

## IV. Health Care Cost Profile of North Carolina

This section provides a profile of health care expenditures in North Carolina compared to the U.S. and other states in the South Atlantic region. It provides both a current profile as well as trends over the past two decades so that readers have a solid context for understanding how affordability of health care might change in the future. Further detail is provided on how utilization and expenditure patterns vary across different areas within North Carolina. The section concludes with baseline projections of health spending over the next 5-10 years.

### Health Care Expenditures

#### Per Capita Health Spending

As of 1998 (which unfortunately is the latest year for which comparative data are available), North Carolina enjoyed a slight margin of advantage relative to the U.S., with per capita personal spending 4 percent below the national average. This advantage is particularly pronounced for physician and other professional services; for these, North Carolinians on average pay 14 percent less per person than the U.S. overall. On the other hand, there are some services where North Carolinians pay more per capita, including hospital care (+4%) and home health (+14%).

**Table 4.1**  
**Health Care Expenditures**

	Spending per Person, Personal Health Care							
	Grand Total	Hospital	Physician/ Other Professional	Prescription Drugs	Home Health	Nursing Home	All Other Services	
<b>United States</b>	\$ 3,760	\$ 1,406	\$ 1,095	\$ 335	\$ 108	\$ 325	\$ 490	
<b>North Carolina</b>	\$ 3,621	\$ 1,456	\$ 942	\$ 340	\$ 124	\$ 311	\$ 449	
	Index (US = 100)							
<b>South Atlantic Region</b>	112	130	100	107	101	95	106	
Delaware	111	111	97	120	137	120	123	
Maryland	102	101	106	97	70	102	103	
District of Columbia	217	352	136	103	95	144	161	
Virginia	87	91	84	94	66	70	95	
West Virginia	103	116	90	128	95	88	91	
North Carolina	96	104	86	101	114	96	92	
South Carolina	92	104	77	102	94	73	93	
Georgia	95	97	102	96	98	62	93	
Florida	106	94	116	124	138	101	105	
<b>Year of Data</b>	1998	1998	1998	1998	1998	1998	1998	1998

**Note:** Figures for South Atlantic Region represent unweighted averages of figures shown, including NC. See Table C-4.1 for raw data, including details about sources and methods.

While North Carolina's performance may be comforting, especially compared to more urbanized states in the region such as Delaware, Maryland and District of Columbia, it is noteworthy that its immediate neighbors (Georgia, Virginia and South Carolina) manage to achieve lower per capita spending for nearly every service shown. These rough comparisons suggest that North Carolina has room to improve its ability to deliver health care more cost effectively.

## Historical Spending Trends

### *Health Expenditure Trends, 1980-1998*

Additional cause for concern comes from seeing how North Carolina's spending has evolved over the past two decades. It is striking that North Carolina's current 4 percent advantage used to be 25 percent in 1980: the average cost of health care for North Carolinian in 1980 was fully one fourth lower than the national average.

**Table 4.2**  
**Health Care Expenditure Trends in NC, 1980-1998**

	Year					Annual Increase	
	1980	1985	1990	1995	1998	1980-90	1990-98
<b>Health Spending per Capita, NC</b>							
Total population	\$ 715	\$ 1,166	\$ 2,065	\$ 3,057	\$ 3,621	11.2%	7.3%
Private per capita (non-Medicaid/Medicare)	640	1,014	1,889	2,766	3,334	11.4%	7.4%
Medicare spending per eligible	1,010	1,820	2,632	4,174	4,745	10.0%	7.6%
Medicaid spending per recipient	1,146	1,971	2,798	3,362	3,868	9.3%	4.1%
Total population, if coverage mix constant	715	1,169	2,033	2,967	3,532	11.0%	7.1%
<b>Health Spending per Capita Index (US=100)</b>							
Total population	75	74	84	92	96	1.2%	1.7%
Private per capita (non-Medicaid/Medicare)	74	71	84	94	99	1.3%	2.1%
Medicare spending per eligible	78	79	82	85	86	0.5%	0.7%
Medicaid spending per recipient	94	102	94	86	96	0.0%	0.3%
<b>Coverage Mix in NC</b>							
Private	82%	82%	78%	71%	70%	-0.5%	-1.4%
Medicare Eligibles	12%	12%	13%	14%	14%	1.5%	1.0%
Medicaid Recipients	6%	5%	8%	15%	15%	2.8%	7.8%
<b>Coverage Mix Index (US=100)</b>							
Private	104%	105%	103%	98%	99%	-0.1%	-0.4%
Medicare Eligibles	94%	94%	96%	100%	101%	0.2%	0.6%
Medicaid Recipients	72%	63%	85%	110%	103%	1.7%	2.5%

**Note:** See Table C-4.2 for raw data, including details about sources and methods.

Part of this increase is due to a sizable expansion of Medicaid during this period. By 1998, roughly a 2-1/2 times greater proportion of North Carolinians were eligible for Medicaid than in 1980. Between 1980 and 1998, North Carolina went from having nearly 25 percent fewer people covered by Medicaid than the national average to reaching parity with the nation. This explains only a small part of the spending increase, however. Even if the mix of population covered by private plans, Medicare and Medicaid had remained completely unchanged between 1980 and 1998, North Carolinians would be spending only about \$100 less a year on health care than they are as a result of these expansions. Thus, the primary "culprit" of increased costs is private sector spending, which went from 26 percent below the national average in 1980 to only 1 percent below the average by 1998.

**Table 4.3**  
**Health Spending as Percent of Per Capita Income**

	Year				Annual Increase		
	1969	1980	1990	1998	1969-80	1980-90	1990-98
<b>United States</b>	7.3%	9.4%	12.5%	14.0%	2.3%	3.0%	1.4%
<b>North Carolina</b>	6.7%	8.7%	11.9%	14.7%	2.4%	3.2%	2.7%
	Index (US = 100)						
<b>South Atlantic Region</b>	86	107	108	112	2.0%	0.1%	0.4%
Delaware	89	93	95	104	0.4%	0.2%	1.1%
Maryland	89	92	85	90	0.3%	-0.8%	0.7%
District of Columbia	NR	189	184	162	NR	-0.2%	-1.5%
Virginia	58	85	83	84	3.5%	-0.3%	0.1%
West Virginia	79	106	120	137	2.7%	1.2%	1.7%
North Carolina	92	93	95	105	0.1%	0.2%	1.3%
South Carolina	88	93	97	111	0.4%	0.4%	1.8%
Georgia	94	105	106	100	1.0%	0.1%	-0.7%
Florida	99	106	111	109	0.7%	0.4%	-0.1%

More ominous still is the fact that North Carolina's annual rate of increase in spending over the past decade has been 2.1% greater than national averages. If this trend were to continue, North Carolina's small margin of cost advantage will quickly become a serious margin of disadvantage, affecting the state's ability to attract and retain jobs and continue to perform well economically. In fact, it is likely that North Carolina's margin of advantage already has disappeared since these data sources are now four years old.

*The Growing Burden of Health Spending in North Carolina, 1980-1998*

Another perspective on health care spending comes from viewing the burden that health expenses pose on the typical North Carolina family, compared to income. Much of what has been described above could legitimately be viewed as a "catch-up" phenomenon in which most states in the region, including North Carolina, lagged behind the U.S. in both per capita income and health benefits. As economic development resulted in incomes catching up with national averages, it is not that surprising to see health expenditures follow suit. However, it is important to understand that medical cost trends have more than outpaced the steady growth in per capita incomes during this period. As a result, while North Carolinians and others used to pay a smaller share of their incomes for health care in the past, today, with the exception of Maryland and Virginia, all South Atlantic states including North Carolina pay a higher share. In North Carolina, this increase occurred mainly in the 1990s; because North Carolina's economic expansion in the 1980s slowed in the 1990s, its health spending burden suddenly escalated to 5% *above* the U.S. average.

*Health Expenditure Trends, by Service*

When the preceding trends are broken down by type of service, it is easier to isolate where some of the major problems appear to lie. As depicted in Table 4.4, on the private

spending side the three components most “out of control” in North Carolina relative to the rest of the nation are home health, nursing home care and hospital care: during the past 8 years for which we have data, these have grown faster than the U.S. average by 7.5%, 3.5% and 3.1% a year respectively. Since most conventional health insurance policies do not cover long term care services, the increase in hospital expenses is the most

**Table 4.4**  
**Health Care Expenditure Trends in NC, by Service, 1980-1998**

	Year					Annual Increase	
	1980	1985	1990	1995	1998	1980-90	1990-98
<b>Private Per Capita Spending Index (US = 100)</b>							
<b>Personal Health Care</b>	74	71	84	94	99	1.3%	2.1%
Hospital Care	73	71	88	102	112	1.8%	3.2%
Physician & Other Professional Services	70	64	77	82	85	0.9%	1.2%
Dental Services	71	72	77	87	90	0.8%	2.0%
Home Health Care	23	30	81	138	143	13.3%	7.5%
Drugs and Other Medical Nondurables	97	93	97	102	104	0.0%	0.9%
Vision Products & Other Medical Durables	65	71	78	72	66	1.7%	-2.1%
Nursing Home Care	51	63	80	98	105	4.5%	3.5%
Other Personal Health Care	87	91	91	103	105	0.4%	1.9%
<b>Medicare Per Capita Spending Index (US = 100)</b>							
<b>Personal Health Care</b>	78	79	82	85	86	0.5%	0.7%
Hospital Care	78	80	84	89	91	0.7%	1.1%
Physician Services	77	78	76	78	73	-0.1%	-0.5%
Other Professional Services	87	100	101	99	100	1.5%	-0.1%
Dental Services	NR	NR	NR	NR	NR	NR	NR
Home Health Care	65	72	99	75	84	4.4%	-2.0%
Drugs and Other Medical Nondurables	NR	NR	NR	NR	NR	NR	NR
Vision Products & Other Medical Durables	67	68	67	90	98	0.1%	4.8%
Nursing Home Care	94	52	50	76	85	-6.1%	6.8%
<b>Medicaid Per Capita Spending Index (US = 100)</b>							
<b>Personal Health Care</b>	94	102	94	86	96	0.0%	0.3%
Hospital Care	95	102	97	85	96	0.3%	-0.1%
Physician Services	105	102	117	118	147	1.1%	2.9%
Other Professional Services	84	69	63	62	47	-2.9%	-3.6%
Dental Services	159	139	113	73	77	-3.4%	-4.7%
Home Health Care	18	54	89	80	93	17.3%	0.5%
Drugs and Other Medical Nondurables	126	113	93	82	91	-2.9%	-0.4%
Vision Products & Other Medical Durables	87	109	90	85	86	0.4%	-0.5%
Nursing Home Care	24	35	55	72	91	8.6%	6.4%

**Note:** See Table C-4.2 for raw data, including details about sources and methods.

relevant piece of this picture for understanding the potential impact of BCBSNC conversion.

For some reason, the private sector has gone from paying 27 percent *less* than the national average for hospital services in 1980 to 12 percent *more* than the U.S. average by 1998. During the same period, per capita spending for physician and other professional services has risen much less and remains below the national average. This disparity seems striking. In part, it is due to the fact that Medicaid payment for physicians has improved in North Carolina, moving from 105 percent of the U.S. average in 1980 to 147 percent by 1998. In that sense, physicians are less in need of a cross-subsidy from the private sector to maintain their viability.<sup>1</sup> North Carolina hospitals, in contrast, are paid

<sup>1</sup> It is critical to emphasize that the figures shown indicate only spending amounts per Medicaid recipient and in no way are intended to show how payments relate to actual costs of providing care. For example, suppose the average cost to a

somewhat less well both by Medicare and Medicaid, but the amounts of underpayment, as we shall see, are far too small to justify private payers in North Carolina needing to pay 12 percent extra to make up the difference.

### Hospital Cost Patterns

Additional insight comes from examining components of hospital costs and revenues. (We focus on hospitals because they are the largest single component of spending, and we lack the same detailed information about other medical services.)

#### *Hospital Payment-to-Cost Ratios*

Hospitals are much like airlines in that they have high fixed costs and therefore can charge widely varying prices depending on patients' ability to pay. Historically, hospitals have been paid less well for their Medicaid and Medicare patients and they generally charge higher prices to their privately insured patients, i.e., prices that exceed the actual cost of providing care to those patients. This is well illustrated in Table 4.5, showing that during the 1990's, Medicaid paid somewhat less than costs, whereas privately insured patients helped make up the difference by paying more than their proportionate share of costs. In North Carolina, this cross subsidy from private payers amounted to 48%, compared to 31% nationally, but by 1999 it had dropped to roughly 25%--still somewhat above the U.S. average. Thus, we can rule out North Carolina's needing a higher cross subsidy to cover Medicaid losses as the explanation for why private per capita hospital spending in North Carolina now exceeds the national average.

#### *Hospital Costs and Financing*

Far more revealing is the general pattern of hospital finances in North Carolina compared to the rest of the region. As shown in Table 4.6, in 1992, North Carolina hospitals were paid an average of 18 percent more than their costs from their private patients. Of this, 5 percentage points were used to cover their losses on Medicare patients, 1 percentage point was used to cover Medicaid losses, 6 percentage points were used to cover losses

**Table 4.5**  
**Hospital Payment-to-Cost Ratios, 1992 and 1999**

	Hospital Payment-to-Cost Ratios			
	Medicaid		Private Payers	
	1992	1999	1992	1999
<b>United States</b>	91.0%	96.7%	131.0%	112.3%
<b>North Carolina</b>	91.0	93.0	148.0	124.8
	Index (US = 100)			
<b>South Atlantic Region</b>	110	98	111	112
Delaware	107	91	120	107
Maryland	114	107	86	97
District of Columbia	NR	113	NR	102
Virginia	120	105	111	117
West Virginia	140	92	110	119
North Carolina	100	96	113	111
South Carolina	131	94	125	127
Georgia	95	94	115	119
Florida	76	86	109	109

**Note:** 100% means that payments from a particular payer roughly equal the hospital costs attributable to those patients. Figures for South Atlantic Region represent unweighted averages of figures shown, including NC. See Table C-4.5 for raw data, including details about sources and methods.

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physician for treating a Medicaid recipient in a year is \$200. If the average Medicaid program nationally paid \$100 for a physician visit for a typical recipient and NC paid \$147 per recipient (either because it paid for more visits or more per visit), it would still be true that NC paid quite a bit more relative to the national average, but also would be true that, under this illustration, physicians would lose money on their Medicaid visits.

for uncompensated care (i.e., principally, but not exclusively, uninsured patients), leaving net gains of 6 percent of total hospital expenses.

A similar story played out in 1999, except that hospitals' net gain had dropped to 2.1 percent because the difference between what private patients paid and what it cost for their care had declined so much in the interim period. Nevertheless, due to gains from non-patient revenues (not shown as a column in Table 4.6), North Carolina hospitals had total revenues that exceeded their costs by 7.8%--well above the national average of 4.9%. Indeed, profits in North Carolina hospitals were higher than in any other state in the entire region with the exception of Virginia—principally because North Carolina has much higher private patient gains. However, it cannot be overemphasized that all of the foregoing represent averages: particular facilities in North Carolina will have vastly different experiences depending on their size, location, ownership, teaching status, patient mix and operating efficiency.

The foregoing data are the most recent available. More recently, a Deloitte & Touche analysis performed for the North Carolina Hospital Association included a series of projections of hospital operating margins for different types of facilities (e.g., by teaching status, hospital size, ownership status).<sup>2</sup> In nearly all categories, this report concluded that operating margins in 2002 would be very similar to those in 1999. Although the same study projected that, by 2002, 38 North Carolina hospitals would experience negative operating margins, this is virtually the same as the 39 facilities with negative operating margins reported in 1999.

It is beyond the scope of this report to conduct a detailed examination of the operational efficiency of the hospital industry in North Carolina. The Deloitte & Touche study has covered much of that ground and indeed, concluded that on many different measures of efficiency, including length of stay and operating expenses per adjusted discharge, North Carolina hospitals compare favorably with those in the Southeast region.<sup>3</sup>

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<sup>2</sup> Deloitte & Touche. North Carolina Hospital Association, *Future of Reimbursement Study*. January 2001.

<sup>3</sup> The Deloitte & Touche study used the Southeast region rather than South Atlantic region as its basis for comparisons: this includes the states of Alabama, Arkansas, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee and Virginia.

**Table 4.6**  
**Hospital Costs and Financing, 1992 and 1999**

	Gains and Losses as Percentage of Total Hospital Costs										Total Gains/ Losses 1999
	Private Payers		Medicare		Medicaid		Uncompensated		Net Private Gains		
	1992	1999	1992	1999	1992	1999	1992	1999	1992	1999	
<b>United States</b>	12.0%	5.2%	-4.0%	0.4%	-1.0%	-0.4%	-5.0%	-5.4%	2.0%	-0.2%	4.9%
<b>North Carolina</b>	18.0	8.7	(5.0)	0.3	(1.0)	(0.9)	(6.0)	(6.0)	6.0	2.1	7.8
<b>South Atlantic Region</b>	15.8	9.6	(4.6)	(0.2)	0.2	(0.7)	(7.0)	(6.3)	4.3	2.4	7.2
Delaware	20.0	9.3	(10.0)	(3.9)	NR	(0.6)	(7.0)	(5.2)	NR	(0.4)	6.7
Maryland	5.0	4.3	4.0	3.6	NR	0.1	(8.0)	(6.3)	NR	1.7	3.9
District of Columbia	NR	5.7	NR	0.9	NR	0.9	NR	(7.3)	NR	0.2	6.7
Virginia	16.0	14.0	(3.0)	0.3	1.0	0.2	(8.0)	(7.0)	6.0	7.5	13.2
West Virginia	13.0	9.2	(5.0)	(2.4)	3.0	(1.3)	(7.0)	(5.4)	4.0	0.1	4.6
North Carolina	18.0	8.7	(5.0)	0.3	(1.0)	(0.9)	(6.0)	(6.0)	6.0	2.1	7.8
South Carolina	20.0	12.7	(7.0)	(2.0)	3.0	(1.7)	(7.0)	(6.3)	9.0	2.7	5.6
Georgia	19.0	12.9	(6.0)	(0.1)	(2.0)	(1.1)	(7.0)	(6.5)	4.0	5.2	9.5
Florida	15.0	9.3	(5.0)	1.6	(3.0)	(1.6)	(6.0)	(6.5)	1.0	2.8	6.9

**Note:** Figures for South Atlantic Region represent unweighted averages of figures shown, including NC. See Table C-4.6 for raw data, including details about sources and methods.

## Opportunities for Cost Reduction

The foregoing discussion shows that the erosion over the past few decades in North Carolina's cost advantage creates an opportunity for the state to do better in the future. It is not inevitable that North Carolina must pay a higher share of income than neighboring states or the nation in order to enjoy high quality health care. The adverse trends documented in this report can be reversed. For instance, hospital spending could be reduced by in a wide variety of forms, including substitution of outpatient care for inpatient care, greater use of medications to substitute for surgery, more preventive care and health promotion and even, perhaps, more hard-nosed negotiations over hospital payment rates.

## Relative Health Costs

### Relative Costs Within the Region

The per capita spending figures shown at the beginning of this chapter have the advantage of accounting for all spending and all citizens. However, they provide only limited insight into potential waste or excess in the current system. Therefore, we also look at the experience of the Medicare population since they account for a reasonably high fraction of spending and the government makes available detailed administrative data that permit more sophisticated analyses. The best available and most intensively analyzed data for this purpose are from the so-called "Dartmouth Atlas." These figures are from 1997, but to the degree that the patterns of use and costs for Medicare reflect the general population, they provide some clue regarding the relative magnitude of potential improvements in health care value.

These figures show that on average, in 1997, Medicare spent \$5,636 annually on a typical individual enrolled in Medicare (note that these figures completely exclude any out-of-pocket costs incurred by these individuals). In North Carolina, the average annual figure for an enrollee of equivalent illness was about \$300 a year lower—a savings of 5.8%. If this same "style" is indicative of what happens in the private sector, this obviously is a far better situation to be in than Florida, whose "excess" spending represented 14.6 percent of its total Medicare spending. But conversely, this performance is not nearly as good as Virginia, which managed to serve its Medicare eligibles at a cost 21.3 percent less than if it had allowed its spending to

**Table 4.7**  
**Medical Cost Factors**

	Price/Illness	Excess Use/Cost	
	Adjusted AAPCC, 1997	Relative to U.S.	Relative to Minneapolis
<b>United States</b>	5,636	0.0%	20.5%
<b>North Carolina</b>	5,329	-5.8%	16.0%
<b>South Atlantic Region</b>	5,652	-0.6%	20.1%
Delaware	5,336	-5.6%	16.1%
Maryland	5,873	4.0%	23.7%
District of Columbia	5,669	0.6%	21.0%
Virginia	4,647	-21.3%	3.6%
West Virginia	5,899	4.5%	24.1%
North Carolina	5,329	-5.8%	16.0%
South Carolina	5,442	-3.6%	17.7%
Georgia	6,080	7.3%	26.3%
Florida	6,599	14.6%	32.1%
<b>Note</b>	[A]	[B]	[C]

**Notes:** Figures for South Atlantic Region represent unweighted averages of figures shown, including NC. See Table C-4.7 for raw data, including details about sources and methods.

- [A] The price-illness adjusted average per capita cost (AAPCC) represents the expected cost of care for a typical Medicare beneficiary in a given geographic area, by eliminating differences in cost of living and differences in severity of illness of the Medicare population in different areas. To the degree that areas exceed this "standardized" amount for the U.S., it implies that either their utilization or medical costs are higher than expected.
- [B] Figures shown indicate the percent savings per Medicare enrollee that would be achieved were the state to match the U.S. average price/illness-adjusted AAPCC, i.e., achieving "average" performance.
- [C] Figures shown indicate the percent savings per Medicare enrollee that would be achieved were the state to match the price/illness-adjusted AAPCC in Minneapolis (\$4,478), i.e., the benchmark for "optimal" performance according to the Dartmouth Atlas.

simply match the national average.

Moreover, excellence is indicated not by comparing one's own performance to the average, but instead to benchmarks that represent superior performance. In the Dartmouth Atlas, Minneapolis has been singled out as just such a benchmark insofar as it is able to serve its Medicare population at an annual cost of less than \$4500 a year with no apparent adverse effects on the quality of their care or health status. Compared to the Minneapolis benchmark, North Carolina has the potential to save up to 16 percent of its health costs annually. Thus, whether one uses Virginia or Minneapolis as a benchmark, there appears to be abundant potential within North Carolina to make quality health care more affordable.

## Relative Costs Within North Carolina

### Cost Patterns by Region

This same logic can be applied to different areas within North Carolina. Table 4.8 shows that all of the hospital referral regions within the state incur fewer per capita Medicare costs than the national average, achieving savings that range from 1.6 percent in Hickory to as much as 7.9 percent in Greensboro. However, compared to the results achieved in Minneapolis, all of these areas in North Carolina have the potential of achieving double-digit cost savings.

**Table 4.8**  
**Medical Cost Factors**

	Price/Illness	Excess Use/Cost	
	Adjusted AAPCC, 1997	Relative to U.S.	Relative to Minneapolis
<b>North Carolina</b>	5,329	-5.8%	16.0%
Asheville	5,507	-2.3%	18.7%
Charlotte	5,273	-6.9%	15.1%
Durham	5,237	-7.6%	14.5%
Greensboro	5,222	-7.9%	14.2%
Greenville	5,381	-4.7%	16.8%
Hickory	5,549	-1.6%	19.3%
Raleigh	5,456	-3.3%	17.9%
Wilmington	5,438	-3.6%	17.7%
Winston-Salem	5,266	-7.0%	15.0%

**Notes:** See Table C-4.7 for raw data, including details about sources and methods.

### Utilization Patterns by Region

Table 4.9 illustrates how various areas of the state perform on a variety of benchmarks provided in the Dartmouth Atlas. These include 6 different benchmarks for preventative services (e.g., mammography), 6 benchmarks for supply-sensitive services (e.g.,

**Table 4.9**  
**Utilization Patterns by Hospital Referral Region**

	Preventative Services	Supply Sensitive Services	Surgery	End-of-Life Care
	<b>North Carolina</b>	98	95	103
Asheville	93	93	87	81
Charlotte	91	95	100	100
Durham	98	93	90	89
Greensboro	101	92	108	90
Greenville	105	100	115	95
Hickory	88	87	96	89
Raleigh	101	96	110	100
Wilmington	108	101	120	97
Winston-Salem	96	95	100	88

**Notes:** See Table C-4.9 for raw data, including details about sources and methods.

medical hospitalizations), 8 benchmarks for surgery (e.g., knee replacement), and 5 benchmarks for end-of-life care (e.g., percent of deaths occurring in hospital). Compared to the national average, North Carolina generally tends to perform fewer preventative services than might be desired, but this is counterbalanced to some extent by having somewhat less "excess care" in supply sensitive services and end-of-life care. In contrast, there appears to be a slight excess of

surgery statewide. Not a single area of the state out-performs the national average on preventative services while also out-performing the national average in terms of having lower-than-average “excess use.” In short, *there is not a single area of the state that could not do better* in order to reach the national average. Moreover, if we were to compare these areas to especially high quality benchmark areas in the country, the apparent room for improvement would be considerably larger.

## **Health Spending Projections**

Over the next decade, literally billions of dollars are at stake regarding whether the state can reverse the trends documented in this section. Nationally, it has been well-established that the “lull” in rapidly escalating health expenditures that consumers enjoyed in the 1990’s is over. But we have already shown that in North Carolina, this deceleration of health spending trends was much more modest than in the nation as a whole, with the consequence that the state had nearly caught up to the U.S. average by 1998. We do not pretend to have a crystal ball that can predict with confidence where health costs are headed in the decade ahead. But based on the latest official U.S. forecasts of health spending, it seems likely that health spending will grow faster each year between now and 2011 than it did between 1990-1998. The critical question is how

North Carolina will fare during this period. Table 4.10 provides two extreme scenarios. In the first, we optimistically make the conservative assumption that the growth in per capita spending (service by service) exactly matches the national growth rates predicted by expert federal health spending forecasters, for each of 10 different major components of health spending ranging from hospital care to other personal health care. This is an optimistic scenario given that North Carolina’s health spending during the 1990’s grew considerably faster than the national average, and there is nothing obvious on the horizon that would change this general pattern. Yet even under this conservative assumption, North Carolina’s health spending will grow by more than \$3,000 per person between now and 2011. Its total tab for health care will nearly double during this period to roughly \$74 billion a year, with health care consuming 18 percent of personal income by 2011. Thus, completely independent of the conversion of BCBSNC, North Carolina consumers are destined for a decade ahead that will pose challenges to both affordability and accessibility of health care.

Sadly, that is the good news. An alternative scenario is that North Carolina’s spending trends during the 1990’s will persist through the first decade of the 21st century. Were this to occur, per capita spending by the year 2011 would be 17 percent higher than the national average, amounting to \$9,244 a person, fully \$1300 more than under the more conservative projection and 22 cents of every dollar in income. Statewide, there is a \$15.5 billion dollar difference between these two scenarios.

**Table 4.10**  
**Health Care Expenditure Projections in NC, by Service, 1998-2011**

	Annual Per Capita Spending Growth Ratio: N.C. vs. U.S.	Year				Annual Increase	
		1998	2002	2007	2011	2002- 2007	2007- 2011
<b>Scenario 1: NC Growth Matches US</b>		<b>Per Capita Spending, NC</b>					
<b>Personal Health Care</b>	1.000	3,538	4,508	6,090	7,636	6.2%	5.8%
Hospital Care	1.000	1,427	1,730	2,207	2,625	5.0%	4.4%
Physician Services	1.000	802	1,014	1,362	1,669	6.1%	5.2%
Other Professional Services	1.000	111	140	192	232	6.5%	4.9%
Dental Services	1.000	170	210	258	301	4.2%	3.9%
Home Health Care	1.000	140	160	214	265	6.0%	5.5%
Prescription Drugs	1.000	318	566	946	1,358	10.8%	9.5%
Other Non-Durable Medical Products	1.000	105	124	149	169	3.8%	3.2%
Durable Medical Equipment	1.000	47	58	72	87	4.5%	4.8%
Nursing Home Care	1.000	310	348	432	522	4.4%	4.8%
Other Personal Health Care	1.000	109	156	260	407	10.7%	11.9%
<b>Total Personal Health Costs (billions)</b>		27.6	37.6	55.3	73.8		
<b>Health Percent of Personal Income</b>		14.3%	15.6%	17.0%	18.0%		
<b>Scenario 2: NC Growth Outpaces US (as per 1990-1998)</b>		<b>Per Capita Spending Index (US = 100)</b>					
<b>Personal Health Care</b>	1.328	96	102	110	117	7.8%	7.3%
Hospital Care	1.558	104	114	127	139	7.4%	6.7%
Physician Services	1.210	86	90	95	98	7.2%	6.2%
Other Professional Services	1.210	86	90	95	98	7.6%	5.8%
Dental Services	1.253	88	92	97	100	5.1%	4.9%
Home Health Care	1.436	114	121	134	145	8.2%	7.7%
Prescription Drugs	1.060	100	103	105	107	11.3%	9.9%
Other Non-Durable Medical Products	1.027	101	102	102	103	3.9%	3.3%
Durable Medical Equipment	1.091	78	79	81	82	4.8%	5.2%
Nursing Home Care	1.423	96	100	108	116	6.0%	6.7%
Other Personal Health Care	1.252	99	106	117	128	12.9%	14.3%
<b>Total Personal Health Costs (billions)</b>		27.6	39.9	63.3	89.3		
<b>Health Percent of Personal Income</b>		14.3%	16.6%	19.5%	21.8%		
<b>Scenario 2 minus Scenario 1</b>		<b>Gross Difference in Spending (millions)</b>					
<b>Personal Health Care</b>		-	2,366	8,015	15,537		
Hospital Care		-	1,412	4,613	8,612		
Physician Services		-	372	1,237	2,300		
Other Professional Services		-	51	179	321		
Dental Services		-	85	228	399		
Home Health Care		-	75	333	694		
Prescription Drugs			124	436	915		
Other Non-Durable Medical Products			4	12	19		
Durable Medical Equipment		-	8	23	43		
Nursing Home Care		-	135	517	1,082		
Other Personal Health Care		-	100	436	1,152		

**Note:** See Table C-4.10 for raw data, including details about sources and methods.