

Healthcare Metro Monitor Supplement

Tracking the Role of Healthcare in Economic Recession and Recovery in the Nation's 100 Largest Metropolitan Areas

June 2013

- **Over the past decade, the healthcare industry has added 2.6 million jobs nationwide.** The industry's 22.7 percent employment growth rate over that period significantly outstripped the 2.1 percent employment growth rate in all other industries.
- **Across the 100 largest metropolitan areas, the healthcare industry accounts for more than one in every 10 jobs.** That share varies from just 7 percent in the Las Vegas metro area to 20 percent in the McAllen, TX metro area. Most healthcare-intensive metro areas are found in the Northeast and industrial Midwest, and in areas of Florida with large senior populations.
- **In each of the 100 largest metro areas, healthcare today represents a higher share of jobs than before the recession struck.** Overall, healthcare has accounted for 13 percent of total job growth in the 100 metro areas over the course of the employment recovery. In 11 metro areas that span every major U.S. region, healthcare has accounted for more than 25 percent of that job growth.
- **The occupational distribution of healthcare workers does not dramatically differ across metro areas, although healthcare support workers have the greatest variation between places.** Healthcare practitioners (such as doctors, nurses, and dentists) on average account for 3.6 percent of all workers across the 100 largest metro areas, ranging from a low of 2.4 percent of workers up to 5.1 percent in individual metro areas. Healthcare technologists (such as lab technicians, sonographers, , and paramedics) represent on average 2.1 percent of all workers across the 100 largest metro areas, ranging from 1.2 percent to 3.2 percent. Healthcare support workers (such as nursing assistants and home health aides) account for 2.9 percent of all workers across the 100 largest metro areas and have the largest range among healthcare occupations, from a low of 1.9 percent to a high of 5.4 percent.
- **Wages for healthcare workers vary among occupation types and across metro areas.** Practitioners have the highest earnings among healthcare workers and earn nearly double the wages of the average worker across all large metropolitan areas. Healthcare technologists show considerable variation in their earning power across metro areas, earning more than the average worker in 35 of the 100 largest metro areas. Healthcare support workers, on the other hand, earn 37 percent less on average than all workers in large metropolitan areas. On average, healthcare wages track general wage levels in a metro area.

Introduction

The implementation of the Affordable Care Act and pressures to contain costs, expand access to care, and improve health outcomes have focused attention on the healthcare industry. Healthcare is a large, diverse, and growing component of the economy. It employs about 14.5 million people and accounts for 10.3 percent of jobs nationally in occupations that span the education, skills, and earnings

continuum. Healthcare jobs are located in nearly every community across the country and in a variety of settings, including hospitals, ambulatory care offices, and skilled nursing facilities.

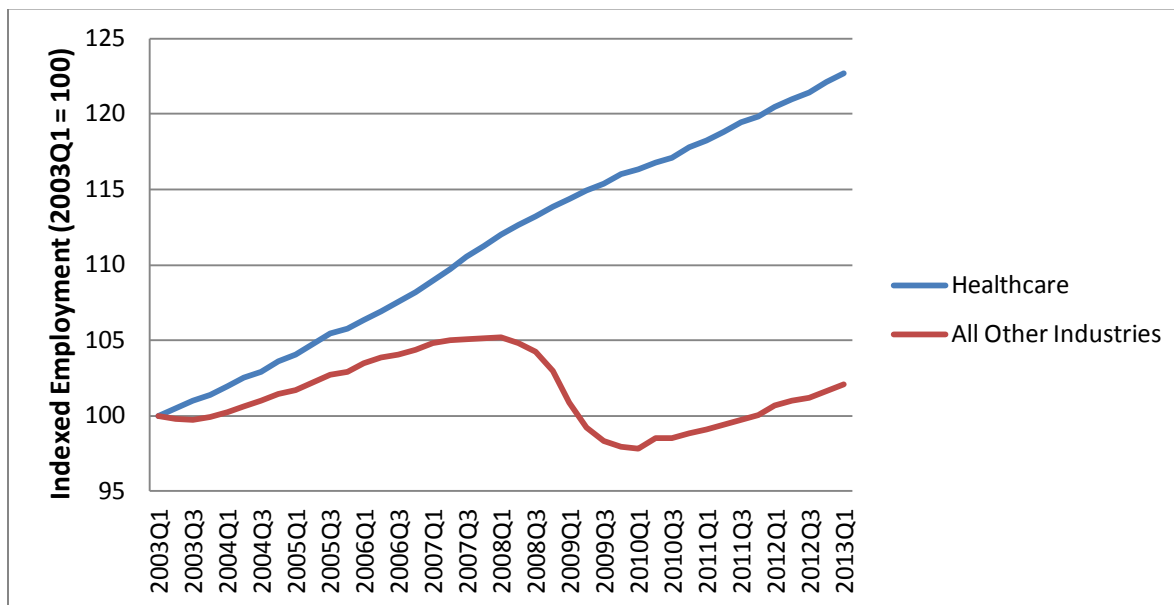
Findings

A. Over the past decade, the healthcare industry has added 2.6 million jobs nationwide.

While there is regional variation, healthcare employment in the aggregate is growing. The number of workers in the healthcare industry in the U.S. grew from 11.9 million in 2003 Q1 to 14.5 million in 2013 Q1. The healthcare industry has grown steadily for at least the past decade, and has never experienced a quarter-over-quarter decline during that time period. As shown in Figure 1, healthcare employment grew by 22.7 percent over the time period, compared to employment in other industries, which grew only 2.1 percent over the same period. In a national economy that is still 2.5 million jobs short of its pre-recession peak, healthcare remains a bright spot for employment growth.

The field is in the midst of major changes in how care is delivered and financed, but by its nature it is a labor-intensive enterprise, even accounting for technological advances. Additionally, the aging of the baby boom generation is also projected to increase demand, as older people are more likely to use healthcare services. Accordingly, the healthcare industry and healthcare employment are projected to grow. The Bureau of Labor Statistics points to a number of subsectors within the healthcare industry (hospitals, ambulatory care services, and nursing and residential care facilities) experiencing some of the largest employment gains between 2010 and 2020 among all industries. Correspondingly, healthcare-specific occupations are also projected to see strong growth to 2020.¹

Figure 1. U.S. Employment Growth in Healthcare and All Other Industries, 2003Q1–2013Q1



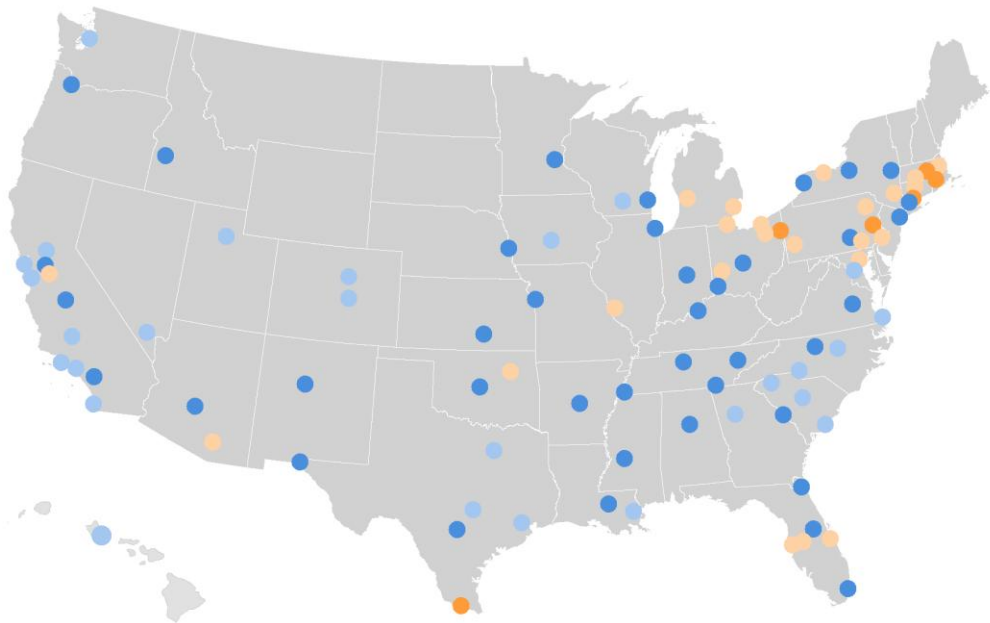
B. Across the 100 largest metropolitan areas, the healthcare industry accounts for more than one in every 10 jobs.

Healthcare accounts for varying shares of the total employment base among the 100 largest metropolitan areas. A metro area's healthcare intensity is the share of the area's total employment made up of the healthcare sector (for the purposes of this report, those jobs in the NAICS 621, 622, and 623 industries) and signifies the relative importance of healthcare to that region's economic well-being. Healthcare intensity results from the interaction of the size of a region's healthcare employment base with the size of its overall employment base, so relatively small regions with large hospitals or clusters of services have high intensity levels, while larger regions that have higher absolute numbers of healthcare employees may have lower intensity levels based on the larger size of their total workforce.

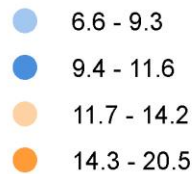
Overall, healthcare accounts for between 7 percent and 20 percent of total employment across the 100 largest metro areas (Figure 2). The 20 metro areas with the highest levels of healthcare intensity vary widely in size, with populations ranging from about 500,000 to nearly 6 million. They are clustered on the East Coast and in the Midwest, with a few in Florida and the Southwest. A metro area's healthcare intensity appears to reflect the presence of older populations and its industrial economic history.² Metro areas with higher shares of their populations over age 60 tend to have higher healthcare intensity, and metro areas that were more focused in manufacturing in 1980 also exhibit higher healthcare intensity. As many of these metro economies lost manufacturing jobs over the succeeding decades, their economic base shifted decidedly toward the healthcare sector, which now represents proportionally larger employment shares in those regional economies.

By contrast, the least healthcare-intensive metro areas tend to locate in the West (Denver, Salt Lake City, San Diego, San Francisco Bay Area, Seattle) and in other metro areas with a younger, "knowledge economy" profile, such as Austin, Raleigh, and Washington, D.C.

Figure 2. Healthcare Employment Intensity by Metro Area, 2013Q1



Percent of Workers Employed in the Healthcare Industry



The 20 Most Healthcare-Intensive Places		The 20 Least Healthcare-Intensive Places	
Allentown, PA-NJ	Palm Bay, FL	Atlanta, GA	Madison, WI
Boston, MA-NH	Philadelphia, PA-NJ-DE-MD	Austin, TX	Oxnard, CA
Cleveland, OH	Pittsburgh, PA	Bakersfield, CA	Raleigh, NC
Dayton, OH	Providence, RI-MA	Charleston, SC	Salt Lake City, UT
Detroit-, MI	Scranton, PA	Charlotte-, NC-SC	San Diego, CA
Grand Rapids, MI	Springfield, MA	Colorado Springs, CO	San Francisco, CA
Lancaster, PA	Toledo, OH	Denver, CO	San Jose, CA
McAllen, TX	Tucson, AZ	Greenville, SC	Seattle-Tacoma-Bellevue, WA
New Haven-Milford, CT	Worcester, MA	Honolulu, HI	Virginia Beach, VA-NC
North Port, FL	Youngstown, OH-PA	Las Vegas-Paradise, NV	Washington, DC-VA-MD-WV

C. Recession and recovery: In each of the 100 largest metro areas, healthcare today represents a higher share of jobs than before the recession struck.

As the flagship quarterly *MetroMonitor* shows, the depth of job losses and pace of recovery has varied tremendously among the 100 largest metro areas. By Q1 2013, every large metropolitan area had

experienced its post-recession employment low, although only about a third had reached their pre-recession employment peaks. This Monitor supplement shows that the recession's effects also varied by industry, with healthcare largely insulated from the worst effects.

In line with recent national trends, healthcare represents a larger share of employment in each one of the 100 largest metropolitan areas today than at their pre-recession employment peaks. In 95 large metropolitan areas, healthcare employment today is larger in absolute terms than prior to the recession. In comparison, only 30 metropolitan areas have more jobs overall today than they did before the recession. In the largest hundred metropolitan areas as a whole, the healthcare sector contributed 13 percent of jobs to the overall employment recovery.

Although healthcare did contribute to job losses in almost all metropolitan areas during the most recent employment downturn, in most places the losses were a fairly small share of the total job loss. In almost all metro areas, the healthcare industry has contributed, sometimes significantly, to job recovery following the recession (Table 1). These contributions have been greatest in metro areas that are posting otherwise weak post-recession growth. For example, in Virginia Beach, almost 40 percent of employment growth since its recessionary employment trough has been in the healthcare industry, and is ranked 90 out of 100 metro areas in terms of its overall recovery. Eleven of the 20 regions in which healthcare accounted for the largest shares of post-recession employment growth are also among those with the weakest recoveries since the recession ended, according to the 2013Q1 MetroMonitor.³ Lastly, in four of the 100 largest metro areas, the healthcare sector continued to lose jobs since the employment trough associated with the recession. For example, in Buffalo, the healthcare industry has lost jobs while total jobs across all industries have increased.

Table 1. Top and Bottom 20 Metros by Healthcare’s Contribution to Employment Recovery

MSA	Healthcare Share of Employment Recovery, Rank	Overall Recovery Rank, 2013Q1	Healthcare Share of Employment Recovery	Changes in Healthcare Jobs, Trough to 2013Q1	Changes in Total Jobs, Trough to 2013Q1
Albuquerque, NM	1	96	376% ⁴	496	132
Augusta-Richmond County, GA-SC	2	69	41%	1,472	3,590
Virginia Beach-Norfolk-Newport News, VA-NC	3	90	38%	6,150	16,353
Syracuse, NY	4	97	36%	1,571	4,379
Fresno, CA	5	56	35%	2,247	6,493
McAllen-Edinburg-Mission, TX	6	50	29%	4,015	13,638
St. Louis, MO-IL	7	77	29%	6,345	21,687
Modesto, CA	8	28	28%	1,343	4,744
Harrisburg-Carlisle, PA	9	99	27%	2,038	7,437
Little Rock-North Little Rock-Conway, AR	10	94	27%	2,219	8,217
Poughkeepsie-Newburgh-Middletown, NY	11	91	26%	1,457	5,643
Memphis, TN-MS-AR	12	82	25%	3,754	15,109
Cleveland-Elyria-Mentor, OH	13	85	24%	8,039	32,847
Worcester, MA	14	38	23%	3,272	14,290
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	15	98	23%	13,880	60,826
Allentown-Bethlehem-Easton, PA-NJ	16	81	22%	3,665	16,865
Riverside-San Bernardino-Ontario, CA	17	20	21%	11,229	54,500
Albany-Schenectady-Troy, NY	18	93	19%	1,911	9,895
El Paso, TX	19	35	19%	3,954	21,290
Boise City-Nampa, ID	20	6	19%	3,358	18,124

MSA	Healthcare Share of Employment Recovery, Rank	Overall Recovery Rank, 2013Q1	Healthcare Share of Employment Recovery	Changes in Healthcare Jobs, Trough to 2013Q1	Changes in Total Jobs, Trough to 2013Q1
Wichita, KS	80	59	6%	306	4,751
Charlotte-Gastonia-Rock Hill, NC-SC	81	25	6%	4,383	68,196
Tulsa, OK	82	61	6%	962	16,337
Des Moines-West Des Moines, IA	83	46	6%	1,013	17,253
Salt Lake City, UT	84	14	6%	3,034	53,055
Provo-Orem, UT	85	13	6%	1,267	22,183
San Jose-Sunnyvale-Santa Clara, CA	86	1	5%	4,617	84,596
Chattanooga, TN-GA	87	49	5%	623	11,902
Miami-Fort Lauderdale-Pompano Beach, FL	88	34	5%	6,045	121,678
Milwaukee-Waukesha-West Allis, WI	89	71	5%	1,027	20,797
San Francisco-Oakland-Fremont, CA	90	15	4%	4,721	129,955
Dayton, OH	91	60	4%	341	9,710
Knoxville, TN	92	33	3%	621	18,318
Youngstown-Warren-Boardman, OH-PA	93	45	3%	207	7,144
Columbia, SC	94	68	2%	229	11,960
Scranton--Wilkes-Barre, PA	95	100	1%	38	4,444
Madison, WI	96	83	0%	20	9,897
Springfield, MA	97	64	-1%	-99	12,255
Toledo, OH	98	37	-2%	-253	11,183
Buffalo-Niagara Falls, NY	99	92	-4%	-559	14,309
Lakeland-Winter Haven, FL	100	67	-14%	-499	3,610

D. The occupational distribution of healthcare workers does not dramatically differ across metro areas, although healthcare support workers have the greatest variation between places.

Healthcare jobs, as measured by the U.S. Department of Labor’s Standard Occupational Classification system, fall into two major occupational groups: healthcare practitioners and technical occupations (SOC 29-) and healthcare support occupations (SOC 31-). Practitioners are the most highly educated and include doctors, surgeons, dentists, pharmacists, chiropractors, physician assistants, and most nurses. Technologists and technicians include laboratory technicians, dental hygienists, paramedics, sonographers, Magnetic Resonance Imaging technologists, licensed practical nurses, medical records technicians, and pharmacy technicians. Healthcare support occupations have the lowest levels of education and include nursing assistants, orderlies, home health aides, dental assistants, massage therapists, medical equipment preparers, medical assistants, and phlebotomists. On average, metropolitan areas have 2 healthcare practitioners for every healthcare support occupation.

Table 2. Healthcare Employment by Occupation in the Nation’s 100 Largest Metros, 2012⁵

	Employment, Top 100 (2012)	% of Total Employment Across Occupations, Top 100 (2012)	Average Annual Wage, National (2012)
(29-0000) Healthcare Practitioners and Technical Occupations	5,084,020	5.7%	\$73,540
(29-1000) Health Diagnosing and Treating Practitioners	3,094,800	3.5%	\$91,890
(29-2000) Health Technologists and Technicians	1,773,270	2.0%	\$43,930
(29-9000) Other Healthcare Practitioners and Technical Occupations	87,320	0.1%	\$57,960
(31-0000) Healthcare Support Occupations	2,550,910	2.9%	\$27,780
(31-1000) Nursing, Psychiatric, and Home Health Aides	1,484,300	1.7%	\$24,320
(31-2000) Occupational Therapy and Physical Therapist Assistants and Aides	96,610	0.1%	\$42,920
(31-9000) Other Healthcare Support Occupations	924,650	1.0%	\$32,100
Total Healthcare Occupations (Sum of 29-0000 and 31-0000)	7,634,930	8.6%	N/A
Total Employment Across All Occupations	88,748,950		\$45,790

Occupational subgroups don't sum to the major group due to data suppression.

Across the 100 largest metropolitan areas, healthcare practitioners represent 3.5 percent of all workers. Healthcare practitioners as a share of the total workforce vary from a low of 2.4 percent in Austin and two California metro areas (Oxnard and Bakersfield) up to 5.0 percent in Augusta, GA and 5.1 percent in Jackson, MS. The largest regions have the highest numbers of practitioners (up to 303,000 in the New York City metro), but based on the size of their total workforce, do not have the highest employment intensity for these occupations.

Healthcare technologists make up two percent of all workers among the 100 largest metropolitan areas. The share of healthcare technologists of the total workforce varies from a low of 1.2 percent in San Jose and 1.4 percent in several metro areas (Greensboro, NC; Las Vegas, Honolulu, and Washington, D.C.) up to 3.0 percent in Knoxville, 3.1 percent in Youngstown, OH; and 3.2 percent in Augusta.

Healthcare support workers account for almost 3 percent of workers among the 100 largest metro areas. Their share of the total workforce varies from a low of 1.9 percent in Austin and Las Vegas up to 4.5 percent in Youngstown, OH and 5.4 percent in Jackson, MS. The relative size of healthcare support workers in a metro area’s workforce exhibits greater variation between metro areas than the other two healthcare occupations. This may be due to the nature of the work of healthcare support workers. While practitioners and technologists could conceivably export their services to consumers coming from

outside the metro area, support occupations are more likely to exclusively serve local residents, and thus correlate closely with the size and demographics of local populations. The intensity of support workers in a metropolitan area is strongly correlated with the share of that metro's population that is over 60; while there is a positive correlation between healthcare intensity and older populations in general, the strongest relationship within all three occupational sub-groups examined here is with healthcare support occupations.⁶

E. Wages for healthcare workers vary among occupation types and across metro areas.

Healthcare practitioners' earnings are nearly double those of the average worker across all large metropolitan areas. In general, earnings differentials are greater for metros with lower average wages. The highest differential is in McAllen, TX, where average annual earnings of \$86,000 for healthcare practitioners is 163 percent higher than average earnings for all workers (\$32,900). Earnings differentials are lowest in the Washington, D.C. and Boston metro areas (63 percent), which are among the top five in terms of average annual wages of all workers. Annual average earnings for practitioners are \$104,000 in Washington and \$96,000 in Boston. In absolute numbers, the lowest annual earnings for this occupational group are in Jackson, MS (\$74,524, 65 percent greater than average annual earnings for all workers), and the highest are in San Jose (\$125,113, 80 percent greater than average annual earnings for all workers).

Health technologists earn annual wages roughly equal to all workers when averaged across the top 100 metros, although there is considerable variation among metros. In 65 large metropolitan areas, workers in this occupational group earn less than all regional workers, while in the other 35 places, they earn more, sometimes considerably so. The Washington, D.C. and Boston metro areas have negative wage differentials. Healthcare technologists in Boston, with an average annual wage of \$47,200, earn 20 percent less than all regional workers. In the Washington, D.C. metro area, technologists have an average annual wage of \$51,900, earning 19 percent less than all workers. Technologists in Modesto, CA, have the highest regional wage differential, earning 29 percent more than average workers, with average annual earnings of \$55,500. In absolute numbers, the lowest average annual wages for technologists are in Birmingham, AL (\$36,700, or 13 percent less than all workers), and the highest annual wages are in San Jose (\$65,800, or 5.5 percent less than all workers).

Healthcare support occupations earn on average 37.2 percent less than all workers in large metropolitan areas. Healthcare support workers in the New York City and Washington D.C. metros have the largest gaps, earning on average \$28,800 in New York (49.5 percent less than all workers in the region) and \$32,300 in Washington, D.C. (49.4 percent less than all workers in the region). The smallest gap is in Las Vegas, where healthcare support workers earn \$33,400, or 19.3 percent less than all workers. In absolute numbers, the lowest-paid healthcare support workers are in Jackson, MS, earning \$20,500 (47.6 percent less than all workers), and the highest-paid are in San Francisco, earning \$37,600 (40.0 percent less than all workers).

Guide to the Healthcare Metro Monitor Supplement

Indicators and Methodology

For this report's industry-based analysis, the healthcare sector is defined as North American Industry Classification System (NAICS) codes 621 (Ambulatory Health Care Services), 622 (Hospitals), and 623 (Nursing and Residential Care Facilities). With regards to occupational analysis, the relevant occupations are contained within the Standard Occupational Classification codes 29-0000 (Healthcare Practitioners and Technical Occupations) and 31-0000 Healthcare Support Occupations.

Employment

Employment data by industry were obtained through Moody's Analytics and are current through 2013Q1. These data are based on the Bureau of Labor Statistics (BLS) Quarterly Census of Employment and Wages (QCEW) and include only privately-owned establishments in its employment counts. As such, the analysis omits publicly-owned healthcare establishments, including those affiliated with state university medical schools. The scope of these omissions does not appear to affect the majority of places when it comes to health intensity. A comparison of industry- and occupational-based intensity measures revealed that only 12 metropolitan areas had lower intensity figures when measured using an industry-based approach, and these discrepancies were relatively small. Employment data by occupation were obtained through the BLS Office of Employment Statistics (OES). These data are available annually and are current through 2012. Due to various suppressions in these data, at times, the sum of occupational employment at the 6-digit Standardized Occupational Classification (SOC) code level may not sum to its 2-digit parent.

Wages

Wage data by occupation were also obtained from the BLS OES, and these annual figures were obtained through 2012 and are in 2012 dollars. For occupational groups at the 3-digit Standardized Occupational Classification (SOC) code level, such as 29-1000 and 29-2000, average annual wages were not available from BLS OES. To obtain annual average wages for occupations at the 3-digit SOC code level, a weighted average was calculated from annual wage data at the 6-digit SOC level.

Population Data

Data on metropolitan area population over the age of 60 were obtained from the American Communities Survey (ACS) 5-year metropolitan area estimates.

Healthcare Share of Employment Recovery

In order to calculate how job changes in the healthcare sector contributed to the overall recovery in the largest hundred metropolitan areas, the sum of the change in employment levels in the healthcare sector from each metro's employment trough (period of lowest employment) to the current period was divided by the sum of the change in total employment base from each metropolitan area's employment trough to the current period. The methodology for calculating post-recession employment lows is the method employed in the MetroMonitor, which is as follows: In order to define employment lows in each metro area, pre-recession employment peaks are calculated. A peak is defined as the highest employment level attained between the first quarter of 2004 and the second quarter of 2009; in some metro areas where this peak occurs in the second quarter of 2009, the peak is defined as the highest level attained between 2004 and the most recent quarter of losses prior to the second quarter of 2009. Employment lows, or troughs, are then defined as the lowest level reached since a peak.

¹ Bureau of Labor Statistics, *Occupational Employment Projections to 2020* Monthly Labor Review, (Department of Labor, January 2012); Bureau of Labor Statistics, *Industry Employment and Output Projections to 2020* Monthly Labor Review (Department of Labor, January 2012)

² The Pearson's r correlation coefficient for the relationship between population over age 60 and 2013Q1 healthcare intensity is .44. For the relationship between the percent employed in manufacturing in 1980 and 013Q1 healthcare intensity, it is .42.

³ The regions in which healthcare contributed large shares to the recovery and which had weak recoveries overall are the following: Albuquerque, NM; Virginia Beach, VA-NC; Syracuse, NY; Harrisburg, PA; Little Rock, AR; Memphis, TN; Poughkeepsie, NY; Cleveland, OH; Philadelphia, PA-NJ-DE-MD; Allentown, PA-NJ; Albany, NY.

⁴ Albuquerque's 376 percent share of employment recovery is due to the fact it has had such little job growth across all its sectors since the area stopped losing jobs in Q3 of 2012, and healthcare has added significant jobs relative to net job changes over the past two quarters.

⁵ Employment totals by healthcare occupations do not match the totals by industry described elsewhere in the paper. Industry data define the kind of business conducted by a person's employing organization, while occupation describes the kind of work a person does on the job. For instance, all hospital employees are counted towards the healthcare industry employment total, including those whose jobs are not healthcare specific, such as accountants, janitors, and HR staff. Occupational healthcare employment totals include only those whose work is directly related to delivering healthcare.

⁶ The Pearson r correlation for the largest hundred metropolitan areas between population over 60 and intensity of healthcare support (31-0000) occupations is 55.

About the Metropolitan Policy Program at the Brookings Institution

Created in 1996, the Metropolitan Policy Program provides decisionmakers with cutting-edge research and policy ideas for improving the health and prosperity of cities and metropolitan areas, including their component cities, suburbs, and rural areas. To learn more, visit www.brookings.edu/metro.

Acknowledgments

The *Metro Monitor* team thanks Alan Berube for his guidance and David Jackson for his edits. The Brookings Metropolitan Policy Program gratefully acknowledges the UnitedHealth Group, Inc. for their support of this research.

The program also thanks the John D. and Catherine T. MacArthur Foundation, the Heinz Endowments, the George Gund Foundation, and the F.B. Heron Foundation for general support for the program's research and policy efforts. We also thank the Metropolitan Leadership Council, a network of individual, corporate, and philanthropic investors that provides us financial support but, more important, a true intellectual and strategic partnership.

The Brookings Institution is a private, nonprofit organization. Its mission is to conduct high-quality, independent research, and based on that, provide innovative, practical recommendation for policymakers and the public. The conclusions and recommendation of any Brookings publication are solely those of its author(s) and do not reflect the views of the Institution, its management, or its other scholars.

Brookings recognizes that the value it provides to any supporter is in its absolute commitment to quality, independence, and impact. Activities supported by its donors reflect this commitment, and the analysis and recommendations are not determined by any donation.