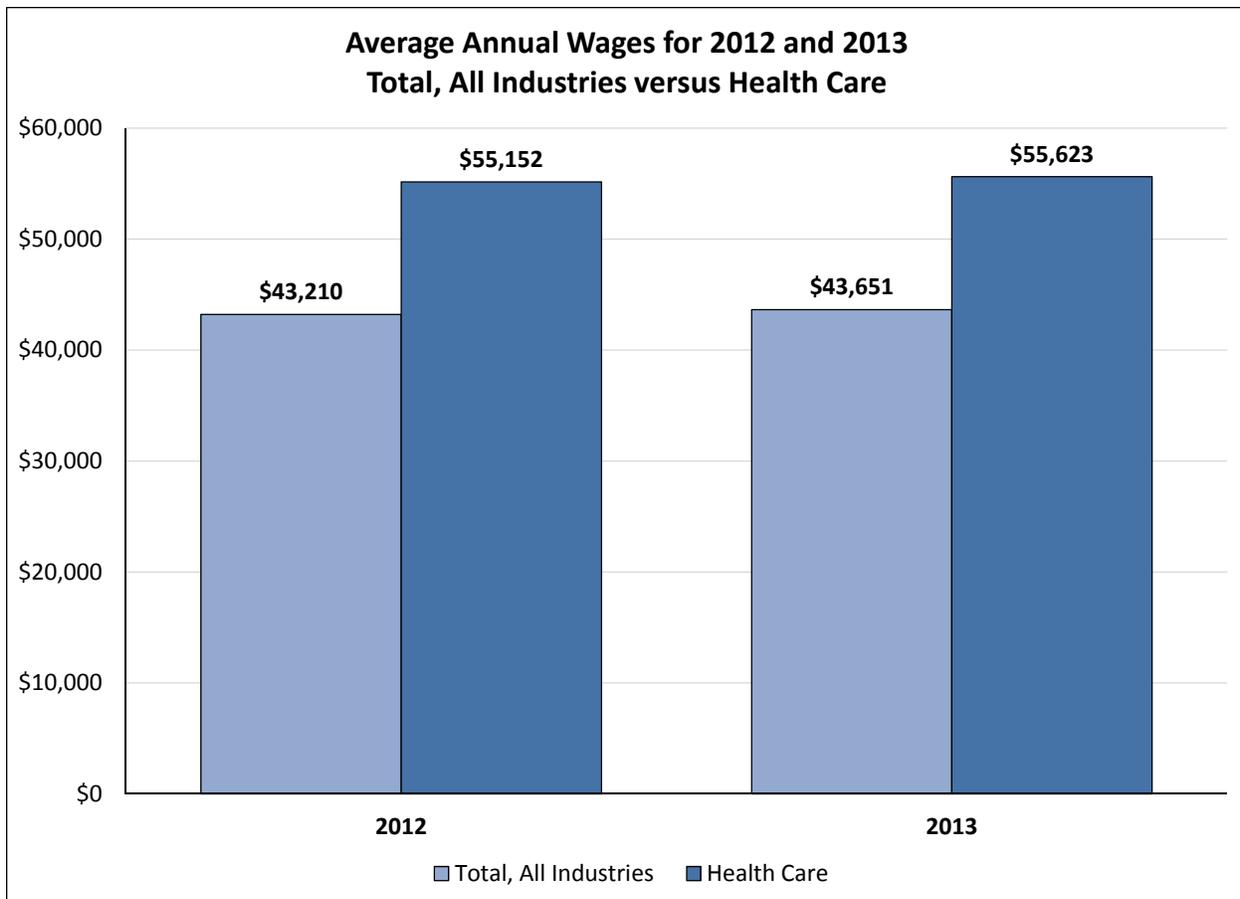
Source: Florida Department of Economic Opportunity, Bureau of Labor Market Statistics, Quarterly Census of Employment and Wages Program (QCEW).

- Florida health care employment has been on an upward trend from January 2001 to June 2014, rising from 553,469 jobs in January 2001 to 771,747 jobs in June 2014. From January 2001 to June 2014, health care employment has increased by 218,278 jobs (+39.4 percent).
- The largest subsectors within health care in June 2013 were general medical and surgical hospitals (305,399 jobs) and offices of physicians (191,679 jobs). These two industries made up 64.4 percent of health care employment.



Source: Florida Department of Economic Opportunity, Bureau of Labor Market Statistics, Quarterly Census of Employment and Wages Program (QCEW).

- Within the health care industry, outpatient care centers subsector gained the most jobs over the year in June 2014 (+4,648, +10.5 percent). The subsector losing the most jobs over the year in the industry was psychiatric and substance abuse hospitals (-537 jobs, -4.3 percent).



Source: Florida Department of Economic Opportunity, Bureau of Labor Market Statistics, Quarterly Census of Employment and Wages Program (QCEW).

- The 2013 average annual wage for health care increased more than the average wage for all industries over the year but grew at a slower rate. The 2013 average annual wage for health care was \$55,623, an increase of \$471 (+0.9 percent) from 2012. The average annual wage for all industries grew by \$441 (+1.0 percent) over the year.
- The 2013 average annual wage for health care exceeded the average annual wage for all industries (\$43,651) by \$11,972 (+27.4 percent). This gap has not changed much from 2012 when the health care average annual wage exceeded the wage for all industries by \$11,942 (+27.6 percent).
- Offices of physicians had an average annual wage of \$76,779 in 2013, the highest of all health care subsectors and 75.9 percent higher than the average annual wage for all industries. Psychiatric and substance abuse hospitals had the lowest average annual wage in 2013 (\$36,173), 17.1 percent lower than the average annual wage for all industries. Six of the ten health care subsectors had 2013 average annual wages in excess of the average annual wage for all industries. Four subsectors had average annual wages greater than \$50,000 and one subsector had a wage higher than \$60,000.

## All Education and Training Levels

<b>Top Occupations in the Health Care Industry For All Training Levels</b>							
Florida Statewide							
Occupation Title	Employment		Change		% of Industry Total	2014	Training Requirement
	2014	2022	Total	Percent		Average Hourly Wage	
<b>Total, All Health Care Occupations</b>	<b>744,337</b>	<b>904,776</b>	<b>160,439</b>	<b>21.55</b>			
Registered Nurses	139,762	169,175	29,413	21.05	18.78	\$30.53	Associate degree
Medical Assistants	37,886	47,140	9,254	24.43	5.09	\$14.03	PSAV Certificate
Nursing Assistants	29,077	34,364	5,287	18.18	3.91	\$11.68	PSAV Certificate
Licensed Practical and Licensed Vocational Nurses	20,353	25,167	4,814	23.65	2.73	\$20.33	PSAV Certificate
Medical Secretaries	16,674	21,648	4,974	29.83	2.24	\$14.84	PSAV Certificate
Dental Assistants	16,106	19,960	3,854	23.93	2.16	\$16.84	PSAV Certificate
Home Health Aides	14,200	20,841	6,641	46.77	1.91	\$10.92	PSAV Certificate
Physicians and Surgeons, All Other	12,624	15,662	3,038	24.07	1.70	\$100.92	Master's degree and above
Radiologic Technologists and Technicians	12,071	14,791	2,720	22.53	1.62	\$24.96	PSAV Certificate
Family and General Practitioners	10,211	12,604	2,393	23.44	1.37	\$91.70	Master's degree and above
Dental Hygienists	10,056	12,936	2,880	28.64	1.35	\$30.07	Associate degree
Physical Therapists	9,887	12,493	2,606	26.36	1.33	\$40.82	Master's degree and above
Medical and Clinical Laboratory Technologists	9,257	10,116	859	9.28	1.24	\$27.91	Associate degree
Medical and Health Services Managers	6,983	8,379	1,396	19.99	0.94	\$52.60	Bachelor's degree
Respiratory Therapists	6,857	8,259	1,402	20.45	0.92	\$26.26	Associate degree

Source: Florida Department of Economic Opportunity, Bureau of Labor Market Statistics, Long Term Projections Program, forecast to 2022. Forecasts to the year 2022 assume economic recovery.

- Employment in the 15 largest health care-specific occupations makes up 47.3 percent of the total employment in this industry.
- The largest health care-specific occupation in 2014 is registered nurses, which has an average hourly wage of \$30.53.
- Average hourly wages among the fifteen largest health care-specific occupations range from a high of \$100.92 for physicians and surgeons, all other to a low of \$10.92 for home health aides.
- Ten of the 15 largest occupations have an average wage greater than \$20.00 per hour.
- All of the fifteen largest occupations are projected to gain employment through 2022.
- Registered nurses are projected to gain the most jobs (+29,413 jobs) of all the top 15 health care-specific occupations, while home health aides are projected to grow the fastest (+46.77 percent) from 2014 to 2022.

- All of the top 15 health care-specific occupations require training beyond high school, with three requiring a master’s degree or higher. Higher wages are found in occupations with greater training requirements.

### Bachelor’s Degree or Higher

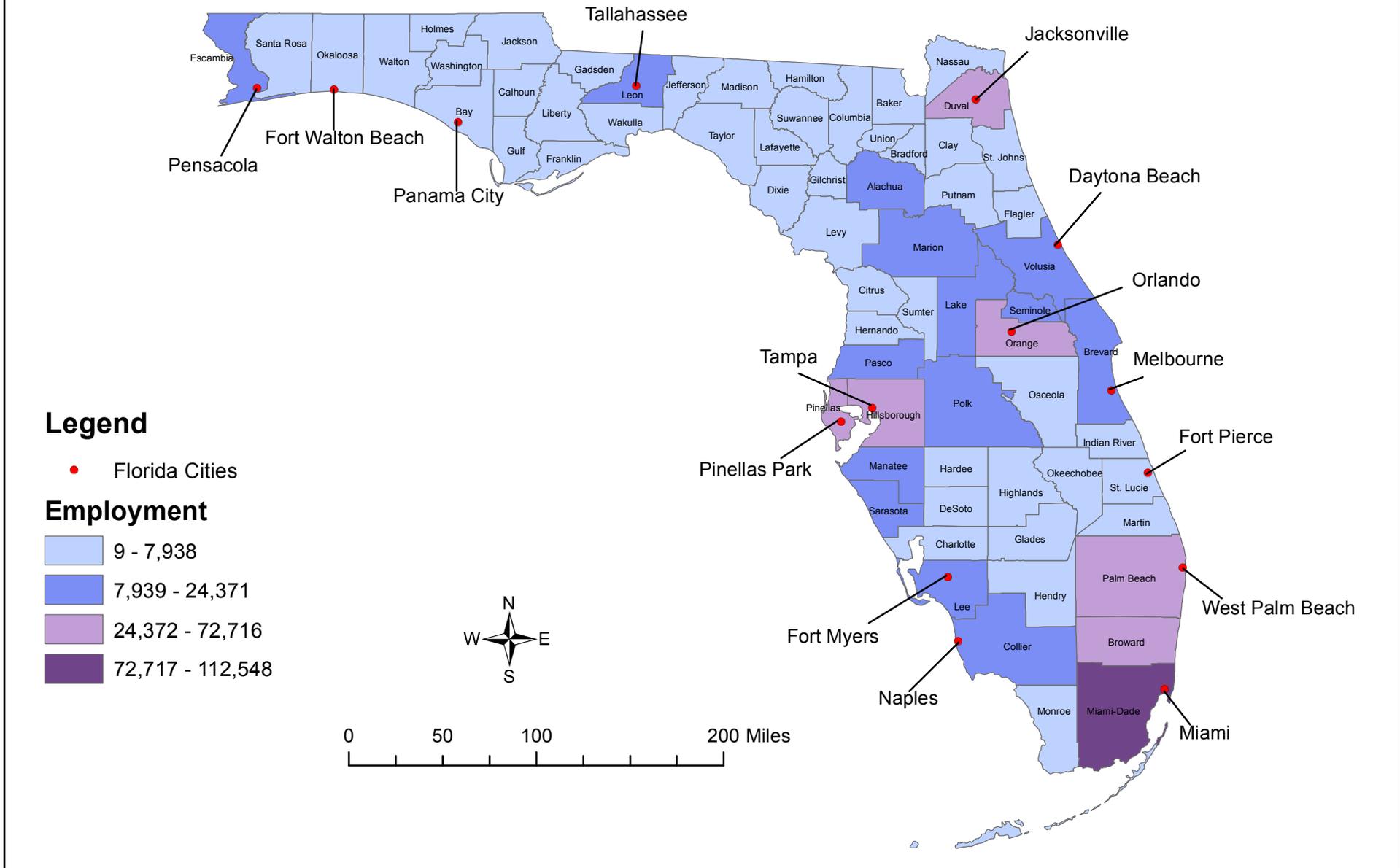
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Family and General Practitioners	10,211	12,604	2,393	23.44	1.37	\$91.70	Master's degree and above
Physical Therapists	9,887	12,493	2,606	26.36	1.33	\$40.82	Master's degree and above
Medical and Health Services Managers	6,983	8,379	1,396	19.99	0.94	\$52.60	Bachelor's degree
Nurse Practitioners	5,718	7,575	1,857	32.48	0.77	\$44.81	Master's degree and above
Dentists, General	5,225	5,980	755	14.45	0.70	\$75.41	Master's degree and above
Pharmacists	4,602	5,168	566	12.30	0.62	\$55.39	Master's degree and above
Physician Assistants	4,478	5,740	1,262	28.18	0.60	\$47.57	Bachelor's degree
Occupational Therapists	4,228	5,465	1,237	29.26	0.57	\$39.77	Master's degree and above
Internists, General	3,622	4,508	886	24.46	0.49	\$100.89	Master's degree and above
Medical and Public Health Social Workers	3,282	4,173	891	27.15	0.44	\$22.79	Master's degree and above
Accountants and Auditors	3,164	3,815	651	20.58	0.43	\$33.38	Bachelor's degree
Speech-Language Pathologists	2,897	3,656	759	26.20	0.39	\$36.37	Master's degree and above
Surgeons	2,562	3,186	624	24.36	0.34	\$117.04	Master's degree and above
Mental Health Counselors	2,521	3,143	622	24.67	0.34	\$20.26	Master's degree and above

Source: Florida Department of Economic Opportunity, Bureau of Labor Market Statistics, Long Term Projections Program, forecast to 2022. Forecasts to the year 2022 assume economic recovery.

- Approximately 11.0 percent of the jobs in health care are concentrated in the 15 largest high skill occupations in this industry.
- Average hourly wages for the top 15 high skill health care occupations range from a high of \$117.04 for surgeons to a low of \$20.26 for mental health counselors.
- All of the 15 largest high skill health care occupations have an average wage greater than \$20.00 per hour.
- All of the top 15 high skill health care occupations are projected to gain employment through 2022.
- Physicians and surgeons, all other are projected to gain the most jobs (+3,038 jobs) among the top 15 high skill health care occupations from 2014 to 2022, while nurse practitioners are expected to grow the fastest (+32.48 percent).

- Three of the 15 high skill occupations require a bachelor's degree and 12 require a master's degree or higher.
- Health care employment is concentrated in the southeast, central, and northeast parts of the state. These counties include: Broward, Duval, Hillsborough, Miami-Dade, Orange, Palm Beach, and Pinellas counties.

# Concentration of Health Care Employment



Source: Florida Department of Economic Opportunity, Bureau of Labor Market Statistics, Quarterly Census of Employment and Wages, 2014, Q2.

