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The Health Sector's Role in New York's Regional Economy

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Economic activity in the New York region depends heavily on the health sector—a sector that helped buoy New York's economy during the region's 1989-92 downturn. But with fundamental changes occurring in health care, will the sector still bolster the region's economy in the years to come?

The provision of health care in the New York region[1] is undergoing fundamental change. In recent months, local news reports have documented layoffs of hospital workers, consolidation of hospitals and clinics into networks of health care providers, and proposals to close municipal hospitals and require welfare recipients to enroll in managed care programs.

These changes raise an important question: How will the restructuring of health care affect the New York region's economy? To help provide an answer, this edition of *Current Issues* examines the role of the health sector in the regional economy. We begin by looking at the size, composition, and growth of the health sector in the New York region. We then contrast health employment in New York with that of five other regions. Next, we examine whether New York's concentration of health sector employment is primarily attributable to local demand or the export of health products and services to other regions. Our findings enable us to offer a brief prognosis for the health sector's capacity to aid the region's recovery.

Employment and Wages in New York's Health Sector

The health sector is an important component of New York's regional economy, accounting for more than 12 percent of all employment and wages (Table 1).[2] The sector's employment can be divided into two broad categories: health care services industries and health-related industries. Nearly 90 percent of New York's health sector workers—including employees of hospitals, nursing homes, and doctors' offices—provide health care services. The region's health-related employment is concentrated in the pharmaceutical and health insurance industries. Although small in comparison with health care, New York's health-related industries employed nearly 80,000 workers in 1992.

An unusually large share—42 percent—of the region's health sector workers hold professional or technical positions.[3] Despite this high concentration of skilled employment, wages in New York's health sector are slightly below the average for all industries in the region. This isn't because average health sector wages are particularly low; rather, wages in New York's finance sector are particularly high. When we exclude the finance sector from the calculation, health sector wages are nearly 8 percent greater than the average for the remaining industries.

New York's health sector grew strongly through the 1980s and early 1990s. Employment in this sector rose nearly 27 percent between 1983 and 1992, considerably faster than in any other major industry in the region (Chart 1). The health sector added 120,000 jobs over the period, nearly as many as the far-larger ser-

vices sector added. Moreover, the health sector was instrumental in buoying New York's economy during the region's 1989-92 downturn, when it added roughly 50,000 jobs and was the only major sector to experience employment growth.[4]

How Big Is Big?

The health sector clearly accounts for a significant share of employment—and thus economic activity—in the New York region. To find out just *how* significant that share is, we compare New York's health sector employment with that of five other regions: the Atlanta, Boston, Chicago, Houston, and Los Angeles metropolitan areas. The difficulty of acquiring data from different state employment offices dictated that the sample be kept small. Criteria for choosing the five regions included broad geographic representation and the presence of a large central city. Boston was included because the city is known for its many prestigious hospitals.

Simple comparisons of health sector employment as a share of total employment suggest that New York's health sector is indeed unusually large (Table 2). We find that New York has the largest share of health-related employment and the second largest share of health care employment.[5] Within the health care category, New York and Boston each have significantly greater concentrations of hospital and nursing home employment than the other areas. New York's higher concentration of health-related employment is primarily attributable to its prominence in pharmaceutical manufacturing.

Nevertheless, comparisons of employment across regions—particularly health care employment—should be viewed cautiously because these data were collected by seven different state departments of labor. For example, the extent to which employment in government-owned health care establishments is classified as public administration, rather than as health, differs among states. In regions with many government-owned establishments, health care employment is thus more likely to be understated.

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To make the comparisons more consistent across the

Table 1
Health Care and Health-related Industries: New York Region

	1992 Employment		1992 Wages	
	Thousands of Workers	Percentage of Total	Average Weekly Wage[a] in Dollars	Percentage of Total
Health care industries				
Hospitals	340.2	6.2	673	6.0
Nursing homes	85.2	1.6	486	1.1
Medical doctors' offices and clinics	68.0	1.2	1,051	1.9
Home health care	41.8	0.8	349	0.4
Dental and other practitioners[b]	43.0	0.8	480	0.5
Other[c]	29.7	0.5	556	0.4
Subtotal	607.9	11.1	647	10.2
Other health-related industries				
Manufacturers				
Pharmaceuticals	43.4	0.8	1,068	1.2
Medical instruments and supplies	9.8	0.2	711	0.2
Health insurance	17.0	0.3	678	0.3
Wholesalers of instruments and supplies	9.6	0.2	781	0.2
Subtotal	79.8	1.5	907	1.9
Total, all health industries	687.7	12.6	677	12.1
Total, all industries	5,467.3	100.0	702	100.0

Sources: New York and New Jersey state departments of labor, data on workers covered by state and federal unemployment insurance programs.

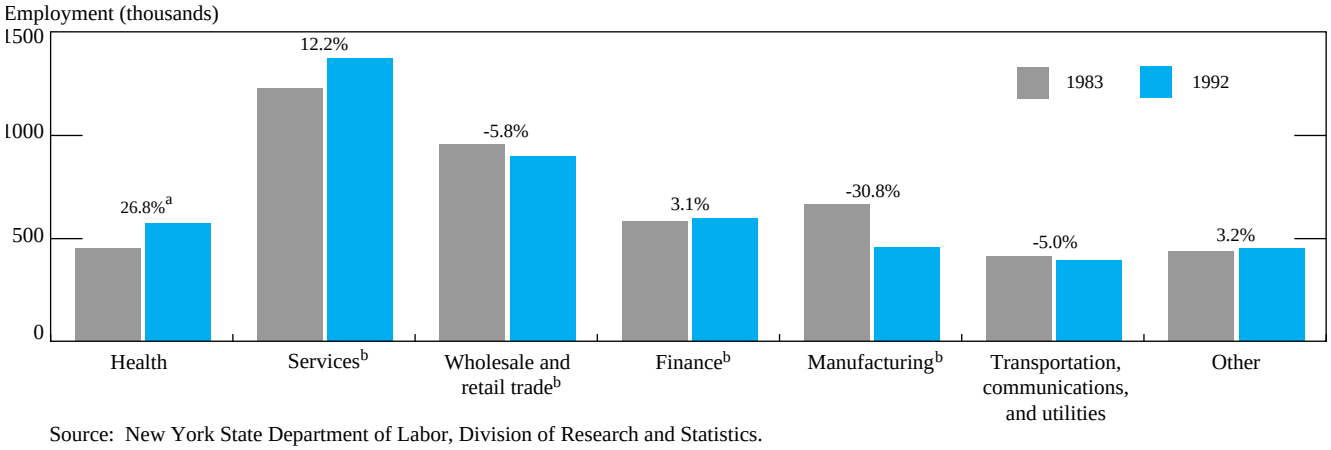
Note: The figures understate the sector's share of regional employment because a significant number of health employees are classified as social service or public administration workers.

[a] Wages of nonsupervisory personnel. Averages for subtotals and totals are weighted by employment.

[b] Includes chiropractors, optometrists, podiatrists, and others.

[c] Primarily laboratories and specialty outpatient facilities, such as those for mental health.

Chart 1
New York Regional Employment by Major Sector: 1983 and 1992



Source: New York State Department of Labor, Division of Research and Statistics.

Note: Chart shows average weekly covered employment for New York City and Nassau, Putnam, Rockland, Suffolk, and Westchester counties. (Comparable data for the five counties of northern New Jersey are not available.) The percent change in employment by sector appears above bars.

[a] Over the same period, U.S. health sector employment increased approximately 34 percent.

[b] Excludes health industries.

six regions, Table 3 uses a narrow definition of health care employment—employment in hospitals and medical doctors' offices and clinics—as a proxy for total health care. The data are presented as location quotients: the ratio of an industry's share of total regional employment to its share of total U.S. employment. A location quotient equal to one identifies an industry whose share of area employment equals the national average; a quotient greater than one identifies an industry that accounts for greater-than-average shares of area employment. By using location quotients and restricting the health care variable to categories defined consistently across jurisdictions, Table 3 makes comparisons of health care employment across regions more reliable.

The location quotient results confirm the employment patterns noted earlier. New York and Boston again stand out as having significantly greater concentrations of health care employment than the other regions in the sample and the nation as a whole. Moreover, the location quotients confirm that New York has considerably more health-related employment than Boston or any other region surveyed.

Location quotients can also be used to estimate how many of New York's health-related workers produce goods and services (such as pharmaceuticals or health insurance) for sale to other regions of the United States and other countries. The information is important because these exports serve as an engine of economic growth. If we assume that an average employment share (a location quotient equal to one) is just sufficient

Table 2
Health Sector Employment as a Percentage of Total Employment by Region in 1992

	New York	Atlanta	Boston	Chicago	Houston	Los Angeles
Health care employment	**11.1**	7.4	11.4	8.4	8.0	7.9
Hospitals	**6.2**[a]	3.7[a]	6.4[a]	5.0[a]	4.4[a]	3.9[a]
Nursing homes	**1.6**[a]	0.7	1.7[a]	1.0[a]	0.5	0.9
Medical doctors' offices and clinics	**1.2**	1.4	1.5	1.1[a]	1.3	1.7
Health-related employment	**1.5**	0.7	1.0	1.1	0.3	0.9
Manufacturers	**1.0**	0.3	0.7	0.6	0.1	0.4
Health insurance	**0.3**	0.1	0.3	0.4	0.0	0.3
All health employment	**12.6**	8.1	12.5	9.5	8.3	8.8

Sources: State departments of labor in California, Georgia, Illinois, Massachusetts, New Jersey, New York, and Texas.

Notes: Except for New York, regions are defined as primary metropolitan statistical areas (PMSAs). The New York region consists of the New York-NY PMSA, the Nassau-Suffolk PMSA, and the Newark-NJ PMSA.

[a] Includes employees of government-owned establishments.

to meet local demand for an industry's product, then any employment above that level can be attributed to production for export.[6] On this basis, we estimate that roughly 30,000 workers—more than one-third of New York's health-related employees—produce goods and services for export.

Health Care under the Scope: Accounting for New York's High Level of Health Care Employment

Although it seems reasonable to conclude that a significant share of New York's health-related employees bolster regional growth by producing goods and services for export, can the same argument be made for the region's much larger population of health care workers? Or does New York's high level of health care employment primarily reflect greater-than-average local demand? Impressionistic evidence—including comparisons of demographic characteristics, the extent of government-provided health care, and hospital discharge data—points to the influence of local demand.

Comparisons of demography and morbidity across the six regions suggest that local demand for health care in New York exceeds that in the other regions in the sample (Chart 2). Nearly 13 percent of New York's population is age 65 and over—the demographic group with the greatest demand for health care services—compared with an average of 9 percent in the other regions. (Only Boston's elderly population is comparable in size to New York's.) Moreover, New York residents are more likely to be seriously ill. For example, the incidence of HIV/AIDS is nearly triple the average for the other regions, while the incidence of tuberculosis is roughly double.

The generosity of statewide Medicaid programs in New York and New Jersey also boosts local health care demand. Like most states in the sample, New York and New Jersey cover a broad range of optional Medicaid services. The inclusion of home health care in New York's Medicaid program, however, is particularly costly. In addition, local Medicaid coverage is not just broad, but deep: New York and New Jersey extend Medicaid eligibility to more optional population groups than most other states in the sample (U.S. Department of Health and Human Services 1993).

Hospital discharge data provide *direct* evidence that the vast majority of demand for health care in the New York region originates locally. More than 95 percent of all patients discharged from New York hospitals reside within the region.[7] Moreover, the same result holds true when discharges are weighted by either length of stay or charges.

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Although the presence of seven academic medical centers and hospitals is often cited as evidence that the New York region is a major exporter of health care, the data do not support the claim. Together, these world-class hospitals attract less than 10 percent of their patients from outside the region. New York's academic medical centers are exporters in a different sense, however: they train a disproportionate share of residents and other health care professionals, many of whom leave to practice in other regions once their training has been completed.[8]

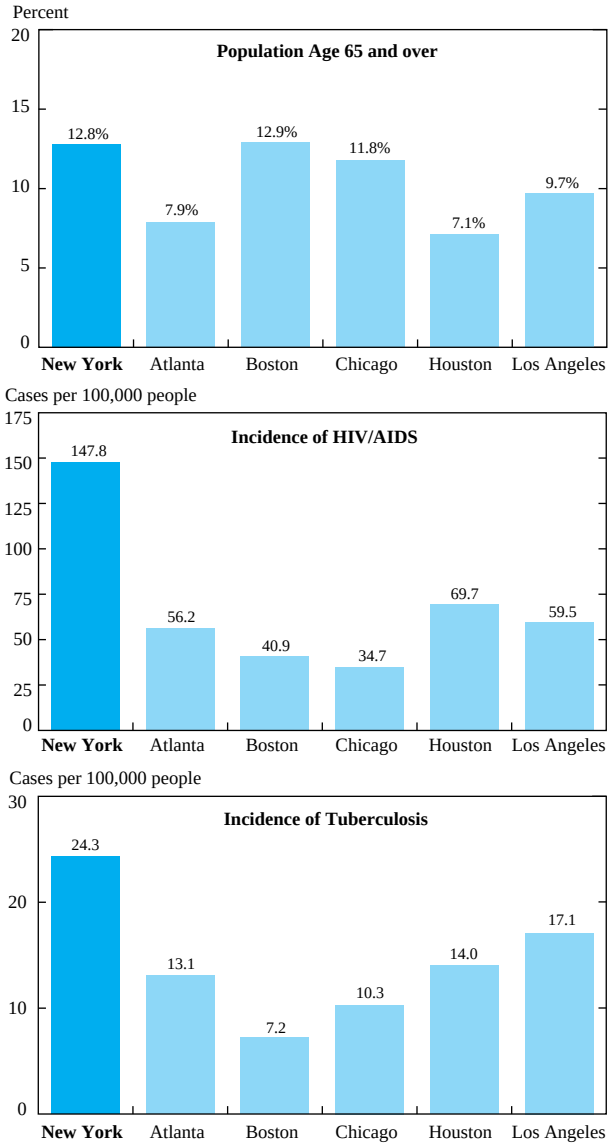
Table 3
Health Sector Location Quotient Comparisons across Six Regions in 1992

	Health Care Industries	Health-related Industries			
	Hospitals and Medical Doctors' Offices	Pharmaceutical Manufacturers	Instrument Manufacturers	Insurance	**Total Health-related**
New York	**1.24**	**3.32**	**0.63**	**1.25**	**1.61**
Atlanta	0.85	0.25	1.02	0.41	0.58
Boston	1.32	0.47	2.10	1.36	1.35
Chicago	1.01	1.98	0.60	1.76	1.41
Houston	0.95	0.10	0.23	0.19	0.18
Los Angeles	0.93	0.55	1.06	1.18	0.94

Sources: State departments of labor in California, Georgia, Illinois, Massachusetts, New Jersey, New York, and Texas.

Note: A location quotient is the ratio of an industry's share of total regional employment to the industry's share of total U.S. employment.

Chart 2
Demography and Morbidity: Selected Characteristics by Region



Sources: U.S. Bureau of the Census; Center for Disease Control; the American Hospital Association.

Note: Data for age distribution are from 1990; for HIV/AIDS incidence, from 1988-92; and for tuberculosis incidence, from 1990-92.

Prognosis for Health Sector Employment

As we have seen, economic activity in the New York region is unusually dependent on its health sector. Health care and health-related employment together account for a larger share of total employment than in any of the five other regions we examined. A significant share of New York's health-related workers produce goods and services for export, thus bolstering regional growth. In contrast, New York's high levels of health care employment primarily reflect strong local demand for health care services.

Employment in New York's health sector grew robustly during the boom years of the eighties and continued to rise—buoying the local economy—through the region's 1989-92 downturn. In recent years, however, increasing use of managed care and other market-based reforms and greater pressure on government budgets have begun to slow the growth of health sector employment. At the national level, the annual rate of increase in health care employment peaked at 5.0 percent in 1989 and has since declined steadily, reaching 3.0 percent in 1994. In the New York region, annual health care employment growth remained roughly constant at 3.7 percent between 1988 and 1992, but declined to 3.1 percent in 1993 and 2.8 percent in 1994.

In the future, this trend toward slower health sector employment growth is likely to continue nationwide, and its effect is expected to be particularly pronounced in the New York region. New York could lose jobs not only in health care, but also in its more export-oriented pharmaceutical and health insurance industries. Compounding the region's troubles, with both New York City and New York State under considerable fiscal stress, cuts in government health spending may well be deeper here than elsewhere. As a result, the region's economy will not receive the same boost from the health sector that it received during the last recession, and New York will have to look elsewhere to power its recovery.

Notes

1. The New York region (at times identified simply as New York) is defined as the five boroughs of New York City; Nassau, Putnam, Rockland, Suffolk, and Westchester counties in New York State; and Essex, Morris, Sussex, Union, and Warren counties in northern New Jersey.

2. To gauge the size of New York's health sector and compare it with that of other regions, we use an original data base compiled from 1992 state labor department records. The author would like to thank the labor departments of California, Georgia, Illinois, Massachusetts, New Jersey, New York, and Texas for their assistance.

3. Although the occupational profile is for New York State, it serves as a reasonable approximation for the region.

4. Health sector employment grew more rapidly for the nation as a whole than it did for New York.

5. In absolute terms, health sector employment in the New York region is more than 70 percent greater than in Los Angeles or Chicago and nearly 300 percent greater than in Boston.

6. In addition to exports and local demand, there are two other potential explanations for a location quotient greater than one: local firms may employ a more labor-intensive mix of inputs or they may be less efficient than the average firm nationwide. (Although the

(Note 6 continued)
question of efficiency is well beyond the scope of this study, New York's greater reliance on hospitals and lesser reliance on medical doctors' offices and clinics relative to the other regions in the sample provide support for the second hypothesis.)

7. Information on hospital discharges was provided by the New York State Department of Health. The figures exclude discharges from hospitals in northern New Jersey.

8. Studies suggest that the increase in hospital costs associated with training residents more than offsets federal training subsidies (New York State Department of Health 1986).

References

New York State Department of Health. 1986. "Report of the New York State Commission on Graduate Medical Education." Albany.

Peach, Richard W. 1994. "Health Care Reform: The Issues and the Options." Federal Reserve Bank of New York Research Paper no. 9419.

U.S. Department of Health and Human Services, Health Care Financing Administration. 1993. *Medicaid: Characteristics of Medicaid State Programs.* HCFA Pub. No. 10130.

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