

IV. CORE HEALTH CARE INDUSTRY IN THE NASHVILLE MSA: ITS SCOPE AND TREND

IV.1. Total Employment

Nashville's core health care sector employs just over 90,000 people, up more than 22 percent from 2004. By segment, 38 percent are in ambulatory services, 46 percent in hospitals, and 16 percent in nursing care facilities. The core health care sector includes NAICS 621, 622, and 623. The share of hospital employment increased more than two percentage points between the years 2004 and 2008, reversing the trend for years 2001 to 2004 (see below).

Core Health Care Employment in Nashville MSA (NAICS 621, 622, and 623)

Years	Ambulatory	Hospitals	Nursing Care	Total
2001	24,000	31,000	12,000	67,000
2004	28,000	33,000	13,000	74,000
2008	34,000	42,300	14,000	90,300
Change (2001-2008)	41.67%	36.45%	16.67%	34.78%
Change (2004-2008)	21.43%	28.18%	7.69%	22.03%

Source: Tennessee Department of Labor and Workforce Development and BERC estimates. BERC used several data sources including IMPLAN and the Census Bureau County Business Pattern to estimate employment by segment.

Each segment of the Nashville MSA core health care industry experienced phenomenal growth over both the long and short terms. From 2001 to 2008, ambulatory services grew nearly 42 percent, hospitals 37 percent, and nursing care 17 percent. In the short run between 2004 and 2008, hospitals experienced a nearly one-third increase in employment, followed by ambulatory services with 21 percent growth and nursing care with 8 percent.



Employment by Occupation

A salient difference between employment in the health care sector and employment by health care occupations is that the former includes all occupations in the sector, ranging from accountant to medical doctor. However, health care occupations refer to medical professionals and allied health occupations and do not include occupations in health care education and research.

Nonetheless, health care occupations account for about 8 percent of total occupations in the Nashville MSA. Overall, average wage for health care occupations at \$62,010 is significantly

Employment by Occupation in Nashville

	Employment		Average Wage	
	Total Number	Percent Share	Average Wage	Percent Difference from Nashville Average
All Occupations	773,500	100%	\$39,280	0.00%
Management occupations	48,980	6%	\$85,940	118.79%
Business and financial operations occupations	30,030	4%	\$57,710	46.92%
Computer and mathematical science occupations	15,860	2%	\$60,740	54.63%
Architecture and engineering occupations	9,710	1%	\$61,350	56.19%
Life, physical, and social science occupations	4,120	1%	\$50,190	27.77%
Community and social services occupations	9,190	1%	\$36,680	-6.62%
Legal occupations	3,470	0%	\$82,790	110.77%
Education, training, and library occupations	37,270	5%	\$43,500	10.74%
Arts, design, entertainment, sports, and media occupations	13,120	2%	\$46,100	17.36%
Health care practitioners and technical occupations	46,810	6%	\$62,010	57.87%
Health care support occupations	18,330	2%	\$25,480	-35.13%
Protective service occupations	17,060	2%	\$34,350	-12.55%
Food preparation and serving related occupations	67,360	9%	\$18,740	-52.29%
Building and grounds cleaning and maintenance occupations	20,730	3%	\$22,260	-43.33%
Personal care and service occupations	14,910	2%	\$22,470	-42.80%
Sales and related occupations	81,120	10%	\$33,460	-14.82%
Office and administrative support occupations	136,290	18%	\$31,670	-19.37%
Farming, fishing, and forestry occupations	320	0%	\$24,380	-37.93%
Construction and extraction occupations	31,910	4%	\$34,820	-11.35%
Installation, maintenance, and repair occupations	32,340	4%	\$40,720	3.67%
Production occupations	66,180	9%	\$34,690	-11.69%
Transportation and material moving occupations	68,380	9%	\$29,990	-23.65%

higher than Nashville's average annual wage of \$39,280.



IV.2. Sectoral Diversity

The health services sector (the core health care industry) is the third largest in Nashville's economy, after government and professional and business services, representing about 12.16 percent or 92,500 of total nonfarm jobs. This is a significant increase from 2004, when it ranked fifth after manufacturing and retail trade.¹ A significant jump from 2004, more than 15 percent, made the sector a pillar of Nashville's economy.

Employment by Sector in Nashville MSA (2008)

	Employment		
	Number (in thousands)	Growth from 2004 (%)	Current Share (%)
Nonfarm	760.6	6.33%	100.00%
Mining, Logging and Construction	39.3	14.24%	5.17%
Manufacturing	73.4	-12.20%	9.65%
Wholesale	37.8	8.93%	4.97%
Retail	86.9	4.83%	11.43%
Transportation and Utilities	29.9	5.28%	3.93%
Information	21.1	8.76%	2.77%
Financial Activities	45.9	3.15%	6.03%
Professional and Business Services	100.6	9.95%	13.23%
Educational Services	19.6	8.89%	2.58%
Health and Social Assistance	92.5	15.05%	12.16%
Leisure and Hospitality	79.5	10.42%	10.45%
Other Services	30.9	4.04%	4.06%
Government	103.1	7.51%	13.56%

In this context, we would like to briefly address the perennial issue of which sector ranks first in the Nashville MSA. In evaluating this issue, we would like to emphasize that employment is only aspect of an economic sector's contribution to the regional economy: business revenue, value added, personal income, and indirect business taxes are additional, often overlooked considerations. What follows is a guide of an economic sector's role in a region's economy.

¹ NAICS (North American Industrial Classification System) 62 provides an aggregate view of health and social services. Social services includes community services, individual and family services, and child day care services. For more information, see www.census.gov/eos/www/naics/.



Contributing to Nashville's Economy: How Much?

	Employment			Business Revenue			Value Added (GDP)			Cumulative Ranking	
	Number (in thousands)	Score	Rank	Total (in millions)	Score	Rank	Total (in millions)	Score	Rank	Average Score	Final Rank
Nonfarm	760.6	n/a	n/a	\$115,358	n/a	n/a	\$59,058	n/a	n/a	n/a	n/a
Mining, Logging and Construction	39.3	0.27	8	\$4,928	0.33	9	\$1,963	0.19	10	0.26	9
Manufacturing	73.4	0.68	6	\$36,026	1.00	1	\$9,287	0.96	1	0.88	1
Wholesale	37.8	0.25	9	\$7,096	0.42	6	\$4,617	0.52	6	0.40	8
Retail	86.9	0.82	4	\$6,742	0.41	7	\$4,523	0.51	7	0.58	6
Transportation and Utilities	29.9	0.18	11	\$4,757	0.33	10	\$2,569	0.25	9	0.25	10
Information	21.1	0.12	12	\$3,357	0.27	11	\$1,813	0.17	11	0.19	11
Financial Activities	45.9	0.34	7	\$11,544	0.62	3	\$7,304	0.84	3	0.60	5
Professional and Business Services	100.6	0.91	2	\$11,175	0.61	4	\$6,970	0.81	4	0.78	3
Educational Services	19.6	0.11	13	\$1,394	0.20	13	\$844	0.10	13	0.14	13
Health and Social Assistance	92.5	0.86	3	\$11,656	0.63	2	\$7,614	0.87	2	0.78	2
Leisure and Hospitality	79.5	0.75	5	\$5,572	0.36	8	\$3,087	0.31	8	0.47	7
Other Services	30.9	0.19	10	\$1,857	0.22	12	\$1,016	0.11	12	0.17	12
Government	103.1	0.92	1	\$8,050	0.47	5	\$6,564	0.77	5	0.72	4

Employment figures are from BLS (www.bls.gov). Business revenue (value of production) and value added (GDP-equivalent) per worker are derived from IMPLANpro 2008 data for the Nashville MSA.

As the above demonstrates, employment is only one measure of the effect of economic activities on a region's economy. Although its ranking by employment is behind other sectors, manufacturing is still number one in terms of creating economic value in the region. Overall, health care ranks second and professional and business services third.²

² For detailed information about a specific sector, please see the North American Industrial Classification System (NAICS) at www.census.gov/eos/www/naics/.



IV.3. Establishments

Ambulatory services account for almost 90 percent of establishments (a single business location of a company) in the core health care industry. Nursing care facilities and hospitals account for about 10 percent of establishments. This table includes only health care establishments under NAICS 621, 622, and 623.

Years	Ambulatory	Hospitals	Nursing Care	Total
2001	1,890	46	166	2,102
2004	2,317	53	214	2,584
2008	2,417	52	234	2,703
Change (2001-2008)	27.88%	13.04%	40.96%	28.59%
Change (2004-2008)	4.32%	-1.89%	9.35%	4.61%

BERC estimates: BERC used several data sources including IMPLAN and the Census Bureau County Business Pattern to estimate establishment by segment.

The number of health care establishments increased dramatically from 2001 to 2004. Total nonfarm establishments exhibited a slower growth rate but a sharp increase after 2002. **Between 2004 and 2008, a total of 466 new health care establishments emerged in Nashville, for a total of 2,703.**



IV.4. Wages

In 2008, wages in the core health care industry in Nashville totaled \$4.7 billion, with hospitals and ambulatory services accounting for 92 percent of those wages. Moreover, total wages across core health care industry segments increased between 2004 and 2008: ambulatory services wages increased from \$1.43 billion to \$1.87 billion; hospital wages increased from \$1.49 billion to \$2.45 billion; and nursing care facilities wages rose from \$0.34 billion to \$0.39 billion. Of the three health care industry segments, hospitals experienced the greatest increase in total wages, 64 percent. Ambulatory services wages increased 31 percent and nursing care 15 percent.

Core Health Care Wages in Nashville MSA (NAICS 621, 622, and 623) (Billion \$)

Years	Ambulatory	Hospitals	Nursing Care	Total
2001	\$1.13	\$1.21	\$0.28	\$2.62
2004	\$1.43	\$1.49	\$0.34	\$3.26
2008	\$1.87	\$2.45	\$0.39	\$4.71
Change (2001-2008)	65.49%	102.48%	39.29%	79.77%
Change (2004-2008)	30.77%	64.43%	14.71%	44.48%

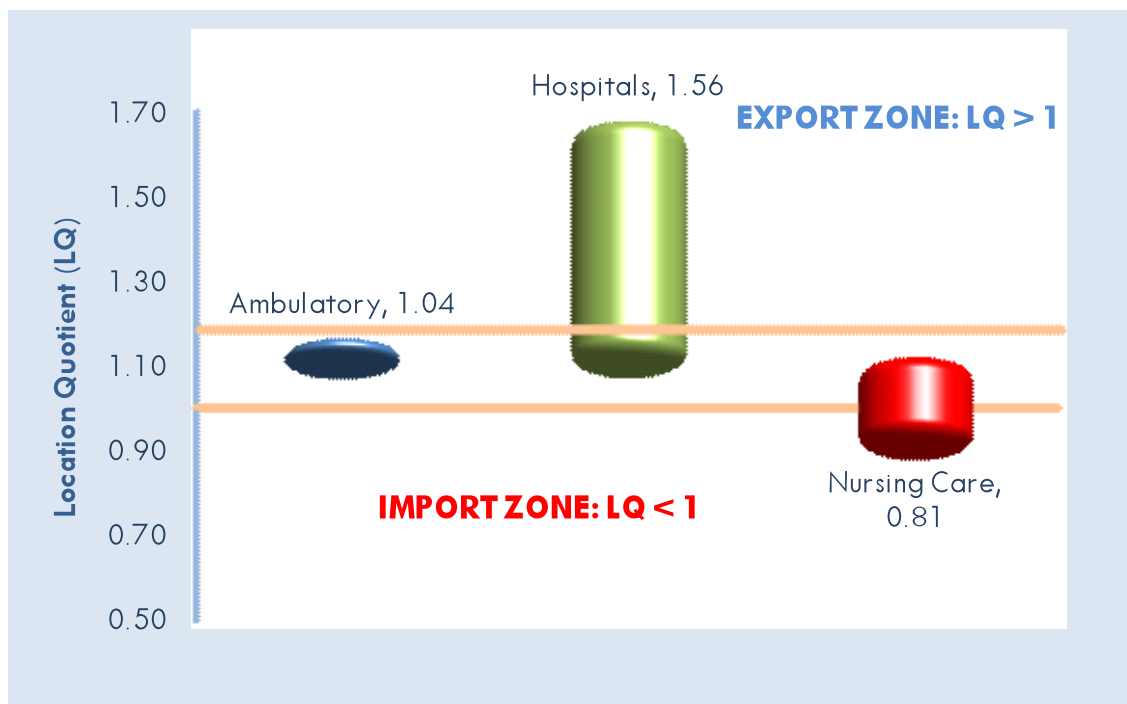
BERC estimates: BERC used several data sources including IMPLAN and the Census Bureau County Business Pattern to estimate wages by segment.



IV.5. Export Potential of Core Health Care Industry Segments

Location quotient (LQ) is often used to describe the relationship between the local and national economies. If the LQ for an industry is larger than 1, that industry has a larger presence in the local economy than its national economic counterpart. Ambulatory services and hospitals employ substantially more people in the Nashville MSA than in the U.S. Consequently, these findings suggest that supply in the region exceeds local demand for hospitals and ambulatory services and that these health care establishments serve residents outside the Nashville area. In the case of nursing care, Nashville area residents are most likely to use long-term care services outside the local economy.

Export Potential of Core Health Care Industry in Nashville



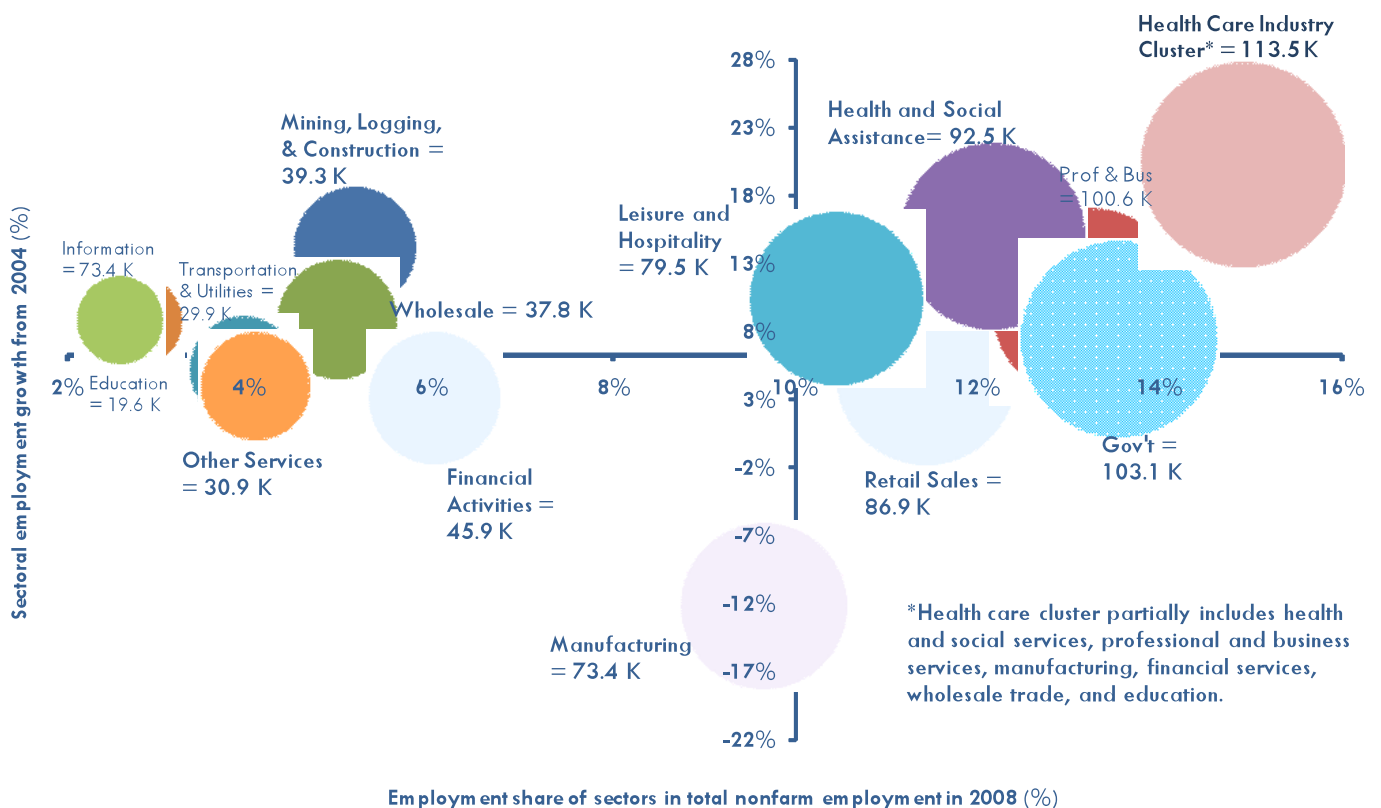
Sources: Bureau of Labor Statistics (www.bls.gov) and BERC calculations



IV.6. Relative Growth Performance of Core Health Care Segments

The health care and social services sector grew faster than other sectors in the Nashville MSA (see the chart below). Growth in health care and social services was substantially larger than the average sector growth rate of 6.3 percent. Furthermore, its current (2008) share in total employment is 5 percent above the average for all sectors.³

"Core Health Care Industry" Trend in Nashville: Relative Performance from 2004 to 2008 (spheres show the actual employment level of each aggregated sector)



³ See Chapter V for information about the health care industry cluster.



IV.7. Core Health Care Industry and the Local Economy

More than 70 percent of core health care spending goes to individuals as either payroll or proprietary income in the Nashville MSA. Real estate, pharmaceuticals, employment services, wholesale trade, and securities investment are the top five sectors that benefit most from the business expenditures of core health care establishments in Nashville.

Where does \$1 million in core industry spending go in the local economy? (Major industries only)

Industry	Value	%
Services to buildings and dwellings	\$4,645	0.46
Other basic organic chemical manufacturing	\$4,665	0.47
Office administrative services	\$4,884	0.49
Postal service	\$5,774	0.58
Management consulting services	\$6,319	0.63
Power generation and supply	\$6,533	0.65
Surgical and medical instrument manufacturing	\$6,894	0.69
Plastic, plumbing fixtures and all other plastics	\$6,930	0.69
Management of companies and enterprises	\$7,657	0.77
Food services and drinking places	\$8,044	0.80
Other ambulatory health care services	\$9,401	0.94
Legal services	\$9,742	0.97
Securities-commodity contracts-investments	\$10,795	1.08
Wholesale trade	\$10,878	1.09
Employment services	\$11,995	1.20
Pharmaceutical and medicine manufacturing	\$13,099	1.31
Real estate	\$46,040	4.60
Other sectors	\$106,798	10.68
Institutions/Individuals		
Employee Compensation	\$383,057	38.31
Proprietary Income	\$255,646	25.56
Other Property Income	\$70,934	7.09
Indirect Business Taxes	\$9,270	0.93
Total	\$1,000,000	100

Source: IMPLANpro Inc. and BERC estimates.

Note: Calculations are based on assumption that all spending occurs in the local economy.

