

# The State of the Workforce Report for the Metropolitan Chicago Region

# 2003

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**The Workforce Boards**  
OF METROPOLITAN CHICAGO

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# TABLE OF CONTENTS

<b>Executive Summary</b> .....	1
Major Findings.....	1
<b>Introduction</b> .....	3
Project Background .....	3
Defining the Metropolitan Chicago Workforce Region.....	3
How to Read this Report.....	4
Comparison of Metropolitan Chicago Region to Other Regions .....	4
Use of Data.....	5
<b>Section One: The Region’s Greatest Strength is the Diversity of Industries</b> .....	6
Employment Distribution Mirrors Distribution Among the Top Twenty Regions .....	6
Employment Distribution Reflects Importance of Services, Especially Business Services ...	7
Recent Job Losses Have Been Severe .....	8
The Bottom Line .....	10
<b>Section Two: Manufacturing, Health Care and Other Industries are Critical to Well-Being of the Region</b> .....	11
Industries Selected for Summits Highlight Chicago Area Strengths .....	11
Manufacturing is Vulnerable but Critical to the Economy.....	11
Health Services Provide Well-Being to the Region in More Ways than One .....	14
Finance and Insurance Employment Share and Growth Mirrors Other Leading Metro Areas.....	16
Hospitality and Tourism Employment Driven by Eating and Drinking Places .....	17
Technology-Related Industries Emerging From Recent Downturn .....	18
Transportation and Distribution (including Logistics) Employment Enjoys Steady Growth..	19
The Bottom Line .....	20
<b>Section Three: Occupational and Skill Requirements Changing for the 21st Century</b> .....	21
The Best Occupations in the Region are those with High Employment, High Growth, and High Wages .....	22
Many Opportunities Exist for Low-Skilled, Entry-Level Jobs .....	23
Understanding the 21st Century Workforce Skill Requirements.....	24
Employer Training Trends Pointing Downward .....	26
The Bottom Line .....	27
<b>Section Four: Age Advantages Offset by Educational Inequalities Across the Region</b> .....	28
The Metro Chicago Region is Comparatively Young .....	28
Social Inequities Exist in the Education System.....	29

Many Youth are “At-Risk” .....	30
Importance of Career Information .....	32
The Bottom Line .....	32

<b>Section Five: Overall Education Level Above Average But Many Adults Being Left Behind .....</b>	<b>33</b>
The Workforce Tends to be Well Educated.....	33
Too Many are Being Left Behind .....	34
Low Income is Concentrated in the Inner-City – as Are Minorities.....	35
Language is a Barrier to Higher Workforce Participation .....	37
Basic Literacy Skills Differ Across the Region .....	38
Individuals with Disabilities are Less Likely to be Employed .....	39
Low Wage Earners are Less Likely to Have Health Insurance .....	39
Ex-Offenders Face Many Barriers .....	40
The Bottom Line .....	41

<b>Section Six: Quality of Life Paints Metropolitan Chicago Region as the Place to Be .....</b>	<b>42</b>
Commuting Trends are Changing.....	42
Chicago Region Comparatively Average in Terms of Urban Sprawl .....	43
Personal Incomes are Higher in Metro Chicago; Poverty is Lower.....	45
Housing is Relatively More Affordable, but Still Too High for Many Residents .....	46
Metro Chicago Trails Comparison Areas in Racial and Ethnic Diversity .....	49
The Bottom Line .....	50

<b>Next Step Recommendations: Opportunities for Action .....</b>	<b>51</b>
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<b>Appendix A: Notes and Definitions .....</b>	<b>55</b>
Geographic Definitions .....	55
NWCET Definitions.....	56

<b>Appendix B: Summary of Major Data Sources.....</b>	<b>58</b>
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<b>Appendix C: Looking Deeper at the Summit-Targeted Industries .....</b>	<b>59</b>
Appendix C1: Chicago MSA Top 25 Occupations for All Industries .....	60
Appendix C2: Chicago MSA Top 25 Occupations for Finance and Insurance .....	62
Appendix C3: Chicago MSA Top 25 Occupations for Health Care Practitioners .....	63
Appendix C4: Chicago MSA Top 25 Occupations for Health Care Support .....	64
Appendix C5: Chicago MSA Top 25 Occupations for Hospitality.....	65
Appendix C6: Chicago MSA Top 25 Occupations for Manufacturing.....	66
Appendix C7: Chicago MSA Top 25 Occupations for Technology .....	67
Appendix C8: Chicago MSA Top 25 Occupations for Logistics and Distribution .....	68
Education and Training Codes .....	69

<b>Appendix D: Healthcare Workforce Summit Action Teams .....</b>	<b>70</b>
Healthcare Workforce Action Teams .....	70

# EXECUTIVE SUMMARY

The metropolitan region of Chicago faces a critical juncture in the development of a skilled workforce. Ensuring that employers have the skilled workforce they need to grow and prosper is reaching paramount importance in a global economy. Equally important are the career information and occupations available to current and future workers. Many other workforce challenges and opportunities are still emerging as the new economy, economic downturn, terrorism and war shape and reshape the workforce landscape.

To meet the changing demands of the 21st century workforce, the eight workforce boards in the area (including boards in Lake County, McHenry County, DuPage County, Northern Cook County, City of Chicago, South and West Suburban Cook County, Kane/DeKalb/Kendall Counties and Will County) have partnered to gain a sense as to the state of the region's workforce. This report is the result of that partnership.

The Metropolitan Chicago region has been studied extensively. Therefore, the research has included analyzing existing reports and studies for workforce-related information.

This study focuses on the regional implications of workforce issues in a major metropolitan area. According to a recent report by the National Governors' Association,<sup>1</sup> "only the metropolis has the fundamental assets that together can offer the combination of specialization and diversity that stimulates self-sustaining economic development and job creation. Metropolitan areas are the only geographic entities that contain the critical mass of skills and resources; the necessary population density and concentration of market incomes; the range of specialized knowledge and institutions; the wide diversity of vitally needed facilities and services; and the fully developed physical and human infrastructure that are prerequisites for new ideas, products and production methods, technological and organizational innovations, and dynamic economic growth and investment."

The Chicago metropolitan area has many strengths, as well as several challenges. Strengths are leverage points that can be built upon to improve a region's relative and absolute position in the national economy, leading to a better quality of living and working for all people and businesses in the region. Identification of challenges provides a focus for continuous improvement. Challenges are the conditions that, if changed, will have the greatest impact on the quality of living and working. The major storylines for the Chicago region are a combination of its strengths and challenges.

## Major Findings

**The Metropolitan Chicago region's greatest strength is the diversity of its industries.** The region is not overly dependent on any one sector, unlike Detroit and Cleveland (manufacturing); Las Vegas and Miami (tourism); San Jose and Austin (high tech); Atlanta and Dallas (telecommunications); or New York and Charlotte (finance). In June, 2003, Moody's Investors Services Inc., the bond rating agency, said the economy in the nine-county Chicago region is number 1 in business-sector diversity. Using a statistical analysis of major job categories, Moody's concluded that the Chicago area's economy is most like the nation's, with no undue reliance on any single sector. The agency calculated a diversity scale, with 100 being the perfect score, and Chicago earned a 95.1. A recent report from the U.S. Conference of Mayors<sup>2</sup> gave the area an above average rating for its diversity of industry.<sup>3</sup> The Metro Chicago region has a diverse industry mix that helps shield it from a downturn in any one industry, although it remains vulnerable to an

<sup>1</sup> *State Policy Approaches to Promote Metropolitan Economic Strategy*, National Governor's Association, Dr. Marc A. Weiss, October 2002.

<sup>2</sup> *The Role of Metro Areas in the U.S. Economy: Employment Outlook*, Global Insight, January 2003.

<sup>3</sup> *Ibid*, based on location quotients of 2-digit standard industrial classifications as a share of U.S. employment.

overall downturn in the U.S. economy as is currently being experienced. As measured by the new North American Industrial Classification System,<sup>4</sup> several sectors in the Metro Chicago region each generate more than 100,000 jobs, including Business and Finance; Professional-Scientific-Technical Services; Health Care; Manufacturing; Transportation and Distribution (including logistics); and Hospitality and Tourism.

**Recent job losses have been severe, and recovery may be slow. The jobs that are in highest demand tend to be low paying and more likely to be part-time and prone to layoffs (as seen in occupational data in the Appendix).** On February 6, 2003, Metro Chicago was declared the “job loss capital of America.” The U.S. Department of Labor’s Bureau of Labor Statistics reported that the Chicago region lost 57,400 jobs in 2002. The New York region, which has a larger employment base than Metro Chicago was runner-up with only 45,100 jobs lost. The Economic Policy Institute points to indicators that signify a “jobless recovery” and the U.S. Conference of Mayors indicates that the “jobless nature of the recovery” is similar to the last recovery of 1991. Metro Chicago’s diverse industry base will help in its recovery since some sub-sectors will grow (especially business services) while others decline. Average job growth for 2003 among the top 20 metropolitan areas is projected to be 0.9%, and the Metropolitan Chicago region is projected to grow by only 0.8%. The U.S. Conference of Mayors rated the Metropolitan Chicago region below average for job performance (annualized growth in non-farm employment).

**The Chicago region enjoys a higher quality of life compared to other metro regions.** Personal income is above average, poverty rates are substantially below those of the other two largest metro regions (New York and Los Angeles), adults tend to be well educated, the population tends to be younger, housing affordability is average, and the area is rich in cultural advantages and tourist attractions. Despite the continuing shift of population and job share from the urban core to the collar counties, the region still ranks 68th out of 83 metropolitan areas on an index of urban sprawl (where a rank of 1 is most sprawling and 83rd is least sprawling).

**The Chicago region is relatively prosperous, but many youth and adults have been left behind. Skill development to raise employment and income is a regional issue, requiring regional solutions.** Although the poverty rate for the region as a whole is below that of the U.S. average, there are thousands of people in poverty, even in the collar counties where tiny percentages hide absolute numbers that should not be ignored. The central city has significantly higher concentrations of people in poverty, many of whom live in lower-cost urban housing but commute to the suburbs to work, while the more highly educated can afford suburban housing and commute into the city for professional and managerial jobs. The imbalance between skills, jobs, housing and “haves” and “have-nots” is an issue across the region. Minorities have been harder hit by the current recession than the majority white population, further exacerbating the problem. Chicago Metropolis 2020 reports nearly three in four (72%) of the region’s residents surveyed want less separation by race and income. They also want higher use of public transit and neighborhoods where it is safe to walk at night.<sup>5</sup>

<sup>4</sup> The North American Industrial Classification System (NAICS) replaces the older Standard Industrial Classification System (SIC) and, despite the fact the data is limited to 2001, portrays a more accurate picture of the economy, allowing us to measure previously difficult to capture industries such as information and hospitality and tourism.

<sup>5</sup> 2002 *Metropolis Index*, Chicago Metropolis 2020

# INTRODUCTION

## Project Background

The eight Workforce Boards of the Metropolitan Chicago region contracted with Corporation for a Skilled Workforce to develop a series of products that would:

- Differentiate the region from others across the country;
- Assess workforce issues and solutions at both a local and regional level;
- Identify critical workforce issues;
- Build a credible foundation for planning;
- Engage stakeholders around critical workforce issues;
- Raise career awareness for youth as to the local labor market;
- Identify priorities for employment and training investment;
- Provide a baseline against which to measure progress in the future; and
- Provide a solid foundation for identifying shared goals, planning strategies, and prioritizing action.

Parallel to the development of these reports, a series of regional meetings were held with key board members and stakeholders to identify strategic issues. Following this report, those issues will be more clearly formulated and prioritized, and the result will be a series of action plans for the region and each workforce area.

## Defining the Metropolitan Chicago Workforce Region

The Metropolitan Chicago workforce region (also referred to as “Metro Chicago region”) consists of eight different workforce development areas covering eight different counties.

Workforce Board	Workforce Area Covered
Chicago Workforce Board	City of Chicago
DuPage County Workforce Board	County of DuPage
Lake County Workforce Investment Board	County of Lake
McHenry County Workforce Investment Board	County of McHenry
The Workforce Board of Northern Cook County	North and Northwest suburbs of Cook County
River Valley Workforce Investment Board	Counties of DeKalb, Kane, and Kendall
Cook County Workforce Investment Board	South and West Suburban Cook County
Workforce Investment Board of Will County	County of Will



The Metro Chicago workforce region differs slightly from the Chicago Primary Metropolitan Statistical Area (MSA<sup>6</sup>); the latter also includes Grundy County. This report uses the MSA in order to be consistent when making comparisons to other areas of the country, and because in terms of percentages there is little or no difference across most indicators.

## How to Read this Report

The report is built around major “storylines” for the region. Supporting data is provided for each storyline, followed by implications at the end of each chapter that describe what the conditions and trends mean for the region. This is not an exhaustive recitation of all data that exists, and more timely data is being printed every day. Gathering workforce intelligence and creating action plans are ongoing activities. The State of the Workforce report is a “freeze frame” along the data gathering/planning continuum that asks readers to pause and consider what needs to be changed to impact the trends over time.

## Comparison of Metropolitan Chicago Region to Other Regions

In order to better understand the Metropolitan Chicago region’s strengths and weaknesses, eight other metropolitan regions were chosen for comparison. They were selected based on a variety of factors including:

- Comparable size and historical economic significance:
  - New York
  - Los Angeles
  - Philadelphia
  
- Geographic economic development rivals
  - Dallas
  - Denver
  
- Emerging new economies:
  - Boston
  - San Diego
  - San Francisco
  
- The United States was also selected where available for additional comparison.

6 The terms PMSA and MSA are used interchangeably in this report; the appendix provides a definition of each area for the comparison areas.

## Population by MSA, 2000

Source: US Census Bureau 2000

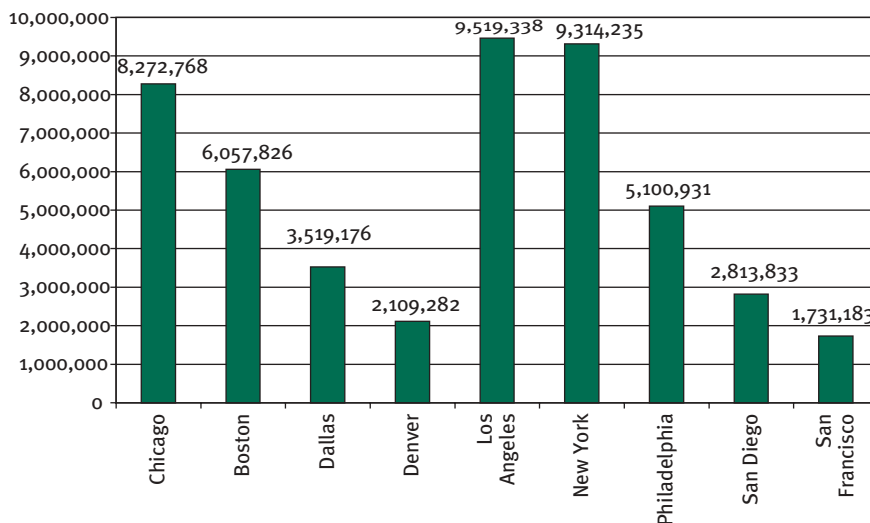


Figure 1

## Use of Data

This report includes key detail about critical industries, occupations, and skill characteristics, current workforce supply demographics, future workforce supply indicators (i.e. education and training), and quality of life (housing, transportation).

Prior to the release of the report, Corporation for a Skilled Workforce provided data files to the steering committee. These files included detailed graphics, tables, and hundreds of key bullet points many of which were not included in the narrative reports. The more detailed data files are available on the web site for the region ([www.workforceboardsmetrochicago.org](http://www.workforceboardsmetrochicago.org)).

This State of the Workforce report features a more focused use of various graphics and tables to describe the current state of the workforce.

# THE REGION'S GREATEST STRENGTH IS THE DIVERSITY OF INDUSTRIES

## Employment Distribution Mirrors Distribution Among the Top Twenty Regions

The Chicago region's diversity of industry offers a buffer against economic storms that strike a particular sector. Its composition is remarkably similar to the average of the top 20 regions in the country as well as the nation (Moody's), reflecting Metro Chicago's lack of dominance by any particular sector.

Table 1: 2003 Employment Shares

	Manufacturing	Services	Trade	TCPU <sup>7</sup>	Finance	Government	Construction and Mining
Chicago Region	14.2%	33.1%	22.5%	6.1%	7.5%	12.0%	4.6%
Average, Top 20 Regions	11.0%	34.7%	22.0%	5.7%	7.3%	14.1%	5.2%

*Source: U.S. Conference of Mayors*

By contrast, the regions with the greatest dominance of single industries are: Manufacturing – Detroit (19.8%), Services – San Francisco (40.1%), TCPU - Atlanta (8.4%), Finance – New York (11.9%), Government – Washington D.C. (21.7%), and Construction and Mining – Houston (10.8%). The Chicago region is considerably more diverse than its size competitors (New York and Los Angeles) and more diverse than its business location competitors (Dallas and Denver).

In addition to the Moody's Investors Services report citing Chicago's economy as most like the nation's, the U.S. Conference of Mayor's report of January 22, 2003 titled *The Role of Metro Areas in the U.S. Economy: Employment Outlook*, rated metropolitan areas on several factors, including their industrial diversity. Ratings were provided for several of the same metropolitan areas that this report is using for comparison purposes. The regions were ranked as top, above average, average, below average, or bottom for industrial diversity:

Chicago	Top
San Diego	Top
Denver	Above Average
Philadelphia	Above Average
San Francisco	Average
Dallas	Average
Boston	Average
New York	Below Average
Los Angeles	Below Average

## Employment Distribution Reflects Importance of Services, Especially Business Services

In 1992, manufacturing employed 577,000 workers; professional services employed 495,000. In 2002, manufacturing had declined to 496,000; professional services had increased to 655,000. While the manufacturing decline is detailed in the next section, it is important to note the large gains in service-related sectors including professional and business services (+32.3%), private education services (+32%), health services and social assistance (+25.3%), leisure and hospitality (+25.2%), and local government education (+23.4%). In addition, construction increased by the highest figure of all, 36.2%.

**Table 2: Chicago MSA Employment and Change by Major Sector, NAICS, 1992-2002**

Major Sectors	2002 Annual Monthly Average (in 1000's)	1992 Annual Monthly Average (in 1000's)	Change, 1992-2002
Natural Resources and Mining	1.9	2.2	-13.6%
Construction	194.9	143.1	36.2%
Manufacturing	496.4	577.2	-14.0%
Durable Goods	284.0	342.6	-17.1%
Non-Durable Goods	212.4	234.6	-9.5%
Wholesale Trade	238.6	223.4	6.8%
Retail Trade	428.8	399.8	7.3%
Utilities	15.7	22.5	-30.2%
Transportation and Distribution	172.0	138.8	23.9%
Information	107.4	98.7	8.8%
Financial Activities	312.7	287.8	8.7%
Professional and Business Services	655.3	495.4	32.3%
Education Services	92.3	69.9	32.0%
Health Services and Social Assistance	391.8	312.6	25.3%
Leisure and Hospitality	334.7	267.3	25.2%
Other Services	175.8	147.6	19.1%
Federal Government	60.6	71.0	-14.6%
State Government	58.0	55.5	4.5%
Local Government-Non-Education	187.2	163.6	14.4%
Local Government-Education	212.5	172.2	23.4%
<b>Total</b>	<b>4,136.6</b>	<b>3,648.6</b>	<b>13.4%</b>

*Source: Bureau of Labor Statistics*

While the table above focuses on major sectors, a look just underneath that level reveals some interesting changes. For example, insurance carriers (within financial activities) declined from 92,800 jobs in 1992 to 85,800 jobs in 2002 (-7.5%). Also, while computer systems design (within professional services) increased from 16,600 jobs in 1992 to 37,700 jobs in 2002 (+127.1%), the manufacturing of computers and electronics declined from 59,800 jobs to 40,700 jobs (-31.9%).

## Recent Job Losses Have Been Severe

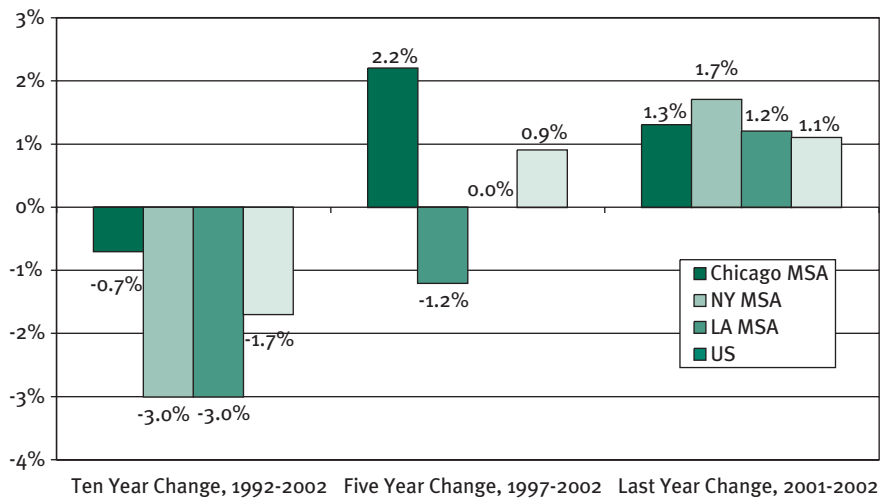
In 2002, Metro Chicago sustained the largest number of job losses in the nation. The nine-county Chicago Metropolitan Statistical Area (“MSA”) – including Grundy County in addition to the eight covered in this report - lost 57,400 jobs in 2002 compared to the larger New York MSA, the runner-up with 45,100 jobs lost. Nearly half the losses occurred in manufacturing. The Metro Chicago region’s unemployment rate had been similar to that of the country over the past ten years, starting slightly lower in 1992, dipping lower five years later, and lower still through 2000. Beginning in 2001, the Chicago region’s rate increased dramatically, and has remained higher than the U.S. rate through 2002.

**Table 3: Unemployment Rates by MSA at Select Intervals, 1992-2002**

	1992	1997	2000	2001	2002
Boston	7.6%	3.4%	4.2%	3.2%	4.8%
Chicago	7.4%	4.5%	2.2%	5.4%	6.7%
Dallas	6.9%	3.7%	3.1%	4.8%	7.1%
Denver	5.3%	2.8%	2.3%	3.5%	5.9%
Los Angeles	9.8%	6.8%	5.3%	5.6%	6.8%
New York	10.3%	8.5%	5.3%	5.6%	7.3%
Philadelphia	7.9%	4.9%	4.0%	4.3%	5.5%
San Diego	7.2%	4.2%	3.0%	3.2%	4.3%
San Francisco	5.8%	3.3%	2.1%	3.8%	5.9%
U.S.	7.5%	4.9%	4.0%	4.7%	5.8%

## Unemployment Rate Changes Ten Years, Five Years, Last Year

Source: Bureau of Labor Statistics



**Figure 2**

The Chicago region is projected to grow at a slightly slower rate than the national average. Recovery will come for the Chicago region assisted by its diverse industrial base, but recovery will come slowly due to national and international events.

This recession has been more broad-based than others. Manufacturing and high-tech industries led the 2001 recession, and according to the U.S. Conference of Mayors report<sup>8</sup> they will be the last to recover. The Economic Policy Institute<sup>9</sup> noted that unlike previous recessions, retail and wholesale trade have both seen more job losses than usual, and the current and most recent (1990-91) prior recessions were more “white collar” than usual. It is because of Metro Chicago’s diversity that it lost so many jobs, but it is because of that same diversity that Metro Chicago has opportunities to recover.

Recent job losses have also had unequal impact across demographics. Total initial unemployment claims data for 2001 for the Chicago region reflect the unequal impact of unemployment. Consider the data below showing that despite the white population being 65.8% of the total population, only 45.5% of all initial unemployment claims were by white persons; conversely, blacks make up 18.8% of the total population, but 29.7% of all of the initial unemployment insurance claims were by black persons.

**Table 4: Race/Ethnicity Distribution of Chicago MSA Initial Claims, 2001**

Race/Ethnicity	Number of Initial Claims, 2001	Percent of all Initial Claims	Percent of Population	Percent of Labor Force
White	34,332	45.5%	65.8%	69.8%
Black	22,430	29.7%	18.8%	16.0%
Hispanic, any race	14,411	19.1%	17.1%	14.6%
Other, or N/A	4,237	5.6%	15.4%	12.2%

*Source: Illinois Department of Employment Security, US Census Bureau 2000*

The Economic Policy Institute also noted that the U.S. economy is growing too slowly to generate jobs, signifying a “jobless recovery.” The economy must grow by at least 3.0-3.5% per year to prevent unemployment from rising.<sup>10</sup> The organization identified several key findings in a January 24, 2003 report:<sup>11</sup>

- The lack of job creation has led to long spells of unemployment.
- The lack of employment growth has led to slower growth of the labor force as fewer people choose to compete for scarce jobs, masking the true extent of unemployment.
- The weak economy is a problem for the employed as well as the unemployed, since the employed have less job security and are less likely to see wage growth.
- The contracting economy helped drive real household incomes lower, with the largest losses occurring at the bottom of the income scale.

These national trends should be part of regional and local conversations as policy leaders and stakeholders move towards strategic planning and action.

<sup>8</sup> *The Role of Metro Areas in the U.S. Economy: Employment Outlook*, U.S. Conference of Mayors, January 2003.

<sup>9</sup> *The State of Working America 2002-03*; Mishel, Bernstein, and Boushey; January, 2003; [www.epinet.org](http://www.epinet.org)

<sup>10</sup> *It Ain't Over Till It's Really Over*; Mishel, Bernstein, and Tiffany; January, 2002; [www.epinet.org](http://www.epinet.org)

<sup>11</sup> *The Jobless Recovery*; Bernstein; January 24, 2003; [www.epinet.org](http://www.epinet.org)

## The Bottom Line

The distribution across industries is strikingly similar to that of other top 20 metropolitan areas, although Chicago has significantly more employment distribution in manufacturing than the average of the top metropolitan areas.

Yet, it is in services, particularly business and professional services, where the majority of employment growth in the region has occurred over the past ten years. While construction experienced the largest growth during this time, several sub-sectors of services increased by over 30% including professional and business services and education services (private). Local government-education also saw a significant increase of over 23%.

At the same time that this growth has been occurring, recent job losses have been hard felt across the region, and negative global and national economic trends are likely to have a sustained impact as the region attempts to recover from the current economic cycle.

The good news is that the Chicago region's diversity of industry – top among all areas as measured by Moody's – bodes well for the recovery, as the Chicago regional economy will not be dependent on any one or two industries to help drive the recovery.

# MANUFACTURING, HEALTH CARE AND OTHER INDUSTRIES ARE CRITICAL TO WELL-BEING OF THE REGION

## Industries Selected for Summits Highlight Chicago Area Strengths<sup>12</sup>

Industry Trends and Employment, 1992-2002  
Summit-Selected Industries, NAICS

Source: Bureau of Labor Statistics

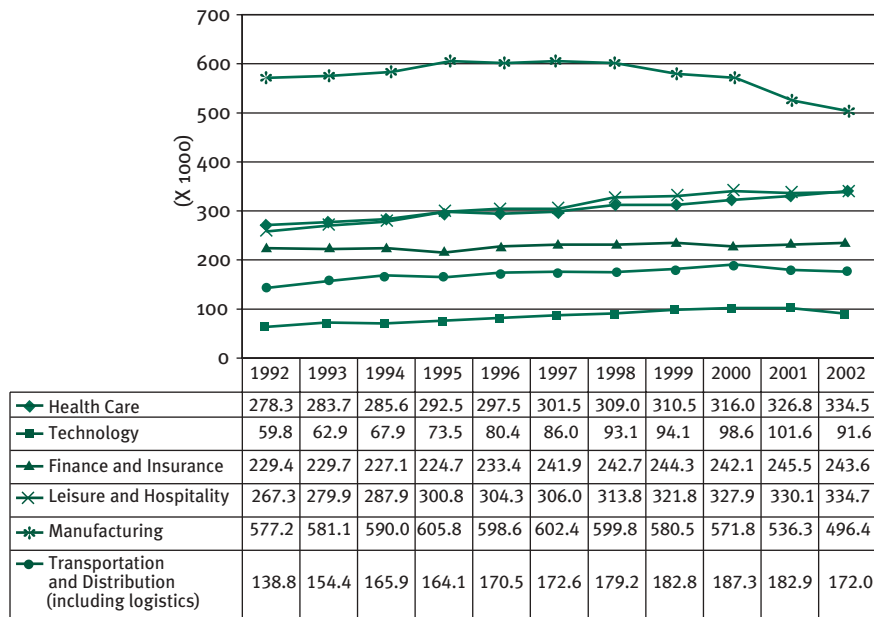


Figure 3

The six industries selected for workforce summits are included in the trend chart above. All have seen slow and steady growth over the past decade with the exception of manufacturing.

### Manufacturing is Vulnerable but Critical to the Economy

While the Chicago area has higher rates of employment distribution in manufacturing compared to the average of the top 20 metro areas in the nation, large declines in manufacturing have been seen. Given the industry’s strategic importance and shifting employment trends, a deeper look into the patterns is necessary.

Table 5 indicates that nearly every industry within the manufacturing sector is declining. Transportation equipment (+4.6%) and plastics (+11.7%) are the only industries showing growth over the prior ten years. Together, these two industries represent just fewer than 50,000 jobs of the area’s 284,000 manufacturing jobs.

Durable goods manufacturing is larger than non-durable goods manufacturing. Manufacturing in general is more sensitive to economic conditions than non-manufacturing, and durable goods even more so than non-durable. The U.S. Conference of Mayors’ report notes that the Chicago area’s “manufacturing array is susceptible to cyclical weakness and various durable goods producers face significant structural challenges.”

12 See Appendix C for detailed definitions of the summit-selected industries.



**Table 5: Chicago MSA Employment and Change by Manufacturing Industry, NAICS, 1992-2002**

<b>Manufacturing Sub-Sectors</b>	<b>2002 Monthly Average Employment (in 1000's)</b>	<b>1992 Monthly Average Employment (in 1000's)</b>	<b>Change, 1992-2002</b>
<b>Durable Goods</b>	<b>284.0</b>	<b>342.6</b>	<b>-17.1%</b>
Primary Metals	13.6	21.2	-35.8%
Fabricated Metals	78.7	82.6	-4.7%
Machinery	48.7	64.1	-24.0%
Computers and Electronics	40.7	59.8	-31.9%
Electrical and Electrical Components	27.6	31.6	-12.7%
Transportation Equipment	20.6	19.7	4.6%
Furnishings	12.7	15.7	-19.1%
Miscellaneous Manufacturing	27.1	34.1	-20.5%
<b>Non-Durable Goods</b>	<b>212.4</b>	<b>234.6</b>	<b>-9.5%</b>
Food	50.7	54.5	-7.0%
Paper	22.1	25.1	-12.0%
Printing	36.7	46.0	-20.2%
Chemicals	43.3	47.6	-9.0%
Plastics	39.0	34.9	11.7%

*Source: Bureau of Labor Statistics*

How economically important is manufacturing to the regional economy? According to national data developed by Virginia's A.L. Philpott Manufacturing Extension Partnership (VPMEP), "Every \$1 million in final sales of manufactured products supports 10 jobs in the manufacturing sector and six jobs in other sectors such as services, construction, and agriculture. Because the service sector is more labor intensive than the manufacturing sector, \$1 million in final sales of services supports 17 jobs. However, since the service sector has a smaller multiplier effect on the rest of the economy, \$1 million in its final sales supports only two jobs in the sectors outside services." The region should pay particular attention to the strongest sub-sectors of durable goods manufacturing (electronic equipment, industrial machinery and equipment, and fabricated metals) and the strongest sub-sectors in non-durable goods (printing and publishing, and food and kindred products) to help the manufacturing sector thrive.

Further enhancing the manufacturing picture is the fact that Metro Chicago is one of only three of the top 20 areas in the country projected to see growth in manufacturing in 2003; the other two are Minneapolis-St. Paul and Washington, D.C. The U.S. Conference of Mayors' report made these projections for growth in key employment sectors for the top 20 areas, many of which are the same as the comparison areas for this report. Only the areas common to the top 20 and this report are shown here.

**Table 6: 2003 Projected Growth in Key Employment Sectors by MSA**

Growth	Total Employment	Manufacturing	Services	Trade	TCPU	Finance	Government	Construction/ Mining
Chicago	0.8%	0.4%	0.9%	0.7%	0.6%	1.0%	0.7%	2.3%
Boston	0.5%	-0.7%	1.9%	-0.3%	0.5%	0.0%	-0.5%	-0.1%
Dallas	0.8%	-1.6%	1.6%	0.1%	1.1%	0.5%	2.4%	1.4%
Denver	1.2%	-0.4%	2.4%	0.6%	1.5%	-0.3%	2.0%	-0.4%
Los Angeles	0.5%	-0.8%	1.9%	0.1%	1.3%	-0.7%	-0.6%	1.1%
New York	0.6%	-1.0%	1.2%	0.6%	0.9%	1.6%	-0.9%	1.3%
Philadelphia	0.8%	-0.9%	2.2%	0.3%	1.2%	0.6%	-0.1%	-0.6%
San Diego	1.9%	-0.4%	2.7%	2.0%	2.6%	2.0%	1.4%	1.8%
San Francisco	0.0%	-0.8%	0.9%	-0.5%	0.7%	-0.8%	-1.1%	-1.5%
Top 20 Average	0.9%	-0.6%	1.7%	0.5%	1.1%	0.9%	0.5%	0.7%

*Source: U.S. Conference of Mayors*

## The Growing Talent Shortage<sup>13</sup>

In April 2003 the National Association of Manufacturers (NAM), the Manufacturing Institute and Deloitte & Touche released a report reflective of current trends in the industry including both available data as well as survey results from their membership. Among their findings:

- Nearly two-thirds (60.3%) of employers identified the availability of qualified job candidates as “moderate shortage,” and one out of five employers (20.2%) identified availability as “serious shortage.”
- The most often cited “serious shortages” among occupational categories included craft workers (42.5% of employers identifying a “serious shortage”), machinists (41.2%), technicians and electricians (33.9%), operators (20.5%), and engineers (20.0%).

Issues identified as important elements of the labor shortage included: student perceptions; parent and teacher perceptions, perceptions of manufacturing employees and executives; influence of popular culture, limited positive images, importance of career planning, and student career goals.

<sup>13</sup> *Keeping America Competitive: How a Talent Shortage Threatens U.S. Manufacturing*, National Association of Manufacturers, The Manufacturing Institute and Deloitte & Touche, April 2003

## On-Going Activities in Manufacturing

More than 210 individuals attended the recent Manufacturing Workforce Summit<sup>14</sup> in May, 2003 to discuss critical workforce issues facing the industry. The attendees focused on five action areas including:

- Building the image of manufacturing
- Raising the foundation and technical skills of entry-level employees
- Raising the skills of the current workforce
- Developing, advancing, and recruiting the immigrant workforce
- Meeting the challenge to small manufacturers of developing a skilled workforce

## Health Services Provide Well-Being to the Region in More Ways than One

As the population ages and more emphasis is placed on bio-medical research and business growth, health services comes to the forefront of critical industries. Health services provide both high-paying occupations at more advanced levels and many opportunities at the entry-level (see Appendix C3, C4). Furthermore, health services employment has increased from about 290,000 employees in 1991 to about 325,000 in 2001, according to the Illinois Department of Employment Security, including growth in every year over the ten year cycle except for one (1997-1998). When using Dun and Bradstreet data to analyze sub-sectors of the health services industry for the most recent month of June 2003, health care employment is 358,219.

14 Co-Sponsored by the Workforce Boards of Metropolitan Chicago, Candy Institute/Food Chicago, Chicago Manufacturing Center, Chicagoland Chamber of Commerce, Chicago Federation of Labor, Greater North Pulaski Development Corporation, Illinois Manufacturers' Association, Lake County Partners, Management Association of Illinois, McHenry Economic Development Corporation, Printing Industry, Association of Illinois and Indiana, Three Rivers Manufacturer's Association, Tooling and Manufacturing Association, Valley Industrial Association, and World Business Chicago.

**Table 7: Top Ten Detailed Employment Industries for Health Care, 3rd Quarter 2002, Chicago Metro Region**

SIC	Industry Title <sup>15</sup>	Employment	% of Total Employment	Establishments	% of Total Establishments	Average # of Employees
8062	General Medical and Surgical Hospitals	140,185	39.1%	368	1.8%	591
8011	Offices and Clinics of Medical Doctors	78,914	22.0%	8,529	42.0%	9
8051	Skilled Nursing Care Facilities	36,276	10.1%	377	1.9%	120
8021	Offices and Clinics of Dentists	21,940	6.1%	4,089	20.1%	5
8082	Home Health Care Services	13,997	3.9%	454	2.2%	44
8093	Specialty Outpatient Clinics, NEC	10,923	3.0%	484	2.4%	31
8099	Health and Allied Services, NEC	9,191	2.6%	578	2.8%	16
8059	Nursing and Personal Care, NEC	8,255	2.3%	153	0.8%	70
8049	Offices of Health Practitioner	8,149	2.3%	2,252	11.1%	4
8059	Specialty Hospitals, except Psychiatric	6,144	1.7%	161	0.8%	58
	<b>Total, All Health Industries</b>	<b>358,219</b>	<b>100.0%</b>	<b>20,300</b>	<b>100.0%</b>	<b>18</b>

Source: Dun and Bradstreet

## On-Going Activities in Health Care

At the recent Health Care Workforce Summit<sup>16</sup> in December, 2002 keynote speaker Gary Mecklenburg<sup>17</sup> stated that “the health care workforce crisis is growing because the demand for services is increasing as the population ages and the current workforce retires; employee dissatisfaction continues to push turnover to alarming rates, the supply of employees shrinks, and limited diversity inhibits the ability to provide quality care to an increasingly diverse patient base.”

As a result of the Health Care Summit, three action teams were formed including:

- Building the information infrastructure
- Building career information and awareness and career paths
- Identifying and supporting replication of models

Appendix D includes detailed information about each of the three action teams in regard to their goals and strategies.

<sup>15</sup> Notes for NEC (Not Elsewhere Classified):

SIC 8093 includes Alcohol Treatment-outpatient, drug clinics-outpatient, birth control clinics, etc.

SIC 8099 includes blood banks, health screening services, sperm banks, etc.

SIC 8059 includes rest homes with health care, domiciliary care with health care, etc.

<sup>16</sup> Co-Sponsored by the Workforce Boards of Metropolitan Chicago, American Society for Healthcare Human Resources Administration, Illinois Hospital Association, and Metropolitan Chicago Healthcare Council.

<sup>17</sup> Gary Mecklenburg is the past Chairman of the American Hospital Association (AHA) Board of Trustees, Chair of the AHA Commission on Workforce, and CEO and President of Northwestern Memorial Health Care.

Hospitals, doctor's offices, and nursing care facilities represent over 250,000 employees and as such are important partners in addressing the health care workforce shortage. While the nursing profession is a big part of this, so too are other important positions. In a fall 2001 national survey<sup>18</sup> of hospitals, imaging technicians had a vacancy rate of 15.3%; registered nurses was at 13.0%, licensed practical nurses at 12.9%, pharmacists at 12.7%, and nursing assistants at 12.0%.

It will become increasingly important to understand the underlying issues behind these shortages and to work together to solve the problems. The summit is a great start and a sustained effort holds great promise for the region.

## Finance and Insurance Employment Share and Growth Mirrors Other Leading Metro Areas

**Table 8: Top Ten Detailed Employment Industries for Finance and Insurance, 2nd Quarter 2003, Chicago Metro Region**

SIC	Industry Title	Employment	% of Total Employment	Establishments	% of Total Establishments	Average # of Employees
6411	Insurance Agents, Brokers, and Service	62,660	16.8%	6,042	33.5%	11
6331	Fire, Marine, and Casualty Insurance	50,238	13.5%	255	1.4%	240
6211	Security Brokers and Dealers	26,050	7.0%	1,437	8.0%	20
6022	State Commercial Banks	26,008	7.0%	720	4.0%	42
6021	National Commercial Banks	18,668	5.0%	804	4.5%	33
6141	Personal Credit Institutions	18,361	4.9%	496	2.8%	41
6153	Short-term Business Credit Institutions	14,723	4.0%	184	1.0%	86
6719	Holding Companies, Not Elsewhere Classified	13,731	3.7%	298	1.7%	47
6159	Miscellaneous Business Credit Institutions	13,504	3.6%	306	1.7%	46
6162	Mortgage Bankers and Loan Correspondents	11,591	3.1%	1,122	6.2%	11
<b>Total, All Industries</b>		<b>372,268</b>	<b>100.0%</b>	<b>18,025</b>	<b>100.0%</b>	<b>22</b>

*Source: Dun and Bradstreet*

<sup>18</sup> *The Healthcare Workforce Shortage and its Implications for Hospitals*, First Consulting Group, 2001.

Finance and Insurance, with over 372,000 employees, is one of the critical sectors in the region. Metro Chicago's growth in financial employment is expected to grow at similar rates to other large metro areas (1.0% to 0.9% for the top 20 metro areas) in 2003, and the Chicago area also has about the same share of employment in this industry (7.5%) as do the top 20 areas (7.3%).

Financial activities increased by 8.7% from 1992 to 2002, slightly below the 13.4% growth experienced for all industries in the region. At the most detailed level of employment, insurance agents have the most establishments (33.5% of total for all financial industries) and the most employees (16.8% of financial total).

Accountants, management analysts, and claim adjustment clerks tend to be the dominant occupations in this sector. Given the area's dominance in the financial markets, as the world and national economies begin to recover it is likely that the industry and related occupations will continue to grow at steady and healthy rates.

One cautionary note regarding this sector is the trend for consolidation within the banking industry. Large banks are merging with one another, and today's banking leader often becomes tomorrow's merger target. As bank consolidation continues, job stability will lessen, and tensions might be felt across the entire industry, as job seekers consider more stable alternatives in these uncertain times.

## Hospitality and Tourism Employment Driven by Eating and Drinking Places<sup>19</sup>

**Table 9: Top Ten Detailed Employment Industries for Hospitality and Tourism, 2nd Quarter 2003, Chicago Metro Region**

SIC	Industry Title	Employment	% of Total Employment	Establishments	% of Total Establishments	Average # of Employees
5812	Eating Places	186,403	52.8%	13,097	50.1%	21
7011	Hotels and Motels	43,156	12.2%	1,042	4.0%	56
7999	Amusement and Recreation Services, NEC	21,805	6.2%	1,708	6.5%	13
4724	Travel Agencies	15,180	4.3%	1,703	6.5%	9
5813	Drinking Places	11,955	3.4%	1,789	6.8%	7
7812	Motion Picture and Video Production	6,934	2.0%	1,008	3.9%	7
7992	Public Golf Courses	5,031	1.4%	189	0.7%	34
7922	Theatrical Producers and Services	4,156	1.2%	507	1.9%	8
8412	Museums and Art Galleries	3,932	1.1%	365	1.4%	11
7929	Entertainers and Entertainment Groups	3,885	1.1%	926	3.5%	4
	<b>Total, All Selected Industries</b>	<b>352,739</b>	<b>100.0%</b>	<b>26,123</b>	<b>100.0%</b>	<b>22</b>

*Source: Dun and Bradstreet*

<sup>19</sup> Hospitality and Tourism remains one of the more difficult industries to analyze. Prior to the conversion to the North American Industrial Classification, this industry represented a conglomeration of various industries from various classifications. In order to provide a sense of detailed industries, select 4-digit Standard Industrial Classification industries were analyzed. Eating and Drinking Places account for nearly 60% of all establishments and employment in this industry. Select 4-digit industries include some from transportation (travel agents), retail trade (eating and drinking places), and a variety of service-related 4-digit industries.

This industry remains one that is identified by low-wage jobs. In later occupation data, we can see occupations such as retail sales clerk, cashier, and waiters and waitresses have low pay, and are highly susceptible to unemployment and part-time employment.

Policy makers working in this arena must devise strategies to overcome perceptions of low wages and poor career mobility by identifying more appealing career ladders within the industry and across industries and focusing on more positive aspects, such as the portability of many occupations. Waiters and waitresses, for example, can work for multiple employers without facing steep learning curves.

## Technology-Related Industries Emerging From Recent Downturn<sup>20</sup>

**Table 10: Top Ten Detailed Employment Industries for Technology, 2nd Quarter 2003, Chicago Metro Region**

SIC	Industry Title	Employment	% of Total Employment	Establishments	% of Total Establishments	Average # of Employees
8711	Engineering Services	32,652	22.7%	2,142	19.9%	16
7371	Custom Computer Programming	30,409	21.1%	2,096	19.5%	15
7374	Data Processing and Preparation	20,549	14.3%	1,283	11.9%	16
7379	Computer Related Services, NEC	19,015	13.2%	2,650	24.6%	7
7373	Computer Integrated Systems Design	13,393	9.3%	764	7.1%	18
7372	Prepackaged Software	9,924	6.9%	948	8.8%	11
7378	Computer Maintenance and Repair	5,679	3.9%	407	3.8%	14
8734	Testing Laboratories	5,142	3.6%	225	2.1%	24
7377	Computer Rental and Leasing	2,859	2.0%	80	0.7%	37
7375	Information Retrieval Services	2,464	1.7%	141	1.3%	18
	<b>Total, All Selected Industries</b>	<b>144,001</b>	<b>100.0%</b>	<b>10,760</b>	<b>100.0%</b>	<b>22</b>

*Source: Dun and Bradstreet*

<sup>20</sup> Data is not comparable to chart at beginning of chapter due to differing data sources and classification codes. Select 4 digit industries include those in SIC 737, plus some in Engineering (SIC 87). Manufacturing-related technology was not included here, but rather in manufacturing.

Despite recent dot-com troubles, the technology industry in the region remains very strong; technology has permeated nearly all industries and occupations and its importance across all sectors of the economy continues to change the way we do business (and everything else). While this sector remains more than just information technology, those most closely related are included in Table 10; essentially computer related services plus engineering and testing laboratories.

Among those industries most specifically related to information technology, custom computer programming and data processing and preparation are leading sectors. In the occupational tables included in the following chapter, computer-related occupations dominate the list of top occupations based on current employment, projected growth, and wages.

## Transportation and Distribution (including Logistics) Employment Enjoys Steady Growth

**Table 11: Top Ten Detailed Employment Industries for Transportation and Distribution, 2nd Quarter 2003, Chicago Metro Region**

SIC	Industry Title	Employment	% of Total Employment	Establishments	% of Total Establishments	Average # of Employees
4225	General Warehousing and Storage	28,754	14.0%	984	8.8%	34
4213	Trucking, except Local	21,384	10.4%	1,259	11.2%	18
4212	Local Trucking, without Storage	17,760	8.6%	2,142	19.1%	8
4731	Freight Transportation Arrangement	16,949	8.2%	1,075	9.6%	17
4512	Air Transportation, Scheduled	11,438	5.6%	128	1.1%	131
4311	U.S. Postal Service	10,941	5.3%	198	1.8%	64
4215	Courier Services, except by Air	10,370	5.0%	102	0.9%	108
4119	Local Passenger Transportation, NEC	8,362	4.1%	890	7.9%	14
4011	Railroads, Line-Haul Operating	8,313	4.0%	123	1.1%	114
4111	Local and Suburban Transit	6,140	3.0%	121	1.1%	69
	<b>Total, All Industries</b>	<b>372,268</b>	<b>100.0%</b>	<b>18,025</b>	<b>100.0%</b>	<b>22</b>

*Source: Dun and Bradstreet*

Transportation and Distribution remains one of the region's leading industries. Transportation and Distribution experienced 8.8% growth between 1992 and 2002. The share of employment in the region for Transportation, Communications, and Public Utilities (6.1%) is higher than the average for the top 20 metro areas (5.7%). However, the projected growth in the region for 2003 (0.6%) is expected to be lower than that for the top 20 areas (1.1%).



## The Bottom Line

Manufacturing has long been a hallmark of Metro Chicago and comparisons with other areas show there is more manufacturing employment distribution in the Chicago region than in other metro areas. Even so, manufacturing has experienced over a 17% decline in durable goods and nearly a 10% decline in non-durable goods over the past ten years. Recent data shows better news; Metro Chicago is the only region among the nine major markets compared in this report to have a projected increase in manufacturing (according to a report released by the U.S. Conference of Mayors).

At the same time, manufacturing is experiencing a shortage of skilled workers. A recent national study by the National Association of Manufacturers identified several areas of concern among employers regarding the availability and preparedness of a skilled labor pool to help them sustain, grow, and prosper.

Skills shortages also challenge the health services industry. Comments made at the Health Care Workforce Summit included observations that recruitment efforts have been falling short, that the looming crisis is not a short-term problem and is broader than just a nursing shortage, and that shortages across many disciplines will become much worse without any action.

While skill shortage data for the other industries selected for workforce summits is harder to ascertain, it is important to note that all are critical to the region's economy. Understanding detailed employment patterns for each industry will allow policy makers to more accurately identify shortages for particular sub-industries.

Local leaders should consider potential solutions emerging from workforce summits including: recruitment at the high school level; tuition grants in return for service; adjusted salaries for critical shortage areas; additional college programs; increased career awareness; and additional English literacy courses for all employees. Local leaders must expand efforts in this area and work with partners and stakeholders to identify and implement best practices and survey suggestions.

# OCCUPATIONAL AND SKILL REQUIREMENTS CHANGING FOR THE 21ST CENTURY

The occupational mix in the Chicago region reflects its industrial diversity. The region's top five occupational clusters (as defined by the U.S. Department of Labor) by size of employment are office and administrative (18.9%), production (11.0%), sales and related (9.7%), transportation and material moving (8.0%), and management (7.6%).

**Table 12: Employment Distribution by Occupational Cluster by Region, 2001**

Occupational Cluster	Chicago MSA*	Los Angeles MSA	New York MSA	US
Management	<b>7.6%</b>	6.0%	6.0%	6.0%
Business and Financial Operations	4.6%	3.9%	5.0%	3.6%
Computer and Mathematical	<b>2.6%</b>	2.1%	2.4%	2.3%
Architecture and Engineering	1.8%	1.8%	1.1%	2.0%
Life, Physical, and Social Science	0.7%	0.7%	0.8%	0.8%
Community and Social Services	1.1%	1.2%	1.8%	1.1%
Legal	0.8%	0.9%	1.4%	0.7%
Education, Training, and Library	4.8%	5.4%	7.3%	5.7%
Arts, Design, Entertainment, Sports, and Media	1.2%	2.6%	2.8%	1.2%
Healthcare Practitioners and Technical	4.5%	4.5%	4.7%	4.7%
Healthcare Support	1.6%	1.9%	3.5%	2.3%
Protective Service	2.0%	3.0%	4.0%	2.3%
Food Preparation and Serving Related	6.4%	5.2%	5.6%	7.7%
Building and Grounds Cleaning and Maintenance	3.3%	2.9%	3.5%	3.3%
Personal Care and Service	1.9%	1.7%	3.4%	2.1%
Sales and Related	9.7%	9.3%	9.6%	10.4%
Office and Administrative Support	18.9%	20.3%	21.3%	17.7%
Farming, Fishing, and Forestry	0.1%	0.1%	0.0%	0.4%
Construction and Extraction	4.0%	3.2%	3.5%	4.8%
Installation, Maintenance, and Repair	3.4%	3.5%	2.9%	4.1%
Production	11.0%	11.4%	5.1%	9.6%
Transportation and Material Moving	8.0%	8.6%	4.5%	7.4%

*Source: Bureau of Labor Statistics*

\*Bold=Clusters that Chicago MSA has the highest rates compared to other 3 areas

The Metro Chicago region has higher rates of employment in management, business and finance, and office and administrative than the nation; likewise it also has higher rates of production and transportation and material moving occupations. This indicates both an “office economy” as well as a “production” and “distribution” economy. Similar to the industry data from the last section, the occupational data from this section speaks to the diversity of the workforce, as the three economies of office, production, and distribution provide a wide-ranging mix of occupations, education, and pay levels.

Metropolitan areas with a high rate of management occupations tend to have a large number of corporate or regional headquarters. The Chicago region is home to 36 headquarters for Fortune 500 companies and 199 headquarters (1999 figures) for public companies with more than 500 employees. Corporate headquarters are a sign of overall economic climate. Management skills are important to the success of these headquarters.

## The Best Occupations in the Region are those with High Employment, High Growth, and High Wages ...

Working under the assumption that the above statement is true – that the best occupations are those with high employment, high growth, and high wages – a simple model was developed that ranked all of the jobs in the metropolitan area against one another based on size (i.e., general managers and top executives had the most employment and therefore received a ranking of 1), wages (the occupation with the highest average annual wage is ranked 1), and growth (with the fastest growing occupation ranked first). Finally, the scores were aggregated. The lower the aggregate score, the higher the occupation is ranked for high employment, high growth, and high wages.

Table 13 is revealing in that four of the top five and six of the top ten occupations are information technology-related. With the exception of police patrol officers, all top 10 occupations require a level 1 education, requiring at least a bachelor’s degree if not more.<sup>21</sup>

**Table 13: Chicago Region’s Top 10 Occupations Based on Current Employment, Projected Growth and Annual Wage**

Occupational Title	1998 Employment	Rank by Employment	Projected Ten Year Growth	Ranking of Occupational Growth Over Ten Years	Average Annual Wage	Rank by Wage	Education & Training Code	Overall Ranking
1. Systems Analysts	27,236	37	91%	4	\$62,429	37	1	78
2. Computer Engineers	15,097	65	98%	3	\$66,656	23	1	91
3. Managers of Engineers, Natural Sciences, Computer Information Systems	12,688	85	39%	24	\$79,400	12	1	121
4. Computer Programmers	33,563	29	36%	32	\$54,294	82	1	143
5. Police Patrol Officers	20,083	52	28%	62	\$61,776	41	3	155
6. Managers of Advertising, Marketing, Promotions, Public Relations and Sales	20,723	50	23%	93	\$65,002	28	1	171
7. Engineers, NEC	18,582	56	33%	43	\$55,520	77	1	176
8. Physicians and Surgeons	21,058	49	20%	119	\$83,465	9	1	177
9. Securities, Commodities, Financial Services Sales	13,648	80	30%	54	\$58,096	60	1	194
10. Computer Scientists, NEC	5,191	186	114%	1	\$78,383	13	1	200

*Source: Illinois Department of Labor, Bureau of Labor Statistics*

## Many Opportunities Exist for Low-Skilled, Entry-Level Jobs

Table 14 lists occupations based on demand. Corresponding information about the likelihood of workers in an occupation to be unemployed or employed part-time shows that workers in nine of the top ten occupations are likely to be employed part-time (high or very high) and eight of the top ten occupations are prone to unemployment (high or very high). Furthermore, only seven of the top ten occupations require more than short-term on-the-job training, only two of the top in-demand occupations pay more than \$30,000 a year, and only one pays more than \$50,000 a year.

While these data only reinforce the need to look at a combination of factors to identify “good jobs” (as in Table 13 that ranks employment, growth, and wages) they also indicate that opportunities exist in entry-level occupations. This is good news, primarily for those people who are seeking to enter the workforce for the first time or after a period of unemployment.

It will always be important to know “where the jobs are” for low-skilled populations served by various stakeholders in the workforce area. What is not helpful for families and communities, however, is for individuals to make lifelong careers out of entry-level type jobs. People in these positions need to be assisted in improving their skills to move up the economic ladder, freeing their jobs for new labor force entrants. This movement between initial and likely low-paying entry-level jobs in demand and more skilled work with higher growth and wages (but probably lower employment numbers) is a natural progression of worker movement that must be encouraged and maximized.

21 Education & Training Level 1 includes those jobs which require a first professional degree, doctor's degree, master's degree, degree plus work experience, or bachelor's degree. Education & Training Level 2 includes those jobs which require an associate's degree or postsecondary vocational award. Education & Training Level 3 includes those jobs which require work experience in a related occupation; long-term on-the-job training, moderate-term on-the-job training, or short-term on-the-job training.

Table 14: Chicago MSA Top 10 Occupations Based on Demand

SOC Title	2001 Employ.	1998-2008 Growth	Average Annual Wage	Part-Time Workers Quartile <sup>22</sup>	Unemployed Workers Quartile	Education or Training Category <sup>23</sup>
Retail Salespersons	102,580	16.1%	\$22,590	Very High	Very High	Short-term on-the-job training
Cashiers	102,190	5.8%	\$16,440	Very High	Very High	Short-term on-the-job training
Laborers and Freight, Stock, and Material Movers	82,860	6.2%	\$20,570	High	Very High	Short-term on-the-job training
Office Clerks, General	81,040	16.1%	\$23,910	High	High	Short-term on-the-job training
General and Managers	75,410	17.3%	\$74,970	Very Low	Very Low	Work operation experience in a related occupation
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	72,460	17.3%	\$22,610	High	Very High	Short-term on-the-job training
Waiters and Waitresses	71,570	17.3%	\$15,220	Very High	Very High	Short-term on-the-job training
Registered Nurses	70,320	11.3%	\$50,190	High	Very Low	Associate's degree
Customer Service Representatives	68,500	7.8%	\$29,030	High	High	Moderate-term on-the-job training
Stock Clerks and Order Fillers	55,120	0.1%	\$21,850	Very High	Very High	Short-term on-the-job training

*Source: Bureau of Labor Statistics*

## Understanding the 21st Century Workforce Skill Requirements

As we move from a manufacturing to services economy and the need for a skilled workforce continues to grow, it is important to understand the skills employers require in the 21st Century.

There are literally dozens of models that outline the skill sets needed in today's workplace, but one of the better framings comes from the Northwest Center for Emerging Technologies (NWCET) and the report *Building a Foundation for Tomorrow*<sup>24</sup> published in 2000. Originally intended to serve as the framework for information technology, these crosscutting skills represent an excellent view for nearly all industries.<sup>25</sup>

<sup>22</sup> Part-time quartile represents the likelihood the occupation will be part-time (i.e. very high 76% or greater, high 51%-75%, low 26%-50%, very low 0% to 25%). Unemployment quartile represents the likelihood an occupation is susceptible to unemployment.

<sup>23</sup> Moderate-term on-the-job training includes occupations in which workers can develop the skills needed for average job performance after 1 to 12 months of combined on-the-job experience and informal training. Short-term on-the-job training includes occupations in which workers can develop the skills needed for average job performance after a short demonstration or up to one month of on-the-job experience or instruction.

<sup>24</sup> Project developed in part by the National Science Foundation. Partners included Microsoft, The Boeing Company, American Association of Community Colleges, American Electronics Association, Educational Development Center, Department of Commerce, and Department of Labor, in addition to many others.

<sup>25</sup> The authors are not promoting this list as the final, or preferred list. However, it is important that readers have an understanding of what is referred to as "21st century skills"

## NWCET Employability Skills<sup>26</sup>

Employers are often quoted by workforce professionals as saying, “just give me people with basic skills and I’ll train them myself.” Yet, employers are vague about their definition of basic skills and often use different definitions to describe what they require of their employees. Workforce professionals will also agree to disagree on what is meant by basic skills. More often than not, employers are looking for people who have the right attitude, have a good work ethic, are good team players, and like to learn. “Basic skills” include:

- Communication Skills
- Organizational Skills
- Team Contribution and Leadership
- Professionalism
- Critical Thinking and Decision Making
- Customer Relations
- Self-Directed and Continuous Learning

### NWCET Cross-Sector Core Skill Areas<sup>26</sup>

- Project Management
- Task Management
- Problem-Solving/ Troubleshooting

### NWCET Core Curriculum<sup>27</sup>

- Analytical Skills and Problem Solving
- Business Organization and Environment
- Coordination and Communication Skills
- Project and Process Flow Skills
- Core Computer Software and Hardware Skills
- Core Field of Study Skills (not included in NWCET definition but added by Corporation for a Skilled Workforce)

<sup>26</sup> Definitions of NWCET terms available in Appendix A.

<sup>27</sup> Referred to as “IT Core Curriculum” in publication; the author of this report has omitted the “IT” to more accurately reflect the all-industry need

<sup>28</sup> Definition of ASTD US Training Leaders - ASTD ranks all U.S. firms in their benchmarking training survey in four categories of training measures: Investment (mainly dollars spent), Time (mainly employee training hours), Reach (mainly the percent of employees trained), and Sophistication (mainly use of learning technologies). The ten percent of organizations with the highest combined scores across the four categories are identified as US Training Leaders. On the basis of 2000 numbers, 39 firms qualified. These firms are those that “have what it takes for an organization to separate itself from the pack” and “make learning a central focus of efforts to stay competitive.”

## Employer Training Trends Pointing Downward

The American Society of Training and Development (ASTD) surveys between 40 and 50 employers in the region in a given year; this represents a total of approximately 40,000 workers. The data also reflects the practices of larger companies, including U.S. Leaders<sup>38</sup> so that local employers can better gauge their practices against those companies that are “making learning a central focus of efforts to stay competitive.”

While U.S. companies overall and U.S. leaders are increasing the percentage of employees trained, City of Chicago companies have dramatically cut back, causing the overall regional score to also reflect a negative (although less extreme) change.

Percent of Training-Eligible Employees Trained, 2000

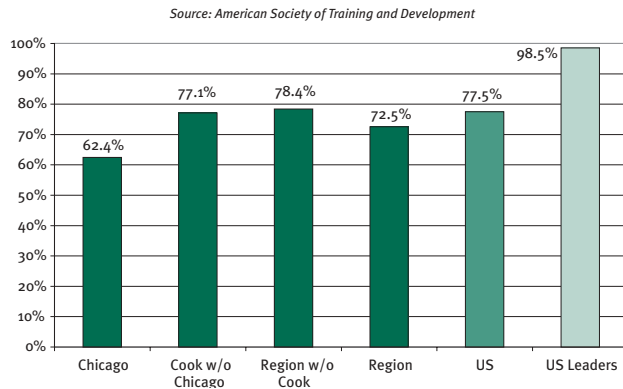


Figure 4

Change in Number of Training-Eligible Employees Trained, 1998-2000

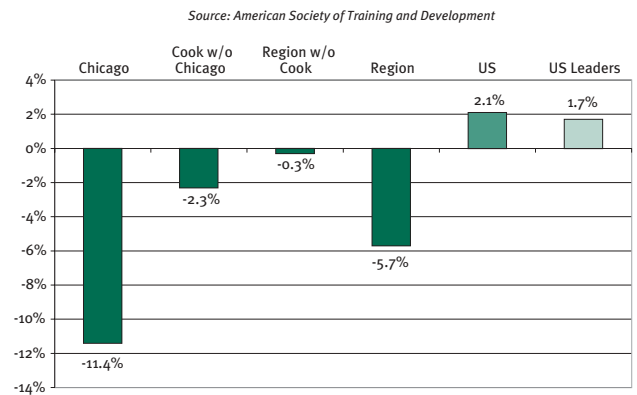


Figure 5

Total Training Expenditures as a Percentage of Payroll

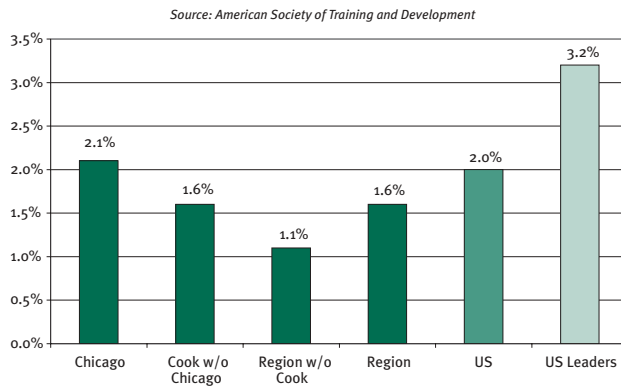


Figure 6

Change in Total Training Expenditures as a Percentage of Payroll, 1998-2000

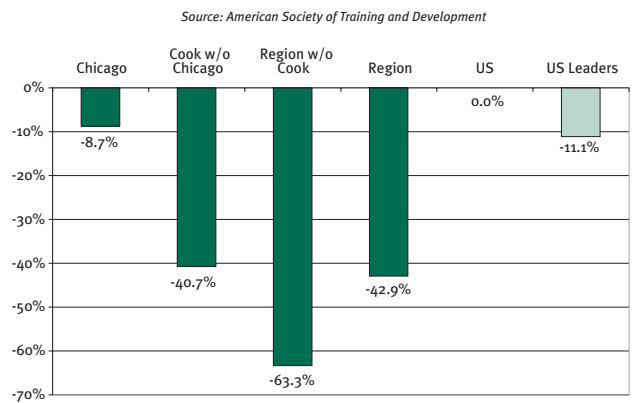


Figure 7

The U.S. leaders and the U.S. also surpass the region in terms of percentage of total payroll spent on training. The balance of the region (without Cook County), in particular, scores significantly lower than the other comparison areas examined in terms of the change in total training expenditures as a percent of payroll.

## The Bottom Line

When looking just at occupations in high demand, the list is dominated by jobs that generally offer low pay, require lower education and training levels, have high or very high vulnerability to unemployment, and have a high likelihood of part-time employment. Yet these are the very jobs that will provide many job seekers the opportunity to attach to the labor force and must be understood by frontline staff and job seekers alike.

Despite the dot-com bust of the past several years, many computer-related occupations dominate the list of top occupations based on recent employment, projected growth, and wages. The dominance of computer occupations shows that while the new economy is churning and sorting itself out after years of high growth and dramatic declines, one fact remains clear: the impact that technology has on business operations and occupational functions is large and not yet fully understood. It is clear that the need for technology education and lifelong learning is an important and vital part of the 21st Century workforce.

Understanding the new economy involves understanding 21st Century skills and curriculum needs. These include employability skills (i.e. “soft skills”), project management skills, and core skills in advanced subjects such as math and computer technology. It also involves a recognition that many of these skills will go lacking in the entry-level workforce that is learning their craft on the job (short-term or mid-term on-the-job training). Employers now expect that workers come into the workplace equipped with these basic skills, so it is imperative that the education and training system at all levels be equipped to provide that foundation.

Workforce leaders in the region should seek to identify workforce skill requirements and come to a consensus definition of education and training needs that are specific to the region’s needs. Additional incentives should be provided for targeting more advanced education and training for occupations that meet the “demand” needs of the region.



# AGE ADVANTAGES OFFSET BY EDUCATIONAL INEQUALITIES ACROSS THE REGION

## The Metro Chicago Region is Comparatively Young

The Chicago region is younger than the U.S. average and many metropolitan areas including San Francisco (oldest at 39), Boston, Philadelphia, New York, and others. Nationally, there is a shortage of younger workers now; shortages are projected for the future as well. This bodes well for Metro Chicago because it will not suffer the same degree of entry-level worker shortages that are being seen in other areas. It also speaks to the need to maximize the educational quality received by all students across the region.

Average Age by MSA, 2000

Source: US Census Bureau 2000

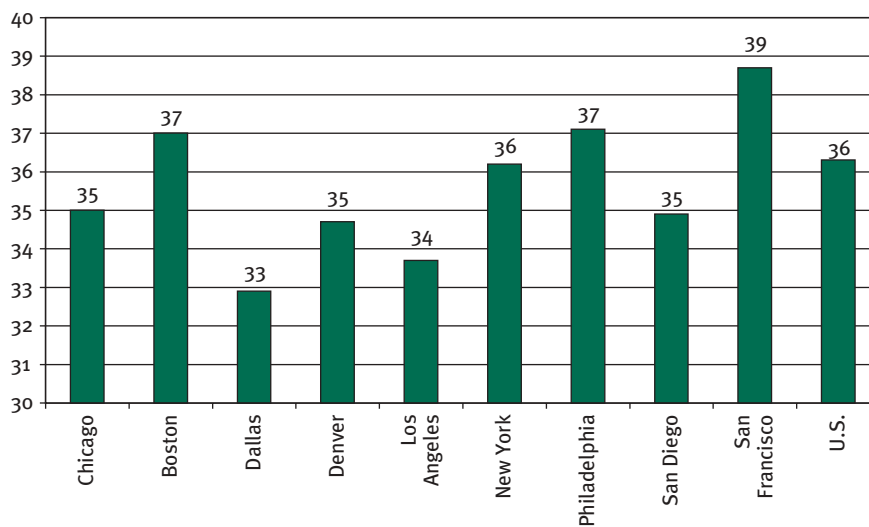


Figure 8

## Chicago MSA Age Distribution, 2000

Source: US Census Bureau 2000

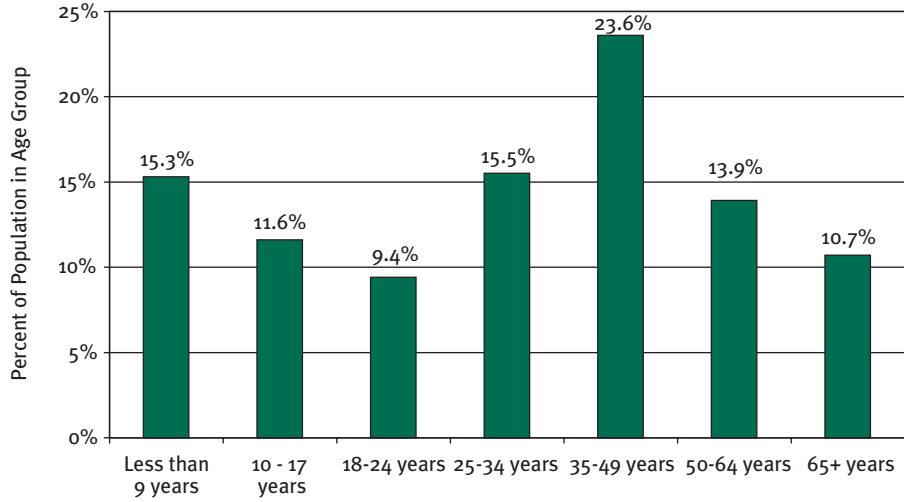
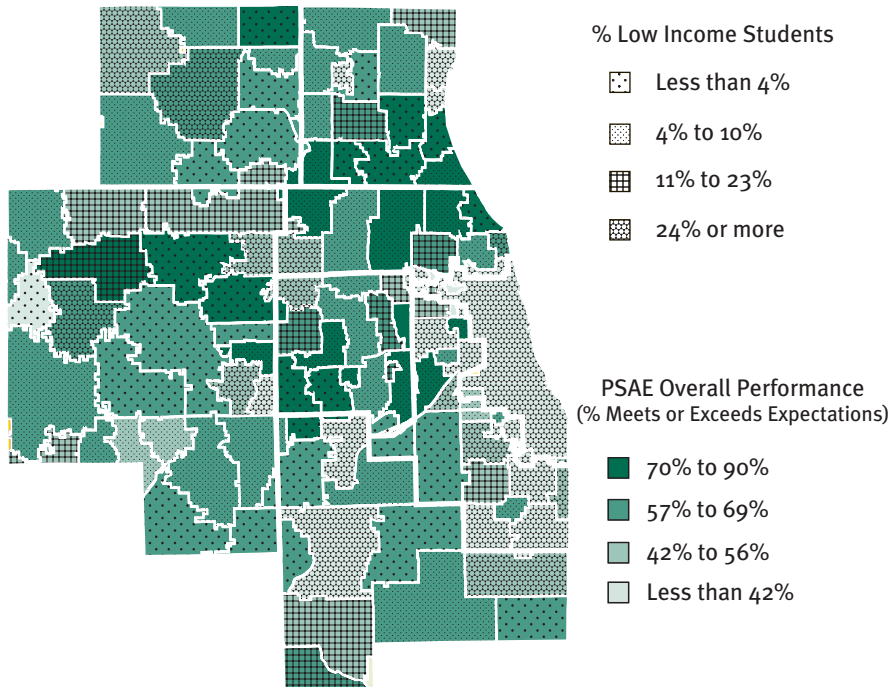


Figure 9

## Social Inequities Exist in the Education System

### Percent of Low Income Students in Public Schools Compared to PSAE<sup>29</sup> Composite Scores (2001-02 School Year)

Source: Illinois State Board of Education



Map 1

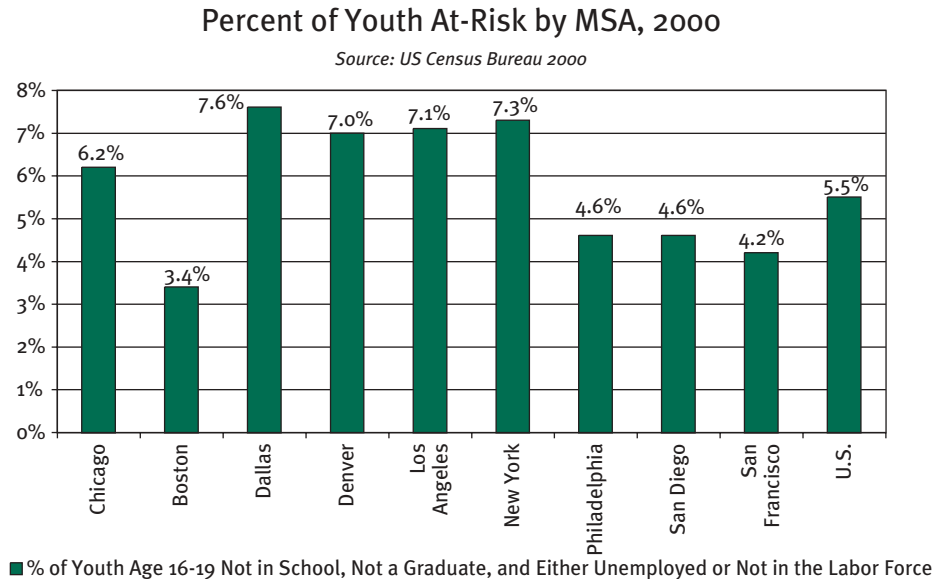
29 The Prairie State Achievement Examination (PSAE) measures the performance of grade 11 students in reading, writing, mathematics, science, and social science in the State of Illinois.

Map 1 illustrates the relationship between high rates of low-income students and lower rates of students meeting or exceeding expectations on standardized tests. Yet, there are many areas of the region where high rates of students are meeting or exceeding expectations on standardized tests.

The Workforce Boards of the Metropolitan Chicago region may not be in the position to change the socio-demographics of the region's educational system and related challenges. However, the workforce boards can help by understanding and supporting existing efforts for increasing the number of students in the region who meet or exceed expectations on standardized tests and also by fostering career awareness and internship initiatives.

## Many Youth are “At-Risk”

The Chicago region has higher rates of at-risk youth (defined as those 16-19 who are not in school, not a graduate, and either unemployed or not in the labor force) than the U.S. but lower rates than Dallas, Denver, New York, and Los Angeles.



**Figure 10**

While the Chicago region holds advantages over many areas, the rate of at-risk youth is high enough to warrant consideration and policy action. Youth who are low-income tend to be more at-risk than other youth.

Low-income youth are found throughout the region, but are concentrated in the City of Chicago. Yet, due to the large population size of the Chicago region, even small percentages of low-income youth in the suburbs translate into large numbers.

Low-income youth face particularly difficult hurdles to accessing and benefiting from the strong regional labor market. A study conducted for the Mayor's Office of Workforce Development in 2000<sup>30</sup> identified the following youth perceptions of their obstacles to employment which are applicable throughout the region:

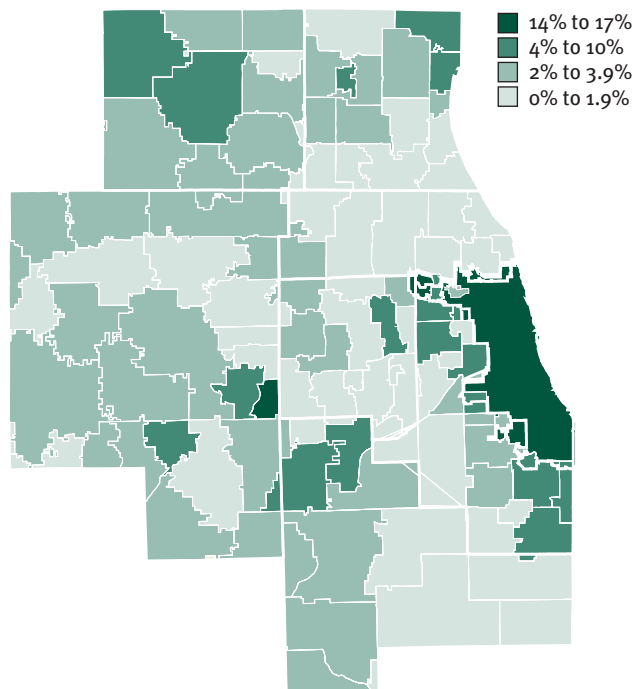
<sup>30</sup> *Assessing Labor Market Needs for City of Chicago Youths*, Conducted for the Mayor's Office of Workforce Development by National Opinion Research Center, July 7, 2000.

- Low-income youth face obstacles to employment because of limited communication skills, difficulty with the application process, lack of etiquette (how to dress and behave), and employer stereotypes about minority youth.
- Low-income youth face serious transportation problems because of distances they have to travel and inadequate public transportation in residential areas.
- Low-income youth lack role models and have unrealistic expectations of what it takes to be a wage earner.
- Background checks will exclude youth with criminal records.
- Dropouts face concern from employers that the pattern will repeat itself.
- Teen mothers face barriers due to childcare arrangements and the need for very flexible schedules.

The relationship between poverty and education is indicated by recent data from the National Assessment of Education Progress (NAEP) that analyzed student achievement in 2000 relative to the poverty level of public schools, as measured by the percent of students eligible for free or reduced price lunch (National Center for Education Statistics, [www.nces.ed.gov](http://www.nces.ed.gov), 1/20/03). The NAEP study found that not only did schools with high percentages of youth in poverty score less well, but that students who are not personally eligible for the free lunch but who attend schools with high rates of poverty scored lower than those in schools with lower rates of poverty. In addition to lower scores, schools with higher poverty rates were found to have higher rates of absenteeism, a lower percentage of students with a “very positive” attitude toward academic achievement, and less parental involvement.

### Dropout Rates for Public Schools by School District 2001-2002 School Year

Source: Illinois State Board of Education



Map 2

## Importance of Career Information

One of the ways in which boards and stakeholders can have an impact on career choices of youth is by ensuring the best possible career information and career awareness. A part of this is helping students reach “career maturity.” In the book *Getting Real: Helping Teens Find their Future*,<sup>31</sup> Dr. Kenneth Gray defines career maturity, as demonstrated by teenagers of high school age, when they:

1. Understand the importance of narrowing career interests as a basis for postsecondary planning;
2. Have, by the 10th grade, identified one or more career interests after an objective evaluation of their likes and dislikes, their aptitudes, and labor market projections;
3. Have, by the end of 12th grade, engaged in activities to verify these choices; and
4. Used these choices to make post-high school decisions.

In order for teenagers to be prepared to develop career maturity, career information must be provided to them at an early age. For example, the occupational tables based on “high-wage, high-growth” as well as “demand” should be shared with teenagers as early as possible. There should be a concrete plan for ensuring that students have access to technology training, and there should also be a means by which students can gain career awareness through direct relationships with employers.

## The Bottom Line

The Chicago region is relatively young compared to most other metropolitan areas. This is important given that prior to the recent economic downturn, most of the country was facing a shortage of entry-level workers. The young workforce of Metro Chicago can help offset potential entry-level shortages. In order to prepare the young workforce, career awareness activities will continue to be very important.

However, there are troubling signs among young workers, including social inequality in the education system. There is a clear correlation between low-income areas and the scores on standardized achievement tests and drop-out rates. High poverty areas tend to see high rates of absenteeism, less positive attitudes about school, and less parental involvement. Helping bring up these lower-income levels so that “no child is left behind” will be a challenge for the entire region, given that there is one labor market that shares both the well-educated and the not-so-well-educated.

Furthermore, there is a high number of at-risk youth in the area who are neither in the labor force nor high school graduates. In these uncertain economic times where higher levels of educational attainment often correlate to a higher standard of living, this should raise the concern of the entire region.

Finally, while Workforce Boards cannot fully influence the educational system, they can work to help improve career information provided to and accessed by the youth in the area. The region would be well served to look for ways to improve the availability of career information, help students achieve career maturity, and continue to engage employers in a meaningful way across the entire region.

<sup>31</sup> *Getting Real: Helping Teens Find their Future*, Corwin Press, Inc., Dr. Kenneth Gray, 2000

# OVERALL EDUCATION LEVEL ABOVE AVERAGE BUT MANY ADULTS BEING LEFT BEHIND

## The Workforce Tends to be Well Educated

Educational Attainment of Adults 25 Years and Older by MSA, 2000

Source: US Census Bureau 2000

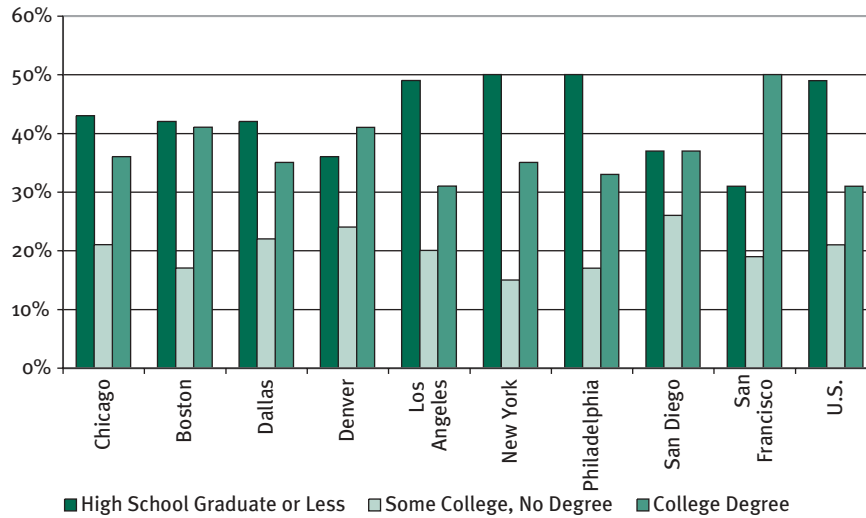


Figure 11

Nationally, nearly half (49%) of all persons 25 and over had a high school diploma or less as their highest level of educational attainment. In Metro Chicago, this rate is slightly less (43%). It is better for an area to have a low rate in this category, and higher rates in the other categories, particularly in college degrees.

Metro Chicago's rate of individuals with a college degree is greater than the national rate (36% compared to 31%), and higher than the other metro areas studied except Boston, Denver, San Diego, and San Francisco. "College degrees" includes individuals with two-year degrees.

The area's higher rates of educational attainment will allow for business and economic development to continue its concentration on both diverse and advanced industries. Educational attainment remains an important criteria in the location and relocation of businesses.

## Too Many are Being Left Behind

### Educational Attainment (Age 25 +) by Race and Origin in the Chicago MSA

Source: US Census Bureau 2000

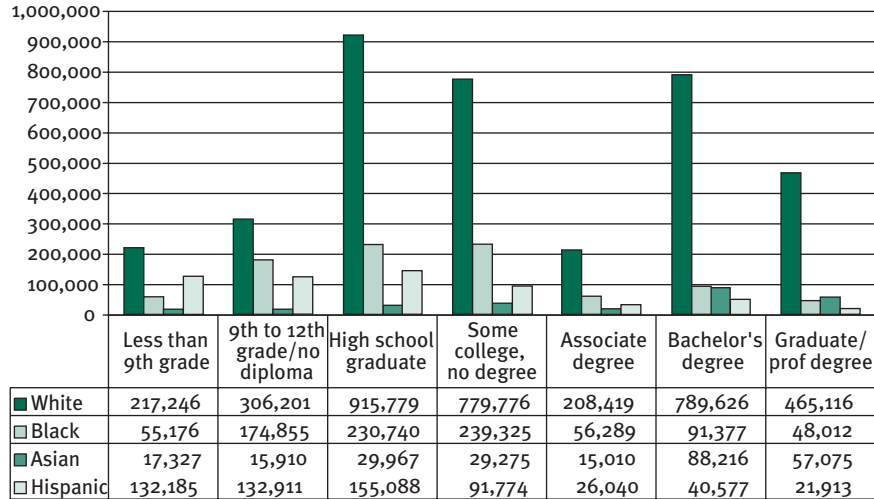


Figure 12

Table 15: Educational Attainment Percentages by Race and Ethnicity, 2000

	White	Black	Asian	Hispanic
Less than 9th	6%	6%	7%	22%
9th to 12th, no diploma	8%	20%	6%	22%
High school graduate	25%	26%	12%	26%
Some college, no degree	21%	27%	12%	15%
Associate degree	6%	6%	6%	4%
Bachelor's degree	21%	6%	35%	7%
Graduate/Professional degree	13%	5%	23%	4%

Source: US Census Bureau 2000

There is a significant difference in the educational levels of the population by race. Asians have the highest rates of education, with 64% of their population with an associate's degree or higher. Whites have significantly higher rates of bachelor's and graduate degrees than do blacks or Hispanics, and Hispanics lag both whites and blacks in associate degree attainment. Educational attainment levels often correlate to underemployment.

The Economic Policy Institute (EPI)<sup>32</sup> says the U.S. economy “has consistently produced the highest levels of economic inequality. Moreover, inequality in the United States (along with the United Kingdom) has shown a strong tendency to rise... poverty is deeper and more difficult to escape in the United States.”

<sup>32</sup> *The State of Working in America 2002-03*; Mishel, Bernstein, and Boushey; January, 2003; www.epinet.org

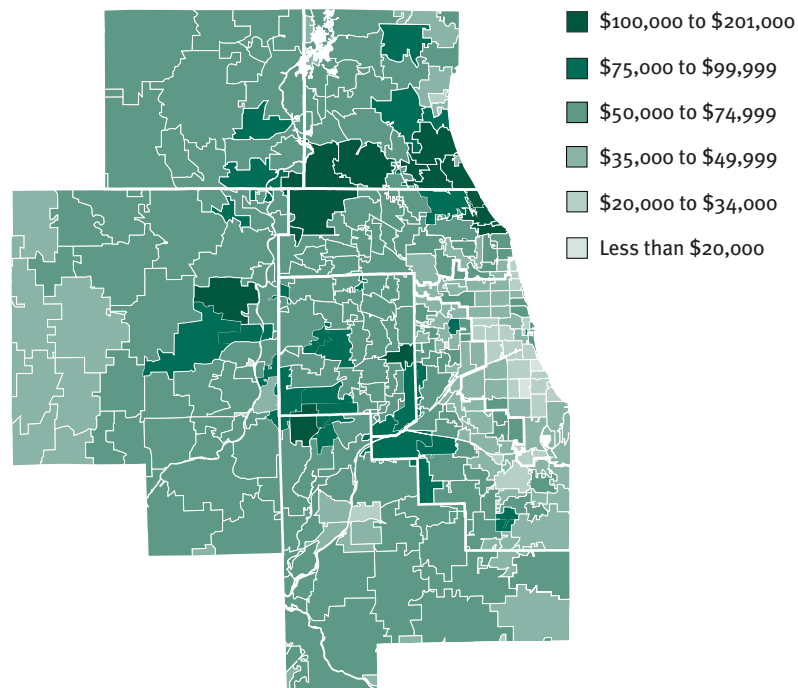
The unemployment rate hides a deeper issue. Higher unemployment results in greater underemployment. The Economic Policy Institute asserts that “overall, as unemployment rises there is a corresponding deterioration of job quality as people reluctantly accept temporary or part-time jobs, jobs that offer fewer hours, or jobs for which they are overqualified. In fact, this growth in underemployment is larger than the actual growth in unemployment ...families in the bottom 40% of the wage scale are the most vulnerable group, with a 6.5% unemployment rate resulting in a 9% loss in annual earnings.” Earning declines for middle-income families, on the other hand, are only 4.5% and only 3% for families in the upper 40%. Inequality grows more slowly when the labor market is doing well; the divide between the “haves” and the “have-nots” increases when unemployment rises.

## Low Income is Concentrated in the Inner-City – as Are Minorities

The socio-economic inequality in the Chicago region is apparent from a map of median household income distribution. The City of Chicago has the lowest income in the region, with almost all of its zip code tabulation areas (ZCTA)<sup>33</sup> below \$50,000. While some of the highest paying jobs are located in the city, workers who live elsewhere hold many of those jobs. Conversely, data from the suburban areas around Chicago shows that while highly paid chief executives and managers are commuting into the city, many lower paid blue-collar workers are commuting out of the city to jobs in the surrounding areas where they cannot afford to live. Chicago Metropolis 2020<sup>34</sup> surveyed residents on a variety of indicators and reported that three out of four residents in the Chicago region think the region will be weakened if some residents are “left behind” in access to jobs. Further, nearly 80% want less separation by race and income.

### Median Household Income by ZCTA, Metro Region, 1999

Source: US Census Bureau 2000



Map 3

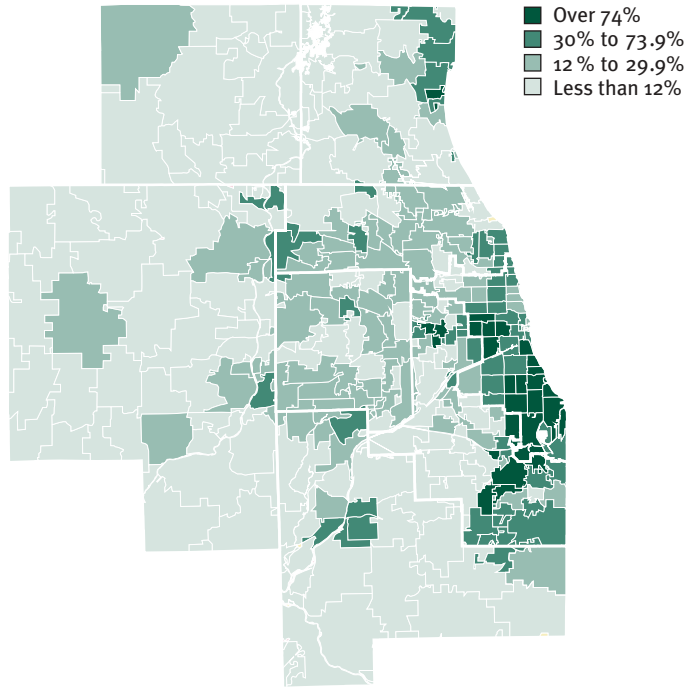
<sup>33</sup> As defined by the U.S. Census, see Appendix A for definition.

<sup>34</sup> *Regional Realities*; Metropolis 2020; February, 2001



## Percent Minority (All Non-White) by ZCTA, 2000

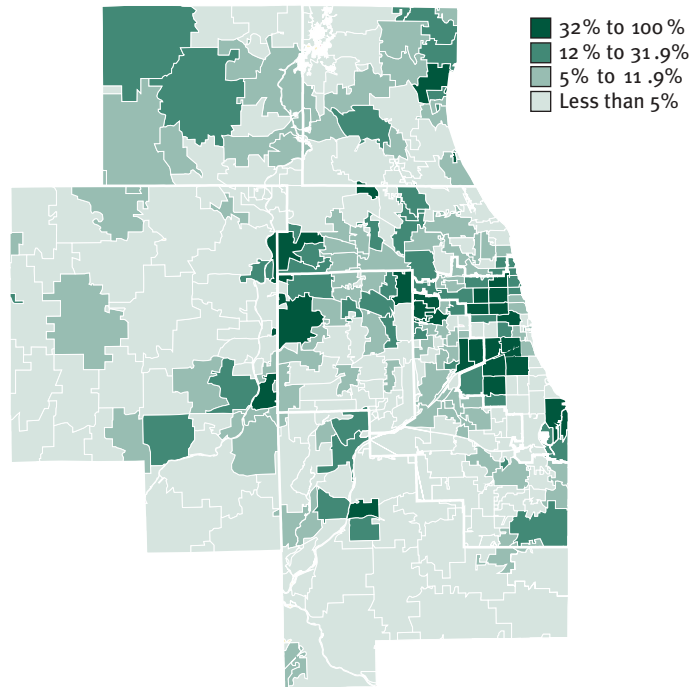
Source: US Census Bureau



Map 4

## Percent Hispanic by ZCTA, 2000

Source: US Census Bureau



Map 5

## Language is a Barrier to Higher Workforce Participation

Cultural diversity brings many challenges, including English language proficiency. The Chicago region has higher rates of people speaking English “not very well” or “not at all” (total of 7%) than does the nation (4%), as one might expect of large metro areas. However, Chicago’s rate is far below that of its size competitors, New York and Los Angeles. Still, that 7% represents 579,094 people who may not be able to communicate well enough to function effectively in the local labor market. The situation is only likely to increase over time. According to the Aspen Institute<sup>35</sup> there is an unexpected negative relationship between the length of time immigrant children are in the U.S. and how well they fare. “The worsening of outcomes seems particularly acute for low education families and for people of color.” Better integrating young immigrant children into the American culture may help alleviate this negative relationship.

Population Speaking English "Not Well" or "Not At All"  
as a Second Language by MSA, 2000

Source: US Census Bureau 2000

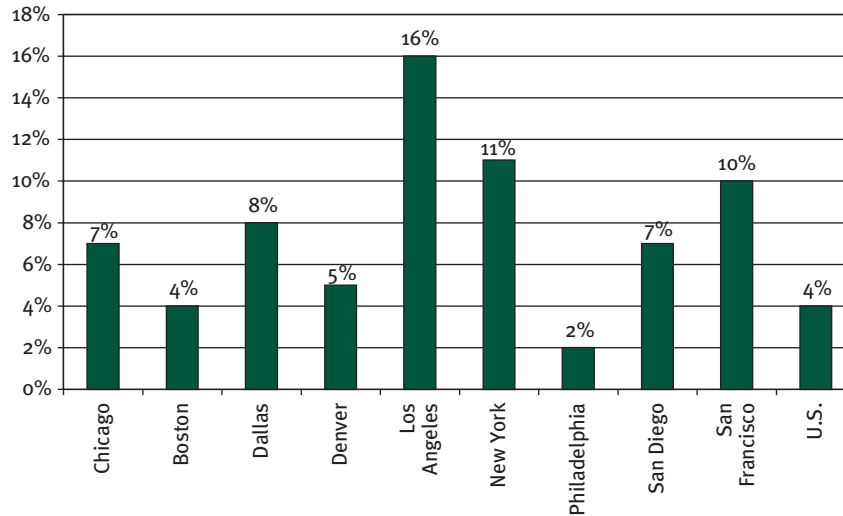


Figure 13

Metro Chicago’s labor force participation rate is higher than that of the U.S. and many areas, but trails Denver, Dallas, San Francisco, and Boston. Nearly one out of every three Chicago area residents over the age of 16 is not participating in the workforce. Increasing English as a second language (ESL) instruction throughout the region may improve both workforce participation as well as level of employment and productivity for immigrants.

## Civilian Labor Force Participation by MSA, 2000

Source: US Census Bureau 2000

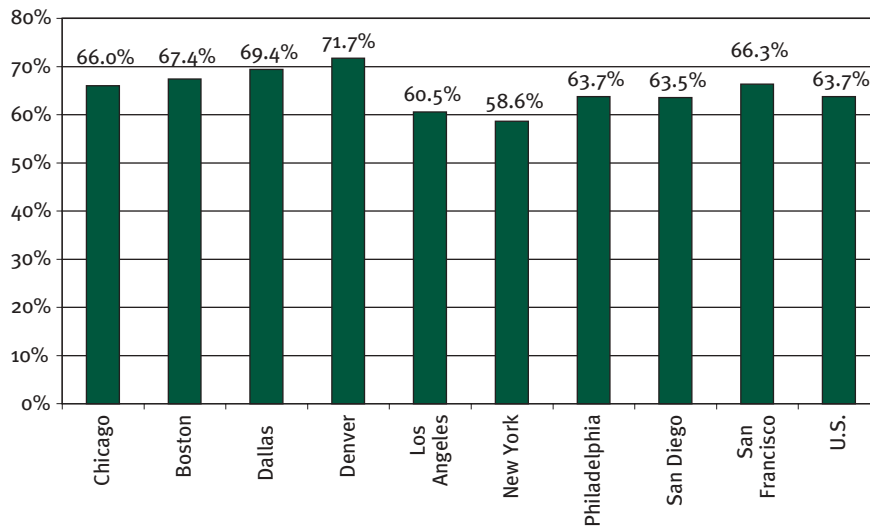


Figure 14

## Basic Literacy Skills Differ Across the Region

### Percentage Adults at Level 1 Literacy

Source: Synthetic Estimates of Adult Literacy, CASAS, 1990 Census and 1992 National Adult Literacy Survey

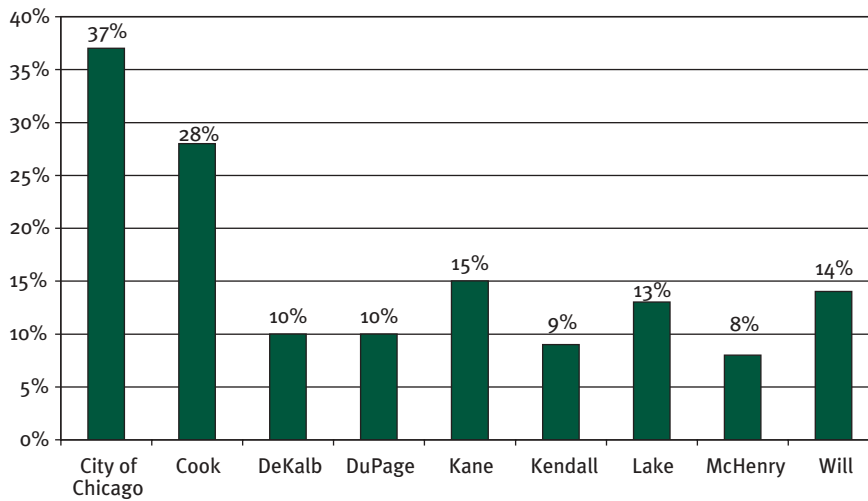


Figure 15

The National Literacy Survey, last completed in 1992, showed a clear separation in the percentage of adults at level 1 literacy. Populations have changed considerably over the last 10 years. Although more current data is not available, the 1992 survey<sup>36</sup> gives us some relative indicators of what we might expect to find today. We do know that many more thousands of immigrants have entered the area in the last decade and that many of them profess to lack English literacy. We can presume that literacy remains a pressing need in the Chicago region.

## Individuals with Disabilities are Less Likely to be Employed

Unemployment Rate of Persons with Disabilities by MSA, 2000

Source: US Census Bureau 2000

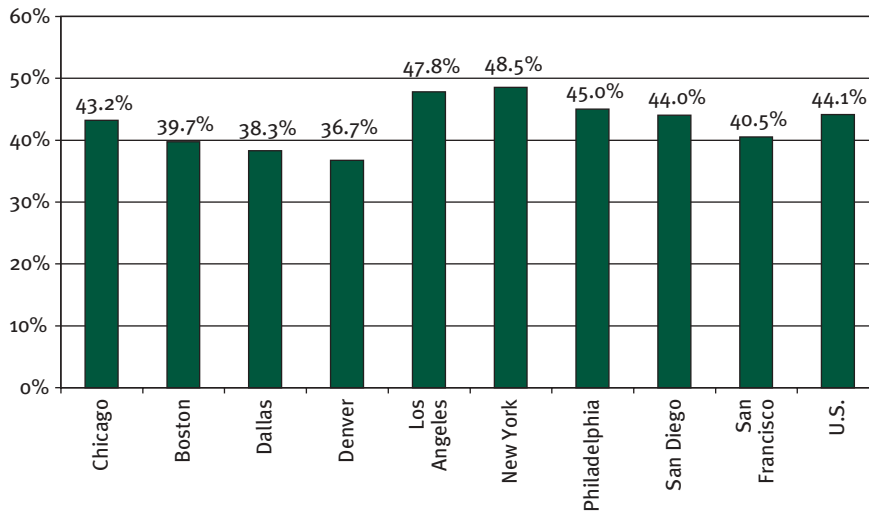


Figure 16

Many industries are already seeing the benefits of hiring disabled workers, ranging from restaurants to new technology start-ups. The Chicago region’s population age 16-64 is 5,348,278 and, of that, 901,764 (17%) report having a disability (including sensory, physical, mental, and others.) Of the 901,764 with a disability, 511,887 (54.8%) report being employed and 389,887 (43.2%) report being unemployed.

The Metro Chicago region has a lower disability unemployment rate than the U.S. but is exceeded by Boston, Dallas, Denver, and San Francisco. Denver has the lowest rate, while New York has the highest. As in many other areas of comparison, Chicago rates in the “average” range.

## Low Wage Earners are Less Likely to Have Health Insurance

The kind of jobs held by low skill, low wage earners are often those without benefits. In *The State of Working America, 2002-2003* ([www.epinet.org](http://www.epinet.org), 11/7/02), EPI noted that benefits declined nationally in the late 1990s. The Aspen Institute (*Grow Faster Together or Grow Slowly Apart*) noted that after two decades of growth and prosperity, the country still has “a third of all full-time workers without health insurance, more than half without employer-provided pension coverage, and one in five families unable to earn enough to escape poverty without social assistance.” On a local level, *Regional Realities: Chicago Metropolis 2020* pointed out that between 1995 and 1998,

<sup>36</sup> The National Adult Literacy Survey provides an outstanding measure of an area’s basic and advanced literacy on 5 different levels ranging from 1 (worst) to 5 (best). These data combine 1992 literacy data with 1997 synthetic estimates for local areas using the 1992 data and 1990 U.S. Census data. The data will be updated in 2005. Level 1 literacy indicates an inability to sign one’s name, identify a country in a short article, locate the expiration date on a driver’s license, or total a bank deposit entry.

the share of residents lacking health insurance in the region increased from 13.9% to 18.7%, resulting in a rate above the national average.

## Ex-Offenders Face Many Barriers

Offenders returning to society after completing their prison sentence, (“ex-offenders,” “returning offenders”) provide an ample opportunity for the city and region, in both ensuring they are integrated into society as a law-abiding, income-earning citizen, as well as potentially addressing critical skill shortage areas with another segment of the population heretofore underserved. In his groundbreaking work *The Vicious Circle*,<sup>37</sup> Dr. Paul Street of the Chicago Urban League stated that mass incarceration has emerged as one of the leading growth items in the state’s budget over the last 16 years. Some key findings of the report include:

### National Trends

- The U.S. has 5% of the world’s population, but 25% of the world’s prisoners.
- Most prisoners return to a relatively small number of heavily disadvantaged minority neighborhoods, where they remain largely beyond the sphere of the mainstream society’s awareness and concern.
- Nearly one in five black men has a prison record, one in three black men now possesses a felony record, and one in four black adult males is an ex-felon.

### Illinois Trends

- It costs \$20,637 a year to house an adult prisoner and \$50,286 to incarcerate a juvenile in Illinois. The cost of incarcerating one adult in Illinois is equal to more than 4.5 times the state’s legally mandated public education minimum expenditure to meet the educational needs of a single child at \$4,560.
- 63% of Illinois prisoners are African-American. In 2001, their incarceration rate was ten times that of whites (1,550 per 100,000 to 127).
- As of June 2001, there were nearly 20,000 more blacks in correctional facilities than public universities across the state. There are more blacks in correctional facilities just on drug charges than enrolled in undergraduate degree programs in state universities.
- Ten Chicago zip codes received 25% of Illinois prisoners released in 2000, 2001, and 2002.
- Incarceration carries a significant 10 to 20 percent “wage penalty.” On average, ex-prisoners experience no real wage increases in their twenties and thirties, when young men who have never been incarcerated tend to experience rapid wage-growth. Prison time serves to channel individuals away from skilled occupations and into job sectors, which are characterized by low wages, limited job stability, and fewer opportunities for advancement.
- Many ex-offenders are banned or severely restricted from employment in a large number of professions, job categories, and fields by licensing statutes and rules. Of the 98 occupations requiring state licensure in Illinois, 57% placed stipulations and/or restrictions for licensure on applicants with a criminal record, including even misdemeanors in some cases.

<sup>37</sup> *The Vicious Circle: Race, Prison, Jobs, Community, and Mass Incarceration in Chicago, Illinois, and the Nation*, Dr. Paul Street, Vice President for Research and Planning, Chicago Urban League, 2002.

## The Bottom Line

There are many reasons why various individuals are being left behind in today's economy and workforce. Among the reasons are low labor force attachment, poverty, disability, prison records, and other challenges. Ensuring everyone has access to education and career opportunities is a key component to stopping the cycle of poverty that affects large portions of the region and various demographic groups.

During periods of tight labor markets it is important that groups traditionally left behind be engaged in the labor market. Given the labor market patterns of the region it is important to ensure that suburban employers are able to reach into a talented city pool to fill critical vacancies; likewise city employers should feel that they can turn to a ready-made applicant pool among their own residents as well as those across the region. Conversely, all residents must feel they can compete on an equal footing regarding knowledge, skills, and abilities.

The workforce area partners must continue to work towards helping with the ex-offender population. The data for the region and the city in particular is startling. Yet, there are opportunities for local workforce areas to work with each other and existing groups on an effort to ensure ex-offenders have the opportunity to attach to the labor force in some permanent way that prevents them from returning to a life of crime.

# QUALITY OF LIFE PAINTS METROPOLITAN CHICAGO REGION AS THE PLACE TO BE

Like the vibrant City of Chicago, the Metro Chicago region has tremendous quality of life assets including two world-class airports, acres of museum campuses, miles of shoreline and beaches, hundreds of festivals and concerts, thousands of restaurants, hundreds of theatre companies, and numerous pro sports franchises.

Yet, quality of life extends beyond these components to include factors such as growth and sprawl, and transportation and housing, issues that are typically intermingled. For transportation, it is often the location of employment relative to where people live (to reduce commuting burden) or transportation systems that get people to where the jobs are. Equally important are housing costs that allow for a healthy and enjoyable lifestyle, and income levels that add to the overall lure of the area so that businesses and workers see it as a desirable place to locate. Transportation and housing are factors in the everyday location or relocation decisions of businesses and workers alike and cannot be overlooked.

## Commuting Trends are Changing

Below are places where a sample of workers age 16+ reported working in Census 2000. In parentheses are the changes since 1990. For example, in 2000, 2,077,798 people who lived in Cook County worked in Cook County, a decrease of 3% since 1990. In addition, 146,135 who lived in Cook County worked in DuPage County, an increase of 25% since 1990.

Table 16: Change in Commuting Trends, 1990-2000

	Cook	DuPage	Kane	Lake	McHenry	Will	Lake, IN	Porter, IN	Kenosha, WI
<b>Cook</b>	2,077,798 (-3%)	146,135 (25%)	18,345 (14%)	64,253 (62%)	5,182 (58%)	24,432 (55%)	11,699 (1%)	495 (96%)	453 (163%)
<b>DuPage</b>	152,433 (-2%)	277,934 (13%)	16,539 (53%)	5,377 (47%)	884 (56%)	9,197 (125%)	313 (12%)	8 (14%)	71 (108%)
<b>Kane</b>	34,361 (30%)	34,318 (31%)	107,807 (14%)	3,012 (95%)	5,056 (58%)	1,840 (81%)	85 (136%)	0 (0%)	32 (256%)
<b>Lake</b>	83,502 (1%)	6,967 (21%)	1,383 (-3%)	212,450 (24%)	5,866 (67%)	389 (-8%)	34 (-38%)	6 (-63%)	2,507 (176%)
<b>McHenry</b>	31,337 (27%)	4,650 (60%)	8,877 (71%)	16,731 (53%)	68,108 (43%)	343 (113%)	0 (0%)	0 (0%)	155 (1%)
<b>Will</b>	76,574 (39%)	43,498 (65%)	3,432 (45%)	1,128 (84%)	158 (216%)	107,456 (37%)	1,658 (93%)	70 (0%)	16 (100%)
<b>Lake, IN</b>	41,408 (16%)	1,637 (33%)	158 (46%)	260 (53%)	41 (46%)	1,591 (110%)	150,611 (0%)	7,570 (16%)	0 (0%)
<b>Porter, IN</b>	5,444 (54%)	231 (38%)	12 (0%)	37 (-5%)	12 (0%)	170 (174%)	19,859 (10%)	40,729 (20%)	13 (100%)
<b>Kenosha, WI</b>	2,942 (19%)	366 (41%)	115 (342%)	15,342 (29%)	1,660 (47%)	35 (40%)	20 (300%)	0 (0%)	40,489 (14%)

The movement between collar counties has increased rapidly over the ten years between the Census. Consider that 125% more people are driving from homes in DuPage County to work in Will County (a total of 9,197 people in the 2000 Census). Similarly, 67% more people now commute from Lake County to McHenry County (5,866 total); 95% more people now commute from Kane County to Lake County (3,012 total). So, while Cook County and the City of Chicago remain the leading employment centers of the region's economy, there is clear and evident growth in the commuting patterns between collar counties. This speaks to the need for increased transportation options in these communities.

## Chicago Region Comparatively Average in Terms of Urban Sprawl

Smart Growth America ([www.smartgrowthamerica.org](http://www.smartgrowthamerica.org)) examined 83 metropolitan areas for urban sprawl. This is one case where the higher the rank, the lesser the problem. The sprawl index is measured by four factors:

- Residential density
- Mix of homes, jobs, and services
- Strength of town centers/downtowns
- Accessibility of street network

The Chicago region was ranked 79th on residential density, 56th on the mix of homes and jobs; 23rd on strength of town centers; and 75th on accessibility of street network. Sprawl issues are important because they affect commuting time, traffic delays, ozone levels, and fatal accident rates.

In overall sprawl of the comparison areas used for this report, New York is the least sprawling and Dallas is the most, with Metro Chicago the median (5th of 9 areas). The ranks of the various comparison areas are:

Dallas	13
Los Angeles	45
San Diego	46
Philadelphia	63
Chicago	68
Denver	73
Boston	77
San Francisco	80
New York	83



## Transportation Indicators for Work by MSA, 2000

Source: US Census Bureau 2000

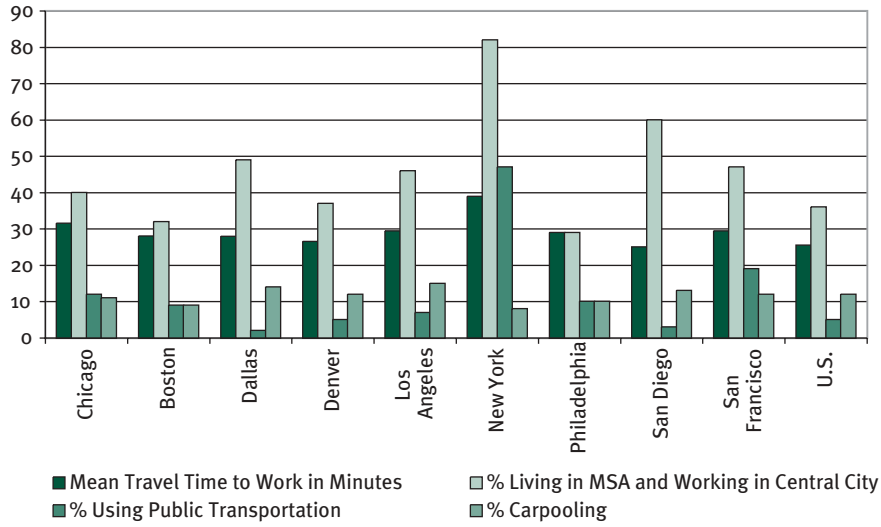


Figure 17

The transportation indicators chart shows only 40% of the population both lives in the region and works in the City of Chicago. This contrasts with the New York region, where over 80% of the region's residents work in the City of New York. Metro Chicago would thus appear to be somewhat more balanced across the region for living and working than its largest rivals in terms of size (New York and L.A.), but less so compared to the U.S. average or other comparison cities such as Boston, Denver, or Philadelphia.

## Net In-Commuting, 1999

Source: Chicago Area Transportation Study ([www.catsmpo.com](http://www.catsmpo.com))

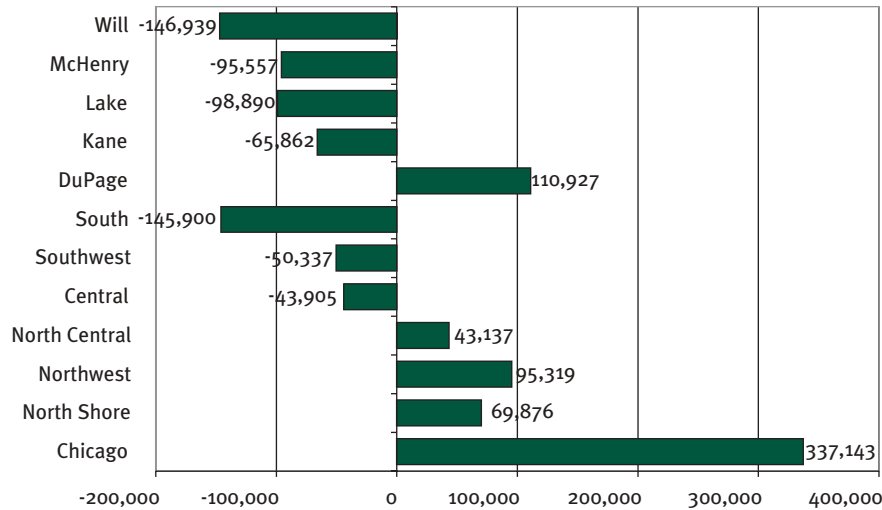


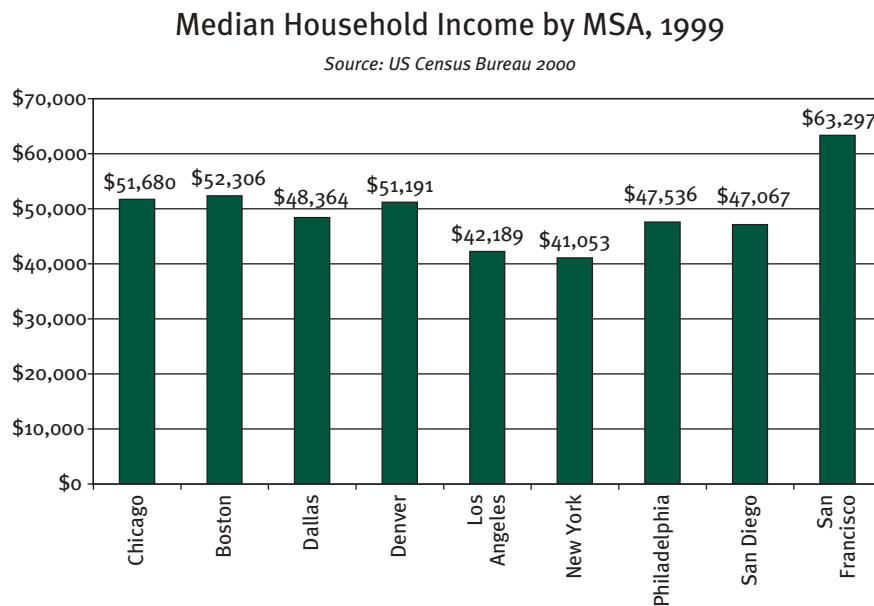
Figure 18

Net in-commuting data for the region<sup>38</sup> (see Appendix A) depicts the City of Chicago as the epicenter of employment, with over 337,000 more people coming into the city than leaving it for work each day. DuPage is the only non-Cook county area with net in-commuting. DuPage and most of Cook are work destinations. The other areas are mostly home destinations. South, Southwest, and Central Cook are the only Cook transportation areas seeing a net decrease for in-commuting, with 145,900 more people leaving South Cook each day for work than coming in.

As employment and population move to the suburbs; it is only natural that commuting patterns would follow suit. However, the impact on sprawl cannot be underestimated, particularly in light of the fact that many of these commuters are driving alone and have very few options in terms of public transportation. Changing commuter trends are behind Metra's proposal, unveiled last month, to build a \$1.1 billion rail line that would link suburbs from Joliet to O'Hare.

## Personal Incomes are Higher in Metro Chicago; Poverty is Lower

Metro Chicago's median household income is third highest among areas studied, trailing only San Francisco and Boston.



**Figure 19**

The Chicago region fares surprisingly well among the areas studied, falling in the middle of the pack, and faring better than the national rates on poverty indicators. Obviously, this story varies within the metro area. The collar counties push the income average up while the City pulls the average down. Similarly, poverty rates are very low in the suburbs and considerably higher in the urban core.

Metropolitan Chicago's poverty rate is substantially lower than that of its traditional large rivals, the Los Angeles and New York areas.

<sup>38</sup> Data provided by Chicago Area Transportation Study. Map of areas provided in Appendix A.

### Poverty Indicators by MSA, 1999

Source: US Census Bureau 2000

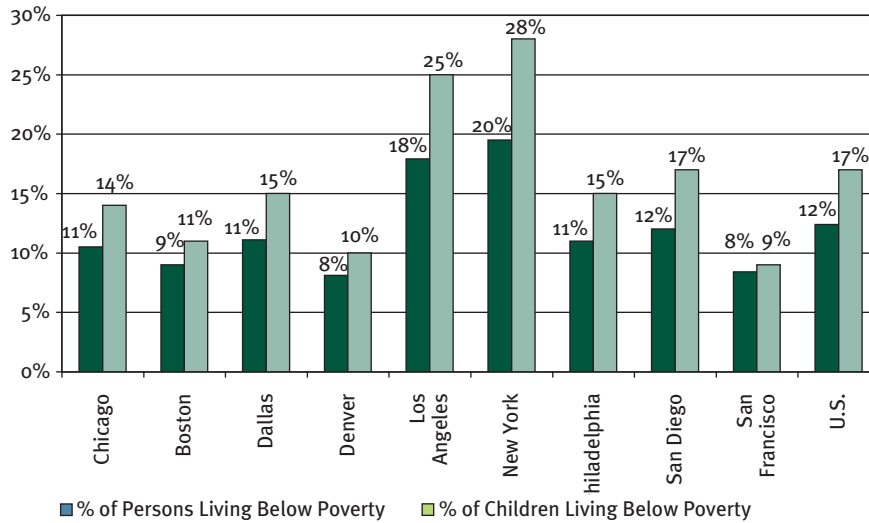


Figure 20

### Housing is Relatively More Affordable, but Still Too High for Many Residents

San Francisco has the highest median household income, but also the highest median home values. The Chicago region’s housing cost is surprisingly moderate compared to most other comparison areas. New York and Los Angeles have lower median household incomes, but higher median home values. Of the largest areas, Metro Chicago definitely has the competitive living advantage.

Metropolis 2020’s report *Recommendations for Attainable Workforce Housing in the Chicago Region* noted that many workers are struggling to meet the wage necessary for quality housing in the State of Illinois which they define as \$17.13 per hour. Of nine occupations cited, most – including manufacturing assemblers, nursing aides, and childcare workers - fall well short of the \$17.13 per hour needed to afford quality housing in the State of Illinois.

### Median Value of Owned Homes by MSA, 2000

Source: US Census Bureau 2000

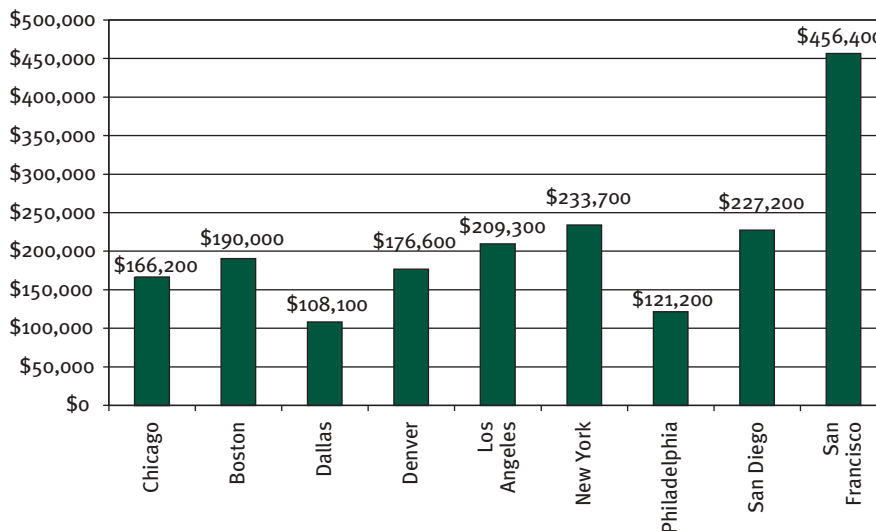
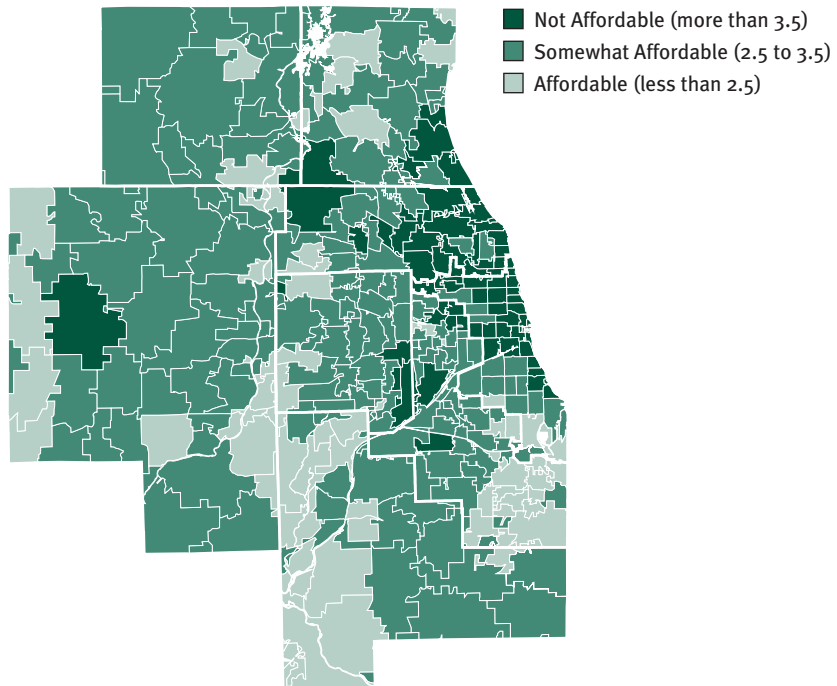


Figure 21

## Housing Affordability Index by ZCTA, Metro Region, 1999

Source: US Census Bureau 2000



Map 6

## Housing Affordability by MSA, 2000

Source: US Census Bureau 2000

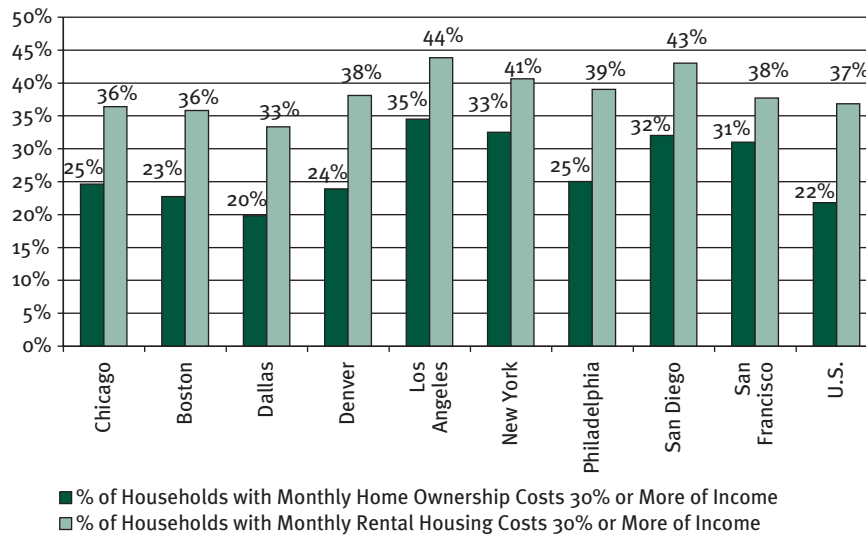


Figure 22

Economists generally believe that 30% of monthly gross income is the maximum that should be spent on housing in order to sustain a healthy standard of living. The Chicago region has a higher rate of homeowners who spend over 30% of their monthly income than does the nation (25% in the Metro Chicago region compared to 22% in the nation) and only a slightly lower rate of those paying rents that are above 30% of monthly income (36% in Metro Chicago compared to 37% in the nation).

Having a lower rate of people exceeding the 30% threshold is desirable; to this extent, Metro Chicago fares better than the Los Angeles, New York, San Diego, and San Francisco areas.

Metropolis 2020's report *Recommendations for Attainable Workforce Housing in the Chicago Region* noted that:

- The growth of low and moderate income working families is greater than the growth of attainable housing for those families.
- The growth of rental housing, which is most critical to families with annual incomes below \$40,000, is lower than the growth of employment, particularly in DuPage, Lake, and Will Counties.
- The cost of housing has been rising faster than inflation.
- Overcrowding is increasing throughout the region, indicating lower income families are doubling or tripling up in dwelling units.

But the report also cited several reasons to be optimistic, including:

- Illinois' Affordable Housing Tax Credit.
- Cook County's incentive Class S to cover 'mark up to market' multi-family rental buildings in which at least 20% of the units are in the Section 8 program.
- Downtown renewal efforts that have included attainable housing in their plans (e.g. Arlington Heights).
- Employers starting to take more interest in Employer Assisted Housing (EAH) programs.

These efforts and others like them should help the region maintain or improve its competitive advantage for housing over some of its competitors.

## Metro Chicago Trails Comparison Areas in Racial and Ethnic Diversity

The Chicago region is considerably more homogeneous than New York and Los Angeles. However, the Chicago region is less homogeneous than the national average and many of the areas studied. The Chicago region has a generally high rate of African-Americans, average rate of Asian-Americans, and less “other.” Los Angeles, San Diego, and San Francisco all have high rates of “other.”

Racial Distribution by MSA, 2000

Source: US Census Bureau 2000

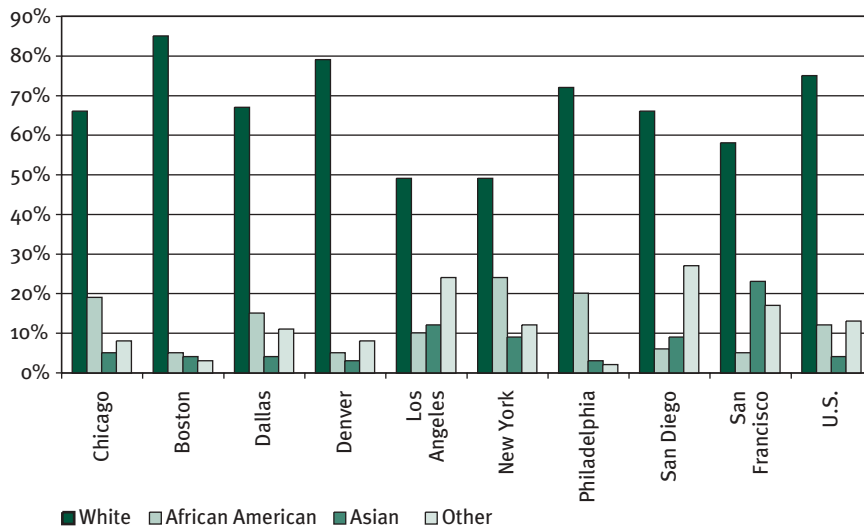


Figure 23

“Hispanic” is an ethnic designation rather than racial. Hispanic individuals may be of any race. The Chicago region has higher rates of Hispanic population than many areas studied, but trails Los Angeles (where nearly 1 in 2 are of Hispanic origin), New York, and Dallas.

Los Angeles and New York have nearly twice the rate of foreign-born citizens than Chicago. However, Chicago’s rate is 6% higher than the national rate (11%). Coastal cities such as Los Angeles, San Diego, San Francisco, and New York are ports of entry for immigrants. They are likely to have greater racial and ethnic diversity than inland areas.

Immigrants are important to the economy. In a Washington Post article of December 2, 2002, author D’Vera Cohn noted that “The U.S. economy would have stumbled in the past decade without the new arrivals, and most immigrants contribute more in taxes than they use in services.” Cohn pointed out that immigrants accounted for all the growth among workers under 35, and the Aspen Report<sup>39</sup> cited earlier estimates that most labor force growth over the next twenty years will be driven by immigrants. Higher rates of foreign born and culturally diverse populations not only factor into increased vitality in a region, but also contribute to economic growth.

39 *Grow Faster Together or Grow Slowly Apart*; The Aspen Institute, 2002

## The Bottom Line

While Cook County and the City of Chicago remain the heart of the region's employment, commuting between collar counties is clearly on the increase. DuPage is the only non-Cook County that experiences positive net-commuting (more people commuting into the county to work than commuting out).

Despite the recent commuting trends, Metro Chicago fares surprisingly well in an index on urban sprawl, ranking about average when compared to other metro areas in this study. Furthermore, it appears to have more balanced commuting across the entire region, as only 40% of Chicago MSA residents work in the City of Chicago itself; in the New York MSA, 80% of residents work in the city.

Housing affordability continues to be a challenge across the region, but once again, when compared to other metro areas the Chicago region fares about average. While housing appears more affordable than other metro areas, costs are still too high, and many critical occupations such as manufacturing assemblers, elementary teachers, nursing aides, and child care workers do not earn wages sufficient for quality housing in the region.

Diversity is the one area in which Metro Chicago does not fare quite as well compared to other metropolitan regions. The Chicago region has a generally high rate of African-Americans, average rate of Asian-Americans and less "other" racial groups than most of the comparison MSAs. The Chicago region has a higher rate of Hispanic population than the comparison MSAs except for Los Angeles, New York and Dallas.

# NEXT STEP RECOMMENDATIONS: OPPORTUNITIES FOR ACTION

This report, along with the work of the Regional Steering Committee that has assisted in the project, presents a starting point for ongoing initiatives to better coordinate the efforts of elected officials, economic and workforce development leaders, educators, organized labor, community groups and other stakeholders to address key issues affecting the growth and prosperity of the entire region. The following list, while not exhaustive, documents some of the major opportunities for action that have emerged from the data analysis and subsequent insights gained through the steering committees.

*Continue to foster regional thinking and coordinated initiatives, reflecting the interconnectedness of Metro Chicago as a labor market.*

Many of the workforce issues identified by Local Steering Committees are regional in nature and must be addressed by a larger geographic coalition for a real impact to be felt. For example, worker/employer geographic mismatches, transportation, and housing are all highly related. A chief cause of traffic congestion is the high level of movement of workers living in one area and needing to work in others. Suburban areas often have to import lower-wage workers because of the lack of moderately priced housing in their areas. Population is increasing faster than job creation in many of the suburbs, ensuring that they retain their “bedroom community” status in the short-term.

Forums already exist for leaders in workforce development, economic development, education, and political jurisdictions to meet on a regional basis, to agree on priorities and share information about local strategies. It is vital that these efforts be sustained to achieve the critical mass necessary to affect the issues. Through such partnerships, leading planning agencies can create a shared vision for the region that enables local areas to “act locally while thinking regionally.” The difficult task will be to pick specific priorities from the wide array of potential candidates for action, and then to maintain focus and accountability for moving toward the desired results.

Examples of opportunities for cross-organization and cross-regional planning include:

- Employers from across the region working with schools on curricula that meet skill needs of new jobs;
- Workforce development professionals working with transportation professionals to understand routes taken by workers to get to jobs and to provoke changes where needed;
- Economic development professionals working with housing professionals on attraction of businesses to sites that match worker housing;
- Employers working with community organizations to provide workers with housing information and financial assistance; and
- Literacy programs working with employers to bring skill upgrading opportunities to the “working poor” at employers’ worksites.



### *Ensure that young people are able to successfully transition into work.*

Economic development, workforce and education leaders need to paint clear pictures of the emerging quality jobs that will be available in the Chicago region, along with clear options for paths to acquire those jobs. By and large, the general public has only a fuzzy image of the kinds of jobs and skills that will form the base of middle-class incomes in the “information age” economy. Solid information and career counseling will be needed for both the current pool of workers needing to transition from disappearing jobs to new opportunities and for the pipeline of students currently making key decisions about academic preparation.

The leadership of the region has an opportunity to work with employers, elementary and secondary schools, colleges, and other training providers to build effective career path networks that make it easier for everyone to see the steps that are necessary to achieve upward economic mobility. A broad network of access points for information and advice will be critical in creating this environment of change, and should include existing government workforce centers (i.e. “one-stops”), education sites, employer human resources departments, libraries, community organizations, ethnic associations and others.

### *Identify and meet the workforce needs of the major sectors of the region’s diverse economy.*

Employers must be more engaged in planning for changes and as users of resources that are already available to address many of the workforce issues. Small businesses, in particular, often lack basic information about the workforce and about resources available to them to meet their hiring and employee training needs. The most effective route to engaging and informing employers appears to be a sector approach – one that identifies the unique needs of each major sector and mobilizes resources to address those needs. While many needs, such as basic literacy and work ethic, cut across all sectors, many others are unique to individual sectors. The Chicago region has a more diverse economy than all other metropolitan areas in the country; the future health of the region depends on meeting the needs of all sectors to ensure that the diversity is maintained as protection against downturns in any single sector.

The region needs to sustain its series of “Industry Summits” as a means of engaging regional employers on a sector-by-sector basis. A Healthcare Summit was held on December 4, 2002, and a Manufacturing Summit was held on May 13, 2003. Subsequent summits will focus on transportation, logistics and warehousing, finance and insurance, technology and hospitality and tourism. Summits are focused on sharing information about needs and best practices. Key discussions from the summits must be sustained, enhanced, and acted upon in a timely manner in order to sustain momentum created by the events. The summits are a first step toward building awareness and engaging employers in developing shared strategies with the public sector. Follow-through implementation and concerted actions from the public sector will be needed to move the initiative from “just an event” to an ongoing way of doing business in the region.

# Appendices

# APPENDIX A: NOTES AND DEFINITIONS

## Geographic Definitions

**Metropolitan Region** – Refers to the eight workforce investment areas involved in this project: Chicago, Northern Cook, South and West Suburban Cook, DuPage, River Valley, Lake, McHenry and Will.

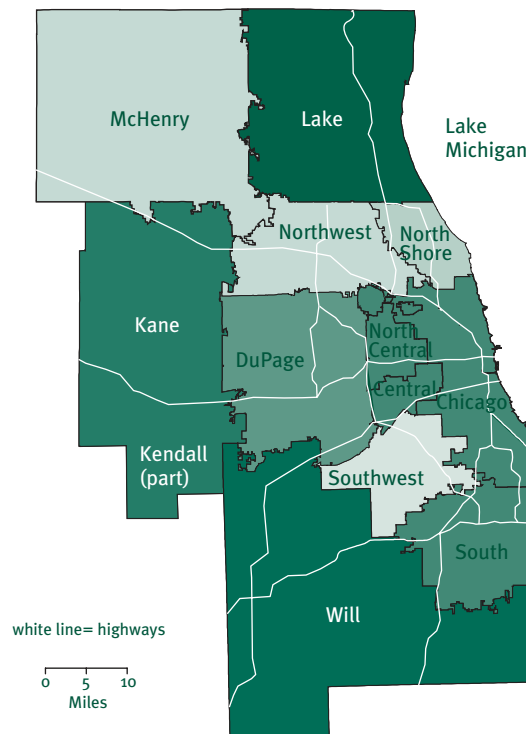
**River Valley** – The name of the state-recognized workforce investment area made up of Kane, Kendall and DeKalb counties.

**Rest of Region** – In some charts, data is given for Chicago and “rest of region.” This includes the Northern Cook, South and West Suburban Cook, DuPage, River Valley, Lake, McHenry and Will workforce investment areas.

**ZCTA** – Zip Code Tabulation Area. A geographic area used for Census tabulations that approximates the delivery area for a five-digit or a three-digit ZIP Code. ZCTAs do not precisely depict the area within which mail deliveries associated with that ZIP Code occur.

**Commuting Regions** – Data regarding commuting was taken from the Chicago Area Transportation Study. The study used its own set of predefined areas as shown below:

Chicago Area Transportation Study Commuting Areas  
January 2001



## NWCET Definitions

### *NWCET Employability Skills*

**Communication Skills** include communication with team members, supervisors and subordinates, customers and clients, and between different groups that is timely and appropriate.

**Organizational Skills** include the ability to identify and define tasks, track milestones, recognize when a project timeline is running into problems and to take appropriate action.

**Team Contribution and Leadership** includes the ability to work with team members with different backgrounds and diverse communication styles, the ability to take on different team roles, and the ability to read the team as a whole and individually.

**Professionalism** includes good work ethics, particularly showing up on time, understanding and following company procedures, and who relate to coworkers and customers with respect.

**Critical Thinking and Decision Making** includes correctly analyzing situations, understanding tradeoffs, making good recommendations, and making the right choices.

**Customer Relations** includes the ability to solicit and listen to feedback and to effectively address customer issues and concerns.

**Self-Directed and Continuous Learning** includes the need for employees to continuously engage in self-assessment against the technological landscape of skills and knowledge and to take proactive steps toward enrolling in continuous training for their trade.

### *NWCET Cross-Sector Core Skill Areas*

**Project Management** includes activities such as: defining the scope of the project; identifying stakeholders, developing task lists, estimating time requirements, evaluating project requirements, tracking milestones, securing needed resources, reporting progress, and many others.

**Task Management** includes developing time and activity plans to achieve objectives, coordinating and implementing work processes and procedures, and monitoring, analyzing processes and procedures and maintaining status reports.

**Problem-Solving / Troubleshooting** includes defining the problem, performing analysis to identify the cause(s), identifying and testing possible solutions, developing and implementing a resolution plan, and evaluating the problem solving process and outcomes.

### *NWCET Core Curriculum*<sup>40</sup>

**Analytical Skills and Problem Solving** includes hypothesis development and design, statistical analysis, and business environment skills.

**Business Organization and Environment** includes principles of accounting, professional development, and computer trends in business and society.

<sup>40</sup> *Building a Foundation for Tomorrow*, Northwest Center for Emerging Technologies. Referred to as “IT Core Curriculum” in publication; the author of this report has omitted the “IT” to more accurately reflect the all-industry need

**Coordination and Communication Skills** includes customer relations, project management, communication, teamwork, and written communication.

**Project and Process Flow Skills** includes analysis and synthesis, project documentation, proposal writing, quality assurance, research, and user testing and validation.

**Core Computer Software and Hardware Skills** includes database applications, email, hardware installation and configuration, Internet, network technologies, presentation software, principles of programming, software installation and configuration, spreadsheet applications, Windows environment, and word processing.

**Core Field of Study Skills** (not included in NWCET definition but added by the author) includes field-specific skills, (e.g., special trades for a general contractor, culinary arts for a chef, therapy and counseling for a social worker, and so forth).

## Metro Areas Defined

The table below reflects the composition of the MSA comparison areas used in this report. These definitions were in effect for the 2000 US Census and all data in this report. Please note that definitions are revised following the Census, and the new definitions (released in 2003) may not be the same for all areas.

### Appendix A: Metro Areas Defined

MSA Name	Counties in MSA
Chicago, IL PMSA	Cook County, DeKalb County, DuPage County, Grundy County, Kane County, Kendall County, Lake County, McHenry County, Will
Boston, MA-NH PMSA	Bristol County, MA (pt.), Essex County, MA (pt.), Middlesex County, MA (pt.), Norfolk County, MA (pt.), Plymouth County, MA (pt.), Suffolk County, MA, Worcester County, MA (pt.), Rockingham County, NH (pt.)
Dallas, TX PMSA	Collin County, Dallas County, Denton County, Ellis County, Henderson County, Hunt County, Kaufman County, Rockwall County
Denver, CO PMSA	Adams County, Arapahoe County, Denver County, Douglas County, Jefferson County
Los Angeles-Long Beach, CA PMSA	Los Angeles County
New York, NY PMSA	Bronx County, Kings County, New York County, Putnam County, Queens County, Richmond County, Rockland County, Westchester County
Philadelphia, PA-NJ PMSA	Burlington County, NJ, Camden County, NJ, Gloucester County, NJ, Salem County, NJ, Bucks County, PA, Chester County, PA, Delaware County, PA, Montgomery County, PA, Philadelphia County, PA
San Diego, CA MSA	San Diego County
San Francisco, CA PMSA	Marin County, San Francisco County, San Mateo County

*Source: US Census Bureau 2000*

# APPENDIX B: SUMMARY OF SOURCES

## **Aspen Institute**

*Grow Faster Together or Grow Slowly Apart: How Will America Work in the 21st Century*  
[www.aspeninstitute.org/](http://www.aspeninstitute.org/)

## **ASTD**

ASTD Benchmarking Survey 2000  
(training practices)  
[www.astd.org](http://www.astd.org)

## **Bureau of the Census, United States**

**Department of Commerce**  
U.S. Census 2000  
[www.census.gov](http://www.census.gov)

## **Bureau of Labor Statistics**

Occupation and industry data  
[www.bls.gov](http://www.bls.gov)

## **CASAS**

Adult Literacy  
[www.casas.org](http://www.casas.org)

## **Chicago Area Transportation Study**

Commuting patterns  
[www.catsmpo.com](http://www.catsmpo.com)

## **Chicago Metropolis 2020**

*Recommendations for Attainable Workforce Housing Report*  
*Regional Realities Report*  
[www.chicagometropolis2020.org](http://www.chicagometropolis2020.org)

## **Chicago Urban League**

*The Vicious Circle: Race, Prison, Jobs, Community and Mass Incarceration in Chicago, Illinois and the Nation*  
[www.cul-chicago.org](http://www.cul-chicago.org)

## **Dun and Bradstreet**

2003 employment estimates  
[www.dnb.com](http://www.dnb.com)

## **Economic Policy Institute**

*The State of Working in America 2002-03*  
[www.epinet.org](http://www.epinet.org)

## **Dr. Kenneth Gray**

*Getting Real: Helping Teens Find Their Future*  
Corwin Press, Inc. 200

## **Illinois Department of Employment Security**

State and local labor market information  
[www.lmi.ides.state.il.us](http://www.lmi.ides.state.il.us)

## **Illinois State Board of Education**

Secondary education statistics including Prairie State Achievement scores  
[www.isbe.state.il.us](http://www.isbe.state.il.us)

## **National Governor's Association**

*State Policy Approaches to Promote Metropolitan Economic Strategy*  
[www.nga.org](http://www.nga.org)

## **National Opinion Research Center**

*Assessing Labor Market Needs for City of Chicago Youth*  
[www.norc.uchicago.edu/index.asp](http://www.norc.uchicago.edu/index.asp)

## **Northeastern Illinois Planning Commission**

Employment center maps  
[www.nipc.cog.il.us](http://www.nipc.cog.il.us)

## **Northwest Center for Emerging Technologies**

(Bellevue Community College)  
Skill Standards for information technology  
[www.bcc.ctc.edu/visitguide/awards.htm](http://www.bcc.ctc.edu/visitguide/awards.htm)

## **Smart Growth America**

Urban sprawl  
[www.smartgrowthamerica.org](http://www.smartgrowthamerica.org)

## **US Conference of Mayors**

*The Role of Metro Areas in the US Economy: Employment Outlook*  
[www.usmayors.org](http://www.usmayors.org)

# APPENDIX C: LOOKING DEEPER AT THE SUMMIT-TARGETED INDUSTRIES

Steering Committee members identified six industry sectors for targeted summits. These sectors are considered important to the region's economy due to their size, growth, wage levels, skill requirements, and overall impact on the economy. The sectors identified and their definitions follow.

## Finance

- NAICS sector 52, Finance and Insurance

## Health Care

- NAICS subsector 621 (Ambulatory Health Care Services)
- NAICS subsector 622 (Hospitals)
- NAICS subsector 623 (Nursing and Residential Care Facilities)

## Hospitality

- NAICS sector 71 (Art Entertainment and Recreation)
- NAICS sector 72 (Accommodation and Food Services)

## Manufacturing

- NAICS sector 31-33 (Manufacturing)

## Technology

- Selected NAICS subsectors from 51 (Information) and 54 (Professional, Scientific and Technical Services)

## Transportation and Distribution

- NAICS sector 42 (Wholesale Trade)
- NAICS sector 48-49 (Transportation and Warehousing)

While specific data supplements will be provided for the industry summits that include detailed industry and occupational distributions for each sector along with anecdotal information, occupational detail for key sub-industries are provided in the following tables. Definitions for the education and training requirements are provided after the tables.

## Appendix C1: Chicago MSA Top 25 Occupations for All Industries <sup>41</sup>

Rank	Occupation Title	Employment	Mean Annual	Part Time Quartile	Unemployment Quartile	Education and Training
1	Retail Salespersons	108,870	\$21,410	Very High	Very High	Short-term on-the-job training
2	Office Clerks, General	93,310	\$22,710	High	High	Short-term on-the-job training
3	Cashiers	92,690	\$16,200	Very High	Very High	Short-term on-the-job training
4	Laborers and Freight, Stock, and Material Movers, Hand	91,260	\$19,490	High	Very High	Short-term on-the-job training
5	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	80,750	\$21,120	High	Very High	Short-term on-the-job training
6	Customer Service Representatives	77,990	\$28,420	High	High	Moderate-term on-the-job training
7	General and Operations Managers	76,120	\$72,060	Very Low	Very Low	Degree plus work experience
8	Registered Nurses	71,490	\$48,460	High	Very Low	Associate's degree
9	Stock Clerks and Order Fillers	60,190	\$21,380	Very High	Very High	Short-term on-the-job training
10	Waiters and Waitresses	59,700	\$13,390	Very High	Very High	Short-term on-the-job training
11	Sales Representatives, Wholesale and Mfg, Except Technical and Scientific Products	50,150	\$44,630	Low	Low	Moderate-term on-the-job training
12	Truck Drivers, Heavy and Tractor-Trailer	46,680	\$37,990	Low	High	Moderate-term on-the-job training
13	Executive Secretaries and Administrative Assistants	46,510	\$33,050	High	Low	Moderate-term onthe-job training
14	First-Line Supervisors/Managers of Office and Administrative Support Workers	43,670	\$40,300	Very Low	Very Low	Work experience in a related occupation
15	Food Preparation Workers	43,020	\$13,530	Very High	Very High	Short-term on-the-job training
16	Bookkeeping, Accounting, and Auditing Clerks	41,900	\$29,730	Very High	Low	Moderate-term on-the-job training
17	Secretaries, Except Legal, Medical and Executive	41,040	\$28,040	High	Low	Moderate-term on-the-job training
18	Combined Food Preparation and Serving Workers, Including Fast Food	38,970	\$13,540	Very High	Very High	Short-term on-the-ob training
19	Helpers--Production Workers	37,080	\$17,010	Low	Very High	Short-term on-the-job training
20	Accountants and Auditors	35,180	\$47,000	Low	Very Low	Bachelor's degree
21	Elementary School Teachers, Except Special Ed	34,760	\$44,630	Low	Very Low	Bachelor's degree

<sup>41</sup> Part-time quartile represents the likelihood the occupation will be part-time (i.e. very high 76% or greater, high 51%-75%, low 26%-50%, very low 0% to 25%). Unemployment quartile represents the likelihood an occupation is susceptible to unemployment. Quartile levels are defined by the U.S. Bureau of Labor Statistics. High likelihood of unemployment is often reflective of seasonal employment, such as in construction related occupations, or of retail trade.



## Appendix C1: Chicago MSA Top 25 Occupations for All Industries

Rank	Occupation Title	Employment	Mean Annual	Part Time Quartile	Unemployment Quartile	Education and Training
22	Maintenance and Repair Workers, General	33,980	\$33,680	Very Low	High	Long-term on-the-job training
23	Security Guards	33,380	\$20,510	High	Very High	Short-term on-the-job training
24	Truck Drivers, Light Or Delivery Services	32,530	\$27,330	Low	High	Short-term on-the-job training
25	Receptionists and Information Clerks	31,730	\$22,130	Very High	High	Short-term on-the-job training

## Appendix C2: Chicago MSA Top 25 Occupations for Finance and Insurance

Rank	Occupation Title	Employment	Mean Annual	Part Time Quartile	Unemployment Quartile	Education and Training
1	Accountants and Auditors	35,180	\$47,000	Low	Very Low	Bachelor's degree
2	Management Analysts	11,500	\$56,770	High	Low	Degree plus work experience
3	Financial Analysts	9,230	\$51,410	Low	Very Low	Bachelor's degree
4	Claims Adjusters, Examiners, and Investigators	8,540	\$38,470	Very Low	Very Low	Long-term on-the-job training
5	Cost Estimators	6,960	\$46,980	Low	Very Low	Bachelor's degree
6	Training and Development Specialists	6,490	\$49,790	Low	Low	Bachelor's degree
7	Purchasing Agents, Except Wholesale, Retail, and Farm Products	6,430	\$45,050	Very Low	Low	Bachelor's degree
8	Loan Officers	5,840	\$57,720	Low	Very Low	Bachelor's degree
9	Employment, Recruitment, and Placement Specialists	5,240	\$43,770	Low	Low	Bachelor's degree
10	Wholesale and Retail Buyers, Except Farm Products	5,050	\$44,140	High	Low	Bachelor's degree
11	Insurance Underwriters	3,800	\$49,090	Very Low	Very Low	Bachelor's degree
12	Tax Preparers	3,720	\$34,670	Low	Very Low	Moderate-term on-the-job training
13	Personal Financial Advisors	3,320	\$60,080	Low	Very Low	Bachelor's degree
14	Compliance Officers, Except Agriculture, Construction, Health and Safety, and Transportation	2,970	\$44,510	Very Low	Very Low	Long-term on-the-job training
15	Credit Analysts	2,870	\$44,060	Low	Very Low	Bachelor's degree
16	Compensation, Benefits, and Job Analysis Specialists	2,810	\$49,850	Low	Low	Bachelor's degree
17	Budget Analysts	2,660	\$41,940	Low	Very Low	Bachelor's degree
18	Tax Examiners, Collectors, and Revenue Agents	1,870	\$55,580	Very Low	Very Low	Bachelor's degree
19	Loan Counselors	1,790	\$31,820	Low	Very Low	Bachelor's degree
20	Financial Examiners	1,270	\$60,760	Low	Very Low	Bachelor's degree
21	Appraisers and Assessors of Real Estate	1,110	\$37,810	Very Low	Very Low	Postsecondary vocational award
22	Insurance Appraisers, Auto Damage	900	\$40,050	Low	Very Low	Long-term on-the-job training
23	Purchasing Agents and Buyers, Farm Products	700	\$45,150	Low	Very Low	Work experience in a related occupation
24	Emergency Management Specialists	340	\$34,520	Low	Low	Work experience in a related occupation
25	Agents and Business Managers of Artists, Performers, and Athletes	230	\$28,740	High	Low	Degree plus work experience

## Appendix C3: Chicago MSA Top 25 Occupations for Health Care Practitioners

Rank	Occupation Title	Employment	Mean Annual	Part Time Quartile	Unemployment Quartile	Education and Training
1	Registered Nurses	71,490	\$48,460	High	Very Low	Associate's degree
2	Licensed Practical and Licensed Vocational Nurses	11,960	\$33,060	High	Low	Postsecondary vocational award
3	Pharmacists	6,990	\$70,200	Low	Very Low	First professional degree
4	Pharmacy Technicians	5,600	\$22,160	High	Low	Moderate-term on-the-job training
5	Dental Hygienists	5,260	\$53,230	Very High	Very Low	Associate's degree
6	Medical and Clinical Laboratory Technologists	4,360	\$40,490	High	Low	Bachelor's degree
7	Medical Records and Health Information Technicians	4,280	\$25,190	Low	Low	Associate's degree
8	Medical and Clinical Laboratory Technicians	4,050	\$29,770	High	Low	Associate's degree
9	Emergency Medical Technicians and Paramedics	4,030	\$30,930	High	Low	Postsecondary vocational award
10	Family and General Practitioners	3,800	\$86,100	Low	Very Low	First professional degree
11	Radiologic Technologists and Technicians	3,700	\$37,360	High	Very Low	Associate's degree
12	Psychiatric Technicians	3,550	\$27,200	High	Low	Postsecondary vocational award
13	Physical Therapists	3,540	\$65,700	High	Very Low	Master's degree
14	Speech-Language Pathologists	3,540	\$48,190	High	Very Low	Master's degree
15	Opticians, Dispensing	2,970	\$24,560	High	Low	Long-term on-the-job training
16	Occupational Therapists	2,910	\$41,120	Very High	Low	Bachelor's degree
17	Dentists	2,340	\$117,260	High	Very Low	First professional degree
18	Respiratory Therapists	2,270	\$37,900	High	Very Low	Associate's degree
19	Surgical Technologists	1,760	\$31,350	High	Low	Postsecondary vocational award
20	Cardiovascular Technologists and Technicians	1,690	\$33,270	High	Very Low	Associate's degree
21	Dietitians and Nutritionists	1,330	\$35,050	High	Low	Bachelor's degree
22	Recreational Therapists	1,180	\$24,440	High	Very Low	Bachelor's degree
23	Veterinary Technologists and Technicians	1,170	\$25,590	High	Low	Associate's degree
24	Diagnostic Medical Sonographers	1,090	\$59,390	High	Very Low	Associate's degree
25	Occupational Health and Safety Specialists and Technicians	1,000	\$44,220	High	Low	Bachelor's degree

## Appendix C4: Chicago MSA Top Occupations for Health Care Support

Rank	Occupation Title	Employment	Mean Annual	Part Time Quartile	Unemployment Quartile	Education and Training
1	Nursing Aides, Orderlies, and Attendants	29,650	\$19,000	High	High	Short-term on-the-job training
2	Dental Assistants	7,690	\$29,710	Very High	Very Low	Moderate-term on-the-job training
3	Medical Assistants	6,240	\$27,620	High	Low	Moderate-term on-the-job training
4	Home Health Aides	5,530	\$17,370	High	High	Short-term on-the-job training
5	Pharmacy Aides	3,490	\$19,620	High	Low	Short-term on-the-job training
6	Medical Transcriptionists	2,370	\$26,230	High	Low	Postsecondary vocational award
7	Veterinary Assistants and Laboratory Animal Caretakers	2,060	\$19,200	High	Low	Short-term on-the-job training
8	Physical Therapist Assistants	1,560	\$31,920	Very High	High	Associate's degree
9	Medical Equipment Preparers	760	\$24,050	High	Low	Short-term on-the-job training
10	Psychiatric Aides	630	\$19,390	High	High	Short-term on-the-job training
11	Physical Therapist Aides	600	\$22,060	Very High	High	Short-term on-the-job training
12	Occupational Therapist Assistants	350	\$36,820	Very High	High	Associate's degree
13	Occupational Therapist Aides	200	\$20,890	Very High	High	Short-term on-the-job training

## Appendix C5: Chicago MSA Top 25 Occupations for Hospitality

Rank	Occupation Title	Employment	Mean Annual	Part Time Quartile	Unemployment Quartile	Education and Training
1	Cashiers	92,690	\$16,200	Very High	Very High	Short-term on-the-job training
2	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	80,750	\$21,120	High	Very High	Short-term on-the-job training
3	General and Operations Managers	76,120	\$72,060	Very Low	Very Low	Degree Plus Work Experience
4	Waiters and Waitresses	59,700	\$13,390	Very High	Very High	Short-term on-the-job training
5	Food Preparation Workers	43,020	\$13,530	Very High	Very High	Short-term on-the-job training
6	Combined Food Preparation and Serving Workers, Including Fast Food	38,970	\$13,540	Very High	Very High	Short-term on-the-job training
7	Landscaping and Groundskeeping Workers	23,320	\$21,170	High	Very High	Short-term on-the-job training
8	Maids and Housekeeping Cleaners	20,970	\$15,980	Very High	Very High	Short-term on-the-job training
9	Cooks, Restaurant	15,920	\$19,170	Very High	Very High	Long-Term on-the-job training
10	Dining Room and Cafeteria Attendants and Bartender Helpers	15,890	\$13,640	Very High	Very High	Short-term on-the-job training
11	Dishwashers	15,620	\$13,320	Very High	Very High	Short-term on-the-job training
12	Cooks, Fast Food	14,920	\$15,040	Very High	Very High	Short-term on-the-job training
13	First-Line Supervisors/Managers of Food Preparation and Serving Workers	14,650	\$24,050	High	High	Work Experience in a Related Occupation
14	Flight Attendants	13,310	\$33,510	Very High	Very Low	Long-Term on-the-job training
15	Marketing Managers	9,900	\$73,750	Very Low	Low	Degree Plus Work Experience
16	Reservation and Transportation Ticket Agents and Travel Clerks	9,420	\$31,760	High	Low	Short-term on-the-job training
17	Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop	8,980	\$15,800	Very High	High	Short-term on-the-job training
18	Food Service Managers	7,810	\$31,020	Low	Low	Work Experience in a Related Occupation
19	Counter Attendants, Cafeteria, Food Concession, and Coffee Shop	6,560	\$16,740	Very High	Very High	Short-term on-the-job training
20	Cooks, Institution and Cafeteria	6,310	\$20,280	Very High	Very High	Long-Term on-the-job training
21	Bartenders	5,310	\$15,860	Very High	High	Short-term on-the-job training
22	First-Line Supervisors/Managers of Housekeeping and Janitorial Workers	5,220	\$32,750	Low	High	Work Experience in a Related Occupation
23	Advertising and Promotions Managers	4,650	\$71,060	Very Low	Low	Degree Plus Work Experience
24	Amusement and Recreation Attendants	4,070	\$16,880	Very High	Very High	Short-term on-the-job training
25	Musicians and Singers	3,890	\$40,270	Very High	High	Long-term on-the-job training

## Appendix C6: Chicago MSA Top 25 Occupations for Manufacturing

Rank	Occupation Title	Employment	Mean Annual	Part Time Quartile	Unemployment Quartile	Education and Training
1	Helpers--Production Workers	37,080	\$17,010	Low	Very High	Short-term on-the-job training
2	Team Assemblers	30,620	\$23,510	Very Low	High	Moderate-term on-the-job training
3	First-Line Supervisors/Managers of Production and Operating Workers	23,520	\$41,330	Very Low	Very Low	Work experience in a related occupation
4	Inspectors, Testers, Sorters, Samplers, and Weighers	15,700	\$25,580	Very Low	High	Moderate-term on-the-job training
5	Machinists	14,690	\$33,040	Very Low	Low	Long-term on-the-job training
6	Electrical and Electronic Equipment Assemblers	12,630	\$22,360	Very Low	High	Short-term on-the-job training
7	Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	12,380	\$23,440	Very Low	High	Moderate-term on-the-job training
8	Packaging and Filling Machine Operators and Tenders	12,260	\$22,590	Low	Very High	Short-term on-the-job training
9	Welders, Cutters, Solderers, and Brazers	9,860	\$31,810	Very Low	High	Postsecondary vocational award
10	Tool and Die Makers	8,060	\$43,820	Very Low	Low	Long-term on-the-job training
11	Printing Machine Operators	7,130	\$29,410	Very Low	Low	Moderate-term on-the-job training
12	Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic	6,770	\$24,150	Very Low	High	Moderate-term on-the-job training
13	Computer-Controlled Machine Tool Operators, Metal and Plastic	6,300	\$30,570	Very Low	Very Low	Long-term on-the-job training
14	Bakers	5,880	\$22,180	High	High	Long-term on-the-job training
15	Bindery Workers	5,550	\$23,730	Low	High	Moderate-term on-the-job training
16	Laundry and Dry-Cleaning Workers	5,410	\$17,430	High	High	Moderate-term on-the-job training
17	Paper Goods Machine Setters, Operators, and Tenders	5,250	\$24,800	Very Low	High	Moderate-term on-the-job training
18	Rolling Machine Setters, Operators, and Tenders, Metal and Plastic	5,220	\$28,270	Very Low	High	Moderate-term on-the-job training
19	Prepress Technicians and Workers	4,920	\$43,520	High	Low	Long-term on-the-job training
20	Sewing Machine Operators	4,820	\$18,440	Low	Very High	Moderate-term on-the-job training
21	Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic	4,770	\$25,710	Very Low	High	Moderate-term on-the-job training
22	Food Batchmakers	4,400	\$22,060	Low	High	Short-term on-the-job training
23	Mixing and Blending Machine Setters, Operators, and Tenders	4,370	\$28,910	Very Low	High	Moderate-term on-the-job training
24	Forging Machine Setters, Operators, and Tenders, Metal and Plastic	4,240	\$26,330	Low	Very Low	Moderate-term on-the-job training
25	Butchers and Meat Cutters	3,840	\$23,720	Low	High	Long-term on-the-job training

## Appendix C7: Chicago MSA Top 25 Occupations for Technology<sup>42</sup>

Rank	Occupation Title	Employment	Mean Annual	Part Time Quartile	Unemployment Quartile	Education and Training
1	Computer Programmers	21,300	\$56,750	Low	Very Low	Bachelor's degree
2	Computer Systems Analysts	18,300	\$65,270	Very Low	Very Low	Bachelor's degree
3	Computer Support Specialists	16,880	\$41,400	Very Low	Very Low	Associate's degree
4	Computer Software Engineers, Applications	16,690	\$67,890	Very Low	Very Low	Bachelor's degree
5	Network and Computer Systems Administrators	7,950	\$58,380	Very Low	Very Low	Bachelor's degree
6	Mechanical Engineers	7,330	\$59,510	Very Low	Very Low	Bachelor's degree
7	Civil Engineers	7,040	\$61,470	Very Low	Very Low	Bachelor's degree
8	Electrical and Electronic Engineering Technicians	6,990	\$39,530	Low	Low	Associate's degree
9	Computer Software Engineers, Systems Software	6,500	\$71,380	Very Low	Very Low	Bachelor's degree
10	Civil Engineering Technicians	6,030	\$45,270	Low	Low	Associate's degree
11	Database Administrators	4,730	\$53,400	Very Low	Very Low	Bachelor's degree
12	Industrial Engineers	4,260	\$59,990	Very Low	Low	Bachelor's degree
13	Electrical Engineers	4,110	\$58,210	Very Low	Low	Bachelor's degree
14	Electronics Engineers, Except Computer	3,620	\$61,970	Very Low	Low	Bachelor's degree
15	Network Systems and Data Communications Analysts	3,400	\$57,240	Very Low	Very Low	Bachelor's degree
16	Architects, Except Landscape and Naval	2,420	\$54,810	Very Low	Very Low	Bachelor's degree
17	Industrial Engineering Technicians	2,350	\$39,690	Low	Low	Associate's degree
18	Architectural and Civil Drafters	1,860	\$34,290	Low	Low	Postsecondary vocational award
19	Chemical Engineers	1,790	\$62,570	Very Low	Very Low	Bachelor's degree
20	Mechanical Drafters	1,730	\$40,820	Low	Low	Postsecondary vocational award
21	Electro-Mechanical Technicians	1,660	\$62,360	Low	Low	Associate's degree
22	Mechanical Engineering Technicians	1,470	\$39,760	Low	Low	Associate's degree
23	Operations Research Analysts	1,230	\$58,060	Very Low	Very Low	Master's degree
24	Actuaries	870	\$62,010	High	Very Low	Degree plus work experience
25	Computer Hardware Engineers	840	\$63,480	Very Low	Very Low	Bachelor's degree

<sup>42</sup> Includes Computer and Mathematic occupations plus Architectural and Engineering occupations

## Appendix C8: Chicago MSA Top 25 Occupations for Logistics and Distribution

Rank	Occupation Title	Employment	Mean Annual	Part Time Quartile	Unemployment Quartile	Education and Training
1	Laborers and Freight, Stock, and Material Movers, Hand	91,260	\$19,490	High	Very High	Short-term on-the-job training
2	Truck Drivers, Heavy and Tractor-Trailer	46,680	\$37,990	Low	High	Moderate-term on-the-job training
3	Truck Drivers, Light Or Delivery Services	32,530	\$27,330	Low	High	Short-term on-the-job training
4	Packers and Packagers, Hand	31,490	\$17,910	High	Very High	Short-term on-the-job training
5	Industrial Truck and Tractor Operators	16,040	\$28,330	Very Low	High	Short-term on-the-job training
6	Driver/Sales Workers	10,280	\$26,950	Low	High	Short-term on-the-job training
7	Airline Pilots, Copilots, and Flight Engineers	8,670	\$103,720	High	Very Low	Bachelor's degree
8	Bus Drivers, School	8,620	\$25,870	Very High	High	Short-term on-the-job training
9	Cleaners of Vehicles and Equipment	8,540	\$16,840	High	Very High	Short-term on-the-job training
10	Parking Lot Attendants	6,940	\$17,440	Very High	High	Short-term on-the-job training
11	Refuse and Recyclable Material Collectors	5,390	\$32,940	Low	Low	Short-term on-the-job training
12	Machine Feeders and Off bearers	4,880	\$22,340	Low	Very High	Short-term on-the-job training
13	First-Line Supervisors/Managers of Transportation and Material-Moving Machine and Vehicle Operators	4,640	\$45,840	Low	Very Low	Work experience in a related occupation
14	First-Line Supervisors/Managers of Helpers, Laborers, and Material Movers, Hand	4,460	\$40,440	Low	Very Low	Work experience in a related occupation
15	Service Station Attendants	3,410	\$18,780	High	Very High	Short-term on-the-job training
16	Taxi Drivers and Chauffeurs	2,830	\$21,660	High	High	Short-term on-the-job training
17	Conveyor Operators and Tenders	1,460	\$27,430	Very Low	Very High	Short-term on-the-job training
18	Ambulance Drivers and Attendants, Except Emergency Medical Technicians	1,410	\$23,450	High	High	Moderate-term on-the-job training
19	Crane and Tower Operators	1,240	\$41,900	Very Low	High	Moderate-term on-the-job training
20	Air Traffic Controllers	950	\$86,890	Very Low	Very Low	Long-term on-the-job training
21	Transportation Inspectors	950	\$31,600	Very Low	Low	Work experience in a related occupation
22	Excavating and Loading Machine and Dragline Operators	900	\$44,690	Very Low	High	Moderate-term on-the-job training
23	Aircraft Cargo Handling Supervisors	420	\$46,620	Low	Very Low	Work experience in a related occupation
24	Bridge and Lock Tenders	300	\$36,160	Low	Very Low	Short-term on-the-job training
25	Loading Machine Operators, Underground Mining	230	\$20,730	Very Low	High	Moderate-term on-the-job training



## Education and Training Codes

Occupations are classified into one of eleven categories by the Bureau of Labor Statistics based on analyses of the occupation's usual education and training requirements conducted while developing information to present in the Occupational Outlook Handbook. The 11 classifications are as follows:

1. **First professional degree.** Completion of the academic program usually requires at least 6 years of full-time equivalent academic study, including college study prior to entering the professional degree program.
2. **Doctoral degree.** Completion of the degree program usually requires at least 3 years of full-time equivalent academic work beyond the bachelor's degree.
3. **Master's degree.** Completion of the degree program usually requires 1 or 2 years of full-time equivalent study beyond the bachelor's degree.
4. **Work experience, plus a bachelor's or higher degree.** Most occupations in this category are managerial occupations that require experience in a related nonmanagerial position.
5. **Bachelor's degree.** Completion of the degree program generally requires at least 4 years but not more than 5 years of full-time equivalent academic work.
6. **Associate degree.** Completion of the degree program usually requires at least 2 years of full-time equivalent academic study.
7. **Postsecondary vocational training.** Some programs last only a few weeks while others may last more than a year. In some occupations, a license is needed that requires passing an examination after completion of the training.
8. **Work experience in a related occupation.** Some occupations requiring work experience are supervisory or managerial occupations.
9. **Long-term on-the-job training.** This category includes occupations that generally require more than 12 months of on-the-job training or combined work experience and formal classroom instruction for workers to develop the skills needed for average job performance. This category includes formal and informal apprenticeships that may last up to 4 years and short-term intensive employer-sponsored training that workers must successfully complete. Individuals undergoing training are generally considered to be employed in the occupation. This category includes occupations in which workers may gain experience in non-work activities, such as professional athletes who gain experience through participation in athletic programs in academic institutions.
10. **Moderate-term on-the-job training.** This category includes occupations in which workers can develop the skills needed for average job performance after 1 to 12 months of combined on-the-job experience and informal training.
11. **Short-term on-the-job training.** This category covers occupations in which workers can develop the skills needed for average job performance after a short demonstration or up to one month of on-the-job experience or instruction.

# APPENDIX D: HEALTHCARE WORKFORCE ACTION TEAMS

## Team I: Building the Information Infrastructure

**Goal:** Identify and develop information infrastructure necessary to support the healthcare workforce action initiatives.

**Primary Strategies:**

- Identify current information, education, and potential clearinghouse websites and information repositories.
- Identify and develop a central clearinghouse of career supporting information and identify dissemination needs for information about models and best practices.

## Team II: Building Career Information and Awareness and Career Paths

**Goal:** Identify and develop career information strategies for the emerging, transition, and current workforce and clarify career paths for development of this workforce.

**Primary Strategies:**

Identify and differentiate career information, including image clarity, and career awareness strategies for the following groups:

- Emerging Workforce - Elementary, secondary, and post secondary youth.
- Transition Workforce
  - a. Entry level, low income, and others in need of “bridge programs” and other strategies.
  - b. Adults in transition and career change due to layoffs and other re-entry reasons such as previous retirement.
  - c. Foreign licensed workers with language barriers.
- Current Workforce – Incumbent workers that may have some employer support for career and skill development but may also be transitioning from one field to another without employer support.
- Identify opportunities for career path strategies.

## Team III: Identifying and Supporting Replication of Models

**Goal:** Identify models, best practices, current benchmarking initiatives and other “good ideas” to support replication.

### Primary Strategies:

- Identify means of collecting the information about regional, state, and national models, partnerships, best practices, “good ideas”, current benchmarking processes and other information for potential communication and replication.
- Provide this information to the other action teams to support communication of these models and to begin communication concerning replication.
- Identify forums and other events and activities to support communication of models and success in replication of these models and promising practices.





