



“Youth Career Ladder and Resource Mapping Project”

Final Report

Submitted To: Eastern Connecticut Workforce Investment Board
Submitted By: The Charter Oak Group, LLC
Date: September 15, 2004

Executive Summary

The Youth Committee of the Eastern Connecticut Workforce Investment Board has been focusing on career paths for youth that meet the needs of employers for a productive workforce and the needs of young people for stable and self-sufficient economic futures. As part of that focus, the Board asked the Charter Oak Group (COG), a Connecticut consulting firm, to expand the workforce system's understanding of resources available to youth in making employment and career choices and to develop career guidance that would increase the capacity of youth program staff to guide the employment and career decisions of young people being served in the region.

A database of area youth service providers was compiled so that all of the potential resources available to young job seekers could be accessed from a single location. COG also developed detailed profiles of the types of young people likely to seek the Board's help. By integrating employers' needs, educational and employment resources, labor market information, and the youth profiles, six career paths were developed. Together, these paths have the potential to provide self-sufficient futures for young people and a well prepared and productive workforce for employers.

The following data provide some insights into the barriers facing a significant number of youth in the region:

- 23.3% of 10th graders in the Eastern Region failed to achieve level 3 proficiency on the mathematics portion of the CAPT test
- 22.7% of 10th graders in the Eastern Region failed to achieve level 3 proficiency on the reading portion of the CAPT test
- 324 of 2808, or 11.5%, of existing youth customers were recorded to be "limited English proficient."
- In March 2004, 836 individuals under the age of 24 were receiving Temporary Family Assistance (TFA). This represents 29.7% of the youth served by the Eastern Region. 93% of those youth receiving TFA are female.

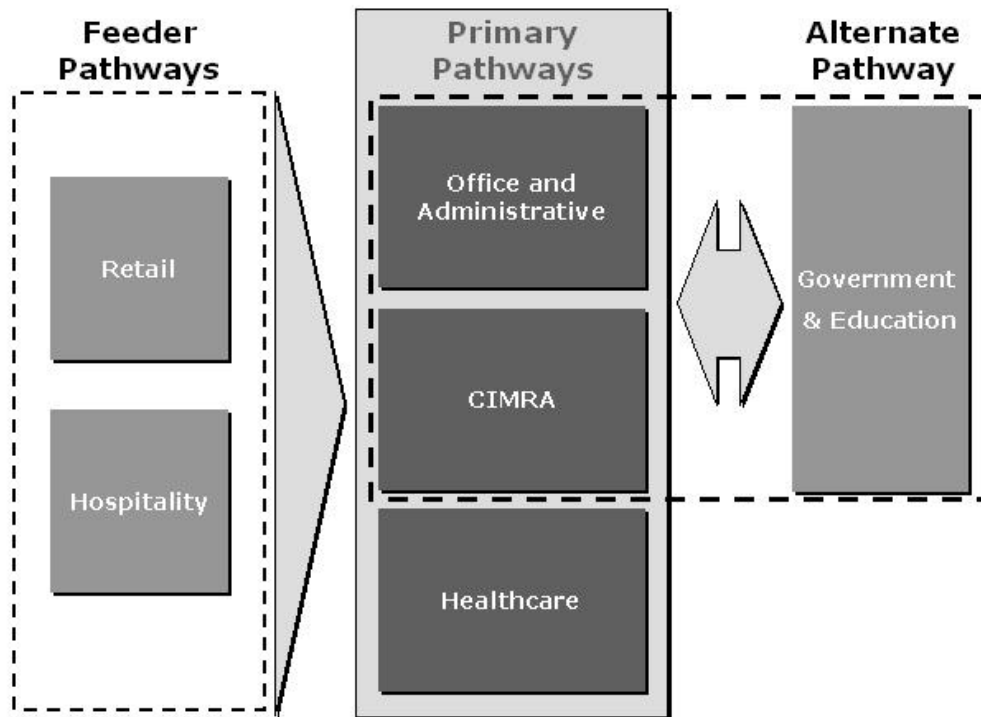
Information about employment opportunities provided additional context for the challenges being faced:

- 48% of the projected job openings for the Eastern Region are in occupations where the annual wage level is \$25,000 or less; this percentage of low-wage jobs is significantly higher than the statewide proportion of occupations where the annual wage level is less than \$25,000 (35.7%)
- The vast majority of the region's projected openings (71.3%) are in occupations whose only requirements are learning on the job or work experience and do not require any post-secondary training. This percentage is significantly higher than the statewide percentage of occupations (65.4%) where only on-the-job training or work experience is needed.

Based on these economic data and employer needs, six career pathways were identified as pathways of opportunity for young people beginning their careers. In the selection of the most promising career paths, we considered the number of projected openings, starting wage, level of training required, career advancement opportunities, and opportunities for entry level employment. The strategic economic development plans for the northeast and southeast parts of the region also helped to guide the choice of career paths.

The six occupational pathways are: Retail; Construction, Installation, Maintenance, Repair and Assembly Occupations (CIMRA); Hospitality and Entertainment; Office and Administrative; Government and Education; Healthcare. Detailed information based on interviews with businesses was developed for four of the six pathways. (Government and Education and Healthcare did not include interviews.) The diagram below indicates the basic relationship among the six pathways. The three occupational ladders in the middle were designated as primary because they all have high potential for providing youth with a living wage. \$32,000-\$40,000 (for both women and men) annually is near the median wage in the United States and these three pathways have that potential. Retail and Hospitality and Entertainment allow some to reach those income levels but are much less likely to provide a living wage for all workers. However, because of the abundance of openings, they are valuable sources of work experience. Government and Education is an alternate pathway in the Eastern Region because there are both state and local government employers that offer additional occupational opportunities in Office and Administrative and CIMRA occupations.

Six-Pathway Relationship Model



The key recommendations for implementing the career pathways are:

- Use entry-level job openings or feeder pathways as a first career development step for youth with little or no work history
- Consider the casinos and retail stores as an important resource for providing youth with many entry-level opportunities in these career ladders
- Provide work readiness training based on employer needs for youth being referred to entry level jobs
- Make the employment and training system an effective resource for support after initial job placement and and life-long learning
- Encourage and assist youth to think about career lattices, opportunities to move across career ladders

Table of Contents

Executive Summary	1
Inventory of Youth Service Providers	6
Community Youth Profile	8
Customer Profiles.....	11
Occupational Analysis	15
The Six Career Pathways	19
Pathway 1: Hospitality and Entertainment	22
Pathway 2: Government Service and Education.....	25
Pathway 3: Office and Administrative.....	28
Pathway 4: Retail	30
Pathway 5: Construction, Maintenance, Repair and Assembly (CIMRA)	33
Pathway 6: Healthcare	39
Recommendations.....	43
Appendix A: List of Employers Contacted.....	45
About The Charter Oak Group, LLC	46

Project Overview

The Youth Committee of Eastern Connecticut Workforce Investment Board contracted with The Charter Oak Group, LLC to assist it in developing youth career ladders and identifying resources for youth employment and training. The following were the specified objectives of this project:

- Develop a database of service providers to assist staff and customers in locating needed resources
- Develop a set of career ladders and lattices to be used as a guide for:
 - Developing training programs
 - Counseling those looking for a career, especially youth
- Train staff in use of career pathway information

There was to be a special emphasis on youth in the pursuit of these objectives. In consultation with Board staff and the Youth Committee, a project plan was created with the following components:

- A youth service provider inventory in a Microsoft Access database
- Youth profiles
- Occupational and industry analysis to identify most important pathways
- Interviews with employers and employer-oriented groups to create pathway portfolios
- Focus groups with top-rung career professionals
- Training of Board and One-Stop Center staff in use of career pathway information

The following report describes the work accomplished. It should be noted that because there was a statewide Healthcare career ladder project already underway in Connecticut, we were asked to focus our work on the five other career paths. For the Government and Education pathway, we did interview some government managers. However, there was no specific information that could be usefully generalized for that career path, and Government and Education ultimately proved to be most important to this project as alternate source for CIMRA and Administrative and Clerical occupations.

Inventory of Youth Service Providers

The Charter Oak Group, LLC (COG) has developed an inventory of organizations in the Eastern Region that provide training or social services to youth. The inventory, which is built in Access, contains the following information about each provider:

- Provider Name
- Provider Address, Zip
- Provider Contact
- Provider Phone
- Provider E-mail
- Services Provided
- Name of Service
- Service Category
 - Training—Vocational
 - Training—Pre-Vocational (job readiness)
 - Training—Basic Skills
 - Tutoring
 - Leadership
 - Other positive social behaviors
 - Mentoring
 - Paid and Unpaid Work Experience
 - Community Service
 - Peer-centered activities (youth clubs, recreational, etc)
 - Comprehensive guidance and counseling
 - Supportive Services
 - Substance abuse
 - Teen pregnancy support
 - Mental health
 - Child care
 - Transportation
 - Housing
 - Fuel assistance
 - Domestic violence support
 - Other support
 - Comments

The inclusion of zip codes in the database will enable the Board to display the information geographically using GIS software. This visual display will allow the Board to identify gaps in service more easily. The addition of the name and e-mail address of the contact person will facilitate communication and updating of the information.

The inventory was begun with the Board's current youth service providers. These providers lead COG to the Youth Service Bureaus located in most towns in the region. While few of these bureaus provide training other than incidental pre-vocational training, most offer many of the other elements of youth programs, and all are well connected with the network of social services provided to youth by state, non-profit, and faith-based organizations.

As the Board is well aware, there is no comprehensive listing of youth service providers in the region. There are local networks of providers that vary greatly in their comprehensiveness, degree of coordination, and formality. Interviews with the Youth Service Bureau directors have made it clear that there is little danger that youth requiring social services would fall through the cracks or not receive needed services. Referral networks, both formal and informal, are extensive. Many bureaus also participate in or host juvenile justice review boards for youth who have been referred by the police or courts, and some have local case work or clinical review groups through which practitioners from multiple agencies discuss difficult cases.

Additional youth service providers were identified by peer referral. Each agency interviewed for the inventory was asked to identify other agencies with which it regularly interacts. For the most part, this led to the identification of social service agencies or broad coalitions of providers rather than individual agencies that provide comprehensive services to youth. Very few additional training providers were identified, nor have many faith-based organizations been identified beyond those that provide broad social services or that have youth programs for their own parishioners. Some organizations that are obviously faith-based in their name and origin, such as the Windham Area Interfaith Ministry, have a decidedly secular approach and identity. (WAIM is a 501(c)(3) organization and so identifies itself.)

Many of the agencies identified through peer referral are state or municipal agencies, such as local police, high school guidance counselors, DCF, or DSS, or general purpose social service agencies without a youth focus. These organizations have been omitted from the inventory, as have statewide organizations and those not based in the Eastern Region. Many of the agencies interviewed have stated that there is a need for the inventory and have expressed the desire to see the inventory made available to the community.

Community Youth Profile

Economic Context

Total non-farm employment for the month of May, 2004 for the New London labor market area was 147,100. This represented a 0.4% increase from May of 2003. Total non-farm employment for the same period in the Danielson LMA was 21,600. This represented a 0.5% decrease from May of 2003.¹

The following table shows the unemployment rate for June, 2004 for Connecticut and the two labor market areas that closely align with the Eastern Region. As can be seen, the New London labor market area's unemployment rate is six-tenths of one percent lower than the statewide rate, while the Danielson labor market area's unemployment rate is two-tenths of one percent higher than the statewide rate.

	Jun-04		Jun-03		Change from Year Ago		May-04	
	Number	Percent of Civ. Labor Force	Number	Percent of Civ. Labor Force	Number	Percentage points	Number	Percent of Civ. Labor Force
CONNECTICUT	86,400	4.8	104,500	5.7	-18,100	-0.9	86,300	4.8
Danielson	1,800	5	2,300	6.2	-500	-1.2	1,900	5.1
New London	7,400	4.2	8,500	4.9	-1,100	-0.7	7,300	4.3

The following table shows the number of firms and employees, by industry, for New London County. As can be seen, the Services, Trade, and Government sectors have the highest percentage of total current employees.²

	Firms	Percent of Total Firms	Employees	Percent of Total Employees
Agriculture	189	3.0%	1825	1.1%
Construction and Mining	666	10.4%	6323	3.7%
Manufacturing	227	3.5%	15625	9.2%
Transportation and Utilities	218	3.4%	7246	4.2%
Trade	1,780	27.8%	46484	27.2%
F.I.R.E. ³	453	7.1%	3942	2.3%
Services	2,406	37.6%	40591	23.8%
Government	464	7.2%	48566	28.5%
	6,403		170602	

¹ Connecticut Economic Digest, July, 2004.

² Southeastern Connecticut Community Economic Development Strategy website, at <http://www.secter.org/index.html>

³ Finance, Insurance, and Real Estate

Similar data were available for most of the northern part of the Eastern Region as well. In the Northeast, the industry that employed the most people was Education, Health and Social Services, followed by Retail Trades and Manufacturing.⁴

Industry	Number Employed	Percent of Total Employed
Agriculture, forestry, fishing & hunting and mining	804	2.1%
Construction	2305	5.9%
Manufacturing	4097	10.6%
Wholesale Trade	831	2.1%
Retail Trade	4548	11.7%
Transportation, ware-housing & utilities	1187	3.1%
Information	929	2.4%
Finance, insurance, real estate, rental and leasing	2323	6.0%
Prof., scientific, mgt, admin., and waste mgt. services	2708	7.0%
Education, health and social services	12416	32.0%
Arts, entertainment, recreation, accommodation and food services	3337	8.6%
Other Services	1531	3.9%
Public Admin.	1753	4.5%
Total	38,769	

Basic Demographic Information

The total population of the Eastern Region in 2000 was 412,026. The total youth population, age 15-24, in the Eastern Region was approximately 60,448, or 14.65% of the total population.⁵ 53% of these youth are male.

CAPT Achievement Scores

Of the 4,887 students taking the reading portion of the 10th grade CAPT test in the Eastern Region in 2003, 1113, or 22.7%, failed to achieve level 3 proficiency in reading, compared with 22.1% statewide. Of the 4,879 students taking the mathematics portion, 1,138, or 23.3%, failed to achieve level 3 proficiency in mathematics, compared with 25.7% statewide.⁶ This indicates that student achievement in the Eastern Region is very similar to the state overall.

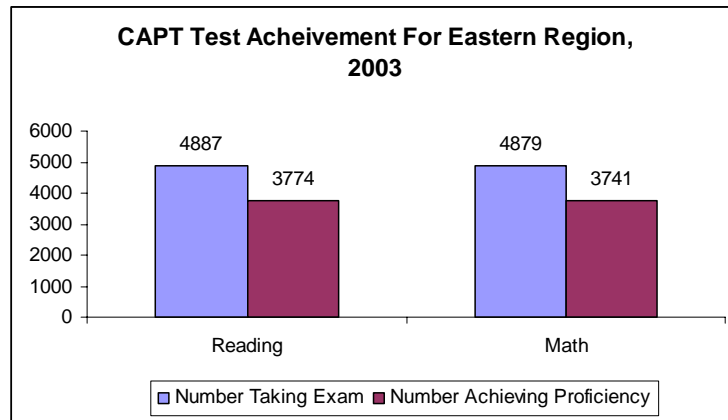
However, as the Connecticut State Department of Education (SDE) has noted, proficiency is not a sufficient goal for preparing students for the new world of work. As a result, SDE has set a goal range that is higher than the proficiency range. In relation to the state goal, less than 50% of students statewide achieved the goal range in reading and math. Students in the Eastern Region again were similar. This suggests that even students who have a high school diploma may not have sufficient preparation in basic math and reading skills. This makes a

⁴ Windham Regional Council of Governments. See: <http://www.wincog.org/regionalprojects.html#NECTEconPart>

⁵ US Census Bureau, 2000 Census.

⁶ <http://www.captreports.com/>

thorough assessment of those skills essential before advising young people about training or career options.



Dropout Rates

The number of dropouts for grades 9-12 in the Eastern Region for 2001-2002 was 783, out of 17,886 students enrolled, resulting in a dropout rate of 4.4%. The statewide rate for the same period was 3.3%.⁷ However, the dropout rate just described is calculated by looking at the number of student in the 12th grade who graduate. A more revealing measure is the number of 10th graders who do not graduate in three years. Statewide, 23% of 10th graders fail to graduate with their class. Given that the grade 12-to-graduation dropout rate in the Eastern Region is higher than the statewide rate, the number of 10th graders who do not graduate with their class is likely to be around 25%. Therefore, the presence of young people without a high school diploma is going to continue to be a major barrier facing many young people with whom the Board is likely to work.

Teens Not In School and Not Working

The percentage of teenagers 16-19 who were not in school and not working in Connecticut was 5% in 2000.⁸ If this percentage is applied to roughly the same age cohort in the Eastern Region, it suggests that at least 1,400 teens in the Eastern Region are not in school and not working. This is also consistent with the dropout rate information provided earlier and further confirms the barriers facing teens in the region.

⁷ <http://www.ctdol.state.ct.us/lmi/misc/iwip.htm>

⁸ Annie E. Casey Foundation, <http://www.aecf.org/cgi-bin/kc.cgi?action=profile&area=Connecticut>.

Youth Customer Profiles

In addition to looking at the make-up of the youth population as a whole within the region, it is important to look at the make-up of youth currently being served. Current customers are the best predictor of future customers unless substantial changes occur in outreach and enrollment procedures.

The following information on youth customers came from the state's employment and training information system, which includes Workforce Investment Act (WIA), TANF, and Employment Service (ES) data. The table below includes all youth customers recorded in the information system from July 1, 2003, to March 29, 2004, including those still active from the previous program year. This constitutes a "snapshot" of the youth customers currently being served. As evident from the table, compared to the total youth population in the region, the one-stop youth customers are more likely to be female, black, and Hispanic.

Gender, Race, and Ethnicity For One-Stop Youth Customers and Population

	All Youth Customers		Overall Youth Population	
	<i>Number</i>	<i>Percent</i>	<i>Number</i>	<i>Percent</i>
Gender				
Male	1224	43.6%	32037	53%
Female	1582	56.3%	28441	47%
Total	2806		60448	
	All Youth Customers		Overall Total Population⁹	
	<i>Number</i>	<i>Percent</i>	<i>Number</i>	<i>Percent</i>
White	1865	69.6%	364614	88.4%
Black	331	12.3%	16897	4.1%
Hispanic or Latino	412	15.3%	22256	5.4%
Asian	22	Less than 1%	7966 ¹⁰	1.9%
Hawaiian or Pacific Islander	9	Less than 1%	--	--
American Indian or Alaskan Native	37	1.3%	3087	Less than 1%
More than one category	--	--	9698	2.3%
Total with Race/Ethnicity Data	2676		412026	

Other Characteristics of Youth Customers

Limited English Proficiency. In 2003, 324 of 2,808, or 11.5%, of youth customers were recorded to be "limited English proficient." This compares with 2.1% of the general youth population reporting that they spoke English "less than very well."¹¹ This suggests that youth programs in the Eastern Region generally deal with more of the young people in the community who face language and literacy barriers.

⁹ Youth by Race/Ethnicity data not available

¹⁰ Asian category in US census includes Asian and Pacific Islander

¹¹ Source for general youth population comparison: 2000 US Census

Disability. Of the 2,808 youth who were customers of the Board, 82 or 2.9% were recorded to have a disability. This compares with 6.9% of the general youth population reporting a disability.¹² While the one-stop centers generally deal with more of the young people in the community who face other significant barriers and disadvantages, the youth programs do not serve youth with disabilities in proportion to their presence in the population.

Receiving TANF. In March 2004, 836 individuals under the age of 24 were receiving Temporary Assistance to Needy Families (TANF). This represents 29.7% of the youth served by the Eastern Region. 93% of those youth receiving TANF are female. TANF clients typically have multiple barriers to employment, including the need for childcare, low basic skills, and lack of transportation. These data further reinforce the fact that a substantial number of the youth served in the Eastern Region face multiple barriers to employment.

WIA Participants

Most young WIA participants are enrolled in the WIA youth program, but some are served in the WIA Adult and Dislocated Worker Programs as well.

Number of WIA Youth in Youth and Other Programs

WIA Adult	15
WIA Dislocated Worker	2
WIA Youth	375
WIA Youth 5%	2
Total Certified or Exited	394

WIA Performance

Below are the most recently available performance data for the Eastern Region. National, state and other local area results are provided for comparison purposes. Overall, the data show the East providing the most effective services to younger youth in the State when judged by WIA performance outcome measures.

Younger Youth Outcomes

Skill Attainment Rate (April 1, 2003 thru March 30, 2004)			
	Attained Goal	# of Goals Set	
East	128	153	83.7%
North Central	713	924	77.2%
Northwest	339	417	81.3%
South Central	315	326	96.6%
Southwest	78	152	51.3%
Statewide	1573	1972	79.8%

¹² Source for general youth population comparison: 2000 US Census

Younger Youth Outcomes, continued

Diploma/Equivalent Rate (Exiters April 1, 2003 thru March 30, 2004)			
	Attained GED	No Diploma at Regist.	
East	33	37	89.2%
North Central	37	117	31.6%
Northwest	47	58	81.0%
South Central	39	50	78.0%
Southwest	10	14	71.4%
Statewide	166	276	60.1%

Younger Youth Retention Rate (Younger Youth Exiters From April 1, 2002 - March 31, 2003)					
	Youth Reten.	Exiters	% Retained	Goal	% of Goal
East	35	38	92.1%	62%	149%
North Central	31	52	59.6%	60%	99%
Northwest	35	37	94.6%	62%	153%
South Central	43	61	70.5%	62%	114%
Southwest	25	26	96.2%	60%	160%
Statewide	169	214	79.0%	62%	127%
National (PY2002)	27,735	46,619	59.5%	55.5%	107%

Older Youth Outcomes

The East's performance with older youth is higher than any other local area with the exception of the Southwest.

Entered Employment (Exiters From Oct 1, 2002 - Sep 30, 2003)				
	Entered Employment.	Exiters	Rate	Goal 2002
East	17	27	63.0%	
North Central	34	56	60.7%	
Northwest	17	32	53.1%	
South Central	28	54	51.9%	
Southwest	34	46	73.9%	
Statewide	130	215	60.5%	70%
National			69.5	65%

Employment & Credential Rate (Exiters From Oct 1, 2002 - Sep 30, 2003)				
	Credential & Employment	Exiters	Rate	Goal 2002
East	24	38	63.2%	
North Central	35	75	46.7%	
Northwest	19	41	46.3%	
South Central	27	64	42.2%	
Southwest	37	51	72.5%	
Statewide	142	269	52.8%	50%
National			46.5%	44.6%

Wage Change (Older Youth Exiters From April 1, 2002 - March 31, 2003)					
	Wage Change	Exiters	Average Gain	Goal	% of Goal
East	\$119,316	28	\$4,261	\$2,900	147%
North Central	\$70,739	29	\$2,439	\$3,000	81%
Northwest	\$66,773	23	\$2,903	\$2,800	104%
South Central	\$87,890	34	\$2,585	\$2,600	99%
Southwest	\$153,115	48	\$3,190	\$2,800	114%
Statewide	\$497,833	162	\$3,073	\$2,800	110%
National			\$2,938	\$2,645	111%

Customer Satisfaction for All Youth (Exiters From January 1, 2003 thru December 31, 2003)

The state goal for customer satisfaction among all WIA participants was 70%. The state exceeded that goal and as evident from the table below, youth only also exceeded the goal.

Customer Satisfaction Jan-Dec 2003		
	# Responding	Score
East	30	74
North Central	139	69
Northwest	56	77
South Central	69	73
Southwest	34	75
Statewide	328	72

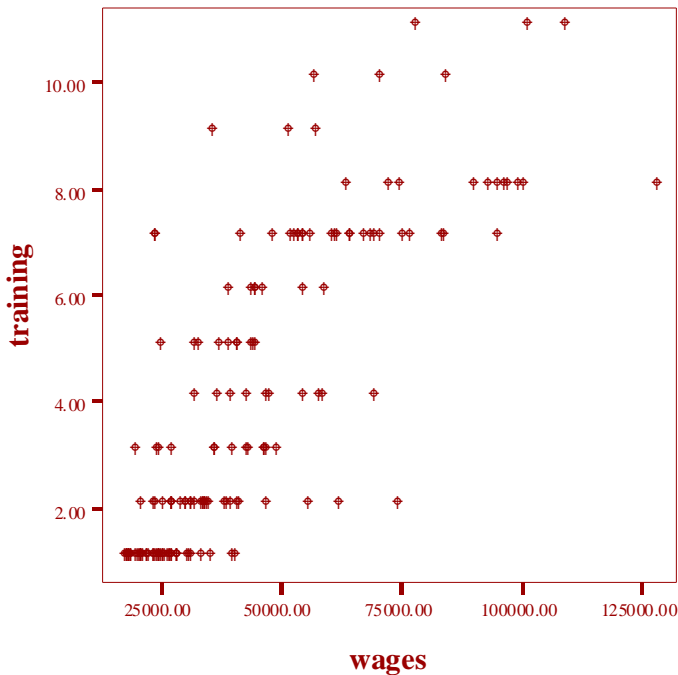
We have included the follow-up rates since this case-management process measure is relevant to several of the recommendations in the report. The percentages of exiters receiving follow-up is in parentheses.

Follow Up For Youth Exiters From July 1, 2002 to June 30, 2003				
		Exiters	Recv'd 1Qtr Follow-Up	Recv'd 3/4 Qtr Follow-Up
	East	86	32(37)	46(53)
	North Central	205	160(78)	179(87)
Younger Youth	Northwest	101	--	88(87)
	South Central	121	56(46)	92(76)
	Southwest	71	14(20)	6(08)
	Statewide	584	--	411(70)
	East	45	14(31)	19(42)
	North Central	82	72(88)	72(88)
Older Youth	Northwest	43	37(86)	37(86)
	South Central	68	41(60)	48(71)
	Southwest	83	25(30)	16(19)
	Statewide	321	189(59)	192(60)
Total Youth		905	754	603

Occupational Analysis

The following is an analysis of the occupational information for the Eastern Region contained in occupational projections developed by the Connecticut Department of Labor.¹³ Scatterplots show each data point in relation to two factors. The first scatterplot shows different occupations in the Eastern Region in relation to the amount of training necessary and the average wages paid for that occupation. Each dot represents an occupation. Therefore, the dot on the far right in the upper part of the chart represents an occupation that requires a high amount of training and pays over \$125,000 a year. The scatterplot clearly shows a strong positive relationship between training required and wage level achieved.

Chart 1. Quantity¹⁴ of Training and Wage Level for Occupations in The Eastern Region



¹³ See Forecast 2000-2010, <http://www.ctdol.state.ct.us/lmi/misc/forecast2010.pdf>

¹⁴ In this chart, the training is coded so that the higher the number, the greater the amount of training necessary (from 1= short-term on-the-job training up to 10 = a professional degree such as MD or JD). Training is coded by the Bureau of Labor Statistics in reverse, with 1 indicating a professional degree and 10 indicating short-term on-the-job training.

The next scatterplot, Chart 2, plots occupations in relation to the number of openings and the average annual wage in the Eastern Region. The chart clearly shows that most of the occupations with the largest number of projected openings are for jobs at relatively low annual wage levels. The table below the chart shows the percentage of total openings by wage level category. 48% of the projected job openings for the Eastern Region are in occupations where the annual wage level is \$25,000 or less. This is a significantly higher percentage than for the state as a whole (37%). This suggests that many of the job openings that will be available in the Eastern Region are not in occupations that will provide a livable wage for workers.¹⁵

Chart 2. Number of Openings and Wage Level for Occupations in the Eastern Region.

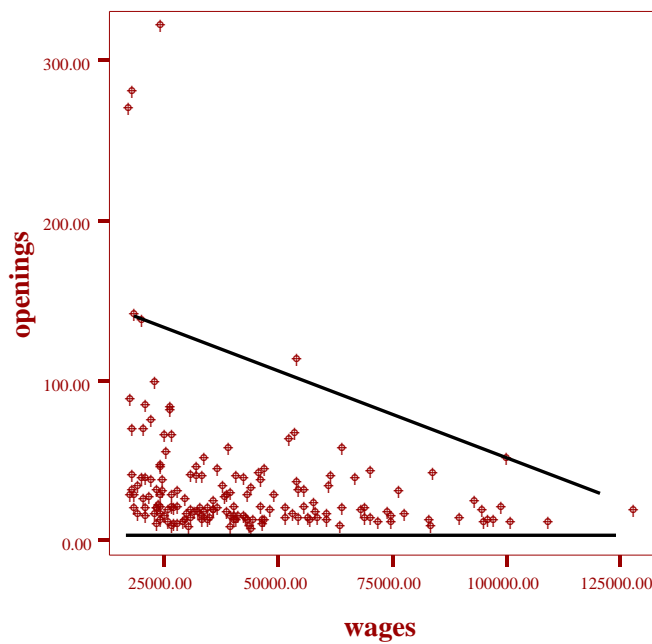


Table 1. Percentage of Total Openings by Wage Level

Wage Level	Number of Openings	Percent of	
		Total Openings	Occupations Represented
0-\$25,000	2308	48.0%	41
\$25,001-\$40,000	1075	22.3%	48
\$40001-\$75,000	1176	24.4%	57
\$75,001-highest	251	5.2%	16
Total	4810	100.0%	162

¹⁵ One estimate of the income needed by a family with two adults, one infant, and one preschool child is \$36,108. See Pierce and Brooks, *The Self-Sufficiency Standard For Connecticut*, Page 11.

The third scatterplot, Chart 3, shows the number of projected openings and the level of training needed for those openings for occupations in the Eastern Region. Each dot represents an occupation. As seen in Table 2, a substantial majority of those projected openings (71.3%) are in occupations that require on-the-job training or work experience only. This suggests that there are numerous opportunities for youth to find entry level jobs that can evolve into jobs that pay a livable wage if the young person is able to take advantage of career ladder and lattice opportunities. Viewed with the Chart 2, Chart 3 also suggests that while the opportunities for entry level work at lower wages are plentiful, there are fewer high paying jobs. Competition for these jobs will be strong, and education and life-long learning, very often accomplished on the job, will provide the competitive edge.

Chart 3. Projected Number of Openings and Level of Training Required for Occupations in the Eastern Region.

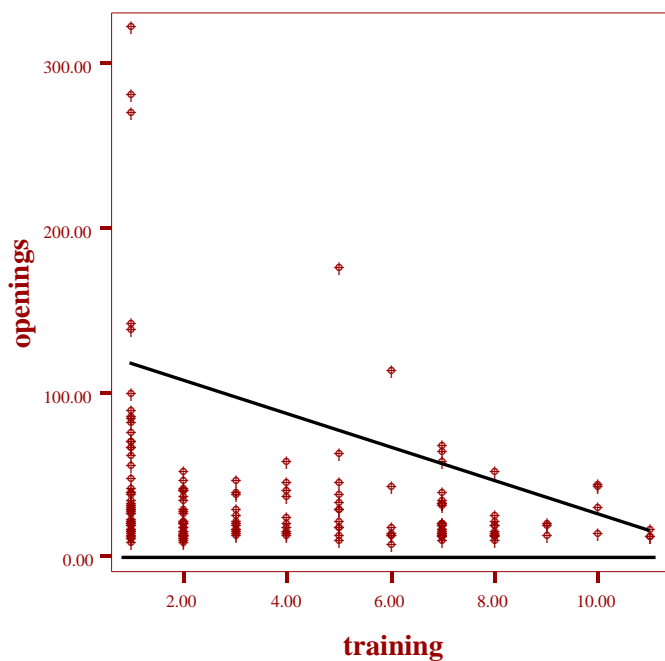
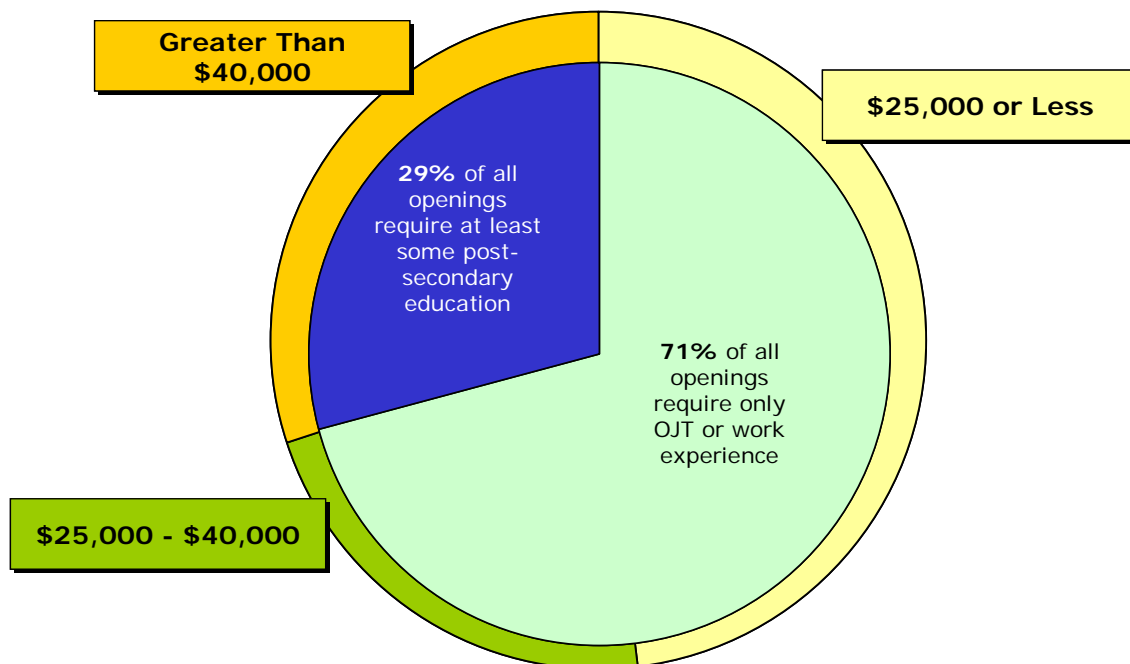


Table 2. Percentage of Total Projected Job Openings by Level of Training Required

	Number of Openings	Percent of Total Openings	Occupations Represented
OJT or Work Experience Only	3689	71.3%	103
Post Secondary Vocational Training or Associate's Degree	625	12.1%	19
Bachelor's Degree or Higher	861	16.6%	46
Total	5175	100.0%	168

Diagram of All Projected Openings through 2010

Combining the information from the previous scatterplots, the diagram below provides a



conceptual view¹⁶ of the occupational outlook in the region. The diagram shows that approximately 71% of the job openings require only OJT or work experience, leaving only 29% of openings that require post-secondary education. This region has a smaller proportion of jobs requiring post-secondary education than the state as a whole.

Within the 71% of jobs that require only OJT or work experience, the majority pay less than \$40,000 a year. Only a few jobs that do not require post-secondary pay more than \$40,000 per year. Some of these jobs that pay more than \$40,000 and do not require post-secondary education, real estate sales, do require workers to pass the licensing exam. As would be expected, however, most of the jobs paying over \$40,000 require post-secondary education.

The large number of jobs that require only OJT or work experience should be taken into account when developing career plans for young people. Most of those jobs that do not require post-secondary education are still likely to require basic skills, including basic computer skills. Most employers also want to see a young person with a high school diploma or GED as evidence of those basic skills and of young person's ability to persist.

¹⁶ The diagram is not a precise representation of the data. It does provide a sense of the proportions of jobs in different categories relative to each other.

The Six Career Pathways

Ladders and Lattices. A career ladder is a widely accepted path to advancing in a career. In the traditional career ladder or career path, a person begins at one of the low rungs and hopes to advance up the rungs by holding a series of jobs with increasing skill demands and responsibilities. Often, management responsibilities are included in the ladder's top rungs.

Another type of path developed recently is non-traditional and more complex. This non-traditional path is sometimes referred to as a career lattice (or web). Rather than an orderly progression up a set of rungs with greater skills and management responsibility, the web or lattice has a series of handholds that are defined by a series of skills. The lattice approach to career advancement is analogous to the rock climber who uses handholds to move up, across and even down in order to attain a long-term goal of satisfying employment. These skills allow a person to move from job to job as interests develop and change. In the analysis below, we will develop, as appropriate, both traditional and non-traditional paths. In this way, the final pathways will provide the flexibility to start younger and older job seekers on careers regardless of their current skills.

Criteria for Initial Choices. The choice of career ladders and lattices as a focus for a particular region involves more than copying the list of occupations in demand. Indeed, if demand were the sole criteria, there would be no need for the current research. Since no criteria have been mandated, we feel it important to specify the criteria we have used as a starting point. If there are changes in the final choice of ladders and lattices, the changes can be based on systematic changes in the selection or priority of criteria. Using explicit criteria can also help ensure that the choices made are in alignment with the Board's broader goals and objectives for workforce development.

Criteria for Developing the Career Ladders and Lattices. The following criteria were used to make initial career ladder and lattice choices:

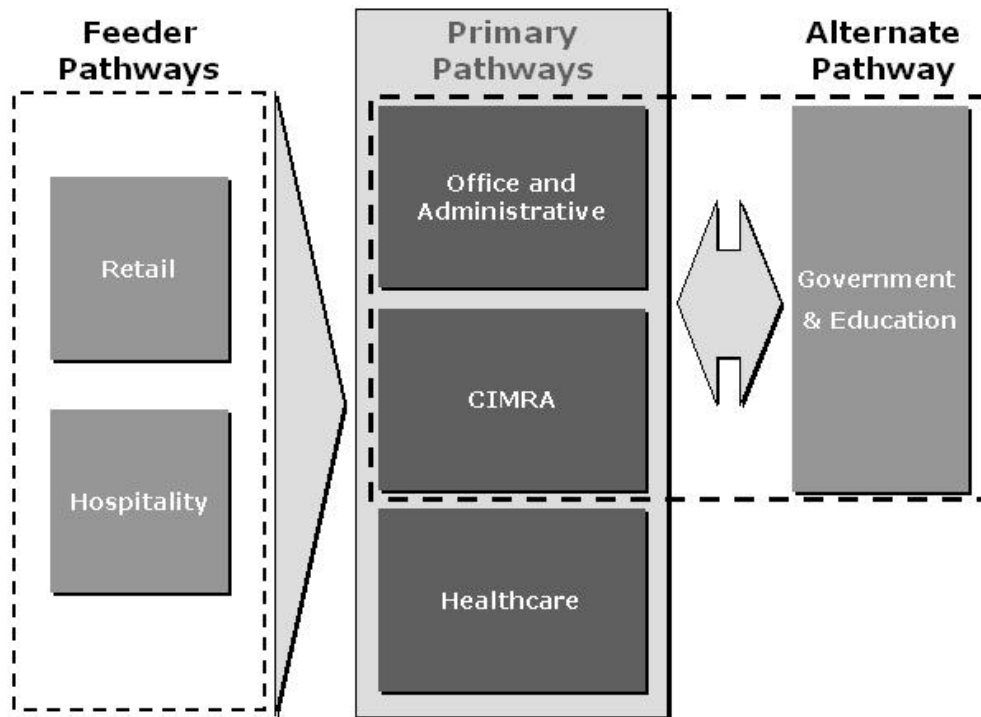
- Starting wage
- Number of openings per year
- Job growth
- Career advancement opportunities
- Entry opportunities for one-stop center customers

Applying the above criteria, the following pathways have been identified:

- Hospitality and Entertainment
- Government and Education
- Office and Administrative
- Retail
- Construction, Installation, Maintenance, Repair, and Assembly Occupations (CIMRA)
- Healthcare

The six pathways were not all seen as equal. Using the criteria described above, three primary pathways, Office and Administrative, CIMRA, and Healthcare were chosen because they offer good starting wages, are occupational areas with high demand, have greatest opportunity for career advancement, and provide moderate to high numbers of entry level openings. The Feeder Pathways, Retail and Hospitality, are those that are notable for having the highest number of openings, and in the case of Hospitality, often having better than average starting wages and benefits. Government and Education was designated as an Alternate Pathway because, except for the education portion, this pathway does not offer significantly different occupations so much as alternate settings in which to pursue an occupation. Many government jobs other than education are either Office and Administrative or CIMRA occupations. Unlike government, education does offer different occupations from the other pathways. However, while education offers some easily accessible jobs in pre-school childcare, most jobs in education require advanced degrees that will not be immediately accessible to the population being served as described in the previous section on customer profiles.

Six-Pathway Relationship Model



The following sections describe each of the pathways, including the total number of projected annual openings for each pathway, together with examples of occupations within the pathway. Note that the pathways do not show all of the incremental steps that someone may take in making progress on a ladder. They do show the major rungs or steps in the

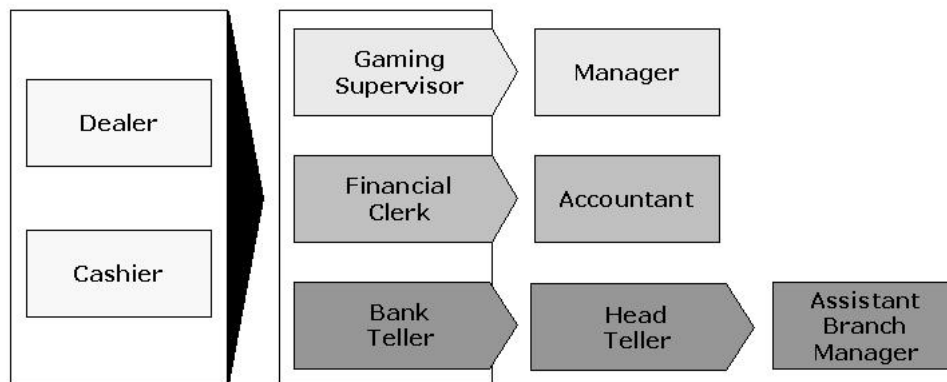
ladder or lattice. The details of different lattices and ladder combinations will be developed as part of the training curriculum.

Pathway 1: Hospitality and Entertainment

Hospitality consists of two closely related industries: Arts, Entertainment, and Recreation; and Hotels and Other Accommodations. This pathway was included because it affords opportunities to youth with little or no work experience and because of the large number of openings in this occupational area forecast for the Eastern Region.

	Annual Openings	Average Annual Salary
Hospitality (examples with high numbers of openings below)	573	
First-Line Supervisors/Managers of Personal Service Workers	11	\$42,585
Gaming Supervisors	58	\$42,420
Gaming Dealers	172	\$17,710
Gaming Workers, All Others	32	
Amusement and Recreation Attendants	35	\$20,231

Sample Hospitality and Entertainment Pathways



The three pathways. The three paths illustrated above track two common jobs in the Hospitality and Entertainment industry in Eastern Connecticut: a dealer or a cashier at one of the casinos. Both jobs require some training but neither requires an associate's degree. The first path, dealer, allows the individual to move to a first-level supervisory position without additional education. However, to become a manager, a bachelor's degree would probably be necessary.

The second path goes from cashier to financial clerk and would probably require some post-secondary education or at least knowledge of typical financial practices and software. This progression could occur within the casino or it could involve going to another industry where financial transactions are recorded and processed.

The third path, from cashier to bank teller, does not require any additional education but may require greater responsibility and attention to detail than the cashier position. The bank teller job is also more complicated and demanding in other ways. However, as the path shows, the opportunities for advancement are considerable. Like the cashier to financial clerk progression, this one involves a higher rung and lateral movement to another industry, Financial Services.

General Discussion. Hospitality and Entertainment occupations are clearly a major source of jobs for the Eastern Region. The presence of the two casinos and the associated hotels and other businesses within the casino complexes are a focal point. There are also Mystic Aquarium and Mystic Seaport. This industry has a number of different occupations. Some are covered in the section on Office and Administrative since many who have jobs in those occupational areas work within the hospitality and entertainment industry. Some workers cross from the gaming industry into the Financial Services industry. (See the diagram above.) Other occupations are covered in Retail Sales since the Hospitality and Entertainment industry also has a number of retail sales people working in context of the hospitality area. In fact, there are also occupations from the CIMRA area that are an important part of the Hospitality and Entertainment field (e.g., electricians, plumbers, carpenters, computer technicians)

Two major career paths that are distinctive to the hospitality industry and gaming in particular are cashiers and gaming dealers. The path for the cashiers includes the possibility of going to the banking industry as a teller and then making progress within a branch bank as noted in the Office and Administrative section. Another path is to stay within the gaming area and become a supervisor or manager. Supervisors do not generally require additional education beyond a high school diploma or two-year degree. However, manager positions usually do require a bachelor's degree.

The major qualities for success in this arena are:

- Good communication skills
- An outgoing personality
- The ability to maintain your composure even when dealing with angry or demanding patrons
- Personal integrity also is important because workers handle large amounts of money

There are age restrictions on who can work in the gaming area so it is best to check with the employer about restrictions for particular jobs.

Local Perspective: Casino Employment. There are well over 20,000 people employed by the two casinos and the related businesses run by the two tribes in Eastern Connecticut. The jobs are highly varied, ranging from parking attendants and security guards, to carpenters and cooks, to dealers and cashiers. The two casinos are always in the process of hiring. There is high turnover in some areas and there are also seasonal shifts, with both casinos gearing up for the summer and fall each spring.

Local Perspective: Casino Employment. The most prominent feature of work at the casinos is the generous benefit package. included are healthcare, life insurance, 401K, meals on days you work, and various extras, such as free training in a variety of areas. While much of the training is job-specific, the free culinary training at Foxwoods, for instance, provides skills that can be used anywhere in the food preparation industry.

The pay scale for entry level jobs is between \$8 and \$10 an hour, with most around \$8.50. Certain job categories, such as dealers, can make much more than the hourly wage after training, which is provided by the casinos. However, the training is intensive and not everyone is successful. Those who succeed once training is completed tend to have very good people skills and to tolerate high levels of stress resulting from interpersonal exchanges and from an environment with high levels of noise, smoke, and alcohol.

There are a few other conditions of employment that must be understood. These businesses run 24 hours a day. When people begin work there, they are on the least desirable shifts, often the late night to early morning, 9 pm to 5 am or similar. Also, days off are usually possible only during the week since weekends are the busiest time.

The greatest advantages are the variety of jobs and the fact that someone can start at an entry-level position with good benefits and have many opportunities for learning, given the right interests.

Particular career paths with good potential:

- Culinary
- Hotel attendant, management
- Electronics-related technician (must have some education for this to start) (CIMRA)
- Retail sales, management

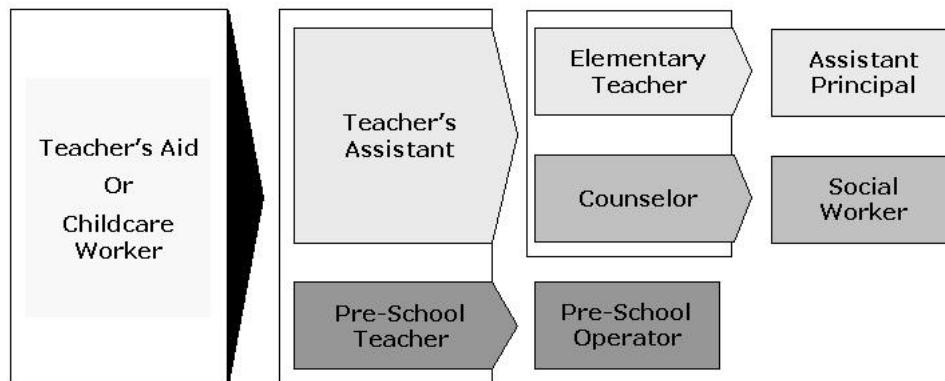
Partial list of the variety of positions available:	
• Food and Beverage	• Engineering
○ Busers	○ Masons
○ Food servers	○ Carpenters
○ Hosts/Hostesses	○ HVAC
○ Bar tenders	○ Plumbing
○ Drink servers	• Casino Operations
• Hotel Operations	○ Cashiers
○ Housekeeping	○ Security
○ Front desk agents	○ Dealers
○ Valets	• Culinary
○ Traffic controllers	○ Cooks
○ Valets	○ Kitchen help
○ Slot technicians	
○ Slot attendants	

Pathway 2: Government and Education

This career pathway is really an amalgam of several sectors, including government, social service, and education. Many of the Government and Education jobs in the region are in also in Administrative and Clerical and CIMRA occupations. This pathway was included because education and government service are recognized as being important to the Eastern Region and because they provide an alternative path for many of the occupations represented elsewhere.

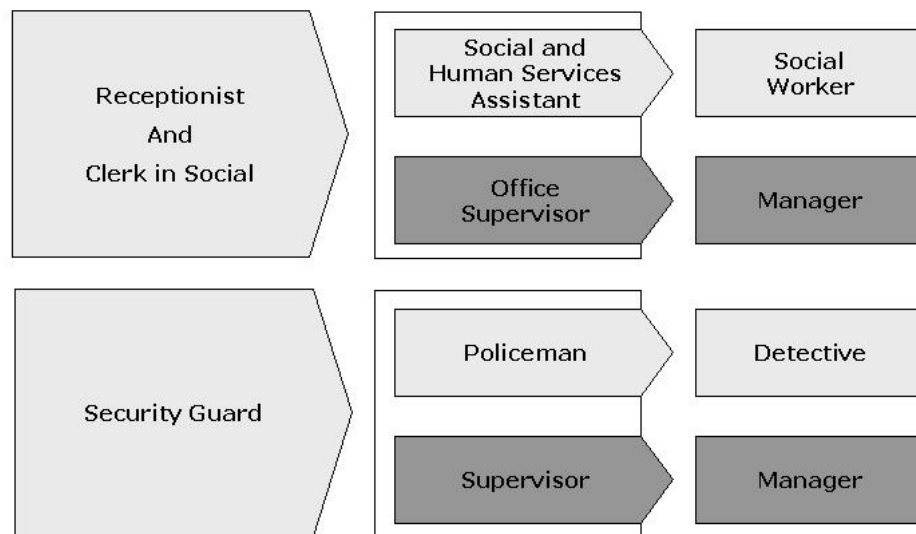
	Annual Openings	Average Annual Salary
Government and Education Occupations (507 Openings)		
Educational, Vocational and School Counselors	16	\$51,424
Rehabilitation Counselors	14	\$35,696
Child, Family and School Social Workers	14	\$48,119
Social and Human Service Assistants	36	\$33,378
Postsecondary Teachers, All Other	10	\$56,720
Preschool Teachers, Except Special Education	15	\$23,516
Elementary School Teachers, Except Special Education	59	\$52,481
Middle School Teachers, Except Special and Vocational Education	27	\$54,352
Secondary School Teachers, Preschool through Elementary	63	\$53,437
Special Education Teachers, Preschool through Elementary	12	\$53,213
Teachers, Primary, Secondary, and Adult, All Other	11	\$41,175
Teacher Assistants	86	\$23,468
Fire Fighters	9	\$46,842
Correctional Officers and Jailers	23	\$38,317
Police and Sheriff's Patrol Officers	24	\$48,915
Security Guards	71	\$22,241
Protective Service Workers, All Other	17	\$24,324

Sample Government and Education Pathway



Career Path. This career path has a number of steps, with education required at each step to allow the person to progress. At the entry point, the individual may not need any more than a high school diploma, especially those teacher’s aides who only do non-teaching tasks. Others will do instructional support under the supervision of the teacher. Teacher’s Assistants are more like a second teacher in the classroom and often have a post-secondary certificate or associate’s degree. They will generally do more teaching, as well as some clerical and non-teaching tasks. For those people who like children and like the structured environment of a school, the next rung on the ladder is requires a bachelor’s degree to become a full fledged teacher. The other path is to work primarily with younger children in a pre-school setting. The educational demands are not as great in the pre-school setting and for those who are entrepreneurial, there is the opportunity of starting your own pre-school.

Additional Government and Education Pathways



Additional Career Paths. The two paths defined above are among the many other occupational areas, beyond teaching, that are available in government. Receptionist and first level clerical workers in social services are an example of a twin paths with the potential to progress through small, incremental steps. The receptionist or clerk in a social services office has the opportunity to learn the business and add responsibilities as skills and knowledge increase from on-the-job training. They can then become a human services assistant with the opportunity to provide a range of direct services, often delivering these services with a high degree of independence. To take on certain tasks, they will have to obtain an associate’s or bachelor’s degree. The degree of autonomy and the range of responsibilities tend to increase with additional post-secondary education. “Social and human services assistant” is a generic term for people with a wide array of job titles, including human service worker, case management aide, social work assistant, community support worker, mental health aide, community outreach worker, life skill counselor, and gerontology aide. They usually work under the direction of professionals from a variety of fields, such as nursing, psychiatry, psychology, rehabilitative or physical therapy, or social

work. The amount of responsibility and supervision they are given varies a great deal. Some have little direct supervision; others work under close direction.

The other option, office supervisor, allows someone who is more skilled in the administrative tasks to progress in that area. By taking on more complex and self-directed administrative tasks, someone can become an office supervisor or manager, overseeing and performing a variety of tasks associated with record keeping, finance, and logistics.

Being a security guard can be an entry level position for pursuing a career in law enforcement or continuing in the private security field, either taking on more difficult security tasks or becoming a supervisor or manager. There are numerous opportunities in the security area in government as well as private companies given the increased emphasis on security due to terrorist threats. It should also be noted that joining the military and being trained as a military policeman is another way to eventually have a civilian law enforcement career. The advantage of the military is that if you qualify, the training is free and you are being paid the whole time.

General Discussion. Government and Education affords a wide range of employment opportunities. The jobs cut across a wide range of occupations rather than being concentrated in a particular area such as the others described in this career ladder/lattice report. Therefore, there are occupations for Office and Administrative and CIMRA. There are also occupations in education and social services. By far, the greatest number of opportunities is in Office and Administrative careers.

Teacher aides can require some college but some aides have childcare training and work as aides in preschools. Some aides in K-12 do not have post-secondary education either, but they usually do not have any teaching responsibilities. They supervise on the playground or in the cafeteria, and provide non-instructional support in the classroom. Upward movement does require getting an associate's degree for instructional responsibilities or a bachelor's degree in order to be a full-time teacher in K-12.

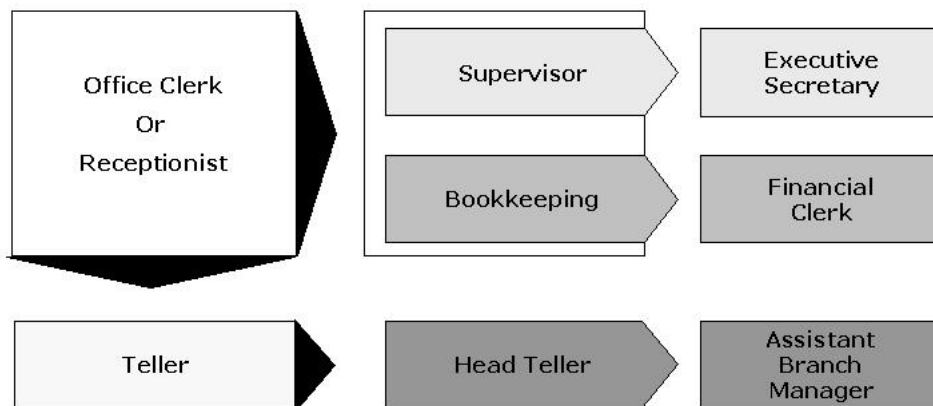
Many in government are involved in the provision of social services or other types of services. There are degree programs at the associate's, bachelor's and master's levels to prepare for these positions. In general, people must have the basic workplace skills of getting along well with fellow workers, being able to take direction, and having good basic skills in math, reading, and sometimes writing. Many positions in this industry also require some post-secondary training (e.g., an associate's degree for some teaching assistants, a two-year degree for social and human services assistants, depending on responsibilities.)

Pathway 3: Office and Administrative

The Office and Administrative career pathway includes a large number of related jobs, with many opportunities to change course within the lattice of these careers.

	Annual Openings	Average Annual Salary
Administration and Office Work (examples with high numbers of openings below)	604	
First-line Supervisors/Managers of Office and Admin. Support	40	\$47,050
Office Clerks, General	62	\$26,736
Receptionists and Information Clerks	51	\$25,365
Bookkeeping, Accounting, and Auditing Clerks	48	\$33,930
Tellers	24	\$24,241
Executive Secretaries and Administrative Assistants	36	\$40,650

Sample Office and Administrative Pathway



The paths described above are common directions taken by those entering the Office and Administrative career path. There are more of these entry level jobs than almost any other career area. As with many entry level positions, the tasks are fairly general, answering phones, greeting people, providing basic information, filing, copying, etc. Most entry level staff must be able to work with other office staff, they should be cooperative, and they must be able to work as part of a team. Obviously, they must be able to take direction from others since rarely are entry level office staff able to work autonomously.

Employers prefer individuals who are able to perform a variety of tasks and satisfy the needs of the many departments within a company. In addition, applicants should have good communication skills, be detail-oriented, and be adaptable.

Those who work in this field and exhibit strong communication, interpersonal, and analytical skills may be promoted to supervisory positions, the top path. Others may move into different, more specialized areas such as finance. After gaining some work experience or specialized skills through a one or two year degree or extensive on-the-job experience, those with an interest and aptitude for finance can transfer to jobs with higher pay or greater advancement potential. Advancement to professional occupations (e.g., accountant) within an establishment normally requires additional formal education, such as a college degree. Those who are interested in finance and are good with detail may decide to take a path that leads into banking. Local opportunities for those with the right skills are substantial. As our industry expert indicated, opportunities for rapid advancement in banking are possible for someone with the right skills, especially with given the many banks and branches throughout the Eastern Region.

Teller: Profile for Advancement:

- Good communication skills
- Very detail-oriented
- Able to take responsibility for large sums of money
- Very professional dress and manner
- Some sales skills

Our informant also indicates that although entry level wages for tellers are fairly low, the responsibilities are high. “People know within a year or less whether this is right for them. Even people who come over from being gaming cashiers, an apparently similar job, may find banking not suitable for them.”

Large versus small organizations.

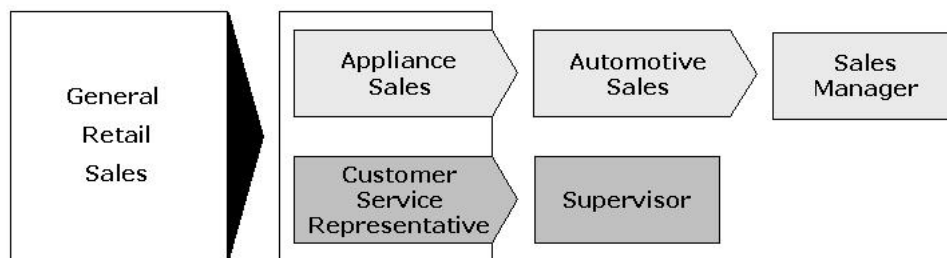
- Advantages of small offices or organizations:
 - Exposure to a wide variety of tasks
 - Less formal environment
 - More responsibility
 -
- Disadvantages:
 - Less opportunity for advancement
 - Less chance for employer-sponsored training
 -
- Advantages of large organizations:
 - Employer-sponsored training
 - Chances for advancement
 - Exposure to many different jobs
 -
- Disadvantages:
 - Often impersonal and formal
 - Limited responsibility
 - Often given limited numbers of tasks

Pathway 4: Retail

Retail is a pathway with a lot of openings. A July 2004 New York Times article notes that Eastern Connecticut is showing signs of continued strong retail growth.¹⁷ While the number of supervisory and management jobs in this pathway are limited, it was included due to the large number of entry level positions and the opportunities such opening afford youth with little or no work experience to gain skills which they can then use to seek better employment in this or other pathways.

	Annual Openings	Average Annual Salary
Retail (examples with high numbers of openings below)	867	
First-line Supervisors/Managers of Retail Sales People	53	\$39,190
Retail Sales Persons	318	\$24,095
Customer Service Representatives	42	\$31,992
Shipping, Receiving and Traffic Clerks	43	\$24,355

Sample Retail Career Pathway



Sales is a field with too many different paths to illustrate here. Retail sales is often the entry point, however. These jobs are often sought for part-time employment, as evidenced by the number of high school and college students who take part-time retail sales jobs. However, there are many opportunities for those who want to use full-time retail sales as a first rung on a career ladder.

There usually are no formal education requirements for this type of work at the entry level although a high school diploma or equivalent is preferred. Employers generally look for people who:

- Enjoy working with others
- Have the tact and patience to deal with difficult customers
- Have an interest in sales work
- Have a neat appearance
- Are able to communicate clearly and effectively

¹⁷ <http://query.nytimes.com/gst/fullpage.html?res=9A0DE1D6173AF93BA25754C0A9629C8B63>

The ability to speak more than one language may be helpful for employment in the Eastern Region where foreign tourists and many Spanish speaking peoples are present.

Local Perspective: General Sales. Sales people who are successful are similar in their personalities and interests whether they are selling clothes, appliances, cars, real estate, or insurance. What distinguishes sales people in these different areas is their content knowledge, level of education, and, to some degree, the sophistication of their sales skills. Therefore, while an entry level retail position may pay little more than minimum wage to start, it is a great training ground on which to hone one's communication skills and ability to persuade.

Local Perspective: Auto-Parts Retail. For young people with an interest in automobiles, there are sales jobs with Autozone. With eight stores in the Eastern Region, they represent a substantial opportunity, especially for an entry level position where having a high school diploma is not necessary. The individual may start at around \$8 an hour. If they are ready to take on additional responsibilities, they can earn up to \$15 an hour as an assistant manager. The company also offers a full range of benefits from healthcare to a 401K.

Local Perspective: Automotive. Automobile sales people can make a good living. They need to be knowledgeable about cars and usually have other sales experience before working on a showroom floor. Cars combine the two factors that lead to high income in sales, the product is very complex and very expensive. The only other common sales areas at a similar level or higher are boats and real estate. Local car dealers are always looking for experienced sales people who can handle the negotiations that occur in the process of selling cars. They look for people with extensive sales experience, communications skills, and people skills to be successful. Pay varies especially for those sales people working on commission.

Local Perspective: Grocery

Large grocery stores such as the Shop-Rite stores in Eastern Connecticut present a unique opportunity for establishing a career. There are a variety of entry level jobs in the grocery store: cashiers, baggers, grocery clerks, deli clerks (18 years or older by law) that can be a starting point. Most importantly, none of these jobs require a high school diploma, although the diploma is certainly considered a plus.

All of the education for these positions is on-the-job or through company-sponsored training. The other unique feature of this part of the retail industry is that most people start part-time and only with experience achieve full-time status.

The mix of part-time to full-time is 70/30. However,, part-time staff with over 20 hours a week have full benefits, despite their part-time status.

As with many industries, promotion occurs from within, so being a part-time grocery clerk allows the individual to directly apply for the full-time jobs that are posted internally.

Requirements:

- Be able to represent the company in a positive light
- No piercings or purple hair
- Must be able to talk to customers
- Be able to present oneself well during the interview

There are other paths to career development in retail sales besides successively more complex and expensive products. There is the ladder from retail to wholesale. Wholesale or industry-to-industry sales can provide a very high income to those with the knowledge and skills. However, unlike some of the higher level retail sales jobs, wholesale jobs often require a bachelor's degree. For example, equipment sales people for the Rogers Corporation often have a bachelor's degree in engineering or technology. Pharmaceutical sales people who might work for Pfizer usually have bachelor's degree in chemistry or biology.

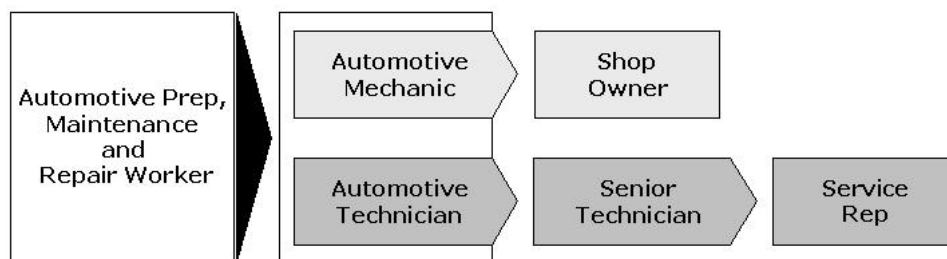
The Churn Factor. Retail is characterized by the large number of seasonal and part-time jobs (e.g., Christmas, fall back-to-school). There is also a great deal of job-hopping among some retail workers as they attempt to earn the highest hourly wage available. Nonetheless, there are real, full-time positions that provide better opportunities and pay than the average, as well as longer-term advancement. Those jobs tend to be with the large corporations like Sears, Nordstrom, and J.C. Penny. They pay better than average salaries and provide good benefits to full-time employees. They also tend to look for people with sales experience. As such, young people may need to get a sales job with lower pay and fewer benefits in order to obtain the experience to qualify for the better-paying retail positions.

Pathway 5: Construction, Installation, Maintenance, Repair and Assembly (CIMRA)

The CIMRA category is a cross-industry/cross-occupation category that includes construction, installation, maintenance and repair, and assembly, and other related occupations. It is not a traditional occupational grouping used by the Bureau of Labor Statistics (BLS). In fact, COG created CIMRA for this project because where there were only modest numbers of opening in the Eastern Region in each of the individual occupational categories. We grouped these BLS categories into CIMRA because of the common skills and interests of the individual who are likely to be attracted to these occupations. Among these skills and interests are the ability to work with your hands and the enjoyment of physical labor.

	Annual Openings	Average Annual Salary
The CIMRA Occupations (examples with high numbers of openings in sub-categories below)	701	
Construction and Extraction Occupations	189	
First-Line Supervisors/Managers of Construction	19	\$57,605
Carpenters	35	\$43,478
Electricians	33	\$46,213
Painters, Construction and Maintenance	16	\$34,401
Plumbers, Pipefitters, and Steamfitters	17	\$46,131
Installation, Maintenance, and Repair Occupations	202	
First-Line Supervisors of Mechanics, Installers, and Repairers	19	\$57,605
Automotive Body and Related Repairers	11	\$39,655
Automotive Service Technicians and Mechanics	40	\$36,751
Maintenance and Repair Workers, General	20	\$35,868
Coin, Vending, and Amusement Machine Services and Repairers	17	\$26,858
Production Occupations	310	
First-Line Supervisors of Production and Operating Workers	32	\$54,239
Team Assemblers	24	\$26,681
Machinists	14	\$35,766
Welders, Cutters, Solderers, and Brazers	13	\$32,604
Inspectors, Testers, Sorters, Samplers, and Weighers	15	\$33,036

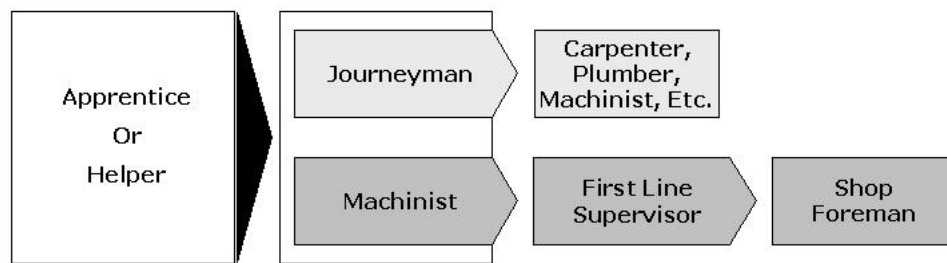
Sample CIMRA Career Pathway



Automotive work can begin with the simple job of washing and preparing cars for the showroom or for a customer. The dealers often hire young people in high school (for part-time work) or out of school (for full- or part-time work). The individuals can acquire new skills on the job or through course work to expand the range of tasks they perform. A next step might be to do oil changes, mount tires, and perform other less technical aspects of automotive maintenance. Usually, senior technicians acquire additional training by attending community-technical schools or schools run by the major car companies, such as GM, Ford, and Mercedes.

Local Perspective: Automotive. We take young people from the trade schools and from other garages and dealers. The job is more complicated than it used to be. A senior technician needs to know as much about electronics as mechanics. The diagnostic work involving the electrical and computer systems is the most difficult. People think you just plug the car into a computer and the computer tells you what's wrong. It just doesn't work that way. The technicians also need to be able to read and write to do their job. They have to write detailed descriptions of what was wrong and what was done to fix it.

Another CIMRA Pathway



This career area is among the most diverse. The jobs can be indoors or outdoors; the tools and equipment range from paint brushes to electrical testing equipment to heavy machinery. What unites them all is that the work involves the direct or indirect manipulation of tools to build, create, install, or repair physical commodities or structures.

Aside from where the work is done, another difference that distinguishes some of these handwork occupations is the degree to which they depend on a team or an organization as opposed to the efforts of individuals. Team occupations tend to occur in manufacturing and utilities. Individual occupations occur in the skilled crafts and automotive and engine repair.

One major area is skilled crafts, in which workers often begin as a helper or with an apprenticeship. Most skilled craft jobs require proficiency in reading and mathematics. Safety training is required for most jobs. Some laborers can learn their job in a few days, but the skills required for many jobs are substantial and must be learned through apprenticeships or other employer-provided training programs. Skilled workers such as carpenters, bricklayers, plumbers, and other construction trade specialists need either several years of informal on-the-job experience or apprenticeship training. Workers pick up skills by working with more experienced workers and through instruction provided by their

employers. As they demonstrate their ability to perform the tasks they are assigned, they move to progressively more challenging work. As they broaden their skills, they are allowed to work more independently, and responsibilities and earnings increase. They may qualify for jobs in related, more highly skilled occupations. For example, after several years of experience, painters' helpers may become skilled painters. Many of the craft jobs also provide opportunities for individuals who want to start their own businesses. Working in a small company where there is the chance to see every phase of the operation from customer relations to estimating the job to execution is worthwhile if an individual one day hopes to be his or her own boss.

Another CIMRA area is marine technologies.

Local Perspective: Marina Jobs

There are 8 primary technical/trade jobs in a marina:

1. Mechanic (more descriptive title is Marine Systems Technician)
2. Fiberglass Repairer/Painter (more descriptive title is Composite Materials Technician)
3. Service Coordinator/Manager
4. Sailboat Rigger
5. Yard Operations
6. Shipwright
7. Carpenter
8. Electronics Installer

Some key points about jobs in a marina:

1. Depending on the marina, two jobs are critically important, mechanic and fiberglass repairer/painter.
2. Depending on marina size, time of year, and weather conditions, the expectation is that everyone pitches in to get things done when needed.
3. In larger yards, the 8 primary jobs may be broken down further. For example, under Yard Operations, you might have lift operators, gas dock personnel, etc.
4. In addition to the above technical/trade jobs, there are often office, store, and managerial jobs.

Requirements:

The minimum recommended level of education is a high school degree. However, as the industry continues to change and the technology used increases in complexity, the time is rapidly approaching when advanced education will be required for entry into the field. This probably will be a certificate in marine technology and eventually may evolve to an associate's degree.

All jobs in a marina require physical effort. Often there are heavy components or parts that must be lifted and placed in tight quarters. While there is equipment to assist, it does take someone who can lift heavy items and work in tight places (e.g., engine compartment below decks).

Licenses:

There are none currently but licenses may be required in the future. Working on some engines may require factory training.

Special Education:

They can come directly from school. At this point there are no specific marina educational programs in CT. The closest that exist today are those programs being offered by The Sound School and the Bridgeport Aquaculture School.

The Sound School does offer limited internships with local marinas (called Supervised Occupational Experiences). Hopes are that this will be expanded in the future.

There have been a number of success stories of people coming from other industries into the marina trades; however, the tendency has been for people to leave the marina trades and go into higher paying, less physically demanding jobs, like automotive repair.

Previous Experience:

There is anecdotal information that people who come from large companies, especially union shops, experience difficulty in moving into a small marina where every person has to be willing to help out on different jobs when the situation arises.

Traditionally, workers in the marina trades could be good technicians and did not have to be effective in dealing with people. This has and is changing. Today's boat owner is increasingly sophisticated and knowledgeable, and has very high expectations. The result is that workers must be effective in dealing with people.

In every case an interview will be required. In addition to the technical information, the marina owner/manager will likely be paying attention to whether the person has the required characteristics:

- Maturity/work ethic
- Ability to work as a team (do whatever has to be done, when it has to be done)
- Capability to work with minimal supervision
- Ability to learn quickly

Detailed List of Job Positions:

Boat Yard Administration

General Manager
Office Manager
Secretary
Controller / Accounting Manager
Bookkeeper
Accounting Clerk

Sales

- Boat Sales Manager
- New/Used Sales Person
- Finance & Ins./Business Manager
- Finance & Insurance Clerk
- Store/Accessory Manager
- Accessory Store Clerk

Yard Operations

- Yard Manager
- Fork-Lift Operator
- Travel-Lift Operator

Marina Operations

- Dock Manager/Dock Master
- Dock/Gas Dock Attendant

Parts

- Parts Manager
- Shipping & Receiving/Stock Clerk
- Parts Clerk/Parts Sales Person

Service

- Service Manager
- Service Advisor
- Warranty Clerk
- Rigging Foreman
- Rigger
- Fiberglass Foreman
- Fiberglass Repairer
- Service Foreman/Lead Technician
- General Technician
- Technician's Helper
- Diesel Technician
- Outboard Technician
- Transmission /Outdrive Technician
- Spray Painter
- Painter/Varnisher
- Boat Washer/Cleaner
- Air Conditioning & Refrigeration Technician
- General Carpenter
- Marine Electrician
- Electronics Installer
- Electronics Technician

The path to most of the other CIMRA occupational areas has similar starting points. The typical start is as an assistant to a skilled person. This allows you to learn on the job the skills and knowledge that will allow you to progress to higher levels. This is true for the automotive (e.g., auto dealers, repair shops, and chain automotive service specialty companies such as Jiffy Lube) and other repair jobs, manufacturing (e.g., Electric Boat, Rogers Corporation), and jobs within the utilities industry (e.g., CNG, Northeast Utilities, Cox Cable, SBC Communications). Some of these jobs, such as technicians in automotive dealers' repair shops, have formal training requirements along with on-the-job training. Some occupations in manufacturing are best entered through training in one of the occupational or technical schools. Apprenticeships lasting up to four years are also a common path to establishing oneself in this occupation.

Like the skilled craft occupations such as carpentry and plumbing, automotive allows the opportunity for individuals to go into business for themselves. However, occupations in the manufacturing and the utilities industries depend on teams of individuals to accomplish most tasks. As a result, there is more emphasis on cooperation and teamwork, and these industries rarely build occupational skills that afford the possibility of starting your own business.

Pathway 6: Healthcare

	Annual Openings	Average Annual Salary
Healthcare (examples with high numbers of openings below in two sub-categories)	474	
Healthcare Practitioners and technical Occupations		
Registered Nurses	109	\$54,036
Dental Hygienists	10	\$58,500
Pharmacy Technicians	15	\$23,404
Licensed Practical and Licensed Vocational Nurses	24	\$43,402
Healthcare Support Occupations		
Home Health Aides	26	\$24,611
Nursing Aides, Orderlies and Attendants	79	\$26,479
Dental Assistants	13	\$33,701
Medical Assistants	21	\$29,638

The above table shows a sample of the healthcare openings projected to be available annually in the Eastern Region through 2010. As explained in the executive summary, because of the work that was taking place at the state level, this study did not focus on the local perspective on the healthcare industry.

The following are the findings of the Connecticut Career Ladder Advisory Committee's three year strategic plan with regard to healthcare occupations:

Because of the acute shortage of workers in the nursing field, the Advisory Committee focused on the **career** path to becoming a nurse. Future discussions will address a broader range of health care professions including technical positions, emergency medical occupations and other allied health fields.

Overview of Shortages

The **Connecticut** Department of Labor (CTDOL) in its July 2003 report, *Connecticut Workforce Demands and the Implications for Education*, documented the current and anticipated workforce shortages in the health care industry. Projections indicate that the number of positions for registered nurses (RNs) will increase from 30,560 in 2000 to 36,740 in 2010—a 20% increase.

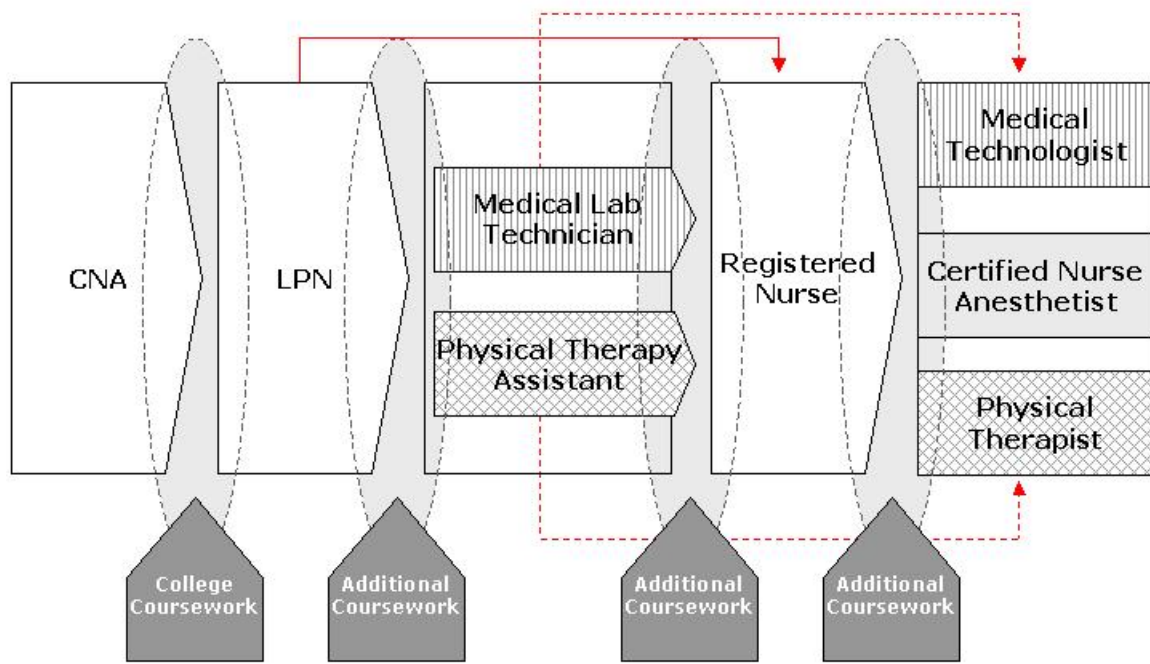
Certified nurse's aide positions will increase from 23,640 to 27,890—an 18% increase over the 2000 to 2010 time period. Other health care occupations are expected to experience similar increases including Licensed Practical Nurses (LPNs) with a 14% increase (7,010 to 7,990), home health aides a 28% increase (8,410 to 10,760) and medical assistants a 45% increase (3,890 to 5,640).

According to graduation rates, **Connecticut** will be unable to produce enough qualified registered nurses. The state produced 863 RNs in 2002 compared to the 1,235 nursing positions to be filled. In its July 2002 report, *Projected Supply, Demand and Shortages of Registered Nurses: 2000-2020*, the Health Resources and Services Administration (HRSA) indicated that the anticipated shortage by 2020 is expected to reach 55%—the fifth most acute shortage in the country.

Pathways to Becoming a Nurse

There are many paths to becoming a registered nurse. An individual may sit for the National Council Licensure Examination (NCLEX) to obtain a registered nurse's license following completion of a diploma program, associates in science degree in nursing program, a bachelor of science degree in nursing program, or a component of an accelerated program (second degree) offered at colleges and universities.

Sample Healthcare Career Pathway



According to the Connecticut Career Ladder Advisory report, licensed practical nurses (LPNs) can receive advanced placement into associate's degree nursing programs by enrolling in two transition courses. Once requirements are met, practical nurses can enter the third semester of the associate's degree programs. In some instances, community colleges recognize experience as a nurse's aide as a plus for entry into a registered nurse program.

As the advisory report states, one of the major obstacles to advancing in the healthcare field is the lack of career paths for nurse's aides to advance to LPN, RN, or other allied health fields. In particular, deficiencies in math and science make advancing in the nursing field (as well as many of the allied health professions) difficult if not impossible. ***There is a substantial, difficult-to-traverse gap between working in a CNA position and gaining the skills necessary to take more advanced jobs in the healthcare field.*** Other positions require

substantial additional college training, at a level that many individuals in CNA positions are not prepared to undertake. The state advisory committee has recommended several strategies for beginning to address this gap, but most of those programs are not yet underway. Also, even once linkage programs exist, it can be difficult for CNAs earning very low wages to pay for additional college courses, or even to have the time to go to school if they have childcare and other family responsibilities.

The following table¹⁸ shows the number of years of training necessary for many healthcare professions. As can be seen, most require at least two years of college. This suggests that to advance in the healthcare field, a job seeker must either “frontload” the education efforts, or start in a lower level position and then take additional college training to ascend to the next level. This training could be done iteratively, so that one could start as a certified nursing assistant, take some additional training to become a licensed nurse practitioner, then take some additional training to become either a nurse or, perhaps, a medical lab technician, a radiologist technician, or a respiratory therapist.

Title	Post High School Education
Primary Care Physician	6 - 8 years
Anesthesiologist	8 years
Certified Registered Nurse Anesthetist (CRNA)	RN + 2 years
Nurse Practitioner	6 years
RN	3 or 4 years
Radiologist Technologist MRI, CT, PET, Mammo, Nuclear	2 years 1 additional year
Respiratory Therapist (Registered)	2 years
Surgical Technician	1 year
Medical Technologist	5 years
Medical Lab Technician	2 years
Physical Therapy Assistant	2 years
Physical Therapist	5 - 6 years
Medical Coder	2 years
Medical Transcriber	1 year or less
LPN	1 year
Certified Nursing Assistant	6 weeks
Medical Physicist	6 or 8 years
Radiation Therapist	3 years
Pharmacist	6 years

¹⁸ See <http://www.utc.edu/Academic/AlliedHealthCareers/students/careers.htm#16>

Sample of Healthcare Employers in the Eastern Region:

BACKUS HOSPITAL, WILLIAM W.
CATHERINE RUSSELL GENERATIONS FAMILY HEALTH CENTER, INC.
COMMUNITY HEALTH NETWORK OF CT
CONNCARE OCCUPATIONAL HEALTH
CONNECTICUT VNA SE
DAY KIMBALL HOMECARE
DAY KIMBALL HOSPITAL
EASTERN AHEC, INC.
EASTERN AHEC, INC.
EASTERN CT REHAB. CTRS. / KILLINGLY OFFICE
GENERATIONS FAMILY HEALTH CENTER, INC.
GOOD AS GOLD CARE
GREENTREE MANOR NURSING
GRISWOLD SPECIAL CARE
HAMILTON REHAB./HEALTHCARE CENTER
HAVEN HEALTH CENTER
HAVEN HEALTH CENTER OF WINDHAM
HILLCREST HEALTH CARE CENTER
HOSPICE OF SOUTHEASTERN CONNECTICUT
INTERIM HEALTHCARE
JOHN HOOKER VNA EAST
LAWRENCE & MEMORIAL HOSPITAL
MARINER HEALTH AT BRIDE BROOK
MARINER HEALTH AT PENDLETON
ODD FELLOWS HOME OF CT
PROFESSIONAL SPEECH AID SERVICE
SECOND HOME ADULT DAY CENTER
UTOPIA HOME CARE, INC
VILLA MARIA CONVALESCENT HOME, INC.
WHOLE LIFE
WINDHAM COMMUNITY MEMORIAL HOSPITAL

Recommendations

1. Use entry-level job openings as a first career development step for customers with little or no work history.

For many customers, training may not be the appropriate solution. As the occupational analysis presented in this report suggests, there are many entry-level openings available that require only on-the-job training. Many customers with little or no experience can be referred to these jobs as the first step in their career development path.

2. Provide work readiness training based on employer needs for individuals being referred to entry level jobs.

Several employers interviewed emphasized the highly variable condition of job applicants. Applicants often come in un-groomed or dressed in “street” outfits (clothing appropriate for their daily lives outside of work but inappropriate for most workplaces). Since employers are looking for reliable workers who have reasonable judgment, these applicants are often dismissed outright. Most employers believe it is impossible to overemphasize the importance of proper dress and work habits in attracting and retaining customers. Youth are particularly problematic in this regard as they often are very attached to their street identities. It may be helpful, therefore, to ensure that the people responsible for imparting work readiness skills to young people do so in a collaborative, problem solving framework. Staff must be respectful of the street culture from which young people come, while helping them recognize and address the imperatives of the workplace to which they are going.

3. For those in training, effective case management is critical.

For those individuals for whom training is appropriate, the tight competition for the better paying jobs suggests that individuals may need considerable guidance to be successful and should be closely case managed after training is completed. In particular, case managers should help customers make the right choices for their first job, ensuring that the job requirements are a good match for the newly acquired skills. Upon the individuals’ entering employment, case managers need to help individuals understand that their training will be most valuable if they continue to obtain training through their employer, where possible, and on their own when necessary. During the follow-up activities, case managers can reinforce the value of continued learning and make some limited services available to encourage life-long learning.

4. Make the employment and training system an effective resource for post-service support and life-long learning.

Whether customers have been through training or not, case managers should help them understand that the employment and training system can help them at later stages of their career development. Customers should be encouraged to call their case managers whenever they may need advice about the next step in the career path, whether it be moving to the

next rung on a career ladder within an organization or planning to move, lattice-fashion, to a different position in a different organization. This becomes particularly true for those individuals who, despite the best efforts of the one-stop center, will have an entry level job that does not provide a livable wage.

5. Encourage and assist customers to think about cross-career ladder and cross-lattice opportunities.

Several cross-ladder and cross-lattice opportunities have been noted in the career paths in this report. Encourage customers to look for and aim toward these opportunities where appropriate.

6. Consider the casinos as an important resource for providing customers with many entry-level opportunities described in the career ladders in this report.

The casinos have a very diverse array of entry level opportunities that customers can use as the first step in their career development path. Careers in culinary arts, the construction trades, law enforcement, and even banking can start with a successful entry level position at one of the casinos. Using the casinos as one of the rungs on a young person's career ladder is particularly important in implementing the previous recommendation for supporting life-long learning and taking advantage of cross-ladder and cross-lattice opportunities.

7. Help customers find ways to obtain infrastructure or other jobs requiring “face-to-face” contact.

In this era of outsourcing and off-shoring of technical jobs, some of the most stable jobs are those related to maintaining infrastructure (such as public sector maintenance jobs, utility-related jobs, and jobs that require being “on the spot,” like construction, electronic repair, or automotive maintenance. Also, other jobs that still require face-to-face contact, like retail managers, are not likely to be off-shored.

8. Carefully evaluate the appropriateness of certified nursing assistant (CNA) training.

Certified nursing assistant (CNA) training can be an entry-level gateway to becoming a nurse or entering another more advanced allied health profession. However, it is important for case managers and customers to understand that being a CNA does not necessarily provide someone with the skills required to advance in the healthcare field. Many of the other allied health professions, including registered nurses, require substantial math and science training. Therefore, case managers should carefully assess the probability that a customer will be successful in taking additional math and science coursework before recommending that the customer take CNA training as a precursor to other advanced healthcare professions.

Appendix A: List of Employers Contacted

This table shows the employers and employer representatives contacted; those who gave their time to complete full interviews are starred in the last column.

First	Last	Organization	Ladder	
Roger	Adams	Willimantic Chamber		
Sam	Angello	Foxwoods	Hospitality	*
Deborah	Dechristoforo	Eastern Chamber		
Nichol	Depolito	Lawrence Memorial Hospital		
Janine	Dunn	Shop-Rite	Retail	*
Dan	Ebberup	Disch Automotive	CIMRA	*
Karen	Eisenstadt	United Natural Foods		
Gail	Elkinds	US Foods		
Fletcher	Fisher	AFL-CIO		*
Ilona	Gobowski-Stone	Windham Public Schools	Government and Education	
Nick	Haluga	Autozone	Retail	*
Dixie	Handfield	Retailer (company name not given yet)	Retail/Office and Administrative	*
Gene	Harper	Electric Boat		
Betty	Kuszaj	Northeast Chamber		
Dana	Lamb	T.N.M. Lathrop, Inc	CIMRA	*
Margot	Larson	Management Alternative, LLC	Office and Administrative	*
Thomas	Norris	CT Maritime Coalition	CIMRA	
Diane	Reynolds	Mystic Aquarium		
Mary	Signorino	Mohegan Sun	Hospitality	*
Sandy	Spencer	Daticon	CIMRA	*
Hugh	Stevens	M.J. Sullivan Automotive	CIMRA	*
Bill	Stevens	Rogers Corporation		
David	Trainor	ESCU	Government and Education	
Aliza	Wilder	UCONN	Government and Education	

About The Charter Oak Group, LLC

The Charter Oak Group, LLC is a consulting firm based in Glastonbury, Connecticut. The three principals, Barry Goff, Ph.D., Ron Schack, Ph.D., and Bennett Pudlin, J.D., consult to local, state, and federal governmental and quasi-governmental organizations on policy, performance, and evaluation issues. To find out more about The Charter Oak Group, visit www.charteroakgroup.com.