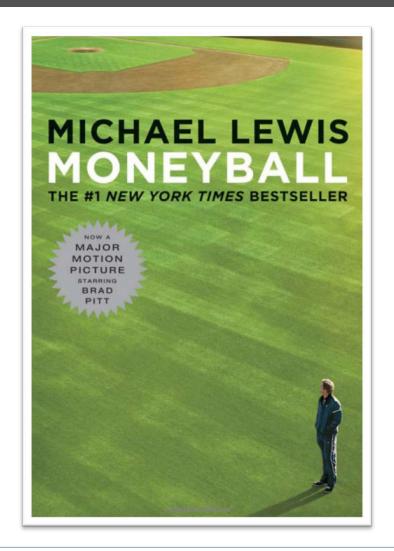
### USING LABOR MARKET INTELLIGENCE TO DRIVE SECTOR STRATEGIES

USDOL Boston Regional Conference April 14, 2015











#### **DEMAND SIDE ENGAGEMENT AND ANALYTICS**

**Data mining** 

Research for publications and reports

**Employer** engagement

Technical assistance tools/templates

**Career** pathways

Program and economic models





#### **PURPOSE OF THIS SESSION**

- How to use Labor Market Information to select industry sector(s) in a region or state
- How to develop performance metrics for a sector project or an industry-workforce partnership
  - Lesley Hirsch, Director, NYC Labor Market Information Service
  - Jason Timian, Labor Market Analyst, New Jersey
     Department of Labor and Workforce Development
  - Navjeet Singh, Deputy Director, National Fund for Workforce Solutions





#### THE NATIONAL FUND MODEL AND GOALS

### National Fund for Workforce Solutions/ Jobs for the Future

Systems Change: National, State & Industry

> Employers Served

Individuals Served, Trained, Placed, Retained

### Regional Collaboratives

Systems Change: State policy & \$

Employers Served

Individuals Served, Trained, Placed, Retained

### **Industry Partnerships**

Employers Served, Systems Change Individuals Served
Trained, Employed, Retained





#### NATIONAL FUND: EVALUATION FRAMEWORK

#### FRAMEWORK FOR EVALUATION AND LEARNING AT THE NATIONAL FUND FOR WORKFORCE SOLUTIONS

PERF	ORM	ANCE
MAN	AGEA	AFNT

TRACKING **PROGRESS**  How much progress has been made against goals? What is the scale of the National Fund?

Sources: National evaluation; annual data brief; annual financial report Methods: Aggregation of data from collaboratives; comparison of progress to goals

Vendors: Program and Policy Insight, LLC (PPI); the National Fund

#### SUMMATIVE **EVALUATION**

MEASURING

VALUE TO INDIVIDUALS

What is the value of the National Fund to individuals? To specific subpopulations? Is the National Fund more effective than other approaches?

Sources: SIF evaluation: local evaluations

Methods: Impact analysis and/or wage-record analysis; quasi-experimental design

Vendors: IMPAQ International, LLC; local evaluators

#### MEASURING

VALUE TO EMPLOYERS

#### What is the value of the National Fund to businesses and employers?

Sources: Business impact studies; surveys of employers Methods: Kirkpatrick/Phillips model

Vendors: Various

#### MEASURING

VALUE TO COMMUNITIES

#### What is the value of the National Fund to communities?

Sources: Surveys of key community stakeholders; analysis of social impact Methods: Surveys and analysis of impact on economic development, etc.

Vendors: Various

#### MEASURING

SYSTEMS CHANGE

#### What systems change outcomes have been achieved?

Sources: Annual systems change reports Methods: Reporting on activities and outcomes Vendors: Collaboratives: the National Fund

#### FORMATIVE **EVALUATION**

LEARNING

#### AMONG COLLABORATIVES

#### What are collaboratives learning from local evaluations?

Sources: Various

Methods: Assessment of how programs are being improved through evaluation Vendors: Collaboratives; local evaluators; Program and Policy Insight, LLC (PPI)

#### LEARNING

AT THE NATIONAL FUND

#### What is the National Fund learning from collaboratives?

Sources: Various

Methods: Identification of innovative practices and sources of success

Vendors: The National Fund; Jobs for the Future (JFF); other





#### PHASES OF PERFORMANCE

### (Emerging) Early Evidence of Progress

- a workplan or roadmap
- employer engagement



#### (Active) Actual Outputs/Products

- skills standards
- career awareness campaigns
- training programs for groups of employers
- industry-driven networking
- tackling non-workforce issues together



#### (Advanced) Impact

- employment for job seekers
- advancement for workers
- reduced vacancy rates for employers
- reduced time to hire
- job creation
- savings to public programs

Thanks to Lindsey Woolsey of the Woolsey Group





#### MARY V. L. WRIGHT Senior Program Director mwright@jff.org

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Deputy Director, National Fund for Workforce Solutions nsingh@jff.org



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**WWW.JFF.ORG** 

New Jersey Department of Labor & Workforce Development Office of Research and Information Division of Workforce Research and Analytics Bureau of Labor Market Information

### **LMI Data and Publication Overview**



Presented By: Jason Timian Labor Market Analyst

### **Previous Focus**

- Geographic: Economic analysis and LMI dissemination by Labor Area
- Deliver customized data and information to help guide local policy-makers to make informed decisions based on their local economies
- This approach was used to help delineate the differences among labor areas due to industry make-up, geographic location or population mix

### **Current Focus**

- LMI efforts are focused toward becoming part of an overall New Jersey strategy of growing the state's economy
- Industry sectors are the engines that drive job expansion and attract new businesses in New Jersey
- ORI has redirected its resources to develop strong relationships among private sector industries, workforce partners, and the education community
- This comprehensive approach provides identification of existing industry and state assets/advantages, while attempting to define changing or emerging trends and opportunities in specific sectors

### Seven Key Industries

- Health Care
  - http://kwd.state.nj.us/labor/lpa/pub/empecon/healthcare.pdf
- BioPharmceuticals & Life Sciences
  - http://lwd.state.nj.us/labor/lpa/pub/empecon/biopharma.pdf
- Transportation, Logistics & Distribution
  - http://lwd.state.nj.us/labor/lpa/pub/empecon/tld.pdf
- Leisure, Hospitality & Retail Trade
  - http://lwd.state.nj.us/labor/lpa/pub/empecon/lhr.pdf
- Financial Services
  - http://lwd.state.nj.us/labor/lpa/pub/empecon/finance.pdf
- Advanced Manufacturing
  - <a href="http://lwd.state.nj.us/labor/lpa/pub/empecon/advmfg.pdf">http://lwd.state.nj.us/labor/lpa/pub/empecon/advmfg.pdf</a>
- Technology
  - <a href="http://lwd.state.nj.us/labor/lpa/pub/empecon/technology.pdf">http://lwd.state.nj.us/labor/lpa/pub/empecon/technology.pdf</a>

# Key Industry Clusters account for two thirds of all employment & wages statewide

Industry Cluster Employment and Wages: 2013 Annual Averages<sup>1</sup>

	Annual Averages <sup>1</sup>			Total <sup>1</sup>	Percent of Total <sup>1</sup>	
Industry Cluster <sup>1,2</sup>	Establishments	Employment	Wages	Wages	Employment	Wages
Adv Manufacturing	4,144	133,700	\$94,378	\$12,618,361,477	4.1%	6.6%
Health Care	21,461	442,913	\$52,685	\$23,334,896,581	13.7%	12.2%
Financial Services	11,683	182,390	\$111,039	\$20,252,397,233	5.6%	10.6%
Technology <sup>3</sup>	26,499	354,640	\$110,952	\$39,348,135,926	11.0%	20.6%
Transportation, Logistics and Distribution	25,109	364,756	\$69,293	\$25,275,160,071	11.3%	13.2%
Biopharmaceutical & Life Science	3,040	115,046	\$130,411	\$15,003,297,747	3.6%	7.9%
Leisure, Hospitality & Retail Trade	54,155	796,788	\$27,516	\$21,924,594,743	24.6%	11.5%
All Cluster Industries <sup>4</sup>	138,142	2,142,522	\$59,763	\$128,042,671,640	66.2%	67.1%
All Private Sector Industries, NJ	251,194	3,234,796	\$59,026	\$190,935,636,907	100.0%	100.0%

#### Notes:

- 1: Industry Cluster component industries are not mutually exclusive and therefore may be included in more than one Industry Cluster.
- 2: Industry Cluster component industries do not include all New Jersey industry sectors.
- 3: The technology cluster was expanded to reflect the U.S. Bureau of Labor Statistics definition of technology industries (2013)
- 4: "All Cluster Industries" totals are the sum of all mutually exclusive component industries. That is component industries are only counted once in the "All Cluster Industries" totals

  Therefore, the sum of individual industry cluster annual averages will not equal "All Cluster Industries" annual averages.

In addition, the sum of individual industry cluster percentages of totals will not equal the "All Cluster Industries" percentage of total.

Source: New Jersey Department of Labor & Workforce Development, Division of Economic & Demographic Research, Quarterly Census of Employment & Wages, 2013 Annual Averages Prepared by: NJLWD, Division of Workforce Research & Analytics, Bureau of Labor Market Information, August 2014.



http://lwd.dol.state.nj.us/labor/lpa/LMI index.html

# Bureau of Labor Market Information Data Sets & Publications

#### NJ Labor Market Views

issue #30

#### NJ Financial Services Employment Remains Stable Despite Uncertainty

by Michael Valeriano, Bureau of Labor Market Information

Although New Jersey's financial services sector represents a relatively small segment of New Jersey's total private sector employment, the cluster represents a significant percentage of the state's Real Gross Domestic

Product due in part to a significar ber of jobs that pay more on ave than those in other industries. Co petitive salaries also reflect the q percentage of financial service jo involve information technology. several large mergers and layoffs raised questions about the indust long-term outlook, other less pub mergers and moves into the state kept employment levels relatively in the sector.

The net result of the various p and negative developments impa financial services in general is the tor employment statewide has re steady over the past several year Since the end of the Great Reces (December 2007 - June 2009 ac to the National Bureau of Econor search) employment in the New financial services sector has ave

Financial Services

198,400 jobs each year with less than one percent variation.

This stability is very evident in the statewide Current Employment Statistics annual average employment chart

#### NJ Labor Market Views

issue #31

#### NJ's Occupational Mix is Diverse and Earns Above Average Wages

by Jason Timian, Labor Market Analyst

issue #21

Getting a read on New Jersey's as easy as taking a simple snapshot of

#### **New Jersey Overview**

Some of the 2013 data reveals that New Jersey ranks 11th among the states in total occupational employ-

> 0 iobs. While New mallfland tate ents ber dina

New Jersey ranks 11th among the states in total occupational employment

Office of Research &

Information

urvey, sper

ployment density surpasses Rhode densest state for opulation) with 441

nual salary in New which ranks seventh nd is 14 percent ional average of usetts at \$56,410 District of Columannual salary of

workforce and earnings situation is not the economy. Instead, it requires tools

NJ Labor Market Views

#### Key Workforce Challenges: Aging **Workforce and Looming Retirements** by Scott Packen, Bureau of Labor Market Information

The recent national recession may have taken center stage for economic issues, but the baby boom generation remains a powerful force casting its shadow over the future. During the recession, the impact on working families went beyond lost jobs to include steep declines in both savings and housing values. As a result, some baby boomers are deciding to postpone planned retirements. But that generation's impact is yet to be felt. As time passes and the oldest baby boomers (those born in the mid-1940s) reach their mid-sixties and

ahead, one of the biggest challenges for New Jersey and other states will be to ensure that new age cohorts of workers are trained and qualified to fill

the gaps created in the workforce as the largest generation of Americans leaves the workplace.

#### New Jersey's Potential for Filling Jobs

New Jersey's working-age population of nearly 7 million has approximately 2.2 million

New Jersey's workingage population of nearly 7 million has approximately 2.2 million people ages 55 and over according to the 2010 U.S. Census

Labor Market &

Demographic

Research

Finance and Insurance —All Other Industries 104 102

http://lwd.dol.state.nj.us/labor/lpa/pub/lmv index.html

Bureau of Labor Market Information Publications

**Labor Market Views** 



New Jersey Department of Labor and Workforce Development Division of Workforce Research & Analytics

Labor Market Information Update for February 2015

Prepared: March 2015



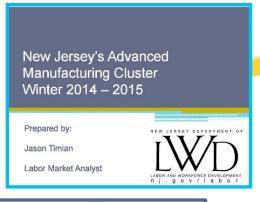


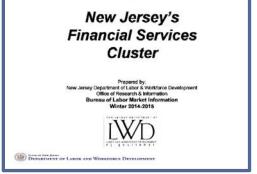
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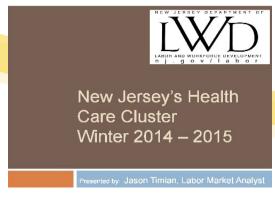
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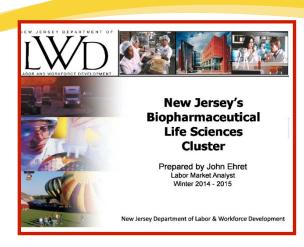
Bureau of Labor Market Information Publications

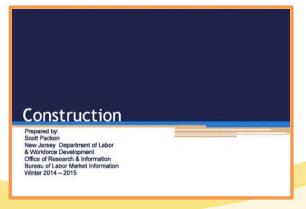
**Economic Indicator Reports** 

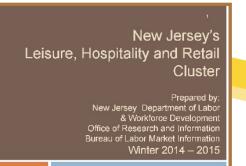
















http://lwd.dol.state.nj.us/labor/lpa/pub/empecon/empeconomy\_index.html

Bureau of Labor Market Information Publications

**Key Industry Reports** 



http://lwd.dol.state.nj.us/labor/lpa/pub/pub\_index.html

## Bureau of Labor Market Information Publications

### **Special Reports**

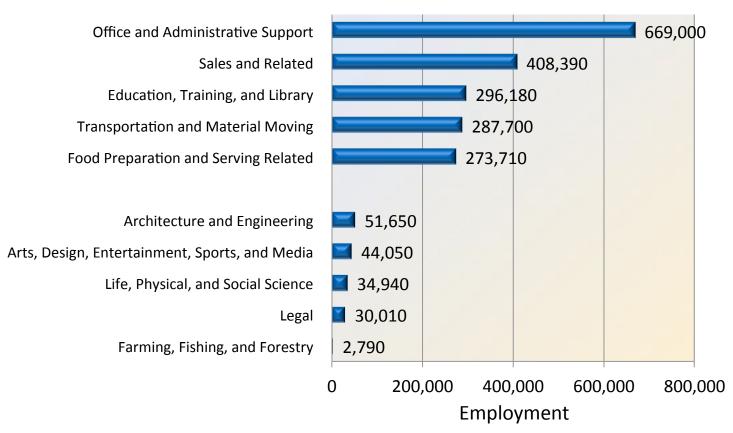
# Occupational Employment and Wages, 2012

A Detailed Analysis of New Jersey's Occupational Landscape

Nearly three of every ten jobs in New Jersey are classified as either office and administrative support or sales occupations.

#### **Overview**

#### Employment for largest and smallest occupational groups, New Jersey 2012



Office and administrative support occupations continued to be the largest occupational group in New Jersey in 2012, accounting for nearly 18 percent of all employment. Three of the top 10 largest detailed occupations are in this group.

Among the top five occupational groups, only education, training and library occupations earned an above average annual wage.

The smallest five occupational groups comprised less than 5 percent of all employment in New Jersey. All but farming, fishing and forestry occupations earned an above average annual salary.

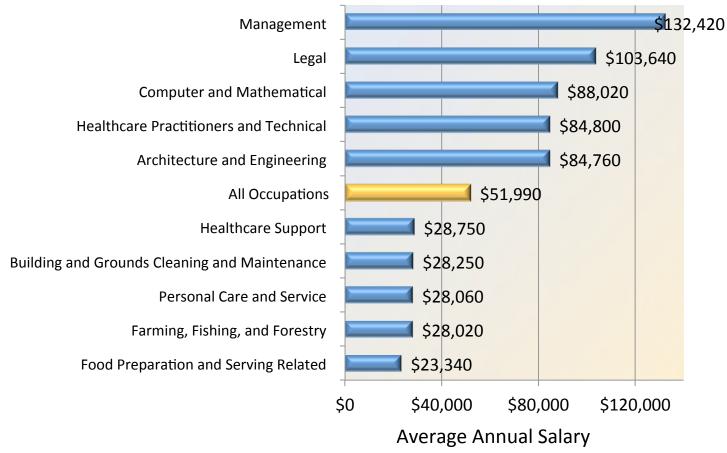




### The average salary of the highest paying occupational group is nearly six times greater than the lowest paying occupational group.

#### **Overview**

### Mean annual salary for highest and lowest paid major occupational groups, New Jersey 2012



The management occupational group earned an average of more than 2.5 times the statewide average salary. The lowest paying occupations in this group were legislators, lodging managers, and educational administrators of preschool and childcare centers.

Healthcare practitioners and technical occupations include some of the highest paid occupations in the state, but also many technicians whose average salary is closer to the statewide average.

Four of the five lowest paying occupational groups are classified as service occupations, where additional income may be received in the form of tips.

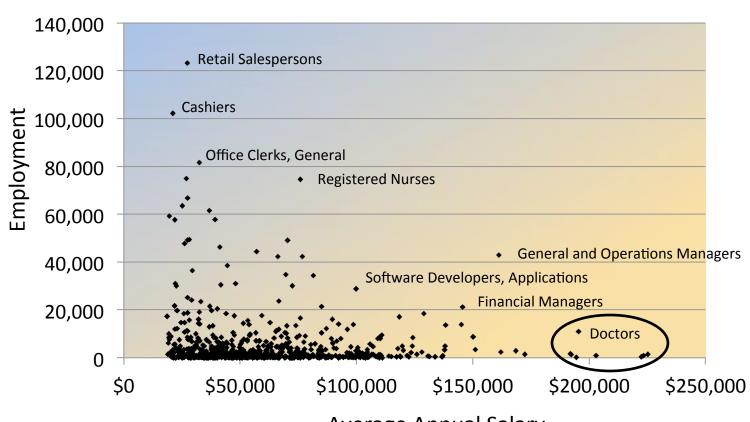




This scatter chart illustrates that most of the 821 detailed occupations have relatively modest employment and wages, but highlights the outliers on each scale.

#### Overview

Employment and Average Annual Wage by Detailed Occupation, New Jersey 2012



Average Annual Salary





There are 39 occupations in New Jersey with employment of at least 20,000 in 2012. Combined, they account for over 1.7 million in employment, or nearly 47% of all jobs in the state.

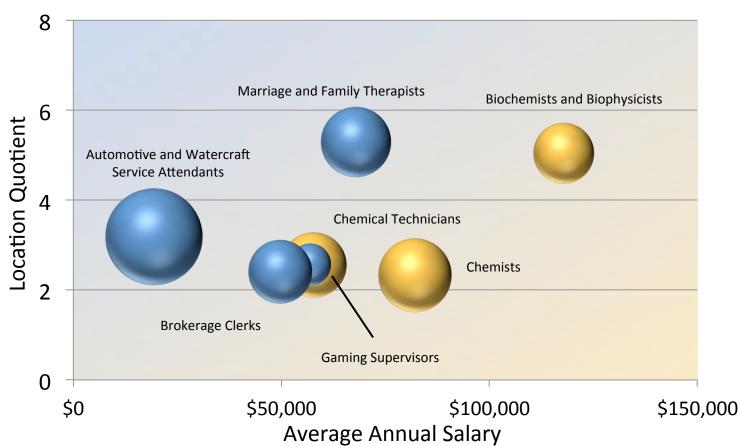
There are 74 occupations with an average annual salary exceeding \$100,000. Combined, they account for just 285,700 in employment, or less than 7% of all employment.

There are two occupations with employment of at least 20,000 and average earnings exceeding \$100,000; general and operations managers and financial managers.

### These occupations had among the highest location quotients and significant employment in New Jersey in 2012.

#### **Overview**

### Location Quotient, Mean Salary and Employment of Select Occupations, New Jersey 2012



Simply, a location quotient significantly higher than 1.0 indicates that an occupation has a strong presence in a given area as compared to that same occupation's presence at the national level.

The size of the bubble represents the total employment for that occupation.

Three of these occupations (highlighted in gold) are STEM occupations and are commonly found working in New Jersey's robust chemical manufacturing industry, which includes one of the leading pharmaceutical industries in the country.





# Science, Technology, Engineering & Math (STEM) Occupations

Transportation, Logistics & Distribution (TLD)

Construction

## Industry Focus

BioPharmaceuticals & Life Science

Leisure, Hospitality & Retail (LHR)

A detailed emphasis of staffing patterns within selected key industries

Healthcare

Advanced Manufacturing

**Finance** 

The healthcare industry presents many opportunities for employment in above average paying occupations that require less than a bachelor's degree.

#### Healthcare

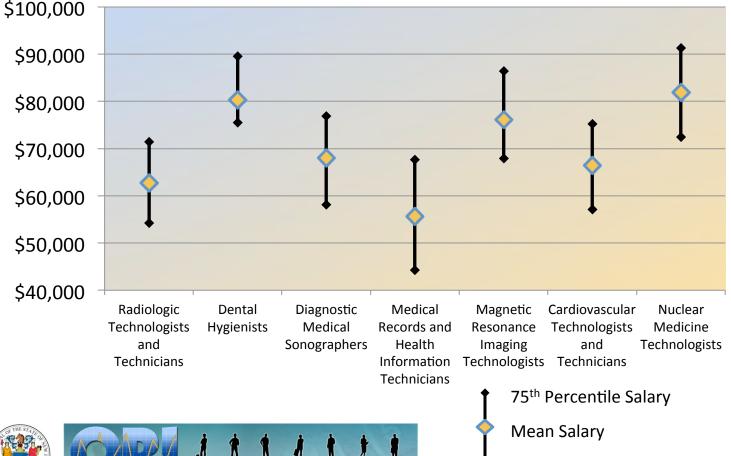
The most common

minimum educational

requirement for these

25<sup>th</sup>-75<sup>th</sup> Percentile and Mean Salary for Occupations that **Commonly Require an Associate's Degree or Less** New Jersey 2012









25<sup>th</sup> Percentile Salary

Registered nurses are the largest occupation in the healthcare sector in New Jersey, and opportunities for employment can be found in many different industries.

#### Healthcare

**Employment and Average Salary for Registered Nurses by Industry** New Jersey 2012

Industry	Employment	Average Salary
Total, All Industries	74,700	\$75,820
General Medical and Surgical Hospitals	42,230	\$79,220
Nursing Care Facilities	5,140	\$69,350
Home Healthcare Services	4,540	\$70,530
Offices of Physicians	4,170	\$67,110
Outpatient Care Centers	3,660	\$76,040
Elementary and Secondary Schools	3,340	\$67,310
Employment Services	1,900	\$79,580
Specialty Hospitals	1,730	\$76,050
Psychiatric and Substance Abuse Hospitals	1,280	\$69,750
Community Care Facilities for the Elderly	1,060	\$68,830

Not surprisingly, general medical and surgical hospitals are the largest employer of registered nurses of all industries, accounting for more than half of those employed in 2012. On average, these nurses earn about \$8,000 more per year than the average of the other nine industries on this list.

There are roughly 3,340 registered nurses employed by elementary and secondary schools across the state. These nurses earn an average salary exceeding \$67,000.

Other settings for employment include smaller physicians' offices, elderly care, and psychiatric and substance abuse facilities. There are many options for an individual interested in nursing in New Jersey. 26







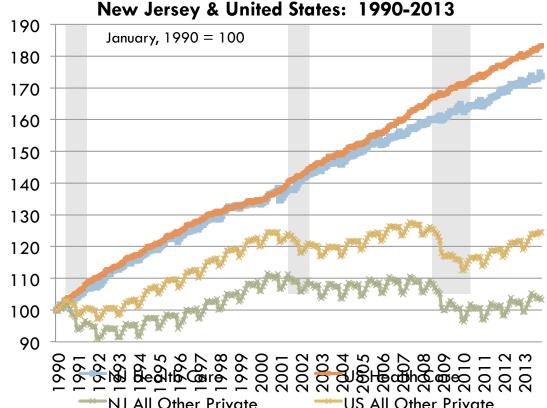
# New Jersey's Health Care Cluster Winter 2014 – 2015

### New Jersey Health Care Highlights

- The health care cluster contributed approximately \$34.8 billion to the Gross Domestic Product in 2012, roughly 7 percent of all output
- From 1990 through 2013, the health care sector has added 186,300 new jobs, while all other private sector employment has had a net increase of only 74,800 jobs
- Health care is the only industry that has added jobs in the state every year from 1990 through 2013 while increasing its share of jobholding from 7.5 percent in 1990 to 11.6 percent in 2013
- The outlook for health care employment is bright. From 2012 through 2022, it is projected that nearly 89,100 jobs will be added, an annual increase of 1.8 percent
- Health care employers paid more than \$23.3 billion in total wages in 2013, or about 12.2 percent of all wages paid

## The health care industry has been the key driver of private sector employment at both the state and national levels





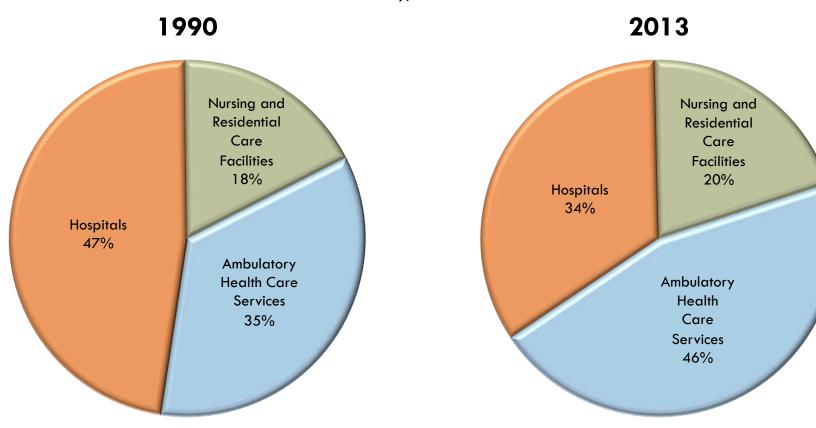
New Jersey has followed the national trend very closely, but starting in 2005 the nation pulled ahead in terms of faster growth

All other private sector employment has grown at a much slower pace, has experienced seasonal ebbs and flows, and has been susceptible to downturns during recessions

From 2000 to 2013, New Jersey has added 98,200 new health care jobs while the rest of the private sector has lost approximately 184,400

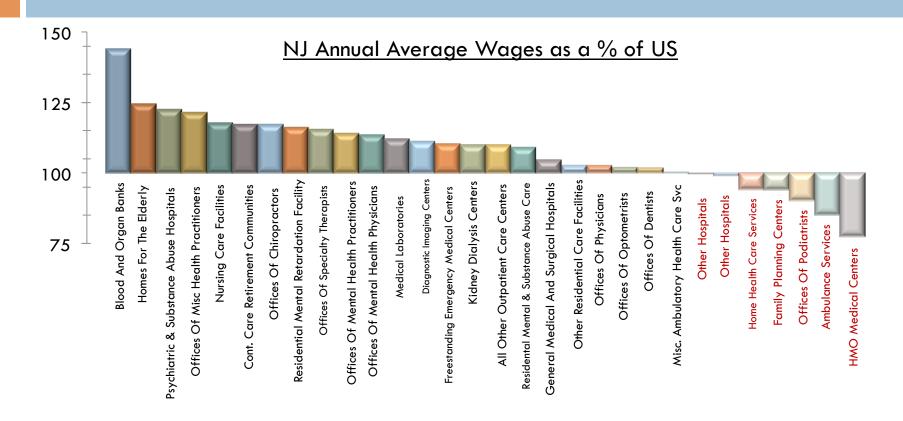
# The landscape of health care delivery has changed dramatically over the past 23 years

Employment of Components as a Percentage of Total Health Care New Jersey, 1990 & 2013



Source: NJLWD, Current Employment Statistics, Annual Averages
Prepared by: New Jersey Department of Labor and Workforce Development
December, 2014

23 out of 30 health care industries in New Jersey have a higher annual average wage than the nation. Overall, the sector paid 5.3% more in New Jersey in 2013 than nationally

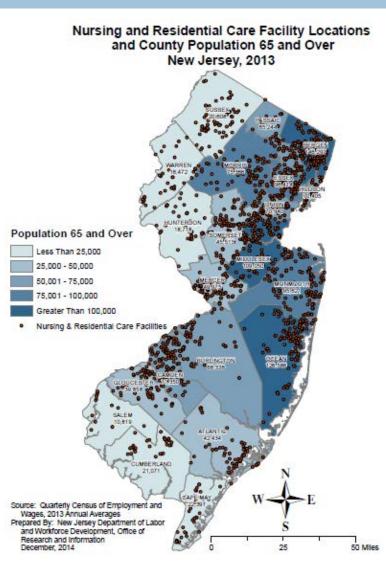


The wage disparity has decreased in 20 of the 30 industries since 2008, when the sector was paid an average of 10.3% more in New Jersey

New Jersey's aging population has created increased demand for health care service, especially in the areas of nursing and residential care

Percentage of County Population Aged 65 and Over						
Cape May	23.3%	Burlington	15.2%	Mercer	13.5%	
Ocean	21.7%	Morris	15.1%	Cumberland	13.4%	
Salem	16.6%	Hunterdon	14.8%	Middlesex	13.2%	
Bergen	15.8%	Sussex	14.1%	Union	12.9%	
Atlantic	15.4%	Camden	13.9%	Passaic	12.9%	
Warren	15.3%	Somerset	13.8%	Essex	12.2%	
Monmouth	15.2%	Gloucester	13.7%	Hudson	10.7%	

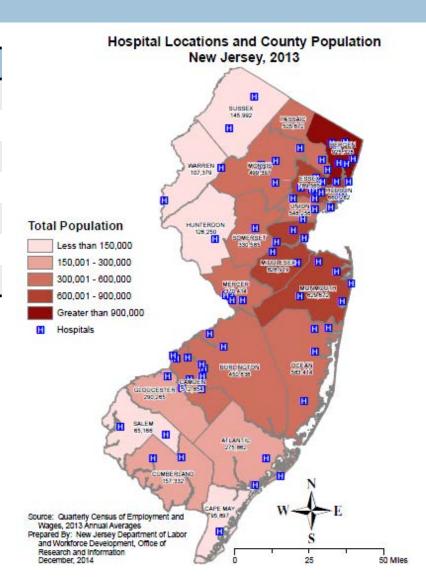
Nursing and residential care facilities are well positioned throughout the state, providing coverage to even the more remote areas. Clusters of locations are found near the population centers and along the coast, where a larger share of those aged 65 and over reside



# There are 77 hospitals in New Jersey that serve the state's population of more than 8.8 million people

Number of Hospitals by County					
Camden	8	Burlington	4	Passaic	2
Essex	8	Morris	4	Salem	2
Bergen	6	Ocean	4	Sussex	2
Hudson	6	Atlantic	3	Warren	2
Middlesex	6	Union	3	Cape May	1
Mercer	5	Cumberland	2	Hunterdon	1
Monmouth	5	Gloucester	2	Somerset	1

The hospital locations tend to be clustered around the state's two primary highways, the New Jersey Turnpike (Interstate 95) and the Garden State Parkway, and near high population centers across state boundaries from New York City and Philadelphia

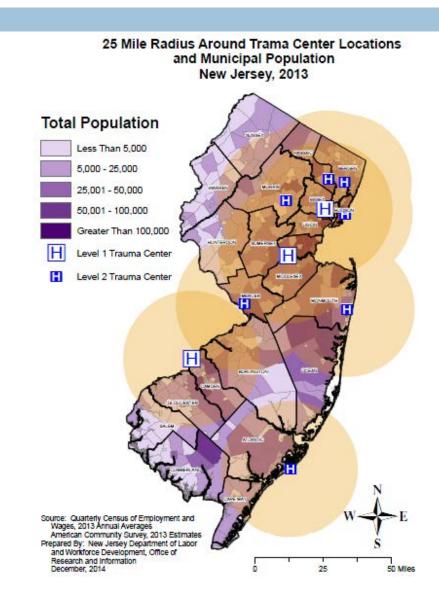


## This map shows the general proximity of each of the ten trauma centers to the population of the state's municipalities

78 percent of the state's population resides in municipalities within 25 miles of a level 1 trauma center, and 94 percent live within 25 miles of either a level 1 or level 2 trauma center

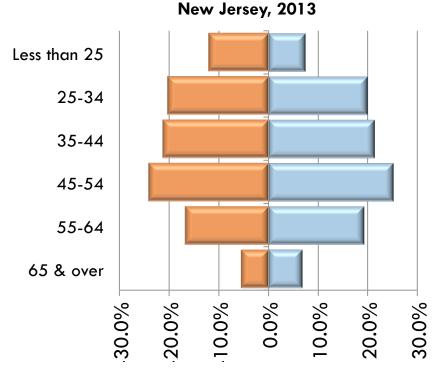
There are gaps in coverage in the more sparsely populated northwest and extreme southern parts of the state

The only municipality of more than 50,000 outside the 25 mile radius is Vineland in Cumberland County. Neighboring cities of Millville and Bridgeton, each with more than 25,000 residents, are also located outside the 25 mile radius



# Comparison by age group of the health care cluster and total nonfarm employment of New Jersey residents

#### Age Breakdown of Workers in Health Care Industry



■ Health Care
■ All Industries

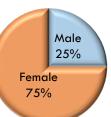
The workforce of the health care industry is older than average with about 51 percent aged 45 and up compared to only 46 percent overall

The largest disparity among age cohorts occurs in the youngest group, where only 7 percent of the health care workforce is 25 years old or younger

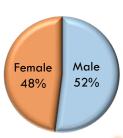
Nearly 7 percent of the current health care workforce is aged 65 and older

### Gender, racial, and ethnic profile of New Jersey residents within health care work force



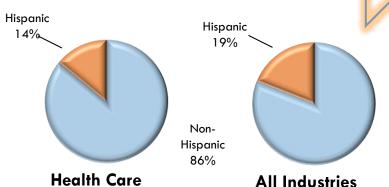


#### **All Industries**



Females outnumber males by a 3 to 1 margin in the health care workforce

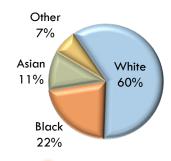
The workforce is more diverse than average, particularly among the black and Asian populations

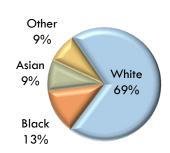


Non-Hispanic 81%

#### **Health Care**

#### **All Industries**

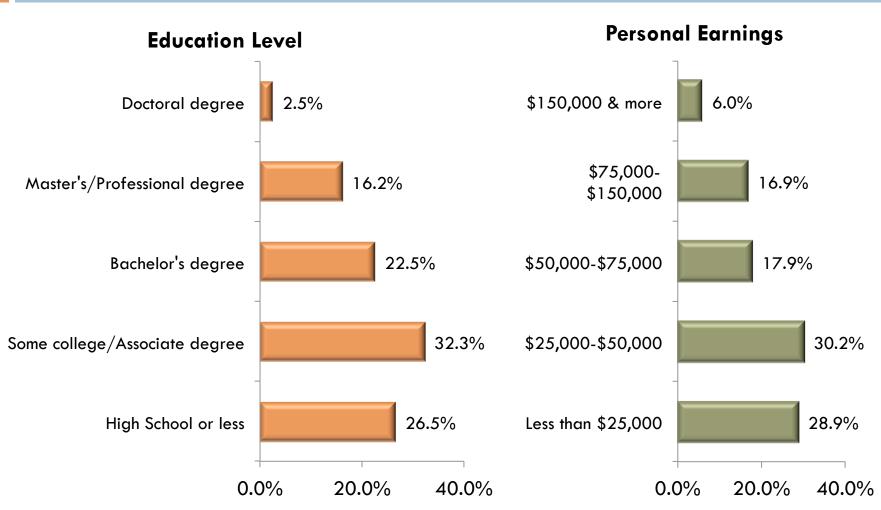




The workforce has just slightly fewer Hispanics than average

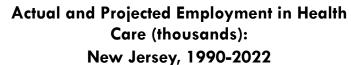
Source: U.S. Census Bureau, 2013 American Community Survey Prepared by: New Jersey Department of Labor and Workforce Development December, 2014

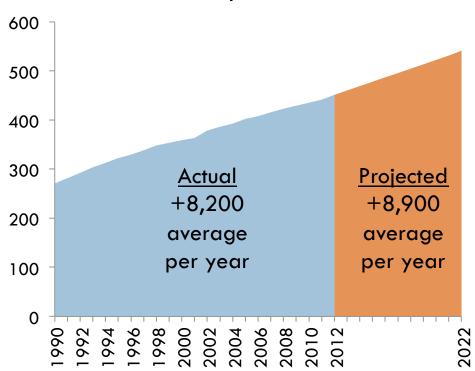
### Employment status and personal earnings of NJ residents in the health care industry



Source: U.S. Census Bureau, 2013 American Community Survey Prepared by: New Jersey Department of Labor and Workforce Development December, 2014

### The health care industry has steadily gained employment over the last 20 years and will continue that trend through 2022





Employment is still growing, but rate of growth is slowing:

- Grew by 3 percent per year during 1990s
- Grew by 2 percent per year during 2000s
- Projected to grow by 1.8 percent from 2012-2022

There will be many opportunities for employment as the industry struggles to increase its workforce for growing demand while also replacing workers who will retire

The health care cluster is projected to add roughly 89,000 jobs, and account for more than 29 percent of net job growth in New Jersey from 2012-2022

New Jersey Department of Labor and Workforce Development <a href="http://lwd.dol.state.nj.us">http://lwd.dol.state.nj.us</a>

Jason Timian
Labor Market Analyst

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E-mail: jason.timian@dol.state.nj.us

### Using labor market intelligence to drive sector

### 7

### strategies

U.S. Department of Labor Boston Regional Conference April 14, 2015



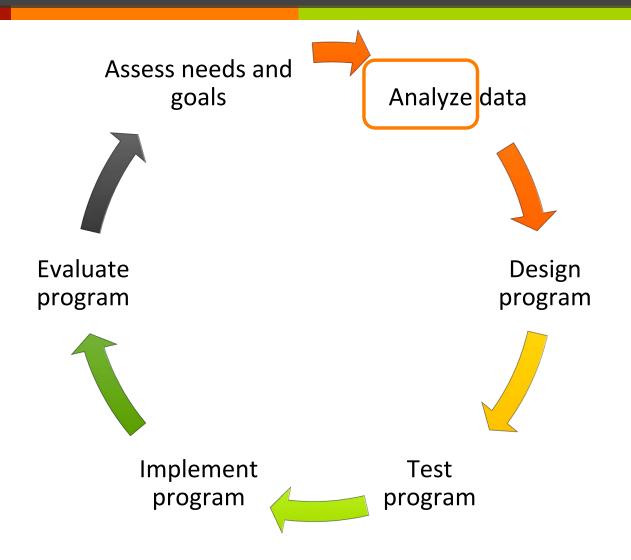
### NYC LABOR MARKET INFORMATION SERVICE

We help education and workforce practitioners and policy makers make data-driven decisions to help the students and jobseekers they serve to achieve success in the labor market.

- Industry Studies
  - Transportation
  - Green (with NY State Department of Labor)
  - Hotels
- Career Exploration Tools
  - Career Advancement Maps
  - Career Planning Tools

- Consulting, Training, & TA
  - CTE Portfolio Alignment
  - OneStop Center Siting Analysis
  - Demand-Side Immersion Academy for Providers
  - Community College TA (TAACCCT)

### HOW LMI FITS INTO THE PROCESS



### BEFORE THE ANALYSIS

(know the relevant workforce and economic development priorities)

As Governor and Candidate, Cuomo Has Kept One Foot in Buffalo

BLOGS > THE INSIDER

De Blasio deputy networks with tech insiders

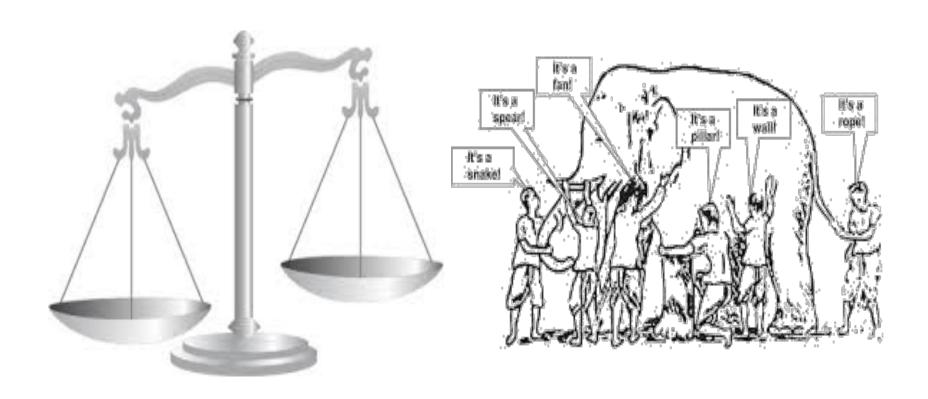
GovBeat

New York will begin universal prekindergarten

New York wins OK to begin revamping Medicaid system, and other news

By Modern Healthcare | October 4, 2014

### BALANCE & PERSPECTIVE

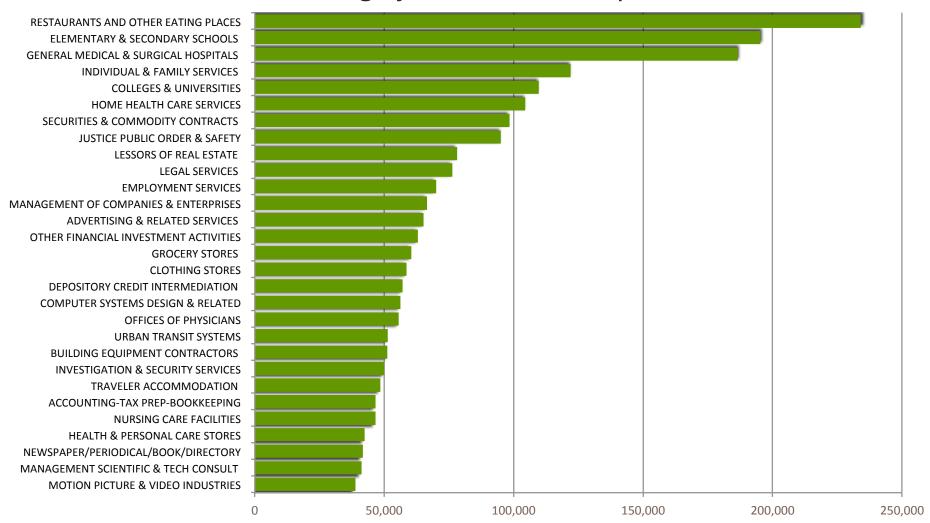


LMI can answer greater number of questions than you might have thought, but it can't address all of them and it sometimes can't give a sufficiently detailed answer.

# CONSIDERATIONS FOR SECTOR SELECTION

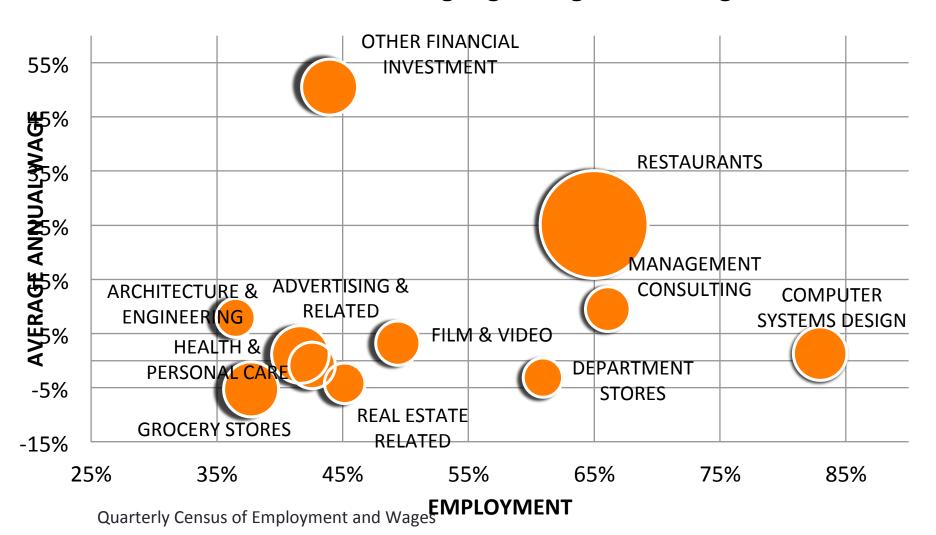
SIZE	
GROWTH	
STABILITY	
UNIQUENESS	
GEOGRAPHY	
OCCUPATIONAL MIX	
INDUSTRY STAFFING NEEDS	

SIZE
Are there enough jobs to warrant special focus?



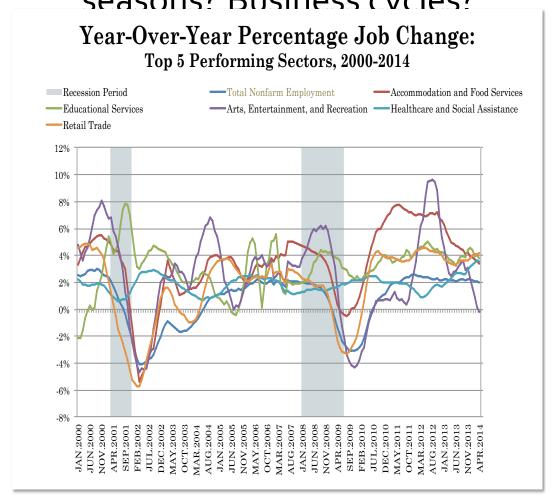
Quarterly Census of Employment and Wages

GROWTH
Is industry employment growing or shrinking?
Are real wages growing or shrinking?

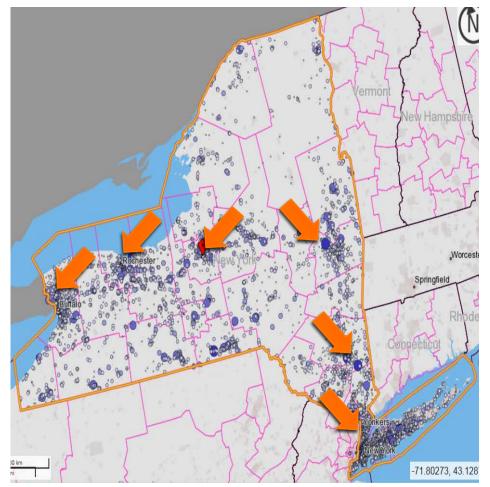


#### STABILITY:

How much has employment been affected by seasons? Business cycles?



# DISTRIBUTION: Vhere are the jobs concentrated?



OntheMap or Quarterly Census of Employment and Wages

NY Counties	Food Manufacturing Employment
Brooklyn	5,494
Erie	5,026
Queens	4,339
Manhattan	3,636
Suffolk	3,457
Nassau	2,710
Monroe	2,598
Westchester	2,095
Chautauqua	1,971
Bronx	1,791
Sullivan	1,202
Rockland	1,048
Onondaga	973
Orange	959
Oneida	923

### UNIQUENESS: Do other industries have similar staffing needs?

Industry:	Traveler /	Accommod	lation
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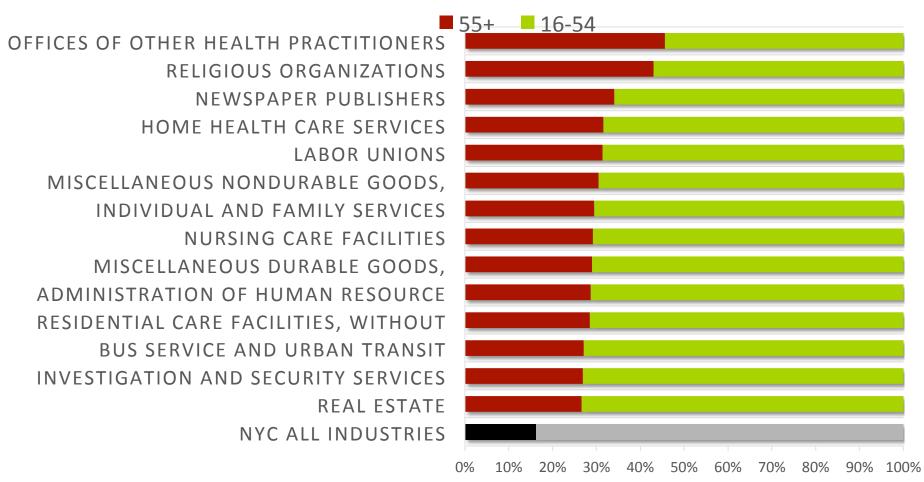
SOC Code	Occupational Title (Click On Title For Wage Information)	Percent Of Industry Employment
37-2012	Maids and Housekeeping Cleaners	28.7%
43-4081	Hotel, Motel, and Resort Desk Clerks	9.8%
35-3031	Waiters and Waitresses	7.4%
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	4.1%
35-2014	Cooks, Restaurant	4.0%
49-9071	Maintenance and Repair Workers, General	3.7%
39-6011	Baggage Porters and Bellhops	3.0%
35-9011	Dining Room and Cafeteria Attendants and Bartender Helpers	2.4%
37-1011	First-Line Supervisors of Housekeeping and Janitorial Workers	2.4%
35-9021	Dishwashers	2.2%
35-3011	Bartenders	2.0%
35-3041	Food Servers, Nonrestaurant	1.9%
<u>43-1011</u>	First-Line Supervisors of Office and Administrative Support Workers	1.7%
33-9032	Security Guards	1.7%
51-6011	Laundry and Dry-Cleaning Workers	1.4%
41-3099	Sales Representatives, Services, All Other	1.4%
11-1021	General and Operations Managers	1.3%
35-1012	First-Line Supervisors of Food Preparation and Serving Workers	1.3%
43-3031	Bookkeeping, Accounting, and Auditing Clerks	1.1%

Industry	Lessors of Real Estate	
muusuv.	Lessurs of Real Estate	

SOC Code	Occupational Title (Click On Title For Wage Information)	Percent Of Industry Employment
<u>49-9071</u>	Maintenance and Repair Workers, General	28.0%
<u>37-2011</u>	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	23.5%
33-9032	Security Guards	7.5%
<u>43-9061</u>	Office Clerks, General	4.0%
41-9022	Real Estate Sales Agents	3.9%
43-6014	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	3.9%
39-6012	Concierges	3.2%
41-2021	Counter and Rental Clerks	2.2%
<u>43-3031</u>	Bookkeeping, Accounting, and Auditing Clerks	2.1%
<u>49-1011</u>	First-Line Supervisors of Mechanics, Installers, and Repairers	1.5%
13-2011	Accountants and Auditors	1.4%
11-9141	Property, Real Estate, and Community Association Managers	1.3%
47-2031	Carpenters	1.2%
<u>37-3011</u>	Landscaping and Groundskeeping Workers	1.2%
43-4051	Customer Service Representatives	1.0%

#### State Staffing Pattern Matrix

## INDUSTRY STAFFING NEEDS: Which industries have an aging workforce?

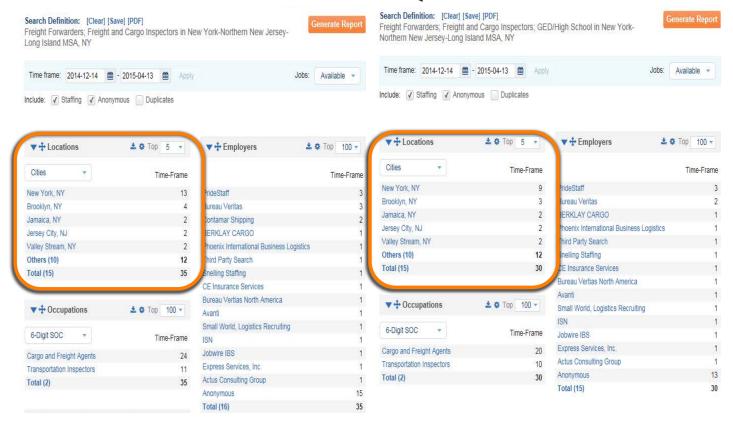


American Community Survey, Public Use Microdata Sample

### INDUSTRY STAFFING NEEDS

What level of education and experience do employers
TOTAL DEMAND FOR
request?

### FREIGHT DEMAND AT THE HIGH FORWARDING SCHOOL-LEVEL OR AGENTS EQUIVALENT



### INDUSTRY STAFFING NEEDS What skills are in demand?

- ▼ Top 25 skills sought by employers seeking jobseekers in computer-related occupations in the past 4 months (N=1,779 ads)
- Suggestive of what's in the labor market
- Caution. Data must be:
  - Validated by industry
  - Watched over a longer period of time
- Are our programs equipping students with these skills?

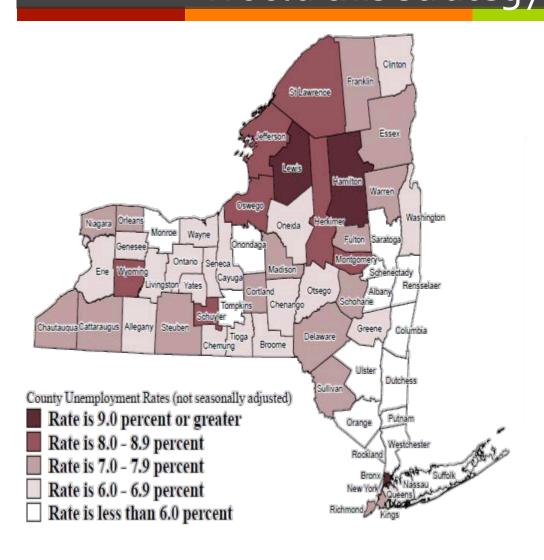
Technical support	293
Structured query language	132
UNIX	123
Linux	110
Preventative maintenance inspections	109
Transmission Control Protocol	101
Quality Assurance	94
Local Area Network	90
Firewall	79
Microsoft Active Directory	76
Systems Integration	75
Technical documentation	68
Wide Area Network	67
JavaScript	67
Microsoft Windows	67
Hypertext markup language	67
Python	65
Java	65
Practical Extraction and Reporting Language	63
Microsoft SQL Server	63
Software development	61
System administration	60
Microsoft Windows 7	59
Application support	58
Disaster recovery	55

# ON THE SUPPLY SIDE: Do we have enough candidates?

#### Number of Engineering Awards Granted in NY State 2012-2013†

Award Type	Number Conferred	
Associate Degree	464	
Bachelor's Degree	10,936	
Master's Degree	7,084	
Doctorate	1,072	
Undergraduate Certificate (<2 years)	36	
Post-Baccalaureate Certificate	88	
Post-Master's Certificate	242	/·
NCES, Integrated Postsecondary E TOTAL Provisional estimates	<b>19,922</b>	(IPEDS)

# ON THE SUPPLY SIDE: Would this strategy serve areas of need?







### SUMMARY

CONSIDERATIONS	QUESTIONS ADDRESSED
SIZE	Is the industry of sufficient size to warrant a workforce strategy?
GROWTH	How has employment changed over the past 10 years?
STABILITY	How much does employment fluctuate by season? In business cycles?
GEOGRAPHY	Where is employment concentrated?  Does this strategy target areas of need?
WAGES	How has its employees purchasing power changed over time? (Alternately: How tight is the labor supply?)
STAFFING NEEDS	What are the industry's pain points that a sector strategy can address? What level of experience and education are required? What skills are in demand?

CONSIDERATI ONS	MEASURE	DATA SOURCE
SIZE	Employment Location Quotient Industry GDP	QCEW, State Labor QCEW, State Labor & BLS Bureau of Economic Analysis
GROWTH	Quarterly/annual employment, historical Projected growth	QCEW, State Labor Long-Term Industry Projections, State Labor
STABILITY	Monthly/quarterly employment Turnover	Current Employment Statistics or QCEW, State Labor Quarterly Workforce Indicators
GEOGRAPHY	Employment by county	QCEW, State Labor
OCCUPATION S	Occupational employment  10-Year Projected Growth Average Openings Per Year Education and training requirements  Job ad volume trends	Staffing Patterns Matrix, State Labor Occupational Employment Statistics Long-Term Occupational Projections, State Labor  Education and Training Requirements by Detailed Occupation Bureau of Labor Statistics  "Real-Time" Labor Market Data
WAGES	Inflation adjusted wages, historical	QCEW, State Labor Occupational Wages, State Labor CPI Measures, Bureau of Labor Statistics

