III. Health Care Resource Profile of North Carolina

This section provides a profile of North Carolina health care resources (including hospital care and health professions) compared to the U.S. and other states in the South Atlantic region. It provides further detail on how such resources are distributed across the state and the current position of Blue Cross Blue Shield of North Carolina (BCBSNC) in the hospital and physician markets.

Hospital Market

Hospital Services Availability

Overall, North Carolina's hospital resources are quite similar to both the nation as a whole and the South Atlantic region. The state mirrors the nation in having a somewhat higher supply of beds (relative to the population) in rural areas compared to urban areas. The same is true for the region as a whole, although the differential between urban and rural is not as large. This is largely because the figures for District of Columbia skew the results, but also because, unlike North Carolina, several states such as Florida, Maryland and South Carolina, have nearly the same relative supply of beds in urban and rural areas.

Table 3.1
Hospital Services Availability in North Carolina, South Atlantic Region and U.S.

	Community Hospital Beds per 1,000			Occupancy Rate		Admis-sions per 1,000	Bed Days per 1,000
	Total	Urban	Rural	Urban	Rural		
United States	**2.9**	**2.8**	**3.3**	**66.0%**	**55.8%**	**117.6**	**683.7**
North Carolina	**2.9**	**2.7**	**3.4**	**71.5%**	**65.2%**	**120.6**	**727.9**
				Index (US = 100)			
South Atlantic Region	**110.7**	**108.0**	**100.3**	**104.5**	**113.3**	**112.1**	**116.8**
Delaware	79.3	78.1	89.3	110.1	150.1	90.4	94.3
Maryland	72.4	74.1	66.7	112.0	113.9	94.2	82.7
District of Columbia	200.0	205.1	NA	111.7	NA	191.8	230.4
Virginia	82.8	79.2	88.6	106.8	103.8	87.3	86.0
West Virginia	151.7	140.8	148.4	92.3	108.8	135.5	143.4
North Carolina	100.0	93.3	103.6	108.3	116.9	102.6	106.5
South Carolina	100.0	100.5	88.7	108.7	112.8	105.0	106.3
Georgia	100.0	88.9	119.5	97.7	107.1	89.6	97.9
Florida	110.3	112.6	97.4	93.1	93.3	112.8	103.8
Year of Data	2000	2000	2000	2000	2000	2000	2000

Note: All figures are for community hospitals (nonfederal, short-term general and other special hospitals). Figures for South Atlantic Region are unweighted averages of figures shown, including NC. See Table C-3.1 for raw data, including details about sources and methods.

The major way North Carolina differs is that its hospital occupancy rates are higher than rates nationally or in rest of the region, both in urban and rural areas. Most notable is that occupancy rates in the state's rural hospitals are nearly one fifth higher than the national average and second highest in the region. In itself this is no guarantee that rural hospitals in North Carolina are in better financial condition relative to their peers in neighboring

states; that would depend on the mix of payment sources. But this does indicate that these facilities are operating somewhat more efficiently than most other states in the region.

These occupancy rate differences also signal that North Carolina has higher hospital utilization than other states, an inference confirmed by the figures on admissions per 1,000 population and bed days per 1,000. The modestly higher utilization rates in North Carolina are mirrored in South Carolina, but are far lower than in West Virginia. Recall from Section II that health status is somewhat worse in North Carolina compared both to the nation and region, so these modest utilization differences may simply be a reflection of that fact.

Note that Delaware, Maryland and Virginia manage to serve their populations with fewer hospital beds, generally higher occupancy rates, and lower hospital utilization rates than North Carolina. This suggests that there may remain important unexploited opportunities for insurers to improve the state's relative performance, thereby garnering some important cost savings in the process. This will be explored more thoroughly in Section. IV.

Geographic Access and Hospital Care

General Availability of Hospital Services

In 2000, North Carolina had 116 hospitals that provided at least some general medical/surgical hospital beds (i.e., excluding facilities offering only specialized beds such as for psychiatric care or rehabilitation). More than half of these facilities and more than half of the state's population are located in counties with just one such hospital. Although there are 17 counties without any hospital whatsoever, only 3 percent of the population lives in such counties. Less than one third of the state's population lives in a county with three or more hospitals from which to choose. Not surprisingly, there are more beds relative to the population in the counties with the greatest amount of competition.

There is some variation in access to hospital facilities across various metropolitan statistical areas (MSAs), but the greatest extremes are more apparent than real. Federal and military facilities are not included in the figures shown, hence making the supply of hospital beds for residents in Goldsboro and Jacksonville appear smaller than in actuality. Conversely, Pitt County Memorial Hospital serves as a large regional referral center for much of eastern North Carolina, thus making the supply of beds available to Greenville residents appear higher than it really is. Viewed across three broad swaths of rural counties that are not part of any MSAs, the distribution of facilities relative to the population is remarkably uniform; a similar picture emerges by comparing beds per 1,000 population across each of the state Health Systems Areas.

Table 3.2
Blue Cross Blue Shield of NC Share of Hospital Market, by Geography, 2000

	Hospitals With Any General Beds				BCBS Charges for All Products/Plans as Percent of			
					Total Charges		Private Third Party	
	Total Hospitals	General Hospital Beds	Percent of Population	General Beds per 1,000 Population	Excluding State Employees	Including State Employees	Excluding State Employees	Including State Employees
State Total	**116**	**20,298**	**100.0%**	**2.5**	**6.2%**	**8.0%**	**19.1%**	**23.5%**
Lowest county	1	43	0.1%	0.6	0.1%	2.5%	1.4%	10.8%
Highest county	6	2,014	8.6%	6.2	12.2%	14.6%	54.2%	58.4%
Local Competition								
Counties with no hospitals (17)	0	0	3.2%	0.0	0.0%	0.0%	0.0%	0.0%
Counties with 1 hospital (61)	61	9,156	50.7%	2.1	6.0%	8.0%	24.4%	30.2%
Counties with 2 hospitals (14)	28	3,168	15.1%	2.6	4.9%	6.2%	23.0%	27.5%
Counties with 3+ hospitals (7)	27	7,974	31.0%	3.2	6.8%	8.6%	20.5%	24.6%
Metropolitan Statistical Areas	**53**	**13,815**	**67.3%**	**2.5**	**6.2%**	**8.1%**	**17.7%**	**22.0%**
Asheville	2	472	2.8%	2.1	0.1%	2.5%	0.5%	8.2%
Charlotte/Gastonia	11	3,354	16.6%	2.5	6.0%	7.1%	14.6%	16.9%
Fayetteville	1	373	3.8%	1.2	6.2%	7.9%	26.1%	31.0%
Goldsboro	1	255	1.4%	2.3	6.0%	9.9%	33.9%	45.9%
Greensboro/Winston-Salem/High Point	14	3,268	15.5%	2.6	6.1%	7.1%	14.8%	16.8%
Greenville	1	604	1.7%	4.5	8.6%	12.4%	34.6%	43.4%
Hickory/Morganton	6	929	4.2%	2.7	9.2%	10.2%	24.3%	26.1%
Jacksonville	1	133	1.9%	0.9	8.6%	10.5%	41.3%	46.4%
Raleigh/Durham/Chapel Hill	11	3,462	14.8%	2.9	7.3%	10.1%	21.1%	26.8%
Rocky Mount	2	371	1.8%	2.6	7.1%	7.4%	28.9%	29.9%
Wilmington	3	594	2.9%	2.5	2.4%	4.6%	7.9%	14.2%
Non-MSAs	**63**	**6,483**	**32.7%**	**2.5**	**6.2%**	**7.7%**	**26.7%**	**31.3%**
Coastal Plains	15	1,566	8.4%	2.3	7.4%	9.6%	39.1%	45.4%
Piedmont	29	3,363	16.8%	2.5	5.8%	7.2%	23.0%	27.3%
Mountains	19	1,554	7.5%	2.6	5.9%	6.8%	24.9%	27.9%
Health Systems Areas			0.0%	-				
HSA I, Western	30	3,348	15.8%	2.6	4.8%	6.3%	16.4%	20.5%
HSA II, Piedmont	19	3,703	17.9%	2.6	6.1%	7.0%	15.1%	17.0%
HSA III, Southern Piedmont	15	3,875	18.8%	2.6	6.1%	7.1%	15.2%	17.4%
HSA IV, Capitol	15	3,792	17.2%	2.7	7.3%	9.9%	21.1%	26.8%
HSA V, Cardinal	17	2,408	14.7%	2.0	4.6%	6.6%	18.9%	24.8%
HSA VI, Eastern	20	3,172	15.6%	2.5	7.7%	10.4%	35.7%	42.8%

Note: Note that the "lowest county" values represent only counties having at least 1 hospital with some general beds available. Unless otherwise shown, all figures shown represent weighted averages for all facilities within a given geographic area. They may be interpreted as the typical experience of patients hospitalized in those areas. In these weighted average figures, hospitals with a large volume of charges count much more heavily than hospitals with fewer charges, so may not reflect the experience at a "typical" hospital. See Table C-3.2 for raw data, including a break-down by county and details about sources and methods.

Blue Cross Blue Shield of North Carolina Role in Hospital Market

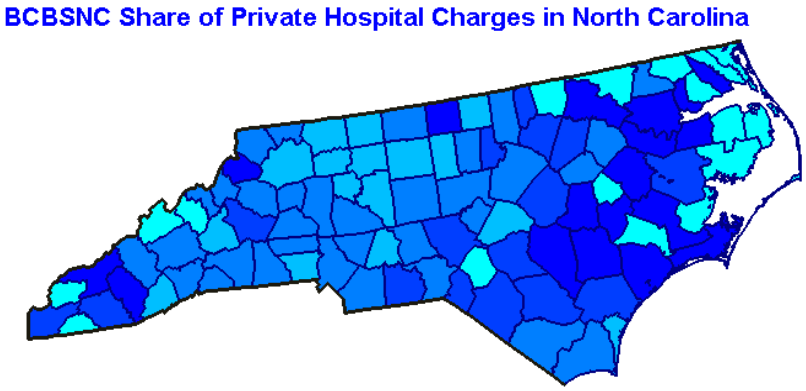
Overview. Ideally, the most accurate way of measuring the importance of BCBSNC in the hospital market would have been to determine the share of actual patient revenues received from various payers in each North Carolina hospital. This information was not available. However, a rough approximation of BCBSNC's relative share can be gleaned from examining the share of total hospital charges accounted for by BCBSNC patients. This information was available from the discharge data that are required to be submitted by all North Carolina hospitals each year. Using data for 2000—the most recent available at the time we began this analysis—we examined the importance of BCBSNC as a hospital payer in several different ways.

Charges are admittedly a poor measure of hospital expenses: they represent the "list price" charged by hospitals knowing that many payers, including Medicaid, Medicare, BCBSNC and other private payers, will actually pay only a negotiated discount price for their subscribers. Even though not all payers will recognize or pay full charges, these charges are set in a standardized way across patients so that two identical patients receiving the identical set of services will be charged the same amount even though one patient is a charity patient whose charges are fully forgiven while another patient may ultimately pay 80 percent of those same charges because her payer negotiated a 20 percent discount. So there is some reasonable relationship between a hospital's charges and the actual resources used in the care of each patient. Thus, knowing the share of charges attributable to BCBSNC says something about the total amount of hospital expenses that can be attributed to its patients.

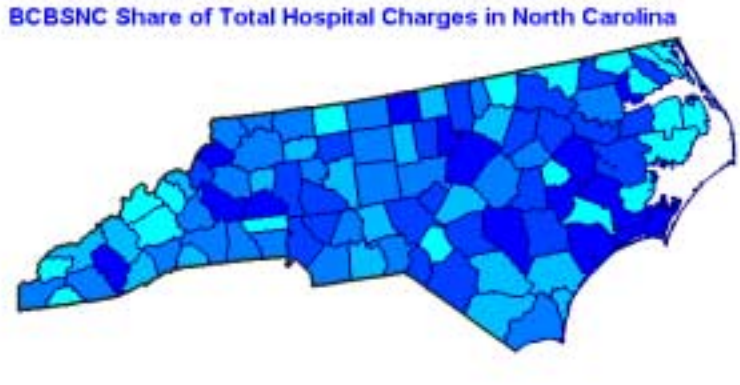
We begin by examining total charges for BCBSNC patients, including BCBSNC patients covered through their Federal Employee Health Benefits Plan (FEHBP) contract and Blue Cross members from other states who receive services in North Carolina. These latter were included since, under the Blue Card program, residents of North Carolina who are covered by BCBS plans in other states (e.g., branch employees of a company headquartered in California) receive the same discounts negotiated by BCBSNC for its own subscribers; hence they are additional "covered lives" that BCBSNC effectively brings to the table when it is negotiating contracts with hospitals. For a similar reason, even though BCBSNC only administers claims and does not actually negotiate the payment rates for hospitals under the state employee health plan (SEHP), the large number of SEHP members is an important bargaining tool in hospital negotiations since, according to explanations we received, no hospital can be paid under the SEHP plan unless it has contracted with BCBSNC for at least one of its other products. So while we show the BCBSNC share of charges without state employees included, we believe the most accurate depiction of the company's "presence" in a given geographic area is best represented by the figures that include state employees.

Hospital Market Share by Geography. In terms of total charges, it may be surprising to learn that, even including state employees, BCBSNC represents only 8 percent of total hospital charges in the state, a figure that is quite a bit lower in the Asheville area[1] and somewhat higher in Greenville.

[1] These data are for 2000 and the very low figure for Asheville reflects a dispute about payment rates that subsequently has been resolved.



Since Medicare (48.5%), Medicaid (12.2%), self-pay (3.7%) and NC Division of Health Services direct pay programs (0.4%) such as cancer control account for nearly two thirds of all charges, a better depiction of BCBSNC dominance within the private insurance market is to compare its share of charges to those of its competitors. Seen this way, and inclusive of state employees, BCBSNC accounts for nearly one fourth of all hospital charges paid by third party payers across the state—a share that exceeds 40 percent in Goldsboro, Greenville, Jacksonville and the rural counties located in the Coastal Plains area. Indeed, in the Eastern HSA, the company's share is more than double that in the Western, Piedmont and Southern Piedmont HSAs. In five counties (Bertie, Carteret, Craven, Martin, and Washington), its share of private third party charges exceeds 50 percent.



Hospital Market Share by Type of Hospital. An alternative way in which to view the importance of BCBSNC as a hospital payor is to examine how reliant particular types of hospitals are on BCBSNC business. Hospitals can qualify for disproportionate share payments under Medicare if they serve large numbers of Medicaid or uninsured patients. While these payments help offset part of the uncompensated losses associated with caring for such patients, they fall short of completely making such facilities whole. As a consequence, these facilities are more dependent than others on being able to earn enough surplus on their private paying patients to avoid running chronic deficits.

Table 3.3
Blue Cross Blue Shield of NC Share of Hospital Market, by Type of Hospital, 2000

	Hospitals With Any General Beds		BCBS Charges for All Products/Plans as Percent of			
			Total Charges		Private Third Party	
	Total Hospitals	General Hospital Beds	Excluding State Employees	Including State Employees	Excluding State Employees	Including State Employees
All NC Short-stay Hospitals	**116**	**20,168**	**6.2%**	**8.0%**	**22.3%**	**27.1%**
Disproportionate Share Hospitals	**101**	**18,344**	**6.1%**	**8.0%**	**22.9%**	**27.7%**
DSH in large urban areas	30	8,840	6.6%	8.3%	21.1%	25.2%
DSH in other urban areas	19	4,176	5.2%	7.4%	23.0%	29.7%
DSH in rural areas	52	5,328	6.3%	8.0%	29.2%	34.1%
Non-DSH	13	1,824	6.7%	8.7%	18.2%	22.6%
Rural Hospitals	**62**	**6,760**	**6.6%**	**8.5%**	**31.3%**	**37.1%**
Sole Community Hospitals*	10	1,568	7.3%	9.9%	40.4%	47.8%
Other rural < 50 beds (MSA=0)	14	530	5.1%	6.1%	32.0%	35.9%
Other rural >= 50 beds (MSA=0)	38	4,662	6.4%	8.1%	28.4%	33.5%
Ownership Status	**116**	**20,168**	**6.2%**	**8.0%**	**22.3%**	**27.1%**
Not-for-profit	67	10,964	6.0%	7.8%	21.5%	26.0%
For-profit	13	1,736	6.4%	7.1%	17.7%	19.2%
Urban public (MSA=1)	14	4,977	6.1%	8.5%	22.9%	29.0%
Rural public	22	2,491	7.2%	9.1%	34.8%	40.3%
Teaching Status	**116**	**20,168**	**6.2%**	**8.0%**	**22.3%**	**27.1%**
Major Teaching	5	3,611	7.6%	10.1%	27.6%	33.6%
Minor/Other Teaching	13	4,269	4.6%	6.4%	16.0%	21.0%
Non-Teaching	98	12,288	6.4%	7.9%	23.3%	27.2%

Note: See Table C-3.3 for definitions and details about sources and methods.

In table 3.3 it can be seen that DSH hospitals in rural areas rely somewhat more heavily on BCBSNC than do their counterparts in urban areas. Indeed, regardless of DSH status, rural hospitals in general are more dependent on BCBSNC revenue than DSH hospitals on average. In particular, rural hospitals designated by Medicare as sole community hospitals qualify for higher Medicare payments because to lose these facilities could create access problems for those living in rural areas. Such facilities rely on BCBSNC for nearly half of their private third party charges.

A similar pattern emerges when we look at ownership status. For-profit hospitals tend to be much less reliant on BCBSNC revenues than their counterparts that are publicly owned, especially publicly owned hospitals in rural areas (which are predominantly county-owned). The BCBSNC share of charges in rural public hospitals (40.3%) is more than double its share of charges in for-profit hospitals (19.2%). Major teaching hospitals also qualify for somewhat higher Medicare reimbursement to partially reflect the uncompensated care, teaching and research missions they undertake and they too are somewhat more reliant on BCBSNC patients than their non-teaching counterparts.

This “demand side” view of the hospital market may leave the impression that a dominant payer such as BCBSNC is in the driver’s seat when it comes to setting payment rates for its subscribers. But this ignores the “supply side” of the market. Providers can and have adopted strategies to help provide a counterbalance to the enormous pressures created in an increasingly competitive market in which all payers continue to jostle to seek the best value for the money.

Hospital Market Structure

General Structure of Hospital Networks in North Carolina

As in the rest of the country, North Carolina has experienced considerable consolidation of its hospital industry over the past two decades. Today, two thirds of the state's hospital beds are part of hospital systems, with nearly 60 percent of beds in public or not-for-profit systems and nearly 10 percent more in for-profit systems. These systems take a wide variety of forms. In some cases, the system owns all the facilities in the network and negotiates with insurance carriers over payment rates as a single block. In other cases, such as Quorum Health Group (a part of Triad Hospitals, Inc.) the system simply manages facilities without owning them outright. Apart from potential economies of scale in purchasing supplies and equipment and pooling management expertise, being part of a system confers important negotiating leverage in efforts to obtain adequate reimbursement from third party payers such as BCBSNC.

However, another importance influence on a hospital's ability to negotiate adequate payment rates relates to whether a hospital has any nearby competitors. Determining the market boundaries for hospital services can be very complicated. The plausible market area for a very specialized and expensive service, such as open heart surgery, will tend to be far larger than for "bread-and-butter" services such as newborn deliveries offered by most hospitals. Nevertheless, all other things being equal, hospitals that represent the sole facility in their county typically face less competition than hospitals with competitors in the same county. It is noteworthy that of the one third of North Carolina hospital beds that are not part of hospital systems, nearly two-thirds are in counties having only one hospital. Indeed, precisely for this reason, the motivation to join a network generally is lower for such facilities.

In short, this "supply side" picture complicates the situation considerably. As an agent for its subscribers, BCBSNC constantly has to balance its customers desires to have low premiums with their understandable desire to have convenient access to facilities when needed without having to undergo long waiting times for appointments or long driving times. The company risks losing business if it either pays "too much" (as this will reduce the affordability of its products) or if it pays "too little" (as this will create accessibility problems in instances that providers opt to terminate their contracts rather than accept insufficient payment for services). Facing this trade-off does not depend on whether BCBSNC remains not-for-profit or instead becomes for-profit. For many decades, Blue plans have faced this fundamental dilemma which each has sought to resolve in its own way (Cunningham and Cunningham 1994).

Table 3.4
Community Hospital Networks in North Carolina, July 2002

Provider System	Control	City	County	Total Hospitals in NC	Total Beds	General Beds	% of General Beds
STATE TOTAL				**126**	**23,970**	**21,224**	**100.0%**
Public and Not-for-Profit Hospital Systems				**51**	**14,103**	**12,451**	**58.7**
Carolinas HealthCare System	Public	Charlotte, NC	Mecklenburg	13	2,543	2,361	11.1
Cape Fear Valley Health System	Public	Fayetteville, NC	Cumberland	2	637	506	2.4
Duke University Health System	Not-for-Profit	Durham, NC	Durham	3	1,775	1,541	7.3
First Health of the Carolinas	Not-for-Profit	Pinehurst	Moore	3	542	450	2.1
Mission St. Joseph's Health System	Not-for-Profit	Asheville, NC	Buncombe	2	472	472	2.2
Moses Cone Health System	Not-for-Profit	Greensboro, NC	Guilford	4	1,200	1,113	5.2
New Hanover Health Network	Public	Wilmington	New Hanover	2	671	549	2.6
Novant Health	Not-for-Profit	Winston Salem, NC	Forsyth	6	1,935	1,719	8.1
The North Carolina Baptist Hospitals, Inc.	Not-for-Profit	Winston Salem, NC	Forsyth	3	906	773	3.6
University Health Systems of Eastern Carolina	Public	Greenville, NC	Pitt	6	1,101	918	4.3
University of North Carolina Hospitals	Public	Chapel Hill, NC	Orange	2	1,078	966	4.6
WakeMed	Not-for-Profit	Raleigh, NC	Wake	2	701	633	3.0
For-Profit Hospital Systems				**23**	**2,392**	**2,062**	**9.7**
Adventist Health System Sunbelt Health Care Corporation	For-Profit	Winter Park, FL	Out-of-state	1	103	62	0.3
Community Health Systems, Inc.,	For-Profit	Brentwood, TN	Out-of-state	2	98	98	0.5
HCA-The Healthcare Company	For-Profit	Nashville, TN	Out-of-state	1	60	48	0.2
Health Management Associates	For-Profit	Naples, FL	Out-of-state	4	390	349	1.6
Kindred Healthcare	For-Profit	Louisville, KY	Out-of-state	1	59	59	0.3
Quorum Health Group/Triad Hospitals Inc.*	For-Profit	Brentwood, TN	Out-of-state	12	1,207	1,110	5.2
TENET Healthcare Corporation	For-Profit	Santa Barbara, CA	Out-of-state	2	475	336	1.6
Hospitals Not in Systems				**52**	**7,475**	**6,711**	**31.6**
Public Hospitals				**16**	**2,533**	**2,291**	**10.8**
In Counties with 1 Hospital	Public		10 counties	10	1,743	1,580	7.4
In Counties with 2 Hospitals	Public		6 counties	6	790	711	3.3
Not-for-profit Hospitals				**35**	**4,918**	**4,396**	**20.7**
In Counties with 1 Hospital	Not-for-Profit		24 counties	24	3,644	3,211	15.1
In Counties with 2 Hospitals	Not-for-Profit		6 counties	8	737	695	3.3
In Counties with 3+ Hospitals	Not-for-Profit		2 counties	2	537	490	2.3
For-Profit Hospitals			**1 county**	**1**	**24**	**24**	**0.4**

Note: Figures include only facilities with short-stay general medical/surgical beds.

Source: NC Hospital Discharge data for 2000, derived from tabulations provided by the Cecil G. Sheps Center for Health Services Research with permission from the Division of Facilities Services; American Hospital Association. Guide to the Health Care Field, 2001. Chicago: AHA, 2001, updated based on additional information obtained from system Web sites. See Tables C-3.4A and C-3.4B for details.

Blue Cross Blue Shield of North Carolina Role in Hospital Market

In many ways, the presence of hospital networks smoothes out some of the large disparities in BCBSNC's share observed earlier across counties. At the county level, there was nearly a sixfold difference across the highest and lowest counties in BCBSNC's share of private third party payments. In contrast, at the system level, the public/not-for-profit systems on average are nearly identical to for-profit systems in BCBSNC's share of their total revenues. To be sure, there still is nearly a threefold difference between University Health Systems of Eastern Carolina (43.7%) and New Hanover Health Network (14.8%) in BCBSNC's share of private third party charges, but it is also of interest to note that certain for-profit systems—notably Community Health Systems and Kindred Health—rely on BCBSNC patients for more than half their private third party charges. In other respects, the picture derived from looking at hospital networks

Table 3.5
Blue Cross Blue Shield of NC Share of Community Hospital Networks in North Carolina, 2000

	BCBS Charges for All Products/Plans as Percent of			
	Total Charges		Private Third Party	
Provider System	**Excluding State Employees**	**Including State Employees**	**Excluding State Employees**	**Including State Employees**
STATE TOTAL	**6.2%**	**8.0%**	**22.3%**	**27.1%**
Public and Not-for-Profit Hospital Systems	**6.1%**	**8.2%**	**20.8%**	**26.3%**
Carolinas HealthCare System	6.2%	7.9%	24.2%	28.8%
Cape Fear Valley Health System	6.2%	7.9%	26.8%	31.8%
Duke University Health System	8.3%	10.7%	32.7%	38.7%
First Health of the Carolinas	5.7%	8.3%	24.8%	32.3%
Mission St. Joseph's Health System	0.1%	2.5%	1.4%	21.3%
Moses Cone Health System	6.8%	6.9%	17.0%	17.2%
New Hanover Health Network	2.1%	4.5%	7.6%	14.8%
Novant Health	4.9%	6.1%	12.6%	15.2%
The North Carolina Baptist Hospitals, Inc.	7.9%	9.6%	20.1%	23.5%
University Health Systems of Eastern Carolina	8.2%	11.8%	35.1%	43.7%
University of North Carolina Hospitals	7.2%	10.5%	19.6%	26.2%
WakeMed	6.0%	8.7%	18.9%	25.3%
For-Profit Hospital Systems	**6.7%**	**7.2%**	**24.3%**	**25.6%**
Adventist Health System Sunbelt Health Care Corporation	7.1%	7.1%	28.6%	28.6%
Community Health Systems, Inc.,	7.0%	8.4%	52.7%	57.1%
HCA-The Healthcare Company	5.2%	5.2%	25.7%	25.7%
Health Management Associates	6.2%	6.2%	23.2%	23.2%
Kindred Healthcare	4.5%	4.5%	61.3%	61.3%
Quorum Health Group/Triad Hospitals Inc.*	4.9%	5.7%	22.6%	25.2%
TENET Healthcare Corporation	9.6%	10.3%	23.8%	25.0%
Hospitals Not in Systems	**6.4%**	**7.7%**	**26.3%**	**30.2%**
Public Hospitals	**7.7%**	**9.3%**	**38.6%**	**43.1%**
In Counties with 1 Hospital	7.7%	9.6%	38.5%	43.8%
In Counties with 2 Hospitals	7.7%	8.5%	38.7%	41.3%
Not-for-profit Hospitals	**5.6%**	**6.8%**	**21.0%**	**24.5%**
In Counties with 1 Hospital	5.7%	7.0%	21.5%	25.2%
In Counties with 2 Hospitals	5.4%	6.5%	27.0%	30.8%
In Counties with 3+ Hospitals	5.2%	6.1%	16.4%	18.7%
For-Profit Hospitals	20.8%	20.8%	33.5%	33.5%

Note: Figures include only facilities with short-stay general medical/surgical beds.

Source: NC Hospital Discharge data for 2000, derived from tabulations provided by the Cecil G. Sheps Center for Health Services Research with permission from the Division of Facilities Services.

reinforces some earlier insights. For example, public hospitals not in systems depend considerably more heavily on BCBSNC than do their not-for-profit counterparts.

Professional Health Services Market

Professional Services Availability

North Carolina's professional health service resources, similar to hospital resources, are quite similar to both the nation as a whole and balance of the region. Both the supply of physicians and registered nurses are somewhat below the national average, but this disparity is driven in part by the state's more rural character. The supply of primary care physicians in urban and rural areas of North Carolina nearly mirrors the national averages, but overall North Carolina has fewer than average primary care physicians because its population is weighted more toward rural areas where the concentration of physicians is lower.

On most measures, North Carolina has slightly better accessibility to physician services relative to South Carolina and somewhat worse accessibility compared to its more urbanized neighbors to the north. The higher average supply of physicians in states such as Maryland and Virginia in theory this gives plans in those states greater leverage than in North Carolina to make use of competition among physicians as a lever to negotiate lower payment rates.

Table 3.6
Professional Services Availability in North Carolina, South Atlantic Region and U.S.

	Physicians per 100,000 Population				
			Primary Care MDs		
	Total Physicans	Primary Care MDs as % of Total	Urban	Rural	Registered Nurses/ 10,000
United States	**285**	**33%**	**100**	**56**	**81**
North Carolina	**262**	**35%**	**99**	**57**	**76**
	Index (US = 100)				
South Atlantic Region	**117**	**105**	**113**	**110**	**118**
Delaware	**93**	**99**	**81**	**123**	**109**
Maryland	**145**	**117**	**130**	**125**	**112**
District of Columbia	**285**	**94**	**231**	**NA**	**289**
Virginia	**94**	**109**	**102**	**115**	**83**
West Virginia	**84**	**113**	**105**	**126**	**121**
North Carolina	**92**	**104**	**98**	**102**	**94**
South Carolina	**82**	**110**	**90**	**103**	**79**
Georgia	**81**	**111**	**92**	**100**	**80**
Florida	**102**	**90**	**85**	**85**	**96**
Year of Data	1999	1999	1999	1999	1999
Source:	[S1]	[S2]	[S3]	[S4]	[S1]

Note: All figures are for nonfederal physicians per 100,000 civilian population. Figures for South Atlantic Region are unweighted averages of figures shown, including NC. See Table C-3.6 for raw data, including details about sources and methods.

Blue Cross Blue Shield of North Carolina Role in Physician Services Market

There exist no data similar to the hospital discharge data that would permit a systematic assessment of the extent to which physicians rely on BCBSNC as a source of patient revenue. One crude way to measure the company's reach is simply by observing what fraction of North Carolina physicians contract with the company for various products. The following is a summary of more detailed information made available our review.

PPO Networks

In its PPO networks, BCBSNC contracts with roughly two-thirds of all primary care physicians located in urban areas, ranging from just half such physicians in Asheville to nearly 80 percent in Greenville/Rocky Mount and the Hickory/Morganton area. Although the company takes great pride in the breadth of its networks, both CIGNA (88%) and United Healthcare (100%) report higher figures (unfortunately, these self-reported figures cannot be compared city-by-city due to differences in how each organization defines the boundaries of its physician networks).

In contrast, BCBSNC contracts with 6/7 of all primary care physicians located in non-urban counties, a figure that appears to be considerably higher than its competitors. All told, therefore, nearly three fourths of primary physicians in North Carolina receive at least some patient income from BCBSNC, but the same is true for United Healthcare (74.6%) and CIGNA contracts with almost two-thirds (65.5%) of physicians statewide. Similarly, virtually all specialists in the state are in BCBSNC's PPO network, both in urban and rural areas, but essentially the same is true for its two largest competitors, CIGNA and United Healthcare.

HMO Networks

On the HMO side, BCBSNC contracts with nearly the identical share of primary care physicians in urban areas as it does for its PPO product, but somewhat fewer such physicians in rural areas (76% vs. 87%) compared with its PPO network. In contrast, both CIGNA and United Healthcare have a higher share of primary care physicians (exceeding 80%) in their HMO products statewide compared to BCBSNC. A similar pattern exists for specialists, except the differences are not so pronounced and United is somewhat behind rather than ahead of BCBSNC in the share of specialists statewide enrolled in their HMO plans (86% vs. 94%).

In summary, BCBSNC plays an important role—but by no means unique—in the physician services market. Many physician rely on BCBSNC patients for income, but by the same token, were BCBSNC to exit the scene entirely, there are competitors with equally broad networks in urban areas that in theory could continue to provide consumers with a similar range of choice of providers. In rural areas, however, there appears to be relatively more reliance on BCBSNC as a source of payment.