The Role of TennCare in Health Policy for Low-Income People in Tennessee

Christopher J. Conover
Hester H. Davies
The Urban Institute

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Assessing the New Federalism
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The Urban Institute
2100 M Street, N.W.
Washington, D.C. 20037
Phone: 202.833.7200
Fax: 202.429.0687
E-Mail: paffairs@ui.urban.org
http://www.urban.org

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This report is part of the Urban Institute's *Assessing the New Federalism* project, a multiyear effort to monitor and assess the devolution of social programs from the federal to the state and local levels. Alan Weil is the project director. The project analyzes changes in income support, social services, and health programs and their effects. In collaboration with Child Trends, the project studies child and family well-being.

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Assessing the New Federalism

Assessing the New Federalism is a multiyear Urban Institute project designed to analyze the devolution of responsibility for social programs from the federal government to the states, focusing primarily on health care, income security, employment and training programs, and social services. Researchers monitor program changes and fiscal developments. In collaboration with Child Trends, the project studies changes in family well-being. The project aims to provide timely, nonpartisan information to inform public debate and to help state and local decisionmakers carry out their new responsibilities more effectively.

Key components of the project include a household survey, studies of policies in 13 states, and a database with information on all states and the District of Columbia, available at the Urban Institute's Web site. This paper is one in a series of occasional papers analyzing information from these and other sources.

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Preface

In 1994, Tennessee embarked upon a major health care reform. The state attempted to expand coverage to all low-income people in the state and to rely on private managed care plans as the mechanism for delivering care to new eligibles and those traditionally covered by Medicaid. The intent was to save enough money through efficiencies wrought through managed care and by converting federal and state payments made directly to hospitals for indigent care to payments for insurance coverage. These funds, together with some new state tax revenues, were expected to finance the expansion of coverage.

The TennCare program is entering its seventh year and has been beset by a series of problems. It now clearly faces a crisis in which none of the alternatives—reducing coverage, cutting benefits, or increasing taxes—are attractive. Some of the events of the past year that have led to the current state of affairs are as follows:

- In March 1999, PricewaterhouseCoopers issued an actuarial study that showed that TennCare was underfunded by 10 percent, or approximately $200 million annually.
- On April 1, 1999, the state had to take over operation of Xantus, the third largest TennCare plan, because the plan was faced with large losses and was falling further behind in paying providers.
- On April 12, 1999, Governor Don Sundquist, a Republican elected in 1994 on an anti-tax platform, announced that he would back an income tax to address a growing state fiscal crisis.
- On May 10, 1999, the state legislature approved $190 million in additional funding to eliminate the shortfall in TennCare.
- In July, BlueCross BlueShield of Tennessee (BCBST) negotiated a renewal contract that gave it the right to leave the program, effective July 1, 2000, if

it was not satisfied with state reform efforts, assuming it provided at least six months' notice.

- In September 1999, TennCare director Brian Lapps resigned (the sixth TennCare director in five years).
- On November 1, 1999, the governor called a special session of the legislature to consider an income tax plan that would produce $500 million in additional tax revenues to support both TennCare and an increase in spending on education.
- On November 11, 1999, the governor announced a pay-or-play plan that would require all employers with 25 or more employees to provide worker health coverage and would require insurance plans and HMOs in the state to participate in TennCare or pay a premium tax.
- On December 1, 1999, the governor announced a 12-point TennCare reform program that included a freeze on new enrollment of the uninsured or uninsurables, a cut in benefits, and increased premiums for those with incomes above 200 percent of the federal poverty level.
- On December 15, 1999, BCBST announced that it would withdraw from TennCare effective July 1, 2000. BCBST covers 645,000 TennCare enrollees, or about 50 percent of total enrollment.

Why has this crisis in the TennCare program occurred? Fundamentally, there was never enough new money to finance a roughly 50 percent increase in coverage, particularly if the allegations of considerable adverse selection into the program are true. Adverse selection has reportedly occurred both because insurers have denied coverage and because of the dropping of employer coverage by employees—particularly those with serious health problems—who found TennCare less expensive and easy to enter.

Because the program has been underfunded, capitation rates to managed care plans have been very low, particularly in comparison with other states. Moreover, the state has made only very limited adjustments to rates for the higher costs of sicker enrollees. Thus, any plan that is faced with a disproportionate share of high-risk patients is even more likely to face financial losses. The low rates, coupled with minimal risk adjustment, impose an increased risk of failure on any plan serving a disproportionate share of less healthy enrollees. Failure of any such plan, in turn, means that the plan's beneficiaries will join other plans, increasing the financial risks that those plans then face.

Because capitation rates are low, provider payment rates are also low. Tennessee's hospitals allege losses in 1998 of well over $450 million. Losses are reportedly greatest for academic medical centers. Physicians claim that the rates they are paid by plans are very low and that plans are slow in processing claims. A considerable amount of anger, resentment, and distrust has built up on the part of providers.

In this milieu, it is easy to lose track of the fact that much good has been achieved by TennCare. The program has increased coverage of many who

would otherwise be uninsured, including those deemed uninsurable by private insurance plans. There is also considerable evidence that access to care has improved, emergency room visits have fallen, and utilization of many preventive health services has increased.

Recent dynamics in the TennCare program make it difficult to write a report that is not out of date the moment it is released. Our goal in commissioning this report was to take a longer view of what is known about the effects of the TennCare program. In this report, Christopher J. Conover and Hester H. Davies document the evidence on changes in insurance coverage, access, and utilization. They also provide considerable data on the impacts of TennCare on health plans, hospitals, and physicians.

It seems clear from the evidence that they provide that the plight of the uninsured has been considerably improved by TennCare. There also seems to be an increase in services provided to the low-income population, that is, the uninsured and Medicaid eligibles taken together. This implies that physicians and hospitals have increased the amount of care they provided to TennCare beneficiaries despite their intense feelings about the program. But it also seems clear that the fundamental structure of TennCare—a huge expansion of coverage with relatively little new financing, with providers giving more services despite lower rates of compensation—is inherently unstable. It is no accident that a crisis has occurred.

There are many directions in which the state might head, but it seems clear that no approach can avoid the need to increase the funding of the program. Further, if the state is to continue with managed care, it must adopt better arrangements for compensating plans for differentials in risk.

The state must also seek approaches to prevent the adverse selection into TennCare or to recognize explicitly that there are benefits to the privately insured when such adverse selection occurs. To the extent that the state bears the cost of high-risk individuals, those who purchase employer-offered or individual insurance policies are paying less. Alternatively, if the state successfully prevents the adverse selection in TennCare, it effectively shifts costs back onto those purchasing employer or individual policies.

It is hard to envision how the state could turn back. If the alternative were reductions in coverage and a return to fee-for-service Medicaid, the costs of providing for the low-income Tennessee population, both in and out of Medicaid, are not likely to be greatly affected. The costs of serving those who remain on Medicaid would be higher on a per-enrollee basis, and the cost of the uninsured would be borne through uncompensated care in hospitals and ultimately paid for by those with insurance, in the form of higher premiums.

Again, Tennessee's problems are largely a debate over who should pay. Reforming TennCare, including adding to its funding, would mean that more of

the costs would be borne by the taxpayer, with a substantial share paid by the federal government. A scaling back of TennCare would mean that more of the costs would be borne by those with employer or individual policies and by the uninsured and less by the state taxpayer and the federal government.

John Holahan
Director, Health Policy Research Center
The Urban Institute

Highlights of the Report

Tennessee has adopted one of the boldest approaches in the nation to state health reform. Beginning January 1, 1994, the TennCare plan replaced Tennessee's Medicaid program. It moved all Medicaid recipients into managed care virtually overnight and simultaneously broadened coverage to hundreds of thousands of previously uninsured persons, including those not in the traditional categories eligible for Medicaid. TennCare has stimulated both criticism and praise, and after five years it continues to be a work in progress. Other states can learn from TennCare's successes as well as its disappointments. On balance, TennCare is viewed more favorably by the patients it serves than by the providers who care for them.

Even though Tennessee's population has grown much more rapidly than the U.S. population as a whole, the state also has a weaker economy than the country, and it ranks among the 10 worst states in the overall health of its people. Much of its low health status is related to lifestyle rather than inadequate medical care services. Because of TennCare, the proportion of Tennessee's nonelderly population enrolled in Medicaid is nearly 75 percent larger than the national average. At the same time, while TennCare produced a temporary dip in uninsured rates, today Tennessee is in the middle of the pack in terms of the relative size of its uninsured population. TennCare has accelerated growth in managed care; coupled with low provider payments, this has created friction between providers and the state.

Summary of Findings

Despite a historically Democratic legislature and a Republican governor now in his second term, Tennessee has worked in a bipartisan fashion to

expand and improve TennCare. Unlike most other states, Tennessee has never had an income tax, a state lottery, or pari-mutuel taxes, so it has had to rely more on provider taxes as a mechanism to finance rapidly growing Medicaid expenditures in the late 1980s and early 1990s. Even though TennCare has now slowed expenditure growth, the Medicaid share of combined federal and state budget spending in Tennessee is exceeded by only 10 other states.

Health Insurance Coverage

Tennessee's patterns of employer-based coverage and insurance obtained through private insurance, Medicare, the Department of Veterans Affairs (VA), military health programs, and the Civilian Health and Medical Program of the United States (CHAMPUS) are nearly identical to the U.S. average. The biggest change introduced by TennCare is that the share of the population covered through Medicaid climbed from one-quarter higher than the national average in the early 1990s to nearly three-quarters higher by the mid-1990s. At TennCare's peak, Tennessee had an uninsured rate that was one-third lower than the national average.

Before TennCare, Tennessee had Medicaid eligibility standards that were somewhat more restrictive than those of most other states but were comparable to those of other states in the same region, if not more generous. TennCare loosened eligibility for traditional Medicaid eligibles as well as opened up coverage to hundreds of thousands of previously uninsured. TennCare covers traditional Medicaid eligibles, the medically uninsurable, and uninsured individuals not eligible for an employer-based plan or a government-sponsored program such as Medicare or Medicaid. Enrollment for the uninsured was frozen at the end of TennCare's first year, but it was subsequently reopened for children and dislocated workers. Because of a rapid increase in uninsurables, the state in 1999 sought federal permission to freeze further enrollment temporarily. The uninsured and the uninsurable pay a sliding-scale premium based on income.

TennCare benefits are more generous than those under the former Medicaid program. Those not qualifying for TennCare under Medicaid eligibility rules must pay modest amounts of cost-sharing that also is related to income. In addition, Tennessee has adopted small-group reforms, but not individual-market reforms beyond those needed to comply with the Health Insurance Portability and Accountability Act of 1996.

The TennCare System

TennCare was initiated because of a looming fiscal crisis posed by federal tightening of rules on the use of provider taxes to fund Medicaid. Faced with the prospective loss of nearly half a billion dollars annually, Tennessee developed a Medicaid waiver proposal that was approved by the federal government less

than six weeks before TennCare was hastily implemented on January 1, 1994. Twelve managed care organizations (MCOs) were selected based on their ability to provide a comprehensive set of medical services round-the-clock and to meet minimum standards related to cost control, quality assurance, and financial solvency. In 1996, all behavioral mental health and substance abuse services were carved out of TennCare and provided by two statewide behavioral health organizations.

MCOs provide comprehensive medical services for a monthly capitation payment that varies by age, sex, and disability status. TennCare enrollees can choose any plan serving their geographic area but otherwise are assigned to an MCO. TennCare was financed by pooling federal and state Medicaid funds as well as other public and private funds used for low-income patients. A global budget cap was set on federal financial participation, along with a cap on enrollment and provisions for freezing enrollment if needed to stay under the budget cap. MCOs theoretically are fully at risk if spending exceeds their capitation payments, but the state has sporadically provided special payments to providers and MCOs for various purposes, including risk-adjustment payments to compensate plans with selected types of high-cost patients. The state monitors MCOs to ensure adequate quality and financial solvency.

The Impact of TennCare on Patients

Despite conflicting evidence on the impact of TennCare on insurance coverage, the best evidence suggests that the program reduced the number of uninsured by at least one-third. The program caused a sharp reduction in the number of uninsured when it was initially implemented, but this decline has dissipated somewhat as TennCare enrollment has leveled off. TennCare has been particularly successful in improving coverage of the uninsurable or high-risk individuals with very limited access to private coverage, although at a very high cost to the state. Growth in this population has been partly responsible for TennCare's recent fiscal problems.

The number of physicians who report participation in TennCare exceeds the number participating in Medicaid before TennCare. The number of primary care physicians available to TennCare beneficiaries is reportedly adequate except in a few areas. There are problems of access to dentists in many areas, however, and difficulties in obtaining specialty care in many MCOs other than BlueCross BlueShield. TennCare has increased use of private physicians as the usual source of care and has reduced reliance on emergency rooms. TennCare has also reduced office waiting room times for low-income patients, but these waits are still higher than the average for the nation. Although in selected instances TennCare has narrowed or eliminated traditional differences between the privately insured and those on Medicaid in access to high-tech services (e.g., coronary revascularization, alpha feto-protein tests in pregnancy), such differentials generally persist under TennCare.

There is evidence that TennCare has increased use of preventive services, including immunization, well-child visits, and mammograms and Pap smears. TennCare is also associated with reductions in emergency visits and hospital admissions for asthma patients. On the other hand, there is evidence of lower levels of prenatal care, obstetrical services, and physician-attended births. The percentage of low-income people making dental visits has also declined. Although there is mixed evidence on TennCare's effect on morbidity and mortality, most indicators point in the direction of improved health for low-income people relative to pre-TennCare levels. Patient satisfaction both globally and on specific dimensions such as access, cost, and quality generally has been at least equal to and sometimes better than under traditional Medicaid. Among all TennCare eligibles (not just new enrollees), self-rated quality rose compared with 1993 traditional Medicaid. *Conceivably,* this average effect might mask a decline in quality for those traditionally eligible for Medicaid; such a decline might be offset by a large increase in quality for the formerly uninsured (whose perceptions of quality perhaps were inflated because of getting low quality before TennCare). Given the 2:1 ratio of Medicaid to uninsured/uninsurable eligibles under TennCare, though, this offsetting effect would need to have been unusually powerful to produce a net increase in average ratings for TennCare eligibles. So while theoretically possible, this seems implausible. While not entirely removing financial barriers to access, TennCare appears to have produced at least several hundred dollars in annual out-of-pocket savings for a typical enrollee who was previously uninsured and considerably more savings for medically uninsurable individuals.

The Impact of TennCare on the Delivery System and the Public

The evidence about TennCare's impact on the health care delivery system and the public is rather more mixed than the evidence about its impact on patients. TennCare generally has had a *negative* effect on safety net providers, resulting in greater financial difficulties for community health centers, public hospitals, and teaching hospitals, but it has had a more neutral impact on local health departments. Despite evidence that capitation rates were inadvertently set below actuarially fair levels, most MCOs had learned to make modest profits by TennCare's second year. In 1997 and 1998, MCOs began losing money again; since 1994, a handful of plans have been forced by financial difficulties to close or merge.

Hospital losses on Medicaid/TennCare and uncompensated care increased substantially and in 1996 were twice the national average. Notwithstanding lower hospital payments under TennCare, the hospital industry in Tennessee on average has prospered and is experiencing higher margins than in the country as a whole. While revenues have grown more slowly, expenses have slowed even more, resulting in higher margins. TennCare is generally perceived by physicians as having had a negative impact because of concerns about inadequate reimbursement, red tape, and difficulties in obtaining adequate services for TennCare patients, especially pharmaceuticals. Nonetheless, physician partic-

ipation is higher under TennCare than it had been under the former Medicaid program.

Although TennCare actually spent less than originally projected, it cost $3.8 billion more in its first five years than if Tennessee's Medicaid program had merely grown at the same rate Medicaid programs grew nationally; in effect the higher expenditures were all attributable to the large expansion in coverage. TennCare produced across-the-board reductions in many measures of hospital utilization, ranging from emergency room visits to inpatient days, and in various measures of staffing. The net effects were efficiency "savings" that exceeded $500 million a year. Much of these "savings" could have been offset if there had been increases in ambulatory care and in post-acute care.

It appears that the public sector, both state and federal, spent $700 million less than it would have over these five years if TennCare had not been adopted—$455 million in savings to the federal government and $245 million in savings to the state of Tennessee. However, when contributions by providers, local governments, and patients are counted, Tennesseans actually experienced a net increase in health expenditures of $3.8 billion relative to what would have happened in the absence of TennCare. This assumes that the forecast provision of charity care, local government contributions, and collection of patient revenues took place. To the extent that they did not, Tennessee expenditures on TennCare were lower than these estimates. The increased expenditures may have been offset in part by the savings from lower hospital costs.

Conclusion

On balance, while a number of problems remain, the TennCare program appears to have expanded coverage and increased access relative to pre-TennCare standards. TennCare has not fully "mainstreamed" the Medicaid population, but it has achieved significant inroads in reducing inappropriate emergency room and inpatient use by low-income patients while retaining or improving prior levels of quality and patient satisfaction. There is little question that those who previously were uninsured have benefited from TennCare in terms of access, cost, quality, and satisfaction.

While TennCare has resulted in more efficient service delivery, it also has squeezed providers hard financially as a result of both low capitation rates and MCO administrative costs. Overall, while the federal and state governments have saved money as a result of TennCare, Tennesseans apparently have spent more than if the former Medicaid program had been retained.

Introduction and Background

Tennessee has adopted one of the boldest approaches in the nation to state health reform. Beginning January 1, 1994, under auspices of a Medicaid waiver approved less than 60 days earlier, the TennCare plan moved all Medicaid recipients into managed care virtually overnight and simultaneously broadened coverage to hundreds of thousands of previously uninsured persons, including those not in traditional categories eligible for Medicaid. These sweeping changes have drawn both criticism and praise. While many of the problems in the first year stemming from such rapid implementation have been resolved, the negative publicity about them has made other states wary of emulating the TennCare model. Nevertheless, because the reforms allowed Tennessee to effectively cut its uninsured rate by one-third to one-half while also controlling Medicaid spending, there is much that other states may be able to learn from this experience.

The purpose of this report is to examine the state of health coverage and health services for low-income people in Tennessee, nearly five years after the inception of TennCare. This study is based on findings from several major evaluations of TennCare, state agency reports and documents, and interviews with key sources in Tennessee. The study has been deeply enriched by findings from several important independent evaluations of TennCare, including annual surveys conducted by the Social Science Research Institute at the University of Tennessee, Knoxville; a case study of TennCare funded by the Henry J. Kaiser Family Foundation and the Commonwealth Fund and conducted by Mathematica Policy Research as part of a broader five-year study of Medicaid managed care programs in five states sponsored by the federal Health Care Financing Administration (HCFA); and a 30-month evaluation of TennCare funded

by The Robert Wood Johnson Foundation and conducted by Duke University's Center for Health Policy, Law and Management. The authors also interviewed state officials, legislators, health care providers, and advocacy groups during a two-day site visit to Nashville in August 1998 and subsequently over the telephone. In many cases, interviewees also provided written documentation.

This report lays out the major issues and initiatives related to health care for low-income people as faced by Tennessee policymakers in the summer of 1998. First, it provides an overview of health insurance in Tennessee and describes how TennCare fits into this broader picture. Second, because TennCare is unique compared with traditional Medicaid programs, the report provides an in-depth explanation of how the system works in terms of eligibility determination, enrollment, service delivery through managed care organizations, and state monitoring and enforcement activities. Third, because of TennCare's importance as a potential model for other states, the report synthesizes the available evidence on TennCare's impact on patients, including health insurance coverage, access to care, out-of-pocket costs, quality, and satisfaction. Finally, the report discusses TennCare's impact on providers—including the traditional "safety net" and other hospitals and physicians—and how it has affected the size and distribution of the financial burden on the public. The intent of the report is to illuminate the most critical current and future health policy issues facing Tennessee.

Sociodemographic Profile

Tennessee's population, which in 1995 was almost 5.3 million, has been growing somewhat more rapidly than the population of the rest of the country (table 1). While the share of the population accounted for by children (26.4 percent) is nearly identical to the national average, Tennessee has proportionately fewer elderly residents than the national average (10.4 percent versus 12.1 percent). It has a somewhat larger rural population (nearly 30 percent) than the U.S. average (almost 22 percent), although the vast majority of Tennessee's residents are distributed in the state's six major metropolitan areas. The elderly differential suggests less pressure in Tennessee posed by long-term care spending, and the larger-than-average rural population may indicate greater geographic barriers to health care.

Although one-fifth of its population is African American—well above the national average—Tennessee historically has not had as large an African American population as other Southern states; most of this population lives in and around Memphis (Barone, Ujifusa, and Matthews 1998). In contrast, the Hispanic share is well below the national average (0.8 percent versus 10.7 percent). Likewise, Tennessee has very few noncitizen immigrants (1 percent of the state population, compared with the U.S. average of 9.3 percent).

Table 1 *State Background*

	Tennessee	United States
Sociodemographic		
Population (1994–95)[a] (in thousands)	5,297	260,202
Percent under 18 (1994–95)[a]	26.4%	26.8%
Percent 65+ (1994–95)[a]	10.4%	12.1%
Percent Hispanic (1994–95)[a]	0.8%	10.7%
Percent Non-Hispanic Black (1994–95)[a]	20.3%	12.5%
Percent Non-Hispanic White (1994–95)[a]	77.9%	72.6%
Percent Non-Hispanic Other (1994–95)[a]	1.1%	4.2%
Percent Noncitizen Immigrant (1994–95)[a]	1.0%	9.3%
Percent Nonmetropolitan (1994–95)[a]	29.2%	21.8%
Population Growth (1990–97)[b]	1.4%	1.1%
Economic		
Per Capita Income (1996)[c]	$21,949	$24,426
Percent Change in Per Capita Personal Income (1995–96)[c]	3.1%	4.6%
Percent Change in Personal Income (1995–96)[c]	4.6%	5.6%
Employment Rate (1997)[d, e]	61.6%	63.8%
Unemployment Rate (1997)[e]	5.4%	4.9%
Percent below Poverty (1994)[f]	16.7%	14.3%
Percent Children below Poverty (1994)[f]	24.5%	21.7%
Health		
Vaccination Coverage of Children Ages 19–35 Months (1996)[g, h]	77.0%	77.0%
Low-Birth-Weight Births (<2,500 g) (1995)[i]	8.7%	7.3%
Infant Mortality Rate (Deaths per 1,000 Live Births) (1996)[j]	8.4	7.2
Premature Death Rate (Years Lost per 1,000) (1995)[k]	54.4	46.7
Violent Crimes per 100,000 (1996)[l]	774.0	634.1
AIDS Cases Reported per 100,000 (1996)[m]	15.5	25.2
Political		
Governor's Affiliation (1998)[n]	R	
Party Control of Senate (Upper) (1998)[o]	18D-15R	
Party Control of House (Lower) (1998)[o]	59D-40R	

a. Two-year concatenated March Current Population Survey (CPS) files, 1995 and 1996. These files are edited by the Urban Institute TRIM2 microsimulation model. Excludes those in families with active military members.

b. U.S. Bureau of the Census, Population Estimates Program, Population Division, ST-98-7 State Population Estimates and Demographic Components of Population Change: Annual Time Series, July 1, 1990, to July 1, 1998 (includes April 1, 1990, census population counts).

c. Bureau of Economic Analysis, U.S. Department of Commerce, January 1998.

d. U.S. Department of Labor, *State and Regional Unemployment, 1997 Annual Averages* (USDL 98-78), Washington, D.C., February 27, 1998.

e. Employment rate is calculated using the civilian noninstitutional population ages 16 and over.

f. CPS three-year average (March 1994–March 1996, where 1994 is the center year) edited using the Urban Institute's TRIM2 microsimulation model.

g. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics, "National Immunization Survey, 1996." *Morbidity and Mortality Weekly Report* 46 (29). Hyattsville, Md. July 25, 1997.

h. 4:3:1:3 series: four or more doses of DTP/DT, three or more doses of poliovirus vaccine, one or more doses of any MCV, and three or more doses of *Haemophilus influenzae* type b vaccine.

i. S.J. Ventura, J.A. Martin, S.C. Curtin, and T.J. Mathews, "Advance Report of Final Natality Statistics, 1995." *Monthly Vital Statistics Report* 45 (11, supp.). Hyattsville, Md.: National Center for Health Statistics, 1997.

j. National Center for Health Statistics, "Births, Marriages, Divorces, and Deaths for June 1996." *Monthly Vital Statistics Report* 45 (12). Hyattsville, Md.: Public Health Service, 1997.

k. Rate was calculated using years of potential life lost from age 65 (National Center for Health Statistics, Multiple Cause of Death Mortality Tapes, 1995) as the numerator and population estimates (U.S. Bureau of the Census. ST-96-1. Estimates of the Population of States: Annual Time Series, July 1, 1990, to July 1, 1996) as the denominator.

l. U.S. Department of Justice, FBI. *Crime in the United States, 1996*. September 28, 1997.

m. Centers for Disease Control and Prevention. *HIV/AIDS Surveillance Report* 8 (2), 1996.

n. National Governors' Association. *The Governors, Political Affiliations, and Terms of Office, 1998*. January 15, 1997.

o. National Conference of State Legislatures, 1998.

Economic Profile

By a number of standards, Tennessee has a weaker economy than the United States as a whole (table 1). Per capita income is 10 percent lower than the U.S. average, and it is growing more slowly. Tennessee's overall poverty rate is one-sixth higher than the national average, with one-sixth of the total population and almost one-fourth of the state's children living below the federal poverty level (FPL) in 1994. Nevertheless, this level of poverty represents an improvement over 1979, when the poverty rate was 40 percent higher than the national average (Danzinger and Ross 1987). Because in the mid-1990s Tennessee had a somewhat higher share of population who were poor and near-poor—that is, up to 200 percent of the FPL (Long and Liska 1998)—a larger fraction of the population qualified for TennCare than would have qualified in several other states if they had adopted similar programs. Despite having fewer elderly, Tennessee also had a lower fraction of the 16-and-over population employed and a correspondingly higher unemployment rate in 1997 (5.4 percent) than the nation as a whole.

Most of Tennessee's 2.6 million workers are employed in professional, service, and nonmanufacturing jobs (Tennessee Department of Economic and Community Development 1998). Nashville has been called the "Silicon Valley" of health care and is the headquarters of Columbia/HCA Healthcare Corporation. Nashville is known as the birthplace of country music, and Memphis is known as the birthplace of blues. Nashville also is the nation's center for religious publishing (Barone, Ujifusa, and Matthews 1998).

Health Status

Tennessee ranked 42nd among the states (tied with Alabama) in a composite measure of overall health in 1997. Tennessee has fallen in overall health ranking since 1990 (when it ranked 35th), in part because smoking prevalence has not declined in Tennessee as much as it has in other states (ReliaStar 1997).

The rate of years lost because of deaths before age 65 is one-sixth higher than the national average (54.4 percent versus 46.7 percent). One reason is the state's higher-than-average infant mortality rate; another is deaths from a wide variety of causes, including heart disease, cancer, stroke, and diabetes (Lamphere et al. 1998). Many of these deaths are lifestyle related. Compared with national averages, Tennessee residents are more likely to smoke, be obese, have a sedentary lifestyle, and have hypertension (ReliaStar 1997). On the other hand, Tennessee's number of reported AIDS cases per 100,000 is substantially lower than the national average (table 1).

Political Overview

Tennessee's current governor, Don Sundquist, is a Republican elected in 1994 as part of the national wave of GOP successes, which included the replacement of the state's two Democratic U.S. senators with Republicans. The state legislature, however, is predominantly Democratic, and following the 1998 elections Democrats retained their control of both the House (59 to 40) and the Senate (18 to 15) (National Conference of State Legislatures 1998). A Democratic majority in both houses of the General Assembly was also present in 1993 when then-Governor Ned Ray McWherter (D) proposed TennCare. Although their margin has generally narrowed in recent years, Democrats, with the exception of a single biennium, have controlled both houses without interruption for the past 50 years. The governorship has changed party several times during this period.

Governor Sundquist has worked with the Democratic majority legislature to pass a 20-bill crime package and Families First (a program that sought to move welfare recipients to work in 18 months). Furthermore, he has put all children's programs into a newly created Department of Children's Services, initiated a program to make TennCare available to all uninsured children (*before* federal legislation enacting the State Children's Health Insurance Program), and moved TennCare and selected mental health services to the Department of Health (his plans for completely abolishing the Department of Mental Health and Mental Retardation are on hold) (Humphrey 1998).

Sundquist ran on a platform pledging to fix, if not dismantle, TennCare. Since he took office, many of the first-year problems with TennCare have been resolved, and in recognition of the fiscal hurdles posed by any effort to return to the old Medicaid program, Sundquist has opted to strengthen rather than scrap TennCare. Governor Sundquist's popularity resulted in his reelection in 1998.

State Budget Overview

Tennessee is one of only seven states not to tax individual wages and salaries, and its fiscal policy reflects this fact. Tennessee does tax dividend and interest income, but these account for less than 1 percent of tax collections (Bureau of the Census 1998). The state relies on sales and gross receipts taxes for nearly two-thirds of its tax collections (Tennessee General Assembly 1998). Between 1994 and 1998, Tennessee had the eighth-highest increase in tax collections (as a percentage of 1994 revenue) in the country, reflecting the addition of nearly $250 million in new taxes during FY 1994 and FY 1995. In addition, Tennessee is one of only four states that do not have either a lottery or pari-mutuel taxes (Bureau of the Census 1998).

State general-fund expenditures for Medicaid in FY 1995 totaled $865 million, absorbing 17.1 percent of the general fund (table 2). If only state general funds are considered, Medicaid is the third single largest expenditure item in the state budget (behind primary and secondary education and higher education). However, it was by far the fastest-growing component between 1990 and 1995, with an annualized growth rate (21.3 percent) that was more than three times the rate of increase in state general-fund expenditures during the same period. All other components of the budget grew by 7 percent or less a year. Most of this growth in Medicaid was in the pre-TennCare period, fueled in part by TennCare's heavy use of disproportionate share hospital (DSH) financing. By 1993, DSH accounted for 16.1 percent of the state's Medicaid expenditures, compared with 13.5 percent nationally. Moreover, without DSH, Tennessee's spending per Medicaid beneficiary would have grown only half as rapidly between 1988 and 1993 (Liska and Obermaier 1995). Between 1988 and 1993, Tennessee's Medicaid expenditures (excluding DSH payments) grew 17.4 percent annually, whereas between 1994 (the start of TennCare) and 1996—in spite of the large expansion of coverage under TennCare—the state's Medicaid growth had dropped to 10.8 percent per year. In contrast, state general expenditures grew by 7.3 percent annually during the latter period (Bureau of the Census 1998). Thus,

Table 2 *Tennessee Spending by Category, 1990 and 1995 ($ in millions)*

	State General-Fund Expenditures[a]			Total Expenditures[b]		
Program	1990	1995	Annual Growth	1990	1995	Annual Growth
Total	$3,707	$5,055	6.4%	$7,421	$12,910	11.7%
Total without Medicaid	$3,377	$4,190	4.4%	$6,052	$9,919	10.4%
Medicaid [c, d]	$330	$865	21.3%	$1,369	$2,991	16.9%
% of Total	(8.9%)	(17.1%)	—	(18.4%)	(23.2%)	—
Corrections	$303	$361	3.6%	$325	$389	3.7%
% of Total	(8.2%)	(7.1%)	—	(4.4%)	(3.0%)	—
K–12 Education	$1,373	$1,930	7.0%	$1,522	$2,276	7.0%
% of Total	(37.0%)	(38.2%)	—	(21.9%)	(17.6%)	—
AFDC	$45	$55	4.1%	$161	$204	4.8%
% of Total	(1.2%)	(1.1%)	—	(2.2%)	(1.6%)	—
Higher Education	$741	$898	3.9%	$1,125	$1,535	6.4%
% of Total	(20.0%)	(17.8%)	—	(15.2%)	(11.9%)	—
Miscellaneous[e]	$915	$946	0.7%	$2,819	$5,515	14.4%
% of Total	(24.7%)	(18.7%)	—	(38.0%)	(42.7%)	—

Sources: National Association of State Budget Officers, *1992 State Expenditure Report* (April 1993) and *1996 State Expenditure Report* (April 1997).

a. State spending refers to general-fund expenditures plus other state fund spending for K–12 education.

b. Total spending for each category includes the general fund, other state funds, and federal aid.

c. States are requested by the National Association of State Budget Officers (NASBO) to exclude provider taxes, donations, fees, and assessments from state spending. NASBO asks states to report these separately as "other state funds." In some cases, however, a portion of these funds is included in state spending because states cannot separate them. Tennessee reported other state funds of $73 million in 1990 and $82 million in 1995.

d. Total Medicaid spending will differ from data reported on the HCFA 64 statement of expenditures for three reasons: (1) NASBO reports on the state fiscal year and the HCFA 64 on the federal fiscal year; (2) states often report some expenditures, such as mental health and/or mental retardation, as other health rather than Medicaid; and (3) local contributions to Medicaid are not included but would be part of Medicaid spending on the HCFA 64.

e. This category includes all remaining state expenditures (i.e., environmental projects, transportation, housing, and other cash assistance programs) not captured in the five listed categories.

after TennCare, growth in Medicaid spending outstripped that of state expenditures generally, but by a much smaller margin than before.

When federal expenditures are added to state spending, the picture changes considerably—as shown in the second panel of table 2. In the consolidated budget for 1995, Medicaid is the single largest expenditure item (23.2 percent). Furthermore, its double-digit growth rate, 16.9 percent, is much faster than the growth of the rest of the overall budget (10.4 percent). In 1996, Medicaid's share of consolidated spending was higher in Tennessee (25.9 percent) than in all but two other states (Lamphere et al. 1998). Although still high, Tennessee had fallen to 11th place (22.2 percent) by 1997 (National Association of State Budget Officers 1997).

Because of increased state revenues from the strong economy, the legislature approved a budget for FY 1998–99 to increase spending while assessing taxes at current levels. In FY 1998–99, Tennessee spent a total of $4.0 billion in state and federal funds on health; $3.66 billion of this spending—representing 23.5 percent of the total budget—was to fund TennCare. Total state and federal spending on TennCare was projected to increase by 3.9 percent between FY 1997–98 and FY 1998–99 (Tennessee General Assembly 1998).

Overview of Health Insurance in Tennessee

Tennessee has undertaken one of the nation's most comprehensive efforts to cover its uninsured population through TennCare, a statewide managed care program that replaced Medicaid and expanded coverage starting January 1, 1994. The plan required all previous Medicaid eligibles to enroll in managed care and used the anticipated savings to cover roughly 400,000 previously uninsured. This significant Medicaid reform, implemented using a Section 1115 waiver, permitted the state to reach large numbers of low-income people who traditionally had been excluded from Medicaid on the basis of categorical restrictions. Consequently, more than one-fifth of the state's population is covered through TennCare—compared with less than one-seventh who were eligible for Medicaid before TennCare. Thus, in a very short period, Tennessee has gone from having somewhat restrictive Medicaid eligibility rules to adopting some of the most generous eligibility standards in the country.

Because of TennCare, the percentage of Tennessee's nonelderly population in Medicaid (21 percent) is nearly 75 percent larger than the national average. As a result, the state has significantly reduced its uninsured rate from its pre-TennCare level, which matched the national average and ranked Tennessee in the middle of the pack among all states. Before TennCare, the state did not operate any health insurance programs for the low-income population beyond Medicaid; it was one of 16 states that did not (and still does not) provide medical benefits through a General Assistance program (Uccello and Gallagher 1998). Although Tennessee had established a high-risk pool for the medically uninsurable as

well as small-group reform before TennCare, most of these private insurance reform initiatives are of very minor consequence—relative to TennCare—in ensuring access to coverage for the low-income population.

Trends in Coverage

As in the country as a whole, nearly two-thirds of Tennessee residents below age 65 obtain health insurance through an employer-sponsored program—even after TennCare (table 3). Before TennCare, the rate of employer-based coverage in Tennessee also was nearly identical to the national average (Winterbottom, Liska, and Obermaier 1995). The share of nonelderly (6.4 percent) who obtain coverage from other sources (individual private insurance, Medicare, VA, military, CHAMPUS) also nearly matches the U.S. average. In 1993, before TennCare, Tennessee's enrollment in health maintenance organizations (HMOs) (5.7 percent) was well below the national average (17.4 percent) (Raetzman, Jensen, and Wright 1993). By 1996, TennCare had dramatically increased HMO enrollment in the general population (15.1 percent), but it still lagged behind the nation overall (24.0 percent) (Lamphere et al. 1997).

What has changed dramatically since TennCare is the fraction covered by Medicaid. In 1994–1995, Tennessee's Medicaid share (21 percent) was 72 percent larger than the national average, compared with 26 percent larger in 1990–1992

Table 3 *Health Insurance Coverage*

Health Insurance 1994–1995	Tennessee	United States
Nonelderly Population		
Percent uninsured[a]	7.2%	15.5%
Percent Medicaid[a]	21.0	12.2
Percent employer-sponsored[a]	65.5	66.1
Percent other health insurance[a, b]	6.4	6.2
19–64 Population		
Percent uninsured[a]	6.5	17.9
Percent Medicaid[a]	18.4	7.1
Percent employer-sponsored[a]	67.4	67.8
Percent other health insurance[a, b]	7.8	7.2
0–18 Population		
Percent uninsured[a]	8.9	10.4
Percent Medicaid[a]	26.8	23.1
Percent employer-sponsored[a]	61.1	62.5
Percent other health insurance[a, b]	3.3	4.0
<200% of the Federal Poverty Level—Nonelderly Population		
Percent uninsured[a]	11.6	25.3
Percent Medicaid[a]	42.5	34.1
Percent employer-sponsored[a]	37.0	33.9
Percent other health insurance[a, b]	9.0	6.7

a. Two-year concatenated March CPS files, 1995 and 1996. These files are edited by the Urban Institute TRIM2 microsimulation model, but it uses unedited Medicaid coverage. Excludes those in families with active military members.

b. "Other" includes persons covered under CHAMPUS, VA, Medicare, military health programs, and privately purchased coverage.

(Winterbottom, Liska, and Obermaier 1995). Consequently, the share of Tennessee residents without coverage (7.2 percent) was only half as large as the U.S. average in 1994–95, whereas the state's uninsured rate (15.7 percent) was virtually identical to the national average (15.8 percent) in 1990–92. In addition, fewer than half as many (11.6 percent) Tennesseans under 200 percent of the FPL lacked coverage compared with the nation as a whole (25.3 percent). By March 1995 (i.e., when ample time had passed for TennCare's eligibility and enrollment procedures to shake out), Tennessee's uninsured rate for the total population was one-third lower than the U.S. average and was the eighth lowest in the entire country (Bennefield 1998). However, the most recent comparable figures show that in 1998 Tennessee's uninsured rate was only 16 percent below average, and the state now ranks 25th on this measure (Bennefield 1998). This change reflects the fact that, except for children and dislocated workers, since January 1995 TennCare has closed its doors to further coverage of the uninsured not traditionally Medicaid eligible, as detailed below.

Medicaid Eligibility

Before TennCare, Tennessee had Medicaid eligibility standards that were somewhat more restrictive than in most states. However, its standards were very comparable to, if not more generous than, those of many other states in the region. Under TennCare, the state continues to track those who qualify under traditional Medicaid rules and those who otherwise would be uninsured. Apart from the expansion of coverage to the uninsured, Medicaid eligibility rules generally have become more generous since the inception of TennCare, thereby permitting larger numbers to qualify under Medicaid standards.

Medicaid Eligibility Standards

In 1996, the need standard for eligibility for Aid to Families with Dependent Children (AFDC)—which automatically qualified families for Medicaid—was 54 percent of the FPL, nearly 10 percent (6 percentage points) below the national average (U.S. House of Representatives 1998). (Before TennCare and for its first two years, however, Tennessee's standard was nearly 25 percent below the U.S. average.) The recent increase in generosity is related to welfare reform rather than to TennCare.[1] Tennessee is one of 34 states to have a medically needy program, permitting categorically eligible individuals with high medical expenses to "spend down" into eligibility, but its medically needy standard in 1996 was only 23 percent of the FPL—less than half the national average (50 percent) (Long and Liska 1998). Most states place their medically needy standards at the federally permitted maximum of 133 percent of AFDC payment standards, but Tennessee historically has chosen not to do so. At the time TennCare began, Tennessee covered pregnant women and infants up to 185 percent of the FPL, whereas the federal requirement is 133 percent.

TennCare Eligibility Standards

The administrative details of how TennCare determines eligibility and enrolls recipients into managed care organizations are described in a later section, but the eligibility requirements may be summarized as follows. There are three types of people who were eligible for TennCare when the program began:

- *Medicaid Eligibles.* All persons who meet the Medicaid eligibility standards described earlier are automatically enrolled. However, under the waiver, those determined to be medically needy in a given month are given one year's coverage rather than just the one month's coverage provided before TennCare began (Gold, Frazer, and Schoen 1995). As with Medicaid, infants born to a TennCare-eligible mother are automatically eligible for TennCare.
- *Medically Uninsurable.* Persons who are uninsurable because of existing health conditions may purchase TennCare coverage on a sliding premium scale, with family contributions ranging from 0 percent of the premium for those below the FPL to 100 percent for those above 400 percent of the FPL. TennCare effectively replaced the Tennessee Comprehensive Health Insurance Pool (TCHIP), begun in 1987 to provide insurance to those denied coverage by an insurer or unable to obtain affordable coverage (Communicating for Agriculture 1993). Its roughly 3,900 members were permitted to join TennCare after the pool ceased operations on December 31, 1993, and $5 million in annual pool assessments on insurers is now used to help finance TennCare. For most such individuals, the premiums required under TennCare were substantially lower than the TCHIP rates—even for those having to pay TennCare's full premium rate (table 4).
- *Uninsured.* This group includes individuals not eligible for Medicaid, an employer-sponsored health plan (either directly as an employee or indirectly as a dependent), or a government-sponsored program, such as Medicare, as of March 1, 1993. Those covered by COBRA (a provision of the Consolidated Omnibus Budget Reconciliation Act of 1985) on the cutoff date also could

Table 4 *TennCare Premiums*

	Income as Percentage of Federal Poverty Level								
	Below 100%	140–169%	200–209%	240–269%	300–349%	400–749%		750% and over	
						Uninsured	Uninsurable	Uninsured	Uninsurable
Monthly Premium 1998 (in $)									
Individual	0.00	23.50	73.50	98.75	128.00	184.75	225.00	190.25	231.50
Family	0.00	47.50	183.50	246.75	320.00	461.50	562.00	475.50	578.75
Premium as Percentage of Income*									
Individual	0	2.3	5.3	5.8	5.9	4.8	5.8	4.9	6.0
Family of 3	0	2.7	7.9	8.5	8.7	7.1	8.6	7.3	8.8
Family of 5	0	1.9	5.6	6.0	6.1	5.0	6.1	5.2	6.3

Source: Bureau of TennCare (1998).
*Calculated at midpoint of income interval shown.

qualify for TennCare once the COBRA coverage expired. As with the medically uninsurable, uninsured individuals can purchase TennCare coverage on a sliding premium scale. The 10-month time lag was chosen deliberately to minimize incentives for individuals or employers to drop their coverage.

There have been several important changes in TennCare eligibility requirements since the program began. First, the March 1, 1993, cutoff date for qualification of the uninsured was moved up to July 1, 1994 (Gold, Frazer, and Schoen 1995). However, in January 1995, because TennCare reached 90 percent of its target enrollment (capped at 1.3 million in the first year and 1.5 million in subsequent years under terms of the Medicaid waiver), new enrollments were limited to Medicaid eligibles and the medically uninsurable (as also was specified under the waiver). Subsequently, on April 1, 1997, and May 21, 1997, respectively, enrollment was reopened to all uninsured children through age 17 who did not have access to health insurance through a parent or guardian and to dislocated workers "who previously had health insurance through employer or business and have lost insurance due to bona fide closure of business or plant" (Bureau of TennCare 1998b).

Under the federal Balanced Budget Act of 1997, Tennessee would have been ineligible for State Children's Health Insurance Program (SCHIP) funding to cover these newly eligible children because they had become eligible earlier than the April 15, 1997, cutoff established in the act. Congress made a technical revision in November 1997 to allow SCHIP funds to be used for these children. Tennessee subsequently submitted an amended expansion SCHIP plan to HCFA in January 1998 (approved September 3, 1999)[2] that provided for reduced cost-sharing for children under 200 percent of the FPL and provided a temporary open enrollment period to permit children through age 18 in this income range to join TennCare even if they have access to other coverage. In addition, since January 1, 1998, uninsured children through age 18 (previously age 17) who meet TennCare criteria for the uninsured have been allowed to enroll without limit.

As of December 12, 1998, there were 1.3 million persons enrolled in TennCare, of whom 833,000 (two-thirds) were enrolled under the Medicaid-eligible category (Bureau of TennCare 1998). Since enrollment was reopened to children and dislocated workers in 1997, more than 27,000 additional children and 3,600 dislocated workers have enrolled in TennCare. The state does not know when TennCare enrollment will reopen to other uninsured adults. Enrollment of the medically uninsurable had risen to 108,000 by early 1999. Because of a combination of fiscal concerns resulting from this growth, and the possibility that the rising number of uninsurables might be the result of "dumping" high-cost patients onto TennCare by private insurers, Tennessee proposed to HCFA a 6- to 12-month moratorium on enrolling new uninsurables (Kilborn 1999).[3]

TennCare Benefits

Covered Services

TennCare requires all eligibles to enroll in a participating MCO, defined to include both fully capitated HMOs and preferred provider organizations (PPOs). The services covered by TennCare are more comprehensive than those under the former Medicaid system, principally because previously imposed limitations on services are removed (Mirvis et al. 1995). For example, under TennCare, the state no longer limits inpatient acute hospital care stays, inpatient psychiatric services, physician inpatient services, home health visits, and number of prescriptions (table 5). However, preauthorization and review of inpatient stays is required, and individual MCOs are permitted to use "gatekeepers," other preauthorization rules, and formulary requirements to inhibit unnecessary use.

Nursing home services, facilities for the mentally retarded, and home- and community-based alternatives to institutional services are *not* included as part of the managed care benefits and are still covered under the fee-for-service Medicaid system. (As noted above, home health visits are covered without limit under TennCare.) However, Medicaid-eligible nursing home residents must choose a plan under TennCare to cover any medical expenses outside the nursing home, such as hospital or physician care. The only other exclusions from TennCare are Medicare-covered services for those dually eligible for Medicaid and Medicare. Although dual eligibles are permitted to go outside their TennCare network for Medicare-covered services, they must rely on their TennCare plan for services, such as prescriptions, that are not covered by Medicare. With these exceptions, nearly all Medicaid services are provided through managed care arrangements for virtually the entire Medicaid population. Only Oregon and Arizona are remotely similar to Tennessee in the extent of their reliance on managed care to deliver services to the entire Medicaid population.

With the exception of a partial carve-out of behavioral health services for severely and persistently mentally ill adults and severely emotionally disturbed

Table 5 *TennCare Benefits*

Service	Former Medicaid	TennCare
Hospital inpatient	Payment reduced to 60% of per diem after 20 days/year	No limits
Hospital outpatient	30 visits per year	No limits
Psychiatric facility, ages 21–65	Not covered	No limits
Physician inpatient	20 visits per year	No limits
Physician outpatient	24 visits per year	No limits
Lab and x-ray	30 occasions per year	No limits
Home health	60 visits per year	No limits
Pharmacy	7 prescriptions/refills per month	No limits

children, MCOs initially were required to provide *all* TennCare-covered services. However, in July 1996, mental health and substance abuse services were completely carved out and covered through one of two behavioral health organizations (BHOs). TennCare eligibles now must select an MCO and companion BHO each year. Under the carve-out, BHO enrollees are divided into two groups: Basic and Priority participants. The Basic benefit package includes the same standard episodic care services that MCOs had provided. The Priority package includes expanded benefits provided to those certified by the state as severely and persistently mentally ill (Health Care Financing Administration 1997).

Cost-Sharing

In addition to income-related premiums described earlier, all TennCare eligibles above 100 percent of the FPL, with the exception of mandatory Medicaid eligibles, must pay deductibles and income-related copayments. Deductibles are $250 for an individual and $500 for a family, and maximum cost-sharing is 10 percent but is graduated between 100 and 199 percent of the FPL (2 percent for those 101 to 119 percent of the FPL, 4 percent for those 120 to 139 percent of the FPL, etc.). Originally, those above 200 percent of the FPL could choose between the low-deductible plan (with higher premiums) and a high-deductible plan ($1,000 for an individual/$2,000 for a family) with an out-of-pocket maximum of $4,000/$8,000, but the high-deductible option was abandoned after two years. Currently, all cost-sharing is capped at an annual maximum of $1,000 for individuals and $2,000 for families (excluding premium payments). There is no cost-sharing for preventive services, and when coverage was expanded for uninsured children, deductibles were eliminated for all children and copayments were limited to 2 percent. There is a $25 copayment for non-emergency use of emergency rooms, applicable to all TennCare members (including Medicaid eligibles).

The TennCare System

The TennCare system is truly unique. Although the similarly ambitious Arizona ACCESS system and the Oregon Health Plan perform many of the same functions as TennCare—including selection of competing managed care plans, eligibility determination, education and enrollment of virtually the entire Medicaid population, establishment of capitation rates and risk adjustments, and plan monitoring—the mechanics of how these functions are done in Tennessee are quite different.

Evolution of TennCare

TennCare was initiated predominantly because of fiscal concerns. Medicaid expenditures had nearly tripled between FY 1987 and FY 1993, and they were projected to increase another 17 percent in FY 1994, in part as a result of federally mandated eligibility expansions beyond the state's control. By the early 1990s, Tennessee had become highly successful in obtaining and increasingly reliant on federal disproportionate share hospital (DSH) payments, financing the state share with provider taxes and donations. In 1992, DSH payments constituted 17.6 percent of Medicaid spending in Tennessee, making it a "high-DSH" state subject to a 12 percent cap established by federal legislation enacted in late 1991 (Coughlin and Liska 1997). This statute also prohibited voluntary provider contributions but permitted provider taxes so long as these were "broad-based" and providers were not "held harmless." Accordingly, the state had adopted a 6.75 percent gross receipts tax on hospitals and other professional services on July 1, 1992.

Because there no longer was any guarantee that the size of the hospital's payment to the state would later be fully repaid in Medicaid DSH reimbursements, this tax was unpopular among hospitals, with the results that by March 1993 the Tennessee Hospital Association was actively seeking the tax's repeal and small hospitals disadvantaged by the new arrangement were threatening legal action (Watson 1995). Faced with a loss of nearly $500 million in federal funding (Bonnyman 1996f), the state considered the alternatives: both raising state taxes and cutting eligibility, benefits, or provider payments by 20 percent were viewed as either infeasible (Tennessee's constitution prohibits an income tax)[4] or undesirable. Therefore, state policymakers concluded that Medicaid would have to be radically overhauled and alternative financing sources found to offset the projected DSH cuts. At the same time, there was a growing sentiment among the public nationally favoring universal coverage. A Section 1115 waiver was viewed as the only plausible mechanism to achieve both objectives. With the waiver, Medicaid eligibles could be required to enroll in managed care plans, and the resultant savings, along with the reallocation of DSH funds, could be used to expand coverage to large numbers of uninsured persons traditionally not eligible for Medicaid.

In early April 1993, the governor presented a draft plan to the General Assembly using this general framework and—after limited debate and no public hearings—quickly received broad legislative authority to continue designing the program through administrative regulations. A detailed plan was developed and submitted for approval to HCFA on June 16, 1993. HCFA approved the waiver on November 18, 1993. TennCare began soon after, on January 1, 1994—a compressed time frame, motivated in part by a desire to generate savings quickly and to implement the program while the legislature was out of session and not susceptible to lobbying by opponents. As a consequence of this rapid implementation on relatively short notice, there were many dislocations during the first year. This section describes how TennCare is administered now and how the program has evolved since 1994.

TennCare Administration

The Bureau of TennCare (formerly the Medicaid Bureau), located within the Department of Health, is the agency chiefly responsible for TennCare operations (the bureau was housed in the Department of Finance and Administration from 1995 through 1996). As will be detailed later, responsibility for determining TennCare eligibility is divided among a half dozen different state agencies. The Department of Commerce and Insurance (DCI) is responsible for regulating HMOs and TennCare PPOs, including financial status, marketing, and complaints. It also is charged with requiring plans to meet health care delivery standards established by the Department of Health. As part of its responsibility for safeguarding the financial solvency of TennCare MCOs and their compliance with contract provisions (e.g., provisions on marketing), DCI conducts on-site inspections and joint audits with the state comptroller's office on MCOs. The

TennCare Bureau retains responsibility for quality monitoring and oversight authority of the MCOs. In essence, DCI handles most complaints by providers while the TennCare Bureau handles the concerns of TennCare enrollees.

Plan Selection and Participation

The assessment and selection of MCOs (and, later, BHOs) to participate in TennCare is conducted by the Bureau of TennCare. In the first year, the state issued a notice of intent rather than a formal request for proposals and began discussions with plans interested in becoming MCOs. Rather than selecting the lowest bidders, the state was willing to certify any and all plans able and willing to meet various service and pricing conditions. In the first year, 12 of the 20 MCOs that applied were accepted. (Seven plans withdrew their applications because of concerns over the contract provisions, and one was rejected on the basis of solvency concerns [Ku and Hoag 1998].) In subsequent years, the state has considered letting new plans become TennCare MCOs, but it has not done so because of concerns about the viability of such plans (Ku and Hoag 1998). In 1998, nine plans were operating, all of which were HMOs and the largest of which is BlueCross BlueShield of Tennessee (BCBST).[5]

Selection Criteria

The managed care organizations permitted to participate in TennCare include HMOs, which must meet well-established Department of Commerce and Insurance standards for obtaining licensure as an HMO, and other organizations designated as PPOs by the TennCare program. Two key differences between TennCare's requirements for PPOs and HMOs are that (1) administrative fees and profits are limited only for PPOs[6] and (2) HMOs have to assign a primary care physician to each plan member to manage and coordinate their care (General Accounting Office [GAO] 1995). All PPOs were required to become HMOs by January 1, 1997. TennCare also imposes numerous specific additional conditions that plans must meet to qualify as participating MCOs, including agreement to an 18-month noncancelable contract. These many conditions fall into several broad categories, including access to care, cost control, quality assurance, and financial solvency. A comprehensive listing of contractual requirements can be found elsewhere (Gold, Frazer, and Schoen 1995), but it may be summarized as follows.

Under the *access* requirements, plans must demonstrate their capacity to deliver all covered services throughout any geographic area served. In 1989, the state was divided into 12 regions called Community Service Areas (CSAs) for the purpose of coordinating services for the medically indigent. Under TennCare, MCOs could opt to serve any or all of these regions. Although all plans must comply with minimum requirements for geographic accessibility within a CSA, the MCOs differ considerably in the actual range of patient choice of

physicians for various types of specialty care. MCOs are expected to maintain adequate provider networks that can meet the following minimum access requirements for primary care physicians (PCPs): (a) provision of covered services (including emergency care) 24 hours a day, 7 days a week; (b) maximum distance to PCP: 20 (30) miles or 30 minutes in urban (rural) areas; (c) maximum patient load per PCP: 2,500 or less; (d) maximum waiting time for appointments: 3 weeks for regular care and 48 hours for urgent care; and (e) maximum office waiting times: 45 minutes (Watson 1995). These requirements vary by service. TennCare staff identified capacity constraints using the ratio of the plan's PCPs to the number of Medicaid eligibles in the CSAs and used this information as the basis for approvals of service areas for the plans.

Under the *cost control* requirements, all plans must demonstrate a commitment to providing case management services either through the MCO or through use of primary care "gatekeepers."[7] All enrollees were expected either to select or to be assigned a PCP. Beyond these minimum requirements, there are no restrictions on how plans manage care except that they may not deny covered services when those services are considered medically necessary. Thus, MCOs differ in their drug formularies and preauthorization requirements for various services. Plans also are permitted to provide noncovered services to individual patients on an ad hoc basis if these are thought to be a cost-effective substitute.

Under the *quality assurance* requirements, all plans are expected to maintain adequate patient records, maintain an internal quality monitoring system, and appoint a high-level quality monitoring committee that includes a representative from TennCare's Office of the Medical Director. MCOs also must comply with specified procedures and deadlines for the handling of patient complaints and grievances. For example, health plans must respond to any request for approval of a treatment within 21 days and must warn beneficiaries 10 days ahead of time if care will be stopped or reduced for some reason. Even though they are being capitated rather than billing on a fee-for-service basis, MCOs are further required to provide to TennCare patient-level encounter/claims data. These data are used for quality and utilization/cost studies. HCFA waived the requirement that HMOs have at least 25 percent private membership—a traditional requirement motivated by the presumption that this enrollee mix ensures higher quality than in a Medicaid-only plan (GAO 1995). However, this was counterbalanced by requirements to collect encounter data and annual satisfaction surveys that were more stringent than in traditional Medicaid programs (GAO 1995). Although MCOs generally face the same standards (e.g., financial) as are established for all HMOs operating in Tennessee, MCOs face more rigorous grievance procedures.[8]

Under the *financial solvency* requirements, each plan must provide audited financial statements annually. All MCOs must comply with standard conditions applicable to all HMOs in Tennessee regarding reserve requirements and other rules designed to avert bankruptcy. BHOs, however, have stricter financial standards than MCOs.[9]

Provider Networks

TennCare imposes few restrictions on how MCOs structure their financing and delivery arrangements with various providers. MCOs can be very tightly organized staff-model HMOs with salaried physicians or they can be much looser PPO arrangements in which there are some common utilization review procedures but providers are paid through fee-for-service payments. However, all MCOs must provide the full range of TennCare services and ensure that these are as available to TennCare enrollees as to others in the same market area. In addition, all plans must contract with designated regional perinatal centers for care of high-risk pregnancies. MCOs also were informally encouraged to use selected specialists as primary care gatekeepers for some special needs populations. Finally, as a condition of the waiver, all plans either must contract with federally qualified health centers (FQHCs) or have enough providers to cover a particular geographic area. Some plans also opt to contract for selected preventive services through local health departments even though not required to do so. Tennessee's imposition of relatively few "essential community provider" requirements compared with other Section 1115 waiver states reflects both the free-market philosophy of TennCare's designers and the reality that most of the FQHCs were already affiliated with a statewide network that ultimately became an MCO (Access MedPlus).

TennCare MCOs also have the freedom to contract with any or all hospitals, specialists, or other providers in a geographic area so long as the MCOs adhere to the standards regarding distance/travel time to various types of services. Once a plan has received a TennCare contract, expansions of its provider network into new CSAs require approval by the TennCare medical director.

One of the most controversial aspects of TennCare, evoking a strong negative reaction among providers and ultimately a lawsuit by the Tennessee Medical Association (TMA), was a provider network issue—the so-called "cram-down" provision. BlueCross BlueShield of Tennessee required all of its physicians to participate in its TennCare MCO as a condition of participating in the Tennessee Preferred Network (TPN)—a PPO serving state employees and private employers (Watson 1995). BCBST further prohibited its TennCare physicians from limiting the number of TennCare patients they treat unless they closed their practice to all new patients—that is, so long as they were accepting new patients, practices were expected to accept TennCare patients without discrimination (Watson 1995). Although the state itself did not impose the cram-down requirement,[10] officials from BCBST and TennCare's creators had engaged in discussions in TennCare's design phase, and there was no question that state officials viewed the cram-down favorably because it guaranteed the presence of at least one statewide TennCare plan with an ample supply of physicians to serve enrollees.

A firestorm of protest against TennCare generally and BCBST resulted in a decline in physician participation in TPN from 7,000 to 4,000 in January 1994 (Watson 1995). Nonetheless, the BCBST MCO garnered 43.9 percent of the initial TennCare enrollment (Mirvis et al. 1995). Two days before TennCare began,

TMA filed a suit against the state to block implementation of TennCare, but it was dismissed by the Chancery Court in August 1994 and by the state Court of Appeals in April 1995 on grounds that TMA lacked standing to sue because MCOs (which were not sued), rather than the state, were responsible for paying providers. By the end of TennCare's first year, physician participation in TPN had climbed to 87 percent of pre-TennCare levels (Watson 1995).

Managed Behavioral Health

When TennCare began, there was a partial carve-out of behavioral health services provided by the Department of Mental Health and Mental Retardation—through five state-run regional mental hospitals and 26 community mental health centers—to 45,000 severely and persistently mentally ill (SPMI) adults and 6,000 severely emotionally disturbed (SED) children. All remaining behavioral health benefits were expected to be provided to patients through their MCO. In November 1994, HCFA approved a waiver that would have folded SPMI and SED patients into MCOs with the requirement that MCOs contract with approved BHOs to deliver behavioral health services to these patients. A change in governors resulted in a postponement and subsequent revision of this plan, creating an alternative known as the TennCare Partners program.

Effective July 1, 1996, the Partners program provides *all* behavioral health and substance abuse services to *all* TennCare enrollees through a full carve-out program. Such services are provided by BHOs. Originally, the state had hoped to give MCOs the opportunity to contract with any of five different BHOs, but this proved to be too complicated. The state subsequently encouraged the development of joint ventures so that MCOs could be assigned to one of two BHOs. Participants must enroll in the BHO assigned to the MCO (and likewise, BHOs must accept all participants regardless of health status). BHO members are divided into two groups: Basic and Priority eligibles. The vast majority are Basic participants eligible to continue receiving the basic mental health and substance abuse services previously provided by MCOs. Priority participants are those diagnosed as SPMI or SED. Under this change, BHOs are required to include regional mental institutions in their networks, as well as community mental health centers. The MCOs are required to coordinate their medical services with the mental health services of the BHOs.

Capitation Payments

MCOs are paid a fixed monthly capitation rate per member that varies by age, sex (for those of child-bearing age), disability, and Medicaid status only (a total of eight separate rates). In addition to these basic rates, which are identical across plans, MCOs receive an additional payment for each enrollee with a specified high-cost chronic condition, thereby at least partially "risk-adjusting" their TennCare revenues (GAO 1995). A later section on financing reviews how these rates were developed and have changed over time.

Although the original TennCare plan contemplated a managed competition model in which future rates would be based on the lowest bids received by MCOs in a CSA, in practice the state has simply established a uniform set of statewide capitation rates for TennCare and accepted all qualified MCOs willing to accept these rates. In the context of Medicaid's very large share of the overall market, state policymakers trusted that these rates would be sufficiently high to induce enough MCOs to take part. Presumably, the state would have been willing to raise the offered capitation rate if an insufficient number of MCOs had expressed interest, but enough plans have come forward each year. Although there have been numerous criticisms of the capitation rates for both MCOs[11] and BHOs (Bonnyman 1996d) and the number of plans has fluctuated over time, TennCare continues to offer enough MCOs to cover the entire state, and it currently gives recipients a choice among at least four MCOs in every CSA (compared with a choice of only two MCOs in certain areas in TennCare's first year).

Plan Participation

TennCare began with seven HMOs and five PPOs. At that time, there were nine HMOs and 29 PPOs operating in Tennessee (Mirvis et al. 1995). Yet for the first year of TennCare, only two of the seven participating HMOs (John Deere and Access MedPlus) had operating experience in Tennessee before TennCare, and only one of these had previous Medicaid managed care experience. (Access MedPlus—a plan organized around a network of FQHCs and owned by the Tennessee Managed Care Net—had 35,000 enrollees before TennCare [Gold, Frazer, and Schoen 1995].) Four other HMOs were created in response to TennCare—Phoenix Health Care and three based at academic medical centers: Vanderbilt Health Plan, Total Health Plus/UT Health Plan (University of Tennessee—Knoxville), and TLC Family Care (University of Tennessee, Memphis). On the PPO side, two of the five plans were already-existing HMOs that opted to participate as PPOs (HealthNet/Total Care and Prudential). Another very large PPO was BCBST, which also had a contract to serve Tennessee state employees and was one of only two TennCare plans to operate statewide. None of the PPOs permitted use of out-of-plan providers (Wooldridge et al. 1997). In the first year, more than three-quarters of enrollment was in just two plans: BCBST and Access MedPlus (Mirvis et al. 1995).

Since 1994, three plans have gone out of business (HealthSource) or been sold (Health Net was purchased by Phoenix; UT Health Plan was purchased by BCBST), but all of these plans served relatively few members. Another change is that all MCOs now operate under the HMO model. All of these plans use an independent practice association model except for two physician-hospital organizations (Memphis Managed Care and Vanderbilt Health Plan) and one group-staff model HMO (Prudential). As of December 12, 1998, 44.7 percent of TennCare recipients were enrolled in BCBST,[12] 23.4 percent were members of Access MedPlus, 13.4 percent were members of Phoenix, and the remaining 18.5 percent were insured by the remaining seven plans (each plan accounting for 7 percent or less of total enrollees) (Bureau of TennCare 1998).

The two BHOs (Premier Behavioral Systems of Tennessee and Tennessee Behavioral Health, Inc.) that began offering TennCare services in July 1996 were formed as a result of the consolidation of five for-profit behavioral health firms (Chang et al. 1998). Virtually all of Tennessee's mental health and substance abuse providers—including community mental health centers—joined at least one of the two BHO networks. Premier Behavioral Health is part of Columbia Behavioral Health of Tennessee (part of the larger Columbia/HCA system headquartered in Nashville). See table 6 for a summary of MCO and BHO statistics and facts.

Eligibility and Enrollment

Eligibility Determination

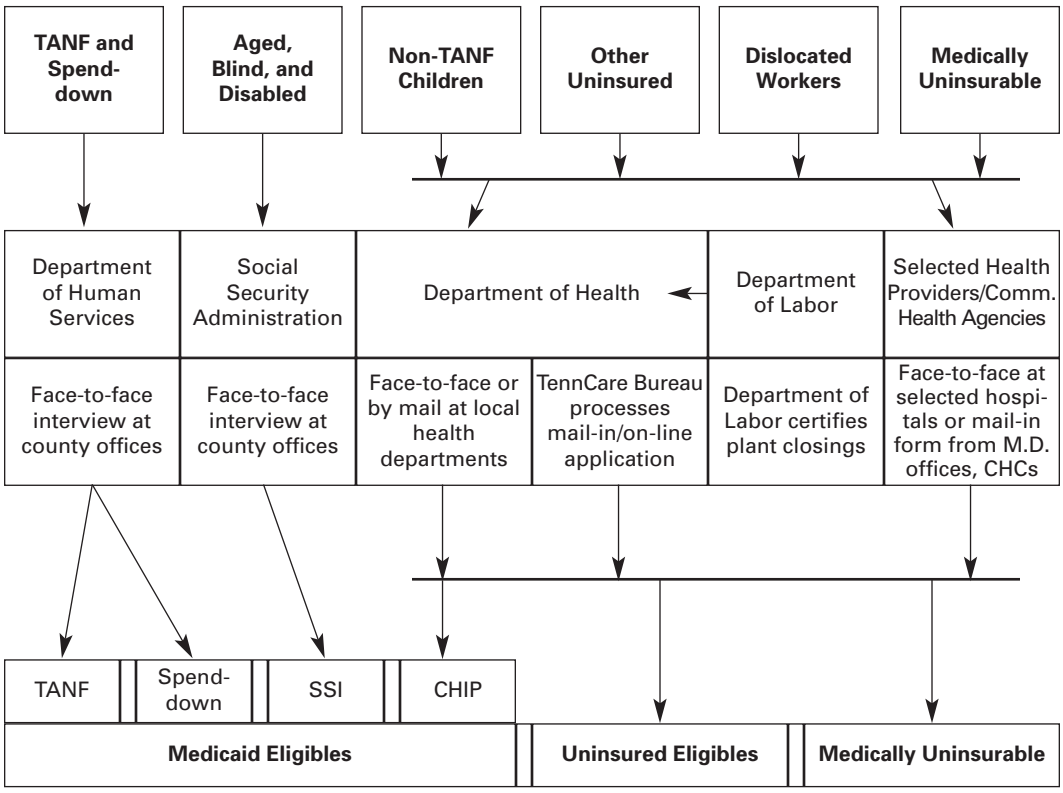
Effectively, there are several avenues for determining eligibility and becoming enrolled in TennCare, each of which is handled somewhat differently (figure 1). There is a TennCare hotline that prospective applicants can use to determine their eligibility, but actual application must be made by mail or face-to-face. As under the former Medicaid program, TennCare enrollment for individuals traditionally eligible for Medicaid via AFDC (now TANF, for Temporary Assistance for Needy Families), via AFDC-related groups (such as pregnant women and children), or using spend-down criteria is handled through Department of Human Services (DHS) welfare offices located in every county. State caseworkers also work in 40 hospitals to do Medicaid eligibility determinations (as they did before TennCare). Likewise, the Social Security Administration (again, through face-to-face meetings in county-based field offices) has continued under TennCare to make decisions regarding qualification of aged, blind, and disabled individuals for federal Supplemental Security Income, a program that automatically entitles recipients to Medicaid and, thus, TennCare. Although

Table 6 *Summary of TennCare Plans*

	MCO		BHO
Description	1994	1998	1998
Number of plans	12 (2 statewide)	9 (4 statewide)	2 (2 statewide)
Do consumers have a choice?	Yes, but consumers are assigned to a plan if they fail to exercise choice within the time limit.		No (MCOs "partner" with BHO for all members), but consumers may petition the state for a change.
Managed care model (percent of enrollees)	5 PPO, 7 HMO (52.2%, 47.8%)	All HMO (100%)	All HMO
How is the capitation rate determined?	Community rate with 8 rate categories, based on sex, age, disability, and Medicare status.		8 rate categories, based on age, sex, disability, and Medicare status.

Sources: Mirvis et al. 1995; Bureau of TennCare 1999b.

Figure 1 *The TennCare Enrollment Process*



TANF = Temporary Assistance for Needy Families.
SSI = Supplemental Security Income.
CHIP = Children's Health Insurance Program.

12-month eligibility is not guaranteed and is not a waiver condition, de facto TennCare eligibility redeterminations are only done every 12 months for cash assistance eligibles, other categorical eligibles such as pregnant women and children, and selected individuals qualifying under spend-down. Those who lose their Medicaid eligibility are notified by letter that they have a 30-day period to apply for TennCare under another eligibility category.

All remaining categories of eligibles may apply to the TennCare Bureau by mail using an application obtained through the TennCare hotline or local Tennessee Department of Health (DOH) offices found in every county. Hundreds of private agencies and health care providers also distribute application forms. The medically uninsurable also may apply by mail by including with the application form at least one letter of denial from any insurance company licensed in Tennessee, as proof of uninsurability. Alternatively, non-Medicaid eligibles can apply for TennCare face-to-face at their local health department. In addition, selected FQHCs, hospitals, and other community health agencies have the authority to enroll uninsured patients at the point of service using a system involving online access to the TennCare application. During the first year, application also could be made through local unemployment offices, but this practice

has been discontinued. Dislocated workers can make application by mail or in person, but their enrollment is contingent on the Tennessee Department of Labor determining that there has been a bona fide business or plant closing.

In the first year of TennCare, open enrollment for the uninsured was maintained the entire year, and verification of eligibility information was deliberately somewhat lax to avoid eliminating potential new eligibles among the uninsured, with the result that an estimated 10 percent of enrollees were technically ineligible for coverage (Gold, Frazer, and Schoen 1995). Although the state contracted with a private health insurance carrier to verify eligibility for the uninsured and uninsurables (Thorne et al. 1995), there reportedly were 10,000 fraudulent enrollments in the first year, including 2,500 nonexistent homeless persons and prisoners (Brown 1996). Enrollees could be terminated for nonpayment of premiums, and by July 1995, 62,000 had been terminated for failure to pay premiums (GAO 1995). TennCare eligibles also are required to report changes in income during the year, and these can produce corresponding increases or decreases in premium or cost-sharing obligations. During the first several years of TennCare, there was no formal recertification procedure, so those with no reported change in income or access to employer coverage were automatically reenrolled each year. During FY 2000, the TennCare Bureau began a systematic process of recertifying all eligibles, starting with those who first enrolled in 1994.

Education and Marketing

In October 1993—before HCFA approval of TennCare had been received—the TennCare program first mailed to the 700,000 current Medicaid eligibles marketing materials from each plan serving their area and a ballot with which to choose a plan (Gold, Frazer, and Schoen 1995). Because this mailing did not include provider lists, enrollees were encouraged to check with their physician or pharmacist about plan affiliation. Moreover, as MCOs were allowed to limit membership, Medicaid eligibles were asked to choose up to three plans. Sixty percent of the surveys were returned; those who did not return the forms were assigned to an MCO (Mirvis et al. 1995). For the 40 percent who were auto-assigned, an effort was made to match recipients to a plan that included their PCP based on their usual source of primary care. However, this information was not always available, and it is uncertain how many were successfully matched in this fashion.

Efforts are made to assign all family members to a single plan, but in practice this has been difficult to achieve when family members qualify via different mechanisms, because there are few links between different Medicaid eligibility determination processes and the process of matching MCOs/providers to family members. Most MCO assignments appear to have been made using a fallback approach in which eligibles were assigned to plans in proportion to their market share among eligibles who made a plan selection. In subsequent years, all enrollees that are in a plan on October 1 have been given the opportunity to

use a mail ballot to change MCOs, effective January 1 of the following year (Bureau of TennCare 1996b).

Once TennCare became operational, assigned enrollees were notified by their MCO and given 45 days to change their MCO assignment. In the first year, this was particularly important given the confusion created by the timing of the original mailing. For the uninsured, when TennCare first began, a mailing similar to that sent to Medicaid recipients was sent to all Food Stamp program recipients in an effort to encourage potential low-income eligibles to apply. A paid TV and radio campaign was used to alert people about the TennCare hotline, which at its peak received 50,000 calls in a single day (Gold, Frazer, and Schoen 1995).

Under TennCare, MCOs can undertake marketing activity themselves both door-to-door or, with permission, in welfare offices. However, they may only use materials meeting certain requirements (e.g., written at a sixth-grade reading level) and approved by the TennCare Bureau (Ku and Hoag 1998). In selected instances, as a marketing tool, plans are permitted to offer additional benefits (e.g., adult dental services) not normally covered by Medicaid. Only a handful of plans have elected to do so. Originally, plans were permitted to offer other inducements to enroll, such as life and disability insurance, but these offers caused sufficient problems that they were prohibited by the second year. Formal marketing guidelines were not released by TennCare until January 1995, but these were made retroactive to January 1, 1994. Even with these changes, the marketing practices of the MCOs have recently been criticized by the Tennessee Medical Association, which has raised concerns about the amount of TennCare dollars diverted from true patient care to fund marketing efforts. The interest of the medical community in this issue probably stems from dissatisfaction that a recent increase in capitation payments given to the MCOs generally has *not* resulted in increased payments for physicians seeing TennCare patients.

Although several state agencies are involved in determining eligibility for TennCare, they are careful not to "steer" TennCare eligibles to particular plans, and no real counseling involving plan choice is conducted by the state. Current mailouts contain very little educational information about how to choose a plan, nor are "side-by-side" plan comparisons, quality information, or other comparative information (e.g., grievance rates) included to assist in this choice. The local DHS and DOH offices will provide prospective TennCare eligibles with information about which plans operate in their counties and toll-free numbers to facilitate their contacting each plan. State workers may advise them to consider the plan or plans that would allow them to continue to see their regular provider, but it is up to clients to contact each plan (or their provider) to find this out.

Enrollment

Once enrolled in TennCare, participants must select an MCO that operates in their geographic area (CSA) (see figure 2). When CSAs originally were cre-

ated, counties with large metropolitan centers were designated as their own area, and counties with smaller populations were grouped with neighboring counties to form a CSA. The county with the most competitive market is Shelby County (Memphis), which in 1999 was served by six plans. However, all other major metropolitan areas, including Chattanooga, Knoxville, and Nashville, are served by five plans; the enrollees in four CSAs may choose among three to four plans (Bureau of TennCare 1999a).

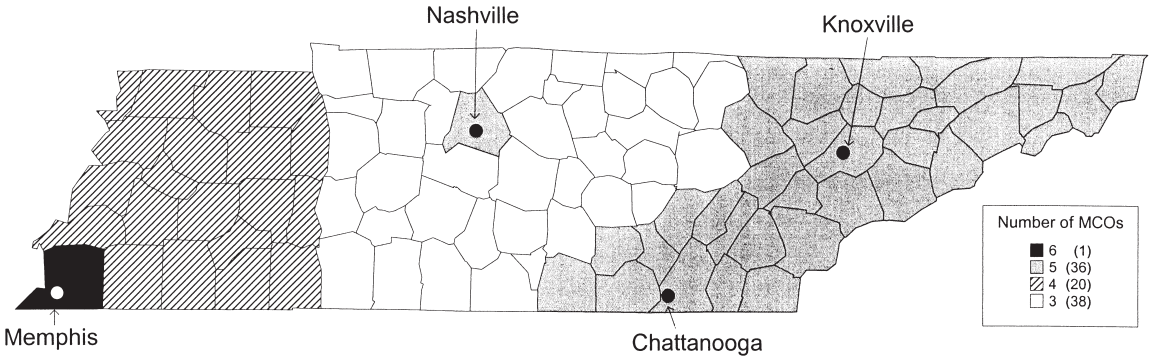
Regarding behavioral health, MCOs are free to contract with either of the two participating BHOs, and all members of that MCO therefore initially are assigned to the BHO selected by their MCO. However, as with MCOs, members are permitted to override this default plan assignment if their traditional provider is not associated with the BHO. (Enrollees also may switch BHOs during open enrollment periods.) Members have free choice of providers within a BHO.

Financing

Funding Sources

TennCare originally was financed by pooling federal and state Medicaid funds as well as other public and private funds previously used for low-income patients. One of the chief fiscal imperatives driving the move to TennCare was Tennessee's heavy reliance on provider "contributions" to serve as state matching funds under Medicaid. When Congress imposed tight caps on the extent to which this "backdoor" funding mechanism could be employed, Tennessee stood to lose nearly one-half billion dollars in 1994 (Bonnyman 1996f). In light of the new restrictions, and to secure support for TennCare from the hospital industry, the state eliminated its 6.75 percent provider tax (termed a "broad-based" tax in table 7 to differentiate it from the provider "donations" previously used to draw down federal funds but subsequently outlawed by Congress in

Figure 2 *TennCare MCOs by County, 1999*



Source: Compiled by the authors using Bureau of TennCare (1999b).

Table 7 *TennCare Financing, Fiscal Years 1994–1998*

Source of Care	FY 1993–94 Budget: Former Medicaid	FY 1993–94 Budget: Proposed TennCare	TennCare Proposal: FY 1994–95	TennCare Proposal: FY 1993–94 FY 1997–98	Distribution: Former Medicaid	Distribution: TennCare Cumulative
Federal	$2,267.1	$2,299.4	$2,448.3	$12,851.9	167.0%	61.1%
Medicaid	2,267.1	2,267.1	2,380.4	12,527.0	67.0	59.6
Other public programs	N/A	32.3	67.9	324.9	0.0	1.5
State	383.0	477.1	588.4	2,939.1	11.3	14.0
Medicaid	383.0	383.0	394.5	2,033.7	11.3	9.7
Other public programs	N/A	94.1	193.9	905.4	0.0	4.3
Local	N/A	25.0	52.5	251.3	0.0	1.2
Private	734.8	795.3	954.6	4,976.0	21.7	23.6
Nursing home tax	80.3	80.3	84.0	442.0	2.4	2.1
Broad-based tax	654.5	303.3	0.0	303.0	19.3	1.4
Charity care	N/A	297.8	631.4	3,086.0	0.0	14.7
Patient revenue	0.0	113.9	239.2	1,145.0	0.0	5.4
TOTAL	3,384.9	3,596.8	4,043.8	21,018.3	100.0	99.9
Total eligibles	1,128,399	1,775,000	1,775,000	8,875,000		
Cost per eligible	$3,000	$2,026	$2,278	$2,368		

Source: State of Tennessee, *TennCare: A New Direction in Health Care*, June 16, 1993.

Note: In FY 1993–94, figures for other public programs and charity care are only for one-half year because TennCare began on January 1, 1994, midway into the state's fiscal year. The figures shown include expenditures for long-term care services, Medicare premiums, coinsurance and deductibles, and Medicaid administrative costs. These are identical in both models, except that under TennCare, administrative costs were projected to be 2.2 percent lower in SFY 1996, SFY 1997, and SFY 1998.

1992). Basically, TennCare retained federal and state funds traditionally spent under Medicaid and replaced funds formerly generated from the hospital tax with funds from other sources.

Revenues from other public programs expected to achieve savings as a result of expanded coverage were used to replace the hospital tax. These included savings from, for example, the Tennessee Comprehensive Health Insurance pool for medically uninsurables, as well as traditional federal-state funded programs providing direct services to patients, including maternal and child health services, mental health services, and alcohol and drug abuse services. Ironically, because state funds constituted three-quarters of revenues used for such programs (i.e., higher than the 67.2 percent federal matching rate for Medicaid), this swapping of funding sources had the net effect of slightly *reducing* the federal share of TennCare overall. Nevertheless, there were several ways in which the state garnered new revenues through the TennCare financing arrangement. For example, while traditional Medicaid did not cover state mental hospital costs for patients ages 21 to 64, a portion of such expenditures—traditionally covered by $69 million in state appropriations—was covered under TennCare, using federally matched dollars.[13] Likewise, the switch from fee-for-service to capitation payments permitted the state to collect $24 million in premium taxes from MCOs (such taxes are effectively included as part of state Medicaid funds shown in table 7 rather than shown separately). The state also was permitted to keep 90 percent of premium collections.

Another funding source was local appropriations historically made to hospitals. By far the biggest source stemmed from the assumption that charity care would continue at historical levels. Revenues from patient premiums and cost-sharing also were sources of new funding. While the state actually collected premium revenues, it did not literally collect local funds that previously had been appropriated to hospitals, charity care, or patient cost-sharing. Instead, all of these amounts were deducted from the capitation payments that otherwise would have been paid by the state to the MCOs. With the exception of patient cost-sharing (which has never been recognized in any Medicaid program as a source of state matching funds), all of the other state, local, and private funds listed were used as state matching funds.

In the original TennCare proposal, because funding was expected to rise only 6 percent in the first year while eligibles rose 57 percent, per capita spending would have had to be cut by one-third for TennCare to avoid incurring a deficit. Because of concerns over the plausibility of achieving such dramatic savings in the first year, HCFA lowered the enrollment cap from 1.8 million to 1.3 million, which still required an 8 percent cut in per capita spending to break even.[14]

Budget Neutrality

The TennCare waiver essentially established a global budget for federal matching funds. As with all Section 1115 waivers, HCFA required Tennessee to demonstrate budget neutrality, although this was defined over the five-year demonstration period of the waiver to permit some year-to-year flexibility. The baseline federal amount was projected using (1) varying annual growth rates based on historical experience or (2) growth caps included in the failed Clinton health reform plan, whichever was lower. These projections produced annual federal spending limits; but because budget neutrality was defined over the entire period of the waiver, the cumulative amount of federal funding for TennCare was permitted to exceed the federal spending limit in year 1 by 8 percent, in year 2 by 6 percent, and so forth, to permit some flexibility. The five-year budget projections used to demonstrate the feasibility of TennCare assumed that TennCare would grow 5 percent a year, matching the expected growth rate of the state's economy rather than expected Medicaid spending. To guard against the possibility of exceeding expenditure projections, aggregate TennCare enrollment also was capped, and built-in triggers were established requiring that enrollment for uninsured and uninsurables above poverty be restricted once TennCare reached 85 percent of its maximum allowable enrollment. Although the original TennCare waiver proposal assumed a 14 percent annual increase in federal spending over the demonstration period, the final growth cap established by the approved waiver was 8.3 percent (GAO 1995); in light of the subsequent slowdown in medical spending growth nationwide, budget neutrality was far easier to achieve than if medical cost trends had persisted at their pre-TennCare

levels. In fact, had federal funding been constrained by actual growth in Medicaid elsewhere in the nation, TennCare would have received far fewer dollars and would be in considerably worse financial shape than it is in today.

Capitation Rates

The original capitation rates were developed by the Department of Finance and Administration based on calculations of the savings expected from managed care and reductions in uncompensated care. That is, the Department started with average Medicaid spending per enrollee in 1992 and projected this to 1994 for each enrollee type. It then reduced the overall rate by an average of 20.4 percent to account for charity care, 1.7 percent for local government expenditures, and 3.9 percent for patient cost-sharing required by TennCare (GAO 1995). The charity care deduction was intended to account for approximately half of the estimated statewide cost of charity care previously provided, on the presumption that coverage of the uninsured would reduce the amount of such care. Likewise, the rates implicitly assumed that local government appropriations to cover uncompensated care losses would continue at historical levels (GAO 1995).[15]

The original rates were calculated assuming a 5 percent annual inflation rate, although the first increase in the rates (5 percent) occurred six months after the start of TennCare in July 1994, and a further 5 percent increase came in July 1995. As an inducement to accept new contract terms, the state increased the July 1, 1995, rates an additional 4.5 percent for MCOs meeting new performance standards included in an amendment to MCO contracts (GAO 1995). In July 1996, rates increased another 5 percent, although the amounts paid to MCOs actually declined, for two reasons. First, the state withheld 1 percent to finance the high-cost chronic conditions pool (discussed later). Second, the rates were further reduced by a flat $7.53 per month in each rate category to cover the mental health services to be provided by the newly established BHOs. In July 1997, individual rates were adjusted by different amounts to reflect the results of a William M. Mercer actuarial analysis. Some rates did not increase at all (males ages 14 to 44), while others rose by nearly 200 percent (ages 65 and over not on Medicaid). Rates in July 1998 were increased by 3 percent.[16]

While the state developed individual capitation rates for MCOs, it also created a statewide average capitation rate for budgeting purposes ($1,641), based on a global budget of $2.9 billion derived by subtracting total expenditures for long-term care, Medicare cost-sharing, and administration from the aggregate amount of funds that would be available, assuming federal revenues would be the same with or without TennCare, and dividing by maximum enrollment of 1,775,000. This final capitation rate was measured against various benchmarks, including the state employee health plan and average Medicaid spending in other states, and judged to be a plausible rate to attract MCO interest.

Premiums and Cost-Sharing

In the original TennCare proposal, both premiums and cost-sharing were intended to be income-related, with (a) no payments required for those in mandated Medicaid eligibility groups and for those below poverty, (b) payments graduated for those with incomes up to 400 percent of the FPL, and (c) full payments for those above this level. This plan was implemented for premiums and partially for cost-sharing where patients pay full deductibles and copayments after they reach 200 percent of the FPL. The one other exception to this general scheme is that while the medically uninsurable pay the same premiums as other eligible groups if they are below 400 percent of the FPL, those at 400 to 750 percent of the FPL pay premiums that are 13.5 percent above standard premiums and those above 750 percent of the FPL pay 21.7 percent above standard TennCare premiums. Roughly half of non-Medicaid-eligible TennCare enrollees are required to pay premiums (GAO 1995). Although TennCare recipients generally are enrolled for a one-year period, the TennCare Bureau has the authority to disenroll uninsured eligibles for failure to pay their required premiums.

Responsibility for premium collection rests with the TennCare Bureau, so the program, rather than individual MCOs, is at risk for nonpayment of premiums. In contrast, the MCOs and BHOs are responsible for collection of all deductibles and copayments. Each plan's capitation payment is reduced by the amount of cost-sharing expected of that plan's members so that there is no financial penalty for plans that enroll a disproportionately low-income population.

How Risk Is Shared

As noted earlier, the federal government established an absolute cap on its financial participation in TennCare, implying that if the program had substantially exceeded projected expenditures, the state would have been at risk for absorbing the excess. There were ways in which the federal government adopted a fairly lenient approach. For one, it permitted the state to count hospital losses associated with caring for TennCare patients at selected public and private hospitals toward the state match. In addition, because the aggregate amount of premium collections was inherently uncertain, it was agreed that the state could keep 90 percent of such collections up to $75 million (and a declining share thereafter), with the balance reverting to the federal government.

As for the risk shared among the state, MCOs, and providers, each managed care plan is given a spending target based on the number of enrollees in each rate category times their respective rate. MCOs are responsible for all care as of the enrollee's application date, and payments to plans are adjusted retroactively to reflect changes in plan enrollment or eligibility of individual plan members. The TennCare program sends the plans updates of changes in eligibility each business day, but initially there were substantial lags in such reporting, especially for eligibles not qualifying under traditional Medicaid rules (Gold, Frazer, and Schoen 1995). Payments to each plan are made monthly. TennCare with-

holds 10 percent of each payment, which it then pays with the subsequent month's payment so long as the MCO has met TennCare quality assurance standards. All TennCare contracts require the plan to withhold some fraction of provider payments, along with an amount for administrative costs of the same percentage being withheld from providers. If the plan's spending exceeds the target, it is required to prorate provider reimbursements to stay within the target (Tennessee Health Care Campaign 1993). While the state is never liable for MCO losses, it is solely responsible for premium collections, and ultimately it lost $37 million in uncollected premiums in the first year.

Because they were not at financial risk, PPOs were limited to 10 percent administrative costs. HMOs have no similar restriction. Likewise, HMOs are permitted to keep whatever profits they can earn on TennCare patients, but any PPO savings were required to be shared, with 5 percent going to the PPO, 5 percent to providers, and the balance to TennCare (GAO 1995). Because PPOs were not supposed to be at risk, this raises a theoretical question of who would have been liable if utilization and spending for PPO patients had outstripped the capitation payments made to that plan. TennCare required PPOs to prorate payments to providers in situations where they otherwise would start incurring a deficit. In the face of losses by several MCOs following the first full year of TennCare, the state announced that it would not cover any unpaid bills of collapsed MCOs (Mirvis et al. 1995). As it turned out, no TennCare plans have gone bankrupt during the first five years of operations, although several have opted to stop participating once their contracts expired.

Special Payments

Several special MCO and provider payments were created to smooth the transition to TennCare. In some cases, these payments were budgeted, and in other cases they were contingent on the availability of unallocated funds (i.e., the difference between capitation payments required if TennCare were at maximum enrollment minus actual payments made). In every year, TennCare has made risk-adjustment payments to plans based on the number of enrollees with specified high-cost diagnoses. The annualized amounts of such payments generally have been $40 million, and the cumulative total of such payments in the first five years has amounted to less than 3 percent of TennCare cash expenditures. Originally, the high-cost chronic conditions pool was funded directly through state and federal Medicaid funds, but starting in July 1996 it was funded through a 1 percent withhold from basic capitation rates (effectively reducing the scheduled increase in rates from 5 percent to 4 percent for that year). A separate reserve fund was created to provide inducements for physician participation; this was used to pay a portion of malpractice premiums for physicians whose practice consisted of more than 10 percent TennCare patients and to make payments to primary care providers with an unusually large TennCare load. This reserve pool was discontinued after FY 1996 after paying a total of $41.7 million in TennCare's first 2½ years.

The unallocated fund pool was available only for the first two years of TennCare, but it helped offset some of the financial difficulties caused by the turbulent TennCare start-up period. This pool provided $50 million to cover uncompensated care payments in FY 1994. It provided $113.8 million to MCOs for the cost of providing the first 30 days of care to uninsured and uninsurable patients, and it paid $23.6 million to selected "essential" or "sole" community hospitals to cover services for those eligible but not enrolled. Funding also was made available in the first year for graduate medical education and risk adjustment across plans. In FY 1998, another $60 million was made available to essential hospital providers to cover uncompensated care losses, but these were characterized as "one-time" payments (Tennessee Department of Health 1998b).

TennCare also provided special pools for medical education and hospitals. Under the former Medicaid program, 18 hospitals had received funds for graduate medical education (GME). The original plan was to provide $48 million in transitional GME funding for 10 of the 18 facilities in TennCare's first calendar year, and it was announced in late 1994 that GME funding would end on January 1, 1995. However, newly elected governor Sundquist convened the TennCare Roundtable, which ultimately recommended continuation of GME funding at $48 million annually, coupled with significant reforms in how such funds were allocated among the 10 hospitals and 4 medical schools (Summit, Herrick, and Martins 1998). These reforms were adopted, and $48 million annually was provided for this purpose in FY 1996 through FY 1998.

The state has not taken responsibility for reimbursement arrangements reached between MCOs and providers. As a consequence of deep discounts demanded by MCOs, hospitals reportedly were paid less under TennCare than under the former Medicaid program (Mirvis et al. 1995). The impact of TennCare on the financial condition of health plans and providers is discussed later.

MCO Oversight

Quality Assurance

One of the waiver conditions imposed by HCFA was that the state document the adequacy of MCO quality assurance efforts and conduct broad patient satisfaction surveys annually (Mirvis et al. 1995). TennCare expects PPOs to meet the same quality requirements as HMOs. TennCare's quality monitoring is modeled after the approach used by the National Committee for Quality Assurance and includes standards for provider credentialing, grievance procedures, and utilization review (GAO 1995).

As a condition of participation in TennCare, all MCOs must provide detailed information on provider and recipient activity, including encounter

data, type of care provided, and outcomes of care. The TennCare Bureau has contracted with an external quality review organization (EQRO), Health First, to process this information (Gold, Frazer, and Schoen 1995). In addition to routine scrutiny of such information, the EQRO has conducted special studies on particular issues (e.g., women's health, preventive services, and birth-related care) to provide an overall picture of TennCare's effect on access to care and quality for selected types of eligibles or services. This evidence is discussed in the next section of the report.

Grievances

Originally, TennCare relied on a central toll-free number available from 7:00 a.m. to 10:00 p.m. to handle all problems, but the huge volume of calls necessitated the creation of separate numbers for general calls and provider calls. The Bureau of TennCare also contracted with the Tennessee Health Care Campaign to run a consumer advocacy hotline to monitor and address complaints. By late 1994, the state had set up a system through which customers could petition the state if they felt they were being denied care unjustly (Gold, Frazer, and Schoen 1995). Even so, in May 1996, a federal district court concluded that the enrollee grievance and appeal process under TennCare was inadequate and mandated that the state remedy this. Accordingly, in the fall of 1996 the state established new procedures to file a grievance, an appeal, or both (Bonnyman 1996b).

Under the new procedures, MCOs (a) have a 21-day limit within which to approve or deny any care requested; (b) must provide at least 10 days' warning before they stop or reduce care being provided; (c) must continue providing denied care so long as a beneficiary has filed a grievance letter within 10 days of a denial; and (d) must reconsider denied claims when a grievance has been filed and offer a written explanation within 14 days. In the event care is denied again, the MCO is required to send the grievance to the TennCare Bureau, where medical staff, if they agree with the patient's position, have the authority to require the MCO to pay for care. Otherwise, a hearing before a state administrative judge or hearing officer is held to give patients one final opportunity to prove that they need care (Bureau of TennCare 1997). In September 1997, to further ensure the independence of grievance decisions, the appeals unit was moved out of the TennCare Bureau and placed under the auspices of the chief health officer in the Tennessee Department of Health.

Early estimates pointed to 90 percent of all appeals being decided in favor of the patient.[17] Recent surveys suggest that the Bureau of TennCare has been doing a better job of informing beneficiaries of their rights under TennCare (Fox and Lyons 1998). There has been an increase in the proportion of TennCare recipients who report that they have received enrollment cards, grievance forms, a list of rights and responsibilities, and information on filing grievances (Fox and Lyons 1998).

Apart from formal grievance procedures, the state contracted with the Tennessee Health Care Campaign (THCC) to provide advocacy services for those with chronic conditions. THCC's advocacy hotline fielded many phone calls that might otherwise have been handled by the TennCare hotline (Thorne et al. 1995). In addition, consumer watchdog groups, notably the Tennessee Justice Center, have been instrumental in focusing attention on areas where patients are encountering difficulties, whether these be related to enrollment, switching plans, obtaining covered services, or securing adequate redress of complaints. This mechanism became somewhat more formalized with the creation in 1995 of the Roundtable on TennCare—consisting of providers, MCO representatives, and those representing advocacy groups—designed to provide advice to newly elected governor Sundquist on TennCare policy issues. (The Roundtable's report was issued on June 29, 1995.) Also in 1995, a separate Citizens' TennCare Review Commission—headed by a member of the Tennessee Business Roundtable—was formed to provide independent research and analysis of the program (Gold, Frazer, and Schoen 1995). The General Assembly also has a permanent TennCare Oversight Committee.

Financial Solvency

Responsibility for monitoring MCO fiscal health rests with the Department of Commerce and Insurance (DCI). Financial data are provided to DCI on a quarterly basis. In addition to annual and quarterly financial reports required of all HMOs in Tennessee, MCOs must provide an income statement showing their receipts and liabilities related to TennCare operations. MCOs must meet reserve requirements on an ongoing basis, and this is verified with an annual audit of each MCO. Even though they were not originally regulated by DCI, PPOs were expected to meet the same fiscal solvency and reporting requirements imposed by DCI on HMOs (Gold, Frazer, and Schoen 1995). Two mechanisms are used to enforce compliance with TennCare requirements: withholds and liquidated damages. Each month, 10 percent of each plan's capitation payment is withheld. If the plan is not found deficient, the withheld amount is paid the following month. Otherwise, the withheld amount is retained until a specified problem has been corrected. Withholds retained by TennCare for a particular problem for six consecutive months are retained permanently. Liquidated damages are contractually specified amounts to be paid for failure to meet contract conditions; these range from $100 per day for late reports to $500 per day for failure to respond to member grievances in a timely fashion. Because it is relatively rare for the same problem to recur, the amount that plans have permanently lost as a result of either withholds or liquidated damages is very small.

Impact of TennCare on Patients

Since its beginning, TennCare has been criticized for one reason or another by almost all parties involved: recipients, physicians, hospitals, MCOs, the media, and advocacy groups. Notwithstanding the controversy it has engendered, TennCare has survived its first five years. Part of the reason is that despite its flaws, TennCare in many ways has been an improvement over what it replaced. This section will assess TennCare from the perspective of its recipients by reviewing the growing body of evidence that examines how TennCare has affected (a) health insurance coverage, (b) access to care, (c) family health care costs, (d) quality of care and health status, and (e) satisfaction with care among low-income people in Tennessee.

TennCare's Impact on Health Insurance Coverage

Part of the motivation behind TennCare was to reduce the number of uninsured, and indeed Tennessee views itself as "the first state in the nation to make health insurance coverage universally available to children" (Tennessee Office of the Governor 1997). TennCare unquestionably has achieved a fundamental goal, that of expanding health insurance coverage. But there are substantially conflicting accounts of how much has been achieved and how Tennessee compares with other states that have adopted ambitious initiatives to reduce the number of uninsured. There are three sources to consider in evaluating TennCare's impact on the uninsured rate: enrollment data, CPS data, and a University of Tennessee survey.

TennCare Enrollment Estimates

TennCare enrollment data show that by the end of its first year TennCare had enrolled 419,000 previously uninsured persons in addition to 850,000 persons traditionally eligible for Medicaid (Mirvis et al. 1995). With an estimated maximum of 775,000 uninsured in Tennessee in 1993 (Sloan and Conover 1998a, 1998b; Nichols et al. 1997; Schriver and Arnett 1998; Carasquillo et al. 1999), these figures imply that TennCare achieved at least a 54 percent reduction in the uninsured population in the first year alone. By January 1999, these TennCare enrollment figures show 464,000 previously uninsured persons were covered, as were 821,000 Medicaid eligibles.

Unfortunately, these figures cannot be taken at face value. For example, original projections estimated that in FY 1994 the former Tennessee Medicaid program would have had 992,000 average daily enrollees even without TennCare. If this projection were accurate, this would suggest that TennCare yielded a net increase in coverage of 277,000 uninsured—implying a 36 percent reduction in the number of uninsured. While more modest than the estimate above, this reduction is nevertheless impressive, because most other incremental state health reform initiatives have produced far smaller reductions in the risk of being uninsured (Sloan and Conover 1998a, 1998b; Nichols et al. 1997; Schriver and Arnett 1998). Moreover, the maximum uninsured estimate was based on an implausibly high 15.9 percent uninsured rate (a composite from three studies). Using a more credible figure of 13.6 percent (based on the March 1993 CPS) would drop the projected baseline number of uninsured in 1994 to 691,000—in which case the reduction attributable to TennCare would exceed 40 percent.

There are several reasons to expect that the "truth" lies somewhere between 36 and 54 percent. The first is that it is easier to apply for TennCare as an uninsured individual than for Medicaid (which requires a face-to-face interview). Thus, TennCare's method of sorting people into uninsured and Medicaid groups is likely to understate the actual number who otherwise would have been Medicaid eligible. Likewise, at least initially, TennCare itself may have produced some "crowding out" of private coverage by guaranteeing 12 months of coverage to individuals who might otherwise have become covered as a result of natural "turnover" in the uninsured population. For example, longitudinal studies have shown that among those losing employer coverage who are recently unemployed (some of whom would fall into TennCare's "displaced worker" category), 40 percent regain coverage within five months and more than 70 percent obtain coverage within one year (Swartz and McBride 1990). If so, TennCare administrative data would have a tendency to overstate TennCare's net impact on the day-to-day size of the uninsured problem.

Current Population Survey Estimates

The most generally used source of estimates of the uninsured population is the Current Population Survey. Although there are flaws in the CPS that inter-

fere with estimating the number of uninsured with precision, most of these flaws should affect all states; hence the CPS provides a rough indicator of trends over time and across states. Given that the CPS questionnaire has changed several times since 1980, it is inappropriate to compare the raw uninsured rates in 1980 with, for example, those in 1990. However, by indexing rates to the U.S. average, the CPS affords a crude picture of how the uninsured risk has fluctuated within a state over a long period (keeping in mind that individual state rates will hop around because of sampling variability).

The "big picture" view provided by the CPS is that even before TennCare, Tennessee had lower-than-average uninsured rates relative to the United States and neighboring states (table 8). Between the late 1980s and the early 1990s, Tennessee's situation improved even further as its uninsured rate dropped from a level 4.3 percent below the national average to a level 12.3 percent lower. With the introduction of TennCare, its relative position improved even further, to 20 percent below the national average in 1994–1995. However, by 1996–1997, its relative position was slightly worse than in the years immediately before TennCare. Nevertheless, Tennessee continues to enjoy lower uninsured rates than most of its immediate neighbors. In short, the CPS "story" is that TennCare's effect was large but appears to have dissipated over time.

Of equal importance, the CPS figures imply that Tennessee falls considerably short of achieving universal coverage. Indeed, in the second year of TennCare (after CPS improved its questionnaire), there were seven states with even lower uninsured rates than in Tennessee (Bennefield 1995). Because enrollment in TennCare has been frozen for selected categories of the unin-

Table 8 *Persons without Health Insurance Coverage, 1988–1997, for Tennessee and Selected State Groups*

	Percent Not Covered by Insurance[a, b]			
State	1988–89	1992–93	1994–95	1996–97
United States	16.1%	17.9%	17.4%	18.0%
Tennessee	15.4%	15.7%	13.9%	16.3%
Arkansas, Louisiana, Mississippi	22.4%	24.6%	21.5%	23.4%
Kentucky, North Carolina, Virginia	15.6%	16.4%	15.6%	16.4%
Alabama, Georgia, South Carolina	18.2%	21.1%	18.2%	18.5%
	Index			
Tennessee	95.7	87.7	80.0	90.2
United States	100.0	100.0	100.0	100.0

Source: The Urban Institute, 1999. Based on March Current Population Surveys, 1989–1998.

a. Includes persons without insurance coverage for the entire year. At no point in the CPS are respondents asked if any members of the household were uninsured for the entire previous year. Estimates of the uninsured reflect the number of persons for whom none of the specified types of coverage is reported for the year.

b. Starting with the 1995 March CPS, significant changes were made to the questionnaire regarding health insurance coverage, including changes in question order, the use of state-specific Medicaid program names, and the addition of more detailed questions. In addition, the 1995 CPS reflects a change in the questionnaire's sample framework. Therefore, it is recommended that data from 1994 and afterward not be compared with data from previous years in time-series analyses.

sured, it should not be surprising that Tennessee's coverage ranking has declined and by 1998 stood at 25th among all states (Bennefield 1998).

The Urban Institute, in recognition of the limitations of the CPS, has used a simulation model to improve estimates of Medicaid coverage (because comparisons with administrative records have demonstrated conclusively that the CPS undercounts those enrolled in Medicaid) and has adjusted the estimated number of uninsured in each state accordingly. Nationally, these adjustments produce a one-tenth reduction in the estimated number of uninsured: Compare 39.7 million uninsured estimated from the March 1995 CPS (Bennefield 1995) to 35.5 million nonelderly uninsured from the Urban Institute's adjustments for 1994–1995 (Liska, Brennan, and Bruen 1998). These adjustments make a much larger difference in Tennessee, because many uninsured who enrolled in TennCare may not have viewed themselves as covered by Medicaid. Although these adjusted estimates are available for only two slices in time, they fortunately bracket the year that TennCare was introduced and provide a plausible "pre-post" comparison for consideration. The Urban Institute figures confirm that before TennCare was adopted, Tennessee already had a nonelderly uninsured rate comparable to the national average and lower than its neighbors. After TennCare, the nonelderly uninsured risk was cut in half—from 15.7 percent in 1990–1992 to 7.2 percent in 1994–1995—dropping to the lowest rate in the entire country (see Winterbottom, Liska, and Obermaier 1995; Liska, Brennan, and Bruen 1998).

University of Tennessee Survey Estimates

An alternative set of coverage estimates comes from an annual survey conducted jointly by the Center for Business and Economic Research and Social Science Research Institute at the University of Tennessee, Knoxville in the years 1993 to 1997 (1998 results are not yet available). The survey results are weighted to account for undersampling low-income households (based on a comparison of the distribution of household income from the survey with figures from the CPS).

Methodological Differences with CPS

Relative to the CPS, the University of Tennessee (UT) survey probably provides more accurate slice-in-time estimates of coverage, for several reasons. First, the CPS question asks about coverage "during the past year" and not about coverage as of the day of the interview. The uninsured are calculated from the CPS as a residual after all individuals who report *ever* being covered by any source during the preceding year are eliminated. If respondents replied strictly as intended, the CPS uninsured count should represent the number without coverage *for the entire preceding year*. However, careful comparisons suggest that most respondents reply as if they have been asked about their current coverage (Swartz and Purcell 1989). While the wording of the CPS raises

questions about how to interpret the uninsured count, the UT study unambiguously queries about coverage on the day of the interview and specifically asks respondents whether they lack coverage (rather than inferring lack of coverage). As noted earlier, a second potential problem with the CPS is that before 1995 respondents were queried about Medicaid coverage generally rather than their state's program specifically. The UT survey has made reference to TennCare ever since its 1994 survey, thus addressing one reason for underreporting of Medicaid that occurs in the CPS. Finally, the UT sample is much larger than the CPS sample for Tennessee. It targets 5,000 households (covering an unreported number of individuals)—with response rates varying from 60 to 80 percent during the five years the survey has been conducted—versus 1,632 individuals covered by the CPS in March 1997. The sample size per se would not bias the estimates up or down, but in any given year the sampling error will be much smaller for the UT results (though bias may be greater with the lower response rate).

Survey Findings Regarding Uninsured

Because of the differences in methodology, it should not be surprising that the UT estimates of lack of coverage differ considerably from those obtained from the CPS. The UT survey showed that there were 318,708 Tennesseans without health insurance in 1997, compared with 841,000 using the March 1997 CPS (Carasquillo et al. 1999). Yet the two sources of data are consistent in showing that TennCare had its greatest impact in its first year, with a gradually increasing number of uninsured since that time. The UT results show that between 1993 and 1994 the proportion of persons uninsured in Tennessee dropped from 8.9 to 5.7 percent—a reduction of more than one-third (Fox and Lyons 1998). However, a more detailed analysis suggested that the 1993 survey may have underestimated the number of uninsured so that the net reduction in the uninsured rate actually was 47 percent (Fox and Lyons 1994). Even in 1997, the uninsured rate (5.9 percent) remains well below its pre-TennCare level. These findings imply that even after three years, TennCare has been able to achieve at least a one-third reduction in uninsured risk—and probably more because uninsured rates have been rising over time elsewhere in the United States.

Reasons for Lack of Coverage

The UT surveys are useful for documenting why, in spite of TennCare, so many people continue to lack coverage in Tennessee. The percentage of Tennesseans citing the cost of health insurance as the major reason they do not have health insurance declined only slightly between 1993 (83 percent) and 1997 (79 percent) (Fox and Lyons 1998). Even among households with the lowest incomes (under $10,000)—that is, those most likely to benefit from TennCare—the problem of affordability declined remarkably little between 1994 (91 percent) and 1997 (83 percent). The percentage of people who reported that they do not have health insurance because they "did not get around to it" doubled from 1993 to 1997 (from 7 to 15 percent), while the percentage who said they do not need health insurance also rose (from 6 to 9 percent).

TennCare's Impact on Access to Care

Access to care can be defined or measured in several ways, including *potential access* based on the relative availability and convenience of use of providers and *realized access* based on actual patterns of care seeking and use. This section synthesizes a large body of evidence with an eye to assessing where the "weight of the evidence" lies in terms of TennCare's effects on various dimensions of access to care. The studies cited are of uneven quality, and many do not appear in peer-reviewed journals. Some are based on local convenience samples, and others rely on more carefully drawn random surveys. Some make use of multivariate methods, and others are more descriptive in nature. The strategy in selecting material has been to report evidence where it exists and alert the reader to potential biases, but in cases where there are multiple studies, weaker studies have been dropped in favor of those whose methodology warrants more confidence in their conclusions.

One of the limitations of most of the studies available is that they typically compare TennCare eligibles as a group with those eligible for Medicaid in Tennessee before TennCare or in control states. Ideally, one would like to compare those traditionally Medicaid eligible with those who qualify for TennCare under Medicaid rules and have a separate comparison of the uninsured (in either Tennessee or a control state) with those in TennCare who became newly eligible because of the expansion in coverage.

In general, the effects of moving a population from fee-for-service to managed care will be much smaller (and harder to detect) than the effects of expanding coverage to individuals who previously were uninsured. By comparing the blended group (i.e., roughly two-thirds Medicaid eligible and one-third formerly uninsured) with those who have traditional Medicaid coverage, such evaluations may therefore understate TennCare's true net impact because they will ignore TennCare's effects on the previously uninsured. On the other hand, the newly insured generally have higher incomes than those traditionally eligible, and there is substantial literature showing the beneficial effects of income on health status independent of health insurance and other factors (Goode 1999). Therefore, once the previously uninsured receive coverage, they may enjoy better health, better access, and higher satisfaction than would their lower-income peers with the identical coverage. If so, a blended comparison could mask a situation in which access, quality, or satisfaction got worse for those traditionally on Medicaid while improving one or more of these dimensions for the previously uninsured. In short, the available comparisons may either overstate or understate TennCare's true impact, and it is difficult to say with confidence a priori in which direction the effects are biased. What is far easier to ascertain with certainty is that TennCare represents a measurable improvement for the previously uninsured on most available indicators.

Provider Availability

Medicaid Physician Participation Rates

Under TennCare, the physician participation rate in Medicaid apparently rose. Before TennCare, only 35 to 40 percent of Tennessee physicians participated in Medicaid, and many limited their Medicaid practice (Gold, Frazer, and Schoen 1995 [reporting 35 percent]; Mirvis et al. 1995 [reporting less than 40 percent]). By the end of 1994, more than 60 percent of Tennessee's physicians participated in BlueCross BlueShield's TennCare MCO alone (Watson 1995). Even if the 60 percent represents *total* physician participation in TennCare, this large change would still imply a net increase in physician availability. (Note that no data are available on significant—as opposed to token—participation either before or after the start of TennCare.) Because the total number of eligibles apparently grew less slowly than the increase in providers participating in TennCare relative to traditional Medicaid, one can infer there was a net increase in relative supply of physicians even if it is difficult to specify its magnitude with any precision. Although not required to do so, most MCOs contract with community health centers and county health departments offering a full range of care (Gold, Frazer, and Schoen 1995), thereby ensuring some continuity of providers for previously uninsured enrollees who had relied on these components of the safety net.

Evidence of Physician Shortages

Despite this growth in the aggregate supply of physicians serving those covered by Medicaid/TennCare, the initial furor and confusion that surrounded TennCare in its first year created substantial short-term dislocations. Between June and December 1993, 42 percent of the 6,842 physicians in the BlueCross BlueShield Tennessee Provider Network (TPN) dropped out to protest the BCBST requirement ("cram-down" provision) that providers in this network—which served more than one-half million patients statewide—also open their practice to TennCare recipients (Mirvis et al. 1995). After the initial physician boycott of BCBST, TPN's dominance in the market persuaded most of the physicians to return to the network by August 1994. And by 1996, the total number of physicians in TPN had reached 97 percent of the 1993 number.

There is evidence that TennCare enrollees have had great difficulty finding both primary care physicians and specialists in MCOs other than BlueCross BlueShield's. For example, for beneficiaries in Access MedPlus (TennCare's second largest plan), no primary care physicians were available in all of Maury County (one of the state's 15 largest counties). Even counting providers in neighboring counties provided a ratio of 1 primary care physician for 5,542 enrollees—more than double the contractually allowable ratio (TennCare Monitoring Group 1995). Similarly, only 13 of 394 orthopedic surgeons in the entire state contracted with Access MedPlus to treat TennCare

patients (TennCare Monitoring Group 1995). Part of the shortage in specialists stemmed from the failure of MCOs to develop networks with sufficient depth or breadth to handle their TennCare enrollments. At the same time, however, resentment over low payments made by TennCare MCOs led to attitudes reflected in the following comment by a respondent to a 1997 survey of Tennessee physicians: "Specialty care physicians will often see an uninsured patient before they'll see a TennCare patient. This is particularly true in neurosurgery, rheumatology, and dermatology" (Sloan, Conover, and Rankin 1999). Access to specialty care by high-risk children was disrupted somewhat by TennCare's requirement that HMOs use primary care case managers; specialty providers, many of whom had well-established relationships with these children, were not permitted to serve this role (Gold, Frazer, and Schoen 1995).

The problem of obtaining specialty care appears not to be solely a transitional one. In spring 1996, 14 percent of TennCare patients in Nashville MCOs reported having difficulties in obtaining specialty care despite the abundance of such specialists in that city and even though they had been referred for such care (table 9) (Bonnyman 1996a; Larson et al. 1996). In late 1997, the TennCare Oversight Committee was still hearing testimony about how difficulties in arranging subspecialty care for children with birth defects and crippling conditions were forcing physicians to refer these patients to nonprofit organizations for care (LaPolt 1998). Moreover, TennCare may have had some adverse spillover effects on uninsured patients not covered through TennCare. Key informant interviews conducted for a Mathematica evaluation indicated that although more physicians were *formally* participating in Medicaid, informal networks of specialists that had developed for low-income persons largely disappeared, thereby reducing access for the uninsured who did not enroll in TennCare (Gold, Frazer, and Schoen 1995). Likewise, many TennCare patients reportedly lost their long-term relationships with such specialists, either because their MCO did not contract with them or because even after they got referrals they often were advised that the specialist was not accepting new patients or could only schedule them after an extended delay (Hulen and Beeler 1995). A 1998 provider survey conducted as part of a state audit showed that, depending on specialty, between 42 and 69 percent of physicians do not believe TennCare provides adequate access to specialty care. On the other hand, this survey also found that while only 65 percent of primary care physicians were accepting new TennCare patients, 90 percent of specialists were willing to do so (Tennessee Department of Health 1999).

There reportedly has been an exodus of dentists who "have fled TennCare because of low fees and slow payment by MCOs," and as a result the percentage of children receiving regular dental screenings has fallen below the previous levels under Medicaid. This stimulated a class action suit by the Tennessee Justice Center, culminating in a court action and a March 1998 consent decree to fix the problem (Davis 1998). In the same consent decree, the problem of denials of care by BHOs was addressed by requiring the state to achieve compliance with federal laws mandating diagnostic screening and treatment for those with mental, physical, and developmental health needs (Wade 1999). An October

1998 report by an outside review team found that further efforts were still required to improve the quantity, quality, and timeliness of behavioral health, medical, and dental services to at-risk children. Subsequent efforts to develop a joint remedial plan for compliance with the consent decree failed, and the issue was still in litigation in early 1999 (Tennessee Department of Health 1999).

Geographic Shortages

TennCare standards require MCOs to have at least one primary care physician per 2,500 eligibles. Yet in 1997 there were seven counties in which the ratio of TennCare eligibles to primary care physicians exceeded the maximum allowable and a total of 30 predominantly rural counties that the state designated as health resource shortage areas for TennCare primary care. In 1998, 10.1 percent of Tennessee's population lived in federally designated health professional shortage areas for primary care—up from 9.3 percent in 1992 (Raetzman et al. 1993; Lamphere et al. 1997). Likewise, there are 21 counties with no TennCare provider for general dentistry and an additional 31 counties where the ratio of dentists to TennCare enrollees exceeds 1:6,493 (Tennessee Department of Health 1999). A 1998 state-sponsored provider survey found that, depending on specialty, between 25 and 69 percent of respondents knew of instances in which enrollees had to travel excessive distances to obtain medical treatment (Tennessee Department of Health 1999). Thus, while TennCare may have expanded the total number of physicians serving low-income recipients, it did not eradicate the maldistribution of physicians (and dentists) that has long been the cause of geographic barriers to access in rural states such as Tennessee.

Access Measures

Despite selected problems with the availability of providers, TennCare generally has succeeded in making it more convenient for low-income patients to use the system, although in some cases this occurred only after a temporary decline in access. Table 9 summarizes the various studies that have been conducted to date with findings related to access to care or patterns of use.

Usual Source of Care

TennCare has had a dramatic effect in shifting the locus of care in desired directions. A 1996 study of six Nashville MCOs found that among those who previously were uninsured, 22 percent of primary care visits were in private physician offices before TennCare, but 78 percent after their TennCare coverage began (cited in Bonnyman 1996a). The UT surveys show that by 1997 the proportion of TennCare recipients who sought care at a hospital had dropped to 7 percent—half the level reported for Medicaid recipients in 1993 (Fox and Lyons 1998). This decline is significant for Tennessee, a state in which emergency room use in 1995 was almost 18 percent higher than the national average

Table 9 *Summary of Study Findings Concerning the Impact of TennCare on Access and Use*

Study	Analytic Framework	Data Sources	Measure	Findings
Fox and Lyons (1998)	1993–1997 time series permits pre-/post-comparisons; insurance status permits TennCare (TNC) vs. 1993 Tennessee Medicaid (MCD) and TNC vs. general population comparisons. No adjustment for other covariates reported.*	Annual telephone interviews conducted by University of Tennessee (1993–1997) targeting 5,000 households each year, using random-digit dialing. Response rate ranges from 60% to 80% by year. Results weighted to account for undersampling of low-income households without phones.	Waiting time for routine appointment with primary care physician. Average travel time to physician office. Waiting time (beyond scheduled appointment time) in physician office. Usual source of care (children and adults). Percent seeing doctor >once/year: children adults.	TNC: 11% wait >3 weeks; 16% wait 1–3 weeks in 1997; nearly identical in 1994. TNC: 25 minutes in '94, 42 min. in '95, 21 min. in '97. TNC: Decline from 105 min. in 1994 to 52 min. by '96 and '97. TNC: % using hospital fell—13–14% in '93 vs. 7% in '97. For TNC children/adults, % seeing MD at least once/year grew faster from '93 to '97 than general population.
Reported in Belcher, McKinzie, and Wrenn (1995) and Wrenn and Slovis (1996)	No adjustment for covariates reported.*	Telephone survey of 126 patients triaged out of Vanderbilt University emergency department (ED) in spring 1994.	Number of ED patients triaged. Compliance with triage follow-up arrangement. Subjective assessment of whether physician opinion needed.	60 patients monthly under TennCare vs. 0 before 1994. 33% noncompliant with follow-up care arranged. 65% thought they should have been evaluated by MD.
Larson et al. (1996), cited in Bonnyman (1996a)	No adjustment for covariates reported.*	Telephone survey in late spring 1996 of 245 TennCare enrollees from 6 MCOs in Nashville. Adjusted response rate = 58%; sampling error = 6%.	Usual source of primary care. Problems in obtaining specialty care.	Among previously uninsured, 22% of visits in physician office before TennCare and 78% after. 14% of those referred for such care reported problems.
Schoen et al. (1997)	Comparisons with 4 other states included in survey (MN, OR, FL, TX); no adjustment for other covariates reported.*	Telephone survey in fall 1995 of 2,000 randomly selected Tennessee adults 18–64 below 250% of FPL. Results weighted by selected individual/household characteristics using March 1994 and 1995 CPS.	Not able to obtain needed care in past year. No regular physician.	24% in TN vs. 19% in MN, no significant difference relative to 3 other states. 58% in TN vs. 52% in OR, no significant difference relative to 3 other states.

(*Continued*)

Table 9 *Summary of Study Findings Concerning the Impact of TennCare on Access and Use (Continued)*

Study	Analytic Framework	Data Sources	Measure	Findings
Young et al. (1997)	Comparison of 1994 vs. 1995; no adjustment for other covariates reported.*	Convenience sample of 250 TennCare patients seen at Vanderbilt University emergency department (ED) in 1994 and 199 patients in 1995.	Has no primary care physician (PCP) or doesn't know name. Never had visited PCP before ED visit. Did not call PCP before ED visit. Aware of responsibility to call PCP before ED visit. Did not succeed in contacting PCP before ED visit.	No major change (1994 = 38%; 1995 = 37%). Steep decline (1994 = 58%; 1995 = 25%). Decline (1994 = 73%; '95 = 48%). Large increase (1994 = 32%; 1995 = 94%). Increase (1994 = 31%; '95 = 40%).
Livengood et al. (1997)	Comparison of TennCare vs. privately insured; no adjustment for other covariates reported.*	Retrospective analysis of 144 chronic pain patients seen at Vanderbilt Pain Control Center since January 1994; 72 private patients randomly selected from 183 candidate patients in this group.	Health status on presentation: Medical/pain status (6 dimensions). Patient use of therapy. Depression and anxiety (self-reported and by testing).	Relative to privately insured: Tenncare patients have more pain and physical pathology. TennCare have twice as many follow-up visits. TennCare have higher self-reported depression and anxiety but no difference by testing.
Phillippi and Hamlet (1997)	1993–1995 figures reported by race permit pre-/post-comparison; no adjustment for other covariates reported.*	Birth-death records in Tennessee linked to Medicaid for 100% of Medicaid births in 1993, 1994, and 1995.	% initiating prenatal care in first trimester.	Compared with 1993 Medicaid, early prenatal care increased among TennCare mothers who were white, black, or other races.
First Mental Health (1997a)	1993–1996 figures reported by race permit pre-/post-comparison; no adjustment for other covariates reported.*	Birth-death records in Tennessee linked to Medicaid for 100% of Medicaid births in 1993, 1994, 1995, and 1996.	% initiating prenatal care in first trimester.	1996 TennCare >1995 TennCare overall and for white/black. Lower for other races, but still >1993 Medicaid.
First Mental Health (1997b)	1993–1996 figures permit pre-/post-comparison for TennCare (TNC) and non-TennCare births; no adjustment for other covariates reported.*	Birth records for 100% of Tennessee births in 1993, 1994, 1995, and 1996.	% births delivered by C-section.	C-section rate fell between '93 and '94, then rose through '96 for TNC and non-TNC births.

(*Continued*)

Table 9 *Summary of Study Findings Concerning the Impact of TennCare on Access and Use (Continued)*

Study	Analytic Framework	Data Sources	Measure	Findings
Ray et al. (1998)	Rates reported for all births and separately for high-risk births (mother <18, African American, living in low-income area); multivariate adjustment for maternal age, race, education, marital status, neighborhood income, and prior pregnancies.	Birth-death records in Tennessee and 7 border states, linked to Medicaid, for 100% of Medicaid births up to November 1 in 1993 and 1995.	% late prenatal care. % inadequate prenatal care visits.	Relative to 1993 Medicaid, 1995 TennCare births show no significant difference in access to prenatal care for all mothers and in separate analyses for African Americans, mothers <18, low-income neighborhoods, or first births.
Sloan, Conover, Mah, and Rankin (n.d.)	Multivariate adjustment for sociodemographic characteristics (7); health/pregnancy history (5); insurance (3), with North Carolina as a control state. Standard Medicaid = TN Medicaid in 1993 and NC Medicaid in 1993/1995.	Telephone interviews with 986 mothers with births in 1993 and 1995 randomly selected from 13 Tennessee hospitals and 10 matching facilities in North Carolina.	Initiated care in 1st trimester; Had regular prenatal provider; Usual source = private office-based; Usual source = nurse; Referred to MD during pregnancy; Use of selected prenatal tests (4); MD-attended birth; C-section use; Hospital stay <1 day.	Relative to standard Medicaid: TennCare 62% less likely to initiate care in first trimester. TennCare 1.22 times as likely to have ultrasound; 1.74 times as likely to have alpha fetoprotein. All other differences not significant at 0.05 level.
Sloan, Rankin, Whellan, and Conover (in press)	Multivariate adjustment for sociodemographic characteristics (6); prior health/functional status (4); insurance (3), with North Carolina as a control state. Standard Medicaid = TN Medicaid in 1993 and NC Medicaid in 1993/1995.	Telephone interviews with 445 patients hospitalized with acute myocardial infarction (AMI) in 1993 and 1995 randomly selected from 13 Tennessee hospitals and 10 matching facilities in North Carolina.	Had coronary revascularization at index AMI. If revascularized, had percutaneous coronary angioplasty (PTCA) rather than coronary artery bypass graft. Had regular provider in past year (post-AMI, 1995 patients).	TennCare as likely to be revascularized as privately insured but 2.55 times as likely as Medicaid patients. TennCare 63% less likely to have PTCA than privately insured; 64% less likely than uninsured. TennCare more likely to have regular provider than the uninsured or privately covered.

(*Continued*)

Table 9 *Summary of Study Findings Concerning the Impact of TennCare on Access and Use (Continued)*

Study	Analytic Framework	Data Sources	Measure	Findings
Conover, Rankin, and Sloan (n.d.)	Multivariate adjustment for maternal demographic characteristics (4); prior birth history (3); community characteristics (4); insurance coverage/TennCare status not available. Analysis equivalent to "difference-in-difference" methodology to determine if baseline differences between TN and NC changed in post-TennCare period.	100% of singleton births in matched birth-death files in 1993 and 1995 for Tennessee and North Carolina; analysis conducted on all mothers and those in high-poverty ZIP codes.	When/whether prenatal care initiated. Birth outside county of residence. Birth >25 miles from residence. Attendant at birth (MD vs. other). Use of obstetric procedures (amniocentesis = amnio, electronic fetal monitoring = EFM, ultrasound = ultra, labor induction). Method of delivery.	Relative to NC trend, 1995 TN births in high-poverty areas: Late prenatal care 27% worse. Out-of-county 22% less likely. >25 miles 15% less likely. MD-attended 43% less likely. Use of amnio, EFM, ultra, induction 14–41% less likely.

*Covariates are variables such as age, race, and sex that may influence a measure of interest, independent of their insurance status. Failure to adjust for such factors may result in incorrect inference that a measured effect is a result of insurance status rather than some other characteristics of an individual.

(Lamphere et al. 1997). By 1997, reliance on the hospital as the usual source of care was nearly identical between those covered by TennCare and the general population. In 1997, 74 percent of TennCare heads of households reported that they initially sought care in a physician's office (compared with 69 percent of Medicaid recipients in 1993), a figure that is somewhat lower than for all heads of household (81 percent). Nearly the identical pattern is observed for children. The difference in physician's office use between TennCare enrollees and the general population is attributable to somewhat higher use of clinics by TennCare enrollees. A multivariate study of adult patients hospitalized for heart attacks found that TennCare patients were more likely to have a regular provider following hospitalization than either the uninsured or privately insured patients (Sloan et al. in press).

Thus, while TennCare has not entirely "mainstreamed" delivery of primary care, it at least has made significant inroads in reducing inappropriate use of the system by low-income patients. Notwithstanding these successes, a fall 1995 survey of nonelderly adults below 250 percent of the FPL showed that 58 percent reported having no regular physician—a level somewhat higher than in another state that has adopted comprehensive health reforms, Oregon (52 percent)—but not significantly different from two other states that have retained standard Medicaid programs, Florida (62 percent) and Texas (59 percent) (Schoen et al. 1997).

Waiting Times for Appointments

The UT surveys show that 74 percent of TennCare heads of household reported that they could make a routine appointment with their primary care physician within one week in 1997. Sixteen percent said it took one to three weeks to get an appointment, and 11 percent said it took longer than three weeks to get an appointment (Fox and Lyons 1998). These numbers are nearly identical to those reported in 1994, but no equivalent question was asked in 1993. Thus, it is not possible to determine how these figures might have changed as a result of expansion in the supply of physicians seeing TennCare patients. The figures are reasonably consistent with a 1998 state-sponsored provider survey showing that only 2.5 percent of primary care physicians and 9.7 percent of specialists reported that, on average, their TennCare patients had to wait longer than one month to get an appointment (Tennessee Department of Health 1999). In contrast to relatively short waiting times for physician care, in late 1997 the Tennessee Health Care Campaign reported that children must wait four to six months for a dental appointment (LaPolt 1998).

Average Travel Time to Physician

Average travel time to the physician's office in 1997 was 21 minutes. Note that under TennCare the *maximum* travel time for primary care visits is not supposed to exceed 30 minutes for MCO members, even in rural areas. Although the distribution of responses is not reported, an average travel time

of even 21 minutes implies a nontrivial fraction of patients who must travel more than 30 minutes to obtain care, because it is expected that a substantial share of the sample would be within 10 minutes of care. Nationally, in 1987, only 6 to 7 percent of those in urban areas and 11 percent of those in rural areas had to travel more than 30 minutes to their usual site of care (Braden, Beauregard, and Cohen 1994).

A study of all births in Tennessee, controlling for maternal characteristics and using a control state to account for secular trends, found that geographic access improved in 1995 relative to 1993. In Tennessee, compared with North Carolina, out-of-county births were 22 percent less likely, and mothers were 15 percent less likely to travel more than 25 miles to the hospital to deliver (Conover, Rankin, and Sloan n.d.).

Office Waiting Times

The UT survey results also show that the average waiting time in the physician's office beyond the scheduled appointment time has decreased dramatically from a high of 105 minutes in 1994 to 52 minutes in 1996 and 1997 (Fox and Lyons 1998). (Again, there is no 1993 Tennessee comparison.) Despite the decrease, the average wait exceeds TennCare standards, which allow a maximum waiting time of 45 minutes (GAO 1995). Moreover, 1987 figures for the United States show that only 18 to 23 percent of those in urban areas and 18 percent in rural areas experience waiting times longer than 30 minutes at their usual source of care (Braden, Beauregard, and Cohen 1994). Thus, while performance under TennCare has improved, the typical TennCare recipient waits far longer for care than the average American, even after nearly four years of program operations.

Use Patterns

There are mixed results regarding care use, generally in the expected directions (i.e., improved access/higher use of primary care and reductions in use of expensive services).

Emergency Room Use

At Vanderbilt University Hospital, emergency room (ER) use declined more than 25 percent initially (the reduction was 40 percent for children), but by nine months into the program total ER usage had returned to its previous levels and was increasing at the same rate as before TennCare began (Wrenn and Slovis 1996). In contrast, ER use statewide fell throughout the first few years of TennCare, and by 1996 it was 14 percent lower than in 1993. Yet even after the total volume of visits returned to previous levels, TennCare apparently continued to affect patient behavior. A comparison of Vanderbilt's ER patients in summer 1994 with those one year later found a 25-percentage-point reduction in the

fraction of patients who failed to call their primary care provider and who had never visited their PCP before they visited the ER (Young et al. 1997). In that one year, there was a tripling of awareness (to 94 percent) of the need to call the PCP before an ER visit. On the other hand, the fraction of patients who tried but were unable to reach their PCP by phone increased from 31 percent in 1994 to 40 percent in 1995, even though in theory all MCOs were supposed to be providing 24-hour access to primary care. Moreover, in both years, nearly 40 percent of patients reported having no PCP or not knowing their PCP's name.

Urgent Care for Adults

A multivariate study of adult patients hospitalized for heart attacks found that TennCare patients were more than 2.5 times as likely to receive coronary revascularization[18] as those on traditional Medicaid—bringing them to the same level of care as privately insured patients. Of those who were revascularized, TennCare patients were 63 percent *less* likely than private patients to receive percutaneous angioplasty, instead receiving the more expensive coronary artery bypass graft procedure (Sloan et al. in press).

Frequency of Physician Visits

The percentage of children who see a doctor more than once a year increased from 64 percent under Medicaid (1993) to 72 percent under TennCare (1997) while remaining nearly unchanged (at 65 percent) for Tennessee children in general. For TennCare heads of household, the share seeing a doctor more than once a year rose from 47 percent in 1993 to 67 percent in 1997, whereas for all Tennessee adults this share rose from 41 to 51 percent during the same period (Fox and Lyons 1998).

Birth-Related Care

Anecdotal evidence indicates that because of delays in getting an appointment to obtain a referral to an OB-GYN from their primary care physician—a requirement imposed by seven TennCare plans even as late as 1997—women experienced a delay of several weeks that pushed them into their second trimester (Page 1998). Delays also were introduced by physicians who refused to see pregnant women under presumptive eligibility rules (further discussion below). Despite these apparent barriers to obtaining needed care, a multivariate study found no changes in access to prenatal care between 1993 and 1995 among Medicaid/TennCare mothers, using both third-trimester prenatal care initiation and the Kessner index of prenatal care adequacy as measures of prenatal care access (Ray et al. 1998; First Mental Health 1997b). Another study of all births showed that the cesarean section rate among Medicaid/TennCare eligibles declined initially, but by 1996 it had returned to nearly the same level as that of traditional Medicaid mothers in 1993 (Bureau of TennCare 1997).

A study that controlled for numerous maternal characteristics to adjust for changes that TennCare might have introduced in the mix of births, and used a control state to adjust for secular changes in use patterns over time, found that there was no change in the likelihood of having a regular prenatal provider or in whether this provider was a physician or a nurse. However, the study did find first-trimester use was 62 percent lower under TennCare than in standard Medicaid (Sloan et al. n.d.). On the other hand, this study also showed that under TennCare pregnant women were 22 percent more likely to have ultrasound and 74 percent more likely to have an alpha fetoprotein test during pregnancy, while there was no significant change in C-section use.

Finally, a study of *all* births in 1993 and 1995 that controlled for numerous maternal characteristics and again used a control state to net out secular trends found that by 1995, in high-poverty ZIP codes in Tennessee, late (third trimester) prenatal care had worsened; use of selected obstetric procedures was 14 to 41 percent less; and the number of physician-attended births was 43 percent lower than what would have been expected given observed trends in the control state (note that insurance status is not controlled for in this analysis) (Conover, Rankin, and Sloan n.d.). This suggests that TennCare may have inadvertently adversely affected care for the remaining uninsured women who relied on the safety net to obtain care.

Inability to Obtain Needed Care

A small study of chronic pain patients seen at Vanderbilt showed that, by most measures, TennCare patients presented with more pain and physical pathology than those with private coverage, which the authors speculate may be in part a result of access problems (Livengood et al. 1997). A 1998 provider survey conducted by the state showed that, depending on specialty, between 6 and 52 percent of providers did not believe TennCare offered adequate access to timely treatment. Further, between 53 and 65 percent thought that TennCare did not offer adequate access to necessary medications (Tennessee Department of Health 1999). As noted earlier, issues of access to children's dental services and diagnostic screening and treatment of mental, physical, and developmental health problems have culminated in legal actions against TennCare. Similarly, a mid-1997 survey of adult enrollees with serious and persistent mental illness and their relatives showed that respondents had a high rate of physical problems but had difficulty in getting medical care for treatment of those problems.[19]

Provider concerns about presumptive eligibility appear to account for some of the apparent access barriers facing pregnant women cited earlier (Bonnyman 1996e; Miller 1997; Page 1998). Traditionally, presumptive eligibility gave women 45 days to complete the Medicaid enrollment process and guaranteed that they could obtain immediate Medicaid-paid care without delay (even if eligibility was subsequently denied). In 1993, nearly two-thirds of Medicaid-eligible

pregnant women relied on such provisional enrollment (Phillippi 1998). However, under TennCare, many doctors were afraid to treat women who did not yet have their permanent TennCare card because until a permanent card was issued they had no assurance that such women would be assigned to an MCO in which those doctors participated. A Nashville Metro Health Department survey from October 1, 1995, to March 31, 1996, showed that 27 percent of expectant women were refused an appointment with a doctor or health professional (Miller 1997).

Whether because of provider reluctance to accept presumptive eligibles or because TennCare has improved continuity of coverage between pregnancies, the fraction of eligibles relying on this mechanism to enter TennCare declined from 64 percent in 1993 to 37 percent in 1996 (Phillippi 1998). Moreover, the TennCare Bureau subsequently clarified that a presumptive patient is eligible for, and will be reimbursed for, *full* benefits; instituted a policy stating that TennCare MCOs can no longer require that a pregnant mother see her primary care doctor before a prenatal OB visit; and now allows providers to fax a copy of the TennCare presumptive eligibility form to the MCO, allowing prompt entry into the system so that pregnant women may have immediate access to such things as prescriptions. In short, the vast majority of the early problems have been alleviated with the maturity of the presumptive eligibility program, although residual issues remain, stemming from patient uncertainty over coverage.[20]

TennCare and Family Health Costs

Only one small study has been done on TennCare's impact on the financial burden faced by families. A survey of 245 TennCare enrollees in six Nashville MCOs conducted in spring 1996 found that of those facing cost-sharing requirements under TennCare (i.e., non-Medicaid enrollees above poverty), 22 percent indicated they had been unable to afford copayments for prescriptions. As a consequence, 62 percent of these opted to go without their prescribed medicine (cited in Bonnyman (1996a)). For those who are traditionally Medicaid eligible (roughly 1 million in 1994),[21] TennCare made no changes in cost-sharing for services and required no premiums, so no change in health spending would be expected for such individuals.

TennCare evidently was a boon to the medically uninsurable. Under the former TCHIP high-risk pool, only 3,900 had been able to afford the premiums for coverage, even though the premiums were capped at 150 percent of standard rates. Because the uninsurables were folded into a much larger pool consisting mostly of children and young adults, the premiums they pay under TennCare are far more attractive, and this—coupled with a much more generous income-related subsidy—resulted in 42,000 uninsurables enrolled in TennCare by the end of its second year (Bonnyman 1996c). Enrollments have risen to 108,000 by early 1999; this growth suggests significant savings to these families.

TennCare's Impact on Quality and Health Status

This section reviews the literature that has examined the effect of TennCare on quality and health status (table 10). It includes both process and subjective measures of medical care quality. Because health status often is a subtle combination of patient behavior/lifestyle and outcomes stemming from the technical quality of medical care, this section distinguishes between these two where possible insofar as TennCare plausibly could have had effects on both patient behavior and provider performance.

Quality

Preventive Services

Several studies have examined process measures of quality, including receipt of preventive services such as immunizations and screenings, with mixed results. In 1997, the statewide immunization rate among two-year-olds was 78 percent—identical to the national average and ranking Tennessee 25th among all states (Annie E. Casey Foundation 1999). In 1994, the estimated immunization rate was 74 percent, but the difference is not statistically significant (Centers for Disease Control and Prevention 1995). Well-child visit rates for children ages three to six on Medicaid/TennCare generally were higher in 1995 and 1996 than in 1993, both statewide and in most of the 12 community service areas (First Mental Health 1997a). The percentages of TennCare-enrolled women ages 52 to 69 receiving mammograms within the past two years and women ages 21 to 64 receiving a Pap smear within the past three years were also higher in 1995 and 1996 than among Medicaid-eligible women in 1993 statewide and in nearly all CSAs (First Mental Health 1997a).

On the other hand, the percentage of TennCare enrollees ages 4 to 21 who have had one or more dental visits during the past year was lower in 1995 and 1996 compared with 1993 Medicaid enrollees statewide and in all but two CSAs (First Mental Health 1997a). Because fewer than one-third of children enrolled in TennCare received regular dental screenings—below previous Medicaid levels—in March 1998, TennCare signed a consent decree with the Tennessee Justice Center to achieve federal minimum levels of screening by doubling the percentage of children receiving such screenings. TennCare has responded by putting pressure on MCOs to improve their dental care networks, but this may be difficult to achieve given the number of dentists who have left TennCare and the low number of pediatric dentists statewide (Davis 1998).

Self-Rated Quality of Care

The University of Tennessee surveys show that self-rated assessments of "poor" quality initially rose among Medicaid/TennCare eligibles under TennCare, but subsequently declined to below pre-TennCare levels—for both house-

Table 10 *Summary of Study Findings Concerning the Impact of TennCare on Quality and Health Status*

Study	Analytic Framework	Data Sources	Measure	Findings
Fox and Lyons (1998)	1993–1997 time series permits pre-/post-comparisons; insurance status permits TennCare (TNC) vs. 1993 Tennessee Medicaid (MCD) and TNC vs. general population comparisons.	Annual telephone interviews conducted by University of Tennessee (1993–1997) targeting 5,000 households each year, using random-digit dialing. Response rate ranges from 60% to 80% by year. Results weighted to account for undersampling of low-income households without phones.	Self-rated quality of care received by head of household (HH), Tenn-Care/Medicaid recipients. HH-rated quality of care received by children, TNC/MCD recipients. Self-rated quality of care received, general population.	Poor quality rose in 1994 (16%) vs. 1993 (11%) but fell in 1996–97 (8%) for TennCare. Excellent/good rising over time (1993 = 58%; 1997 = 66%). Similar pattern as above. Virtually unchanged from 1993–1997 for adults and children.
Fox and Lyons (1994)	Same as above, with more detailed breakdowns by coverage for selected questions.	Same as above.	Self-rated quality of care received by head of household. HH-rated quality of care received by children.	Poor quality rose in 1994 (25%) vs. 1993 (13%) among those remaining uninsured. Similar degradation of quality among uninsured children.
First Mental Health (1997a)	1993–1995 figures reported statewide and for 12 CSAs permit pre-/post-comparisons of TennCare (TNC) with 1993 Tennessee Medicaid (MCD) and 1995 rates for general population in South (STH) or U.S. where available. No multivariate adjustment except for ambulatory-care sensitive conditions (ACS), which were adjusted for age, sex, race, and illness severity.	100% of Medicaid/TennCare enrollees in 1993, 1994, and 1995; 1995 estimates for general population in South and U.S.	Mammogram rate/1,000 member years: women ages 50 to 64. Pap smear rate/1,000 member years: women ages 21 to 64. Well-child visit rate/1,000 member years: children ages 3 to 6. Dental visit rate/1,000 member years: under age 21. Adjusted admission rate/1,000 member years for all ACS: <65.	TNC rate > 1993 MCD in '95/'96 in all CSAs. TNC rate < MCD in '95/'96; TNC rate = STH in '95 but > STH in '96; TNC =/> MCD in 3 CSAs in '95 and 7 CSAs in '96. TNC rate =/> MCD, STH, U.S. in '95/'96 statewide and in most CSAs. TNC rate < MCD in '95/'96 and in all but 2 CSAs in '95; in all but 1 CSA in '96. TNC lower ACS rate than MCD in '95/'96; higher than U.S. '94.

(*Continued*)

Table 10 *Summary of Study Findings Concerning the Impact of TennCare on Quality and Health Status (Continued)*

Study	Analytic Framework	Data Sources	Measure	Findings
First Mental Health (1997a)	1993–1996 figures reported statewide and for 12 CSAs permit pre-/post-comparisons of TennCare (TNC) with 1993 Tennessee Medicaid (MCD); no adjustment for other covariates reported.	100% of Medicaid/TennCare enrollees continuously enrolled in 1993, 1995, and 1996.	% women ages 52 to 69 receiving mammogram in past 2 years. % women ages 21 to 64 receiving Pap smear in past 3 years. % children ages 3 to 6 receiving 1+ well-child visit in past year. % members ages 4 to 21 receiving 1+ dental visit in past year.	TNC rate > MCD in '95/'96 statewide and in all but 1 CSA. TNC rate > MCD in '95/'96 statewide and in all but 1 CSA. TNC rate > MCD in '95/'96 statewide and in all CSAs. TNC rate < MCD in '95/'96 statewide and in all but 2 CSAs.
First Mental Health (1997a)	1993–1996 figures reported statewide permit pre-/post-comparisons of TennCare (TNC) with 1993 Tennessee Medicaid (MCD); no adjustment for other covariates reported.	100% of TennCare MCO enrollees in 1994–1996.	Inpatient admissions for asthmatic children/1,000 member years among adolescents ages 10 to 17. ER visits/1,000 member years for same children.	TNC rate > 1993 MCD in '94/'95/'96 for both admissions and ER visits.
First Mental Health (1997b)	1993–1996 figures reported statewide permit pre-/post-comparisons of TennCare (TNC) with 1993 Tennessee Medicaid (MCD); no adjustment for other covariates reported.	100% of female Medicaid/TennCare enrollees in 1993–1996; 100% of non-TNC births in 1993–1996.	Births/1,000 member years among adolescents ages 10 to 17. Average months since last delivery, all pregnancies.	TNC teen birthrate < '93 MCD and fell steadily from '94 to '96. TNC interval > 1993 MCD in '94/'95/'96; non-TNC < '93 non-TNC for all years.
Phillippi and Hamlet (1997)	1993–1995 figures reported statewide permit pre-/post-comparisons of TennCare (TNC) with 1993 Tennessee Medicaid (MCD); rates separately reported for all, white, black and other; otherwise, no adjustment for other covariates reported.	Birth-death records in Tennessee linked to Medicaid for all births in 1993, 1994, and 1995.	Infants per 1,000 live births who died before 1 year of life. % low birth weight. % preterm deliveries (<37 weeks).	Compared with 1993 MCD, TNC death rate lower in '94/'95. TNC rate > 1993 MCD in '94, but lower in '95. TNC rate = 1993 MCD in '94, but lower in '95.
First Mental Health (1997b)	Same as above with addition of 1996 data.	Birth-death records in Tennessee linked to Medicaid for all births in 1993, 1994, 1995, and 1996.	Infant mortality rate per 1,000 live births. % low birth weight. % preterm deliveries (<37 weeks).	1996 TNC rate < 1995 TNC overall and for all races. '96 TNC rate > '95 TNC, but <1993 MCD overall and whites/blacks. 1996 TNC rate < 1995 TNC overall and for all races.

(*Continued*)

Table 10 *Summary of Study Findings Concerning the Impact of TennCare on Quality and Health Status (Continued)*

Study	Analytic Framework	Data Sources	Measure	Findings
Ray et al. (1998)	Multivariate analysis controlling for maternal age, race, education, marital status, neighborhood income, prior pregnancies, and birth weight (last was only used in models for death).	Birth-death records in Tennessee and 7 border states, linked to Medicaid, for all births up to November 1 in 1993 and 1995.	% low birth weight. % very low birth weight. % dying in first 60 days.	Relative to 1993 Medicaid, 1995 TennCare births show no significant difference in any outcomes for all mothers and in separate analyses for African Americans, mothers <18, low-income neighborhoods, or first births.
Sloan, Conover, Mah, and Rankin (n.d.)	Multivariate adjustment for sociodemographic characteristics (7); health/pregnancy history (5); insurance (3), with North Carolina as a control state. Standard Medicaid = TN Medicaid in 1993 and NC Medicaid in 1993/1995.	Telephone interviews with 986 mothers with births in 1993 and 1995 randomly selected from 13 Tennessee hospitals and 10 matching facilities in North Carolina.	Infant rehospitalization.	Relative to standard Medicaid: Rehospitalization rate for TennCare infants not significantly different.
Sloan, Rankin, Whellan, and Conover (in press)	Multivariate adjustment for sociodemographic characteristics (6); prior health/functional status (4); insurance (3), with North Carolina as a control state. Standard Medicaid = TN Medicaid in 1993 and NC Medicaid in 1993/1995.	Telephone interviews with 445 patients hospitalized with acute myocardial infarction in 1993 and 1995 randomly selected from 13 Tennessee hospitals and 10 matching facilities in North Carolina.	Health status at interview (SF-36): Physical functioning. Role—physical (e.g., work). Bodily pain. General health. Mental health. No. of Activities of Daily Living (ADLs) without difficulty.	Relative to patients with private coverage: Health status for TennCare patients significantly lower for physical role only. Health status for Medicaid patients significantly worse on all dimensions except bodily pain. Worse ADL status for Medicaid, but not TennCare.
Conover, Rankin, and Sloan (n.d.)	Multivariate adjustment for maternal demographic characteristics (4); prior birth history (3); community characteristics (4); insurance coverage/TennCare status *not* available. Analysis equivalent to "difference-in-difference" methodology to determine if baseline differences between TN and NC changed in post-TennCare period.	All singleton births in matched birth-death files in 1993 and 1995 for Tennessee and North Carolina; analysis conducted on all mothers and those in high-poverty ZIP codes.	Birth under age 18. Birth out of wedlock. Maternal behavior while pregnant: Weight gain < 15 lbs. Smoked. Used alcohol. Birth outcomes: Premature birth (<37 weeks). Very low birth weight (<1,500 g). Any birth abnormalities. Apgar score good at 5 min.	Relative to NC trend, TN births in 1995: 13% more likely to gain <15 lbs. 22% more like to use alcohol. 16% less likely to have good Apgar scores. TN mothers in high-poverty areas: 24% more likely to gain <15 lbs. 30% less likely to have low birth weight. 11% less likely to be abnormal.

hold heads and children (Fox and Lyons 1998). "Excellent" or "good" assessments rose steadily from 58 percent among Medicaid enrollees in 1993 to 66 percent among TennCare enrollees in 1997. In contrast, among the general population, there was virtually no change in quality assessments between 1993 and 1997 for either children or heads of households. Among those who remained uninsured, however, ratings of "poor" quality nearly doubled—to 25 percent—between 1993 and 1994, for both adults and their children (Fox and Lyons 1994). Later surveys do not offer a similar breakdown, so it is not known whether this pattern persisted. Thus, in the eyes of its target population, TennCare ultimately represented an improvement in quality, although this might have been at the expense of quality for a minority of others.

In contrast, physicians generally have a poor opinion of TennCare's quality. A 1997 survey found that only 12.6 percent thought TennCare was better than traditional Medicaid and 45.9 percent thought it was worse. More than one-third thought that care given to their TennCare patients was worse than that given other patients. A 1998 survey found that those rating the quality of care received by TennCare enrollees as "fair" or "poor" ranged from 26 to 34 percent, depending on specialty.[22]

Health Status

Lifestyle/Behavior

Under TennCare, the teen birthrate declined steadily between 1993 and 1996 among Medicaid/TennCare-eligible mothers (Bureau of TennCare 1997). However, in a multivariate analysis that controlled for numerous maternal characteristics and used a control state to account for secular trends, the rate of teen and out-of-wedlock births showed no significant change between 1993 and 1995. Relative to what might be expected, the percentage of mothers gaining less than 15 pounds increased (for both the general population and mothers living in high-poverty areas), as did the percentage using alcohol during pregnancy (for the general population only) (Conover, Rankin, and Sloan n.d.).

Avoidable Morbidity

The rate of ambulatory care–sensitive conditions among the nonelderly (adjusted for age, sex, race, and illness severity) was lower among TennCare eligibles in 1995 and 1996 than among Medicaid eligibles in 1993 (First Mental Health 1997a). Similarly, the rate of emergency room visits for asthmatic children ages 10 to 17 was lower among TennCare eligibles in 1995 and 1996 than among such children on Medicaid in 1993, both statewide and in all CSAs. The same was true of inpatient admission rates for such children (First Mental Health 1997a). This consistent pattern suggests that TennCare generally has improved performance in the delivery of preventive services and effective outpatient care.

A study of patients hospitalized for heart attacks showed no significant difference between privately insured patients and those on TennCare in the post-hospitalization level of health status—including physical functioning, bodily pain, general health, mental health, and number of activities of daily living performed without difficulty. In contrast, health status for traditional Medicaid patients was significantly worse relative to those with private coverage on all dimensions except bodily pain (Sloan et al. in press). Such findings give the general impression that TennCare in essence was able to provide "mainstream" medical care for Medicaid patients relative to the pre-TennCare standard.

Birth Outcomes

Several studies have examined TennCare's impact on birth outcomes. A multivariate study of 1993 and 1995 Medicaid/TennCare births controlling for maternal characteristics found no significant change in low-birth-weight or very low birth-weight rates attributable to TennCare even among high-risk mothers (African Americans, mothers under age 18, and those from low-income neighborhoods) (Ray et al. 1998). A similar multivariate study of all Tennessee births in 1993 and 1995 (using a control state to adjust for secular trends) found no significant change in premature births, but a 30 percent lower-than-expected rate of low birth weights among mothers in high-poverty areas (Conover, Rankin, and Sloan n.d.).

As for infant mortality, unadjusted figures show that Tennessee's infant case fatality rate for Medicaid/TennCare eligibles declined steadily between 1993 and 1996 (First Mental Health 1997b). However, the multivariate results for Medicaid/TennCare births show no significant change in the 60-day case fatality rate for newborns between 1993 and 1995 (Ray et al. 1998).

TennCare's Impact on Satisfaction

Satisfaction regarding TennCare has been measured globally and in terms of the specific dimensions discussed earlier, including access, costs, and quality (table 11). Satisfaction can be measured using self-reports from surveys, but it also can be inferred from behavior such as grievances filed or decisions to switch plans.

Self-Reported Satisfaction

Global Satisfaction

In its annual health survey, the University of Tennessee found that satisfaction with Medicaid/TennCare coverage dropped by 21 percent between 1993 and 1994. Satisfaction with insurance coverage under TennCare now has returned to pre-TennCare levels (Fox and Lyons 1998). By 1997, 81 percent of

Table 11 *Summary of Study Findings Concerning the Impact of TennCare on Patient Satisfaction*

Study	Covariates/Controls	Data Sources	Measure	Findings
Fox and Lyons (1998)	Annual surveys conducted 1993–1997 permit pre-/post-comparisons; comparisons based on insurance status also available; no adjustment for covariates reported.	Telephone interviews targeting 5,000 households each year, using random-digit dialing. Response rate ranges from 60% to 80% by year. Results weighted to account for undersampling of low-income households without phones.	Global satisfaction with coverage (TennCare/Medicaid recipients only).	Recipient satisfaction declined initially (1994 = 61%), but now has returned to 1993 (82%) level: 1996 = 82%; 1997 = 81%.
Fox and Lyons (1997)	Same as above, with more detailed insurance breakdowns.	Same as above.	TennCare vs. previous status, former Medicaid. TennCare vs. previous status, former uninsured.	At first viewed TennCare as worse (1994 = 51%); by 1996, better = 29%, worse = 27%. Most view TNC as better: 1994 = 59%; 1996 = 71%.
Fox and Lyons (1994)	Same as above, with more detailed insurance breakdowns.	Same as above.	Global satisfaction with coverage.	Satisfaction declined for TNC/MCD (1993 = 82%; 1994 = 61%), while improving 7–9% for group, individual, and Medicare coverage.
Division of Health Care Services Evaluation (1998)	No adjustment for covariates reported.	Random sample of 2,260 TennCare enrollees who did not switch plans in fall 1997 (accounting for 97.3% of all enrollees); respondents rated satisfaction on 14 dimensions using 5-point scale. Reported results collapsed into E = "excellent" and F&P = "fair" or "poor" ratings.	Satisfaction with: Overall plan. Location of clinic. Clinic hours of operation. Access to specialists. Access to emergency care. Office waiting time. Waiting time to get appointment. Information by telephone. MD thoroughness, carefulness. MD's technical skills. Interpersonal aspects of care. Cost of medical care.	 80% E; 11% F&P 31% E; 15% F&P 22% E; 12% F&P 27% E; 19% F&P 10% E; 32% F&P 10% E; 32% F&P 16% E; 19% F&P 20% E; 24% F&P 33% E; 12% F&P 30% E; 14% F&P 38% E; 10% F&P 24% E; 25% F&P

(*Continued*)

Table 11 *Summary of Study Findings Concerning the Impact of TennCare on Patient Satisfaction (Continued)*

Study	Covariates/Controls	Data Sources	Measure	Findings
Sloan, Conover, Mah, and Rankin (n.d.)	Multivariate adjustment for sociodemographic characteristics (7); health/pregnancy history (5); insurance (3), with North Carolina as a control state. Standard Medicaid = TN Medicaid in 1993 and NC Medicaid in 1993/1995.	Telephone interviews with 986 mothers with births in 1993 and 1995 randomly selected from 13 Tennessee hospitals and 10 matching facilities in North Carolina.	Satisfaction with: All care thought needed. Waiting time for appointments. Waiting time for doctor. Answers to questions. Care received.	No significant difference between TennCare and traditional Medicaid for any measure. Satisfaction for TennCare patients significantly higher than for uninsured for all except waiting time for appointment.
Conover, Mah, Rankin, and Sloan (1999)	Multivariate adjustment for sociodemographic characteristics (6); prior health (1); insurance (3), with North Carolina as a control state. Standard Medicaid = TN Medicaid in 1993 and NC Medicaid in 1993/1995.	Telephone interviews with 705 patients hospitalized with acute myocardial infarction or head trauma in 1993 and 1995 randomly selected from 13 Tennessee hospitals and 10 matching facilities in North Carolina.	Satisfaction with: Medical care. Location of MD office. MD hours of operation. Access to specialists. Access to emergency care. Waiting time to see MD. Waiting time to get appointment. Information by telephone. Attention paid to patient. Time spent with doctor. MD's technical skills. MD's personal manner. Cost of medical care.	No significant difference between TennCare and traditional Medicaid for any measure. Satisfaction for TennCare patients significantly higher than for uninsured for cost of medical care.

TennCare recipients reported that they were satisfied with health insurance coverage under TennCare, compared with 82 percent of Medicaid recipients in 1993.

Satisfaction with Selected Dimensions

A 1996 telephone survey of nearly 1,700 patients hospitalized in Tennessee and North Carolina (control state) in 1993 or 1995 found that for both adult care (heart attacks and head traumas) and newborn care, satisfaction with care during and after hospitalization across a variety of dimensions was no different between those on TennCare and those with traditional Medicaid. For newborn care, satisfaction among TennCare recipients was significantly higher than among uninsured patients in terms of (a) getting all the care thought needed; (b) waiting times in the doctor's office; (c) getting answers to all questions; and (d) overall care received, but not for waiting times for appointments. For adult care, TennCare patients were more satisfied than the uninsured on 13 of 14 dimensions—the sole exception being the cost of one's medical care (Conover et al. 1999).

Satisfaction Inferred from Behavior

A rough measure of general satisfaction is that in the first open enrollment period, fewer than 10 percent of TennCare eligibles (about 100,000) switched plans (Gold, Frazer, and Shoen 1995). In fall 1997, roughly 35,000 switched plans—2.7 percent of enrollees. The principal reason for switching, cited by 44 percent of respondents, was to see a specific physician in another MCO. A logistic regression showed that adults who switched plans tended to be younger, nonwhite, and less satisfied than those who did not (Division of Health Care Services Evaluation 1998). Children with untreated health problems also were more likely to be switched by their parents. Switchers were found to be more dissatisfied on all of 14 different dimensions of satisfaction.

In 1994, the Tennessee Consumer Advocacy Program received a total of 2,720 complaints, of which 46 percent involved the TennCare Bureau; 35 percent the individual MCOs; and the balance, enrollee problems (Mirvis et al. 1995). Most of the MCO complaints stemmed from concerns about inadequate numbers of specialists, disputes about covered services, and misrepresentation of benefits (Mirvis et al. 1995). While this implies only 1 formal complaint for every 467 TennCare enrollees, it should be kept in mind that during this same period the state also operated a TennCare hotline that averaged 50,000 calls daily in the first quarter of 1994 and 9,000 daily calls in the second quarter (these counts include calls by MCOs and providers) (GAO 1995). Moreover, an independent TennCare consumer advocacy line received a high volume of complaints by phone (Gold, Frazer, and Schoen 1995).

Most of the initial beneficiary complaints stemmed from the fact that the state had conducted an enrollment by mail before MCOs had completed their

provider contracts. Thus, many eligibles were unable to determine which MCO(s) their personal provider would opt to join and were upset when they belatedly discovered that they had signed up with an MCO that did not include their regular provider. More recent data show 4,550 enrollee appeals filed from October 1997 to October 1998 under a revamped TennCare grievance process (1 complaint per 276 eligibles). Of those resolved during this period, 65 percent were reversed in favor of the enrollee, with formulary decisions by far being the leading cause (43.5 percent) of reversals (Tennessee Department of Health 1999).

Shortcomings in Grievance Process

While satisfaction with TennCare is currently high, there are apparent gaps in the current system for informing recipients of their rights and responsibilities under TennCare and how to file grievances if they become dissatisfied. Although the entire grievance process was overhauled effective October 28, 1996,[23] the 1997 UT survey (conducted in the last quarter) showed that fewer than two-thirds (63 percent) of respondents recalled receiving a list of their rights and responsibilities. Fewer than one-third (31 percent) reported having received information on filing grievances, and even fewer (28 percent) reported having received a grievance form to be used in case of a complaint (Fox and Lyons 1998). An audit issued in March 1999 found that while TennCare maintains a central registry of enrollee appeals (as required by a 1996 consent decree), the Bureau of TennCare does not analyze these data to identify programmatic deficiencies or improve quality of care (Tennessee Department of Health 1999).

Summary—The Effect of TennCare on Patients

Based on the evidence presented in this chapter, the following conclusions emerge:

- Although there is conflicting evidence on the magnitude of the impact of TennCare on insurance coverage, the evidence seems to suggest that the program reduced the number of uninsured by at least one-third. The program caused a sharp reduction in the number of uninsured when initially implemented, but this decline has dissipated over time as TennCare enrollment has leveled off.
- TennCare has been particularly successful in improving coverage of the uninsurable or high-risk population. These individuals often have very limited access to private coverage. The availability of TennCare has provided access, but at a very high cost to the state. The recent fiscal problems that the program has faced have been attributable to growth in this population.
- The number of physicians reporting participation in TennCare exceeds the number that reported participation in Medicaid before TennCare. The num-

ber of primary care physicians available to TennCare beneficiaries is reportedly adequate, except in a limited number of areas. There are problems of access to dentists in many areas, however, and difficulties in obtaining specialty care in many managed care organizations other than BlueCross BlueShield.

- TennCare has increased the use of private physicians as the usual source of care for previously uninsured enrollees and has reduced the reliance on emergency rooms. TennCare has also reduced office waiting room times for low-income patients, but these waits are still higher than the average for the nation. Although in selected instances TennCare has narrowed or eliminated traditional differences between the privately insured and those on Medicaid in access to high-tech services, such differentials generally persist under TennCare.
- There is evidence of increased use of preventive services, including higher immunization rates, more well-child visits, and increases in the number of mammograms and Pap smears.
- There is also evidence of reductions in emergency visits and hospital admissions for asthma patients.
- On the other hand, there is evidence of lower levels of prenatal care, obstetrical services, and physician-attended births. The percentage of low-income people making dental visits has also declined.
- Although there is mixed evidence on TennCare's effect on morbidity and mortality, most indicators point in the direction of improved health for low-income people relative to pre-TennCare levels. Patient satisfaction both globally and on specific dimensions such as access, cost, and quality generally has been at least equal to and sometimes better than under traditional Medicaid. Among all TennCare enrollees (not just new enrollees), self-rated quality rose compared with 1993 traditional Medicaid. *Conceivably,* this average effect might mask a decline in quality for those traditionally eligible for Medicaid, for whom a decrease in quality might be offset by a large increase in quality for the formerly uninsured. But given the 2:1 ratio of Medicaid to uninsured/uninsurable eligibles under TennCare, the latter offsetting effect would need to have been unusually powerful to produce a net increase in average ratings for TennCare eligibles. So while theoretically possible, this seems implausible given the evidence.

Thus, on balance, while a number of problems remain, the TennCare program seems to have both increased coverage and increased access relative to pre-TennCare standards. TennCare has not fully "mainstreamed" the Medicaid population, but it has achieved significant inroads in reducing inappropriate emergency room and inpatient use by low-income patients while retaining or improving prior levels of quality and patient satisfaction. While it is difficult to isolate the effects on the traditional Medicaid population before and after TennCare, there is little question that those who previously were uninsured have benefited from TennCare in terms of access, cost, quality, and satisfaction.

Impact of TennCare on the Delivery System and the Public

TennCare, though plagued with many start-up problems, appears generally to have had a beneficial effect on those it intended to serve, including those formerly on Medicaid and those previously uninsured. However, the evidence reviewed earlier provides no indication of TennCare's impact on either the delivery system or the general public. How did the traditional "safety net" fare under TennCare's sweeping changes in financing and delivery? Did TennCare improve or worsen the financial picture for hospitals, and has this had any effect on the pace of consolidation or restructuring within that industry? How did TennCare affect physicians and other health professionals in general and primary care providers in particular? Finally, did TennCare save money, and if so, who ultimately benefited from this? How were the tax savings or losses from TennCare distributed between federal taxpayers and those in Tennessee? If Tennessee taxpayers saved money, were any of these savings offset by hidden effects of TennCare such as increased "cost-shifting" or reductions in access to care (e.g., because of long waits)? This section will address these critical questions.

TennCare's Impact on the Traditional Safety Net

The traditional "safety net" consists of a large array of providers of subsidized care for those unable to pay for their care. These providers include those delivering primary care and other outpatient services, such as *local health*

departments and *community health centers,* as well as hospitals that have traditionally served large numbers of indigent patients, including *public hospitals* and *teaching hospitals*. The safety net by no means is the exclusive source of care for the medically indigent. Such patients also rely heavily on uncompensated care provided by private community hospitals, physicians, and other providers; these impacts will be discussed in later portions of this section.

Local Health Departments

Background

There are 95 public health departments in Tennessee, including 89 local health departments (LHDs) in rural counties and 6 metropolitan facilities in the larger cities. Each LHD has an independent operating budget in affiliation with its respective county government. The general philosophy among LHD staff is that they will provide a needed service either through in-house means—even if this requires shifting around available state, local, and federal categorical funds—or, if this cannot be done, through indirect means, including referrals to local providers. All LHDs offer the "traditional" public health services, such as immunizations; well-child care; Medicaid early and periodic screening, diagnosis, and treatment (EPSDT) services; family planning; and communicable disease control. In addition, 44 percent of LHDs provide primary care services, and many provide other nontraditional services such as prenatal care and dental services (Gold, Frazer, and Schoen 1995). Tennessee's LHDs have undergone a dramatic shift regarding home health care from years ago, when almost every LHD provided home health services.

TennCare's Impact on LHDs

Tennessee's LHDs have been heavily involved in TennCare, with all LHDs (a) providing program information by phone or face-to-face; (b) providing outreach services to help enroll families and individuals who may be eligible for the program; (c) distributing application forms for enrollment by mail; (d) enrolling new TennCare eligibles face-to-face; (e) assisting clients in locating TennCare providers as well as obtaining referrals and necessary prior authorization for services; and (f) since May 1998, reverifying enrollment of TennCare eligibles who joined a TennCare MCO during the program's first three years (Tennessee Department of Health 1998a, 1999). In addition, 19 LHDs are designated primary care gatekeepers for TennCare MCOs, providing 24-hour coverage and arranging patient referrals (Tennessee Department of Health 1999). LHDs may receive fee-for-service payment for basic preventive services, but to do so, they must negotiate agreements with TennCare MCOs (Gold, Frazer, and Schoen 1995). The Department of Health negotiates contracts with MCOs on behalf of LHDs in rural areas. By contrast, the six metro health departments must negotiate their individual contracts. Beginning in January 1999, county health departments implemented a central intake and assessment program for TennCare clients with alcohol and drug problems (Tennessee Department of Health 1999).

In FY 1999, TennCare is projected to account for 18 percent of LHD funding,[24] although the Bureau of Health Services estimated in late 1998 that 25 to 30 percent of the health department patient load was from TennCare recipients. A recent Department of Health audit suggests that TennCare's overall impact on LHD patient loads was very modest. Total patients seen in rural LHDs increased 3 percent between 1993 and 1997, as did the number of visits. But this masks dramatic reductions in the number of patients receiving selected services (e.g., children's special services visits dropped 46 percent) that were offset by large increases in other types of patients (e.g., dental patients increased 105 percent). In FY 1998–99, $104.5 million in direct patient care services were provided through local health departments, the lion's share of which was subsidized care through either TennCare or other federal, state, or local funds.[25]

Community Health Centers[26]

Background

There are 17 federal grantee community health centers (CHCs) and 52 other federally qualified health centers (FQHCs) in Tennessee. In 1994, these centers served a population of 140,000, 15 percent of whom had a rural residence (Gold, Frazer, and Schoen 1995). Under traditional Medicaid, services of federally designated rural health clinics (RHCs) and FQHCs are considered mandatory services that must be offered to Medicaid recipients, with payment to such centers made using Medicare cost reimbursement rules (State of Tennessee 1993). Even before TennCare, these centers had obtained more experience with managed care than their counterparts in other states because of the Tennessee Managed Care Network (TMCN). TMCN is a foundation-funded initiative that began in 1984[27] and ultimately developed into a statewide HMO that included many of the state's CHCs and FQHCs in its network (Gold, Frazer, and Schoen 1995). TMCN served roughly 35,000 Medicaid eligibles at the time TennCare began. (The plan renamed itself Access MedPlus under TennCare in order to appear ahead of the BlueCross BlueShield plan on plan selection ballots.)

TennCare's Impact on CHCs

One of the TennCare waivers included a waiver of twin requirements that RHC/FQHC services be mandatory and that FQHCs be paid using Medicare reimbursement rules (State of Tennessee 1993). This ensured that MCOs were not obligated to contract with all RHCs/FQHCs, nor were FQHCs given a "preferred" status in terms of how MCOs elected to pay their providers. Because of their traditional role as providers of health care to low-income individuals in underserved areas, Tennessee's CHCs have been significantly affected by TennCare, with nearly 50 percent of all CHC visits attributable to TennCare enrollees. As of September 1998, each center had a contract with at least two of TennCare's MCOs, and the majority of centers had contracts with *all* MCOs within their respective region.

Some observers have been concerned about TennCare's impact on the long-term viability of the CHCs. To understand these dynamics better, the Tennessee Primary Care Association (TPCA) commissioned a study funded by the U.S. Public Health Service to analyze the financial impact of the TennCare program. This study of eight centers found that the number of uninsured patients in CHCs had declined by 16 percent between 1993 and 1997, and the number of TennCare/Medicaid patients increased by 40 percent during the same period (Goldstein Golub Kessler & Company, P.C. 1998). A recent study of four Section 1115 Medicaid waiver states showed that the percentage increase in Medicaid users between 1993 and 1996 was higher than in any of the other states (Hawaii, Oklahoma, and Rhode Island) and the United States overall; TennCare was the only one of the states to show a decline in uninsured users during this period, while uninsured users grew 22.5 percent nationally (Hoag, Norton, and Rajan 1999). Of greater significance, total visits for self-pay patients remained flat, while TennCare visits increased by 112 percent in 1997 compared with 1993 Medicaid. While the fact that the number of uninsured is dropping as TennCare patients increase seems positive, TPCA reports that TennCare reimbursement rates for CHCs are far below the cost of providing care. In TennCare's first year (1994), the cost per CHC visit was 9 percent lower than in 1993 and TennCare reimbursement was 80 percent of costs. By 1996, the cost per visit had increased by 12 percent, but TennCare payment per visit had dropped by 7 percent, resulting in a near doubling of the loss per TennCare patient between 1994 and 1996. As of September 1998, the average cost per TennCare visit was $80 (the same level as 1993), while actual reimbursement per visit was only $54 (the same level as 1996); these losses typically cannot be cost-shifted to privately insured payers. In 1996, FQHC losses per user in Tennessee (–$20) were more than double the national average (–$9), yet were lower than in certain other Section 1115 waiver states such as Hawaii (–$24) and Oklahoma (–$35) (Hoag, Norton, and Rajan 1999).

Because CHCs continued to lose roughly the same amount on their uninsured patients (because total visits remained unchanged) and TennCare introduced greater numbers of patients served at a loss, CHCs have experienced growing losses from TennCare and uninsured patients. Losses by the state's 17 CHCs amounted to $2.2 million in 1994 and an estimated $9 million in 1997. These losses may ultimately result in the decision of CHCs to limit the number of TennCare patients seen by limiting contracts with the MCOs. To offset these mounting losses, the CHCs have received state budget appropriations for the first time in the amount of $1 million in 1998.

Public Hospitals

Background

In 1993, Tennessee had 31 nonfederal short-stay community hospitals that were publicly owned, accounting for 23.7 percent of such hospitals and 22.8 percent of beds.[28] These include 2 state-owned hospitals (University of

Tennessee Memorial Hospital in Knoxville and University of Tennessee Medical Center in Memphis), 16 county-owned facilities, 4 city-owned hospitals, 2 city-county hospitals, and 7 district hospitals. Insofar as both state-owned facilities also are teaching hospitals, discussion of them appears in the later section on teaching hospitals.

Eleven of the county-owned hospitals are quite small, predominantly rural facilities (with fewer than 100 acute care beds), and only one, Maury Regional Hospital in Columbia (275 beds), has more than 200 beds. Likewise, half of the city-owned and city-county-owned hospitals had fewer than 100 beds, and the largest had only 182 beds. Included among these is Metropolitan Nashville General Hospital, a relatively small facility (105 beds) whose main business historically has been indigent care (Meyer and Blumenthal 1996). Three of the seven district hospitals also have fewer than 100 beds, but among the largest is Erlanger Medical Center (587 beds), the principal source of indigent care in Chattanooga. Because of their small size, many of these facilities in principle were vulnerable to closure or conversion if TennCare had adversely affected their financial performance. One other facility worth noting is the Regional Medical Center in Memphis (commonly termed "The Med"). The Med was converted from county-owned status to not-for-profit control in 1981 (to permit it to receive bond indebtedness), but as the major clinical teaching site in Memphis for the University of Tennessee, this large (525 beds) hospital is in many ways similar to Erlanger in the important role it plays in being the mainstay for indigent care in the city. Therefore, even though it is no longer publicly owned, most discussion of this hospital is contained here rather than in the section on teaching hospitals.

TennCare's Impact on Public Hospitals

TennCare has had several disparate effects on public hospitals. First, it eliminated the 6.75 percent hospital tax but also implicitly assumed that providers would continue to finance charity care amounting to at least 5 percent of gross revenues out of surplus funds. Second, TennCare promised to expand coverage to large numbers of uninsured who historically had been responsible for generating large uncompensated care losses at these safety net facilities, but it also eliminated the DSH payments to safety net facilities intended to offset some of these losses. Third, the capitation rates were set at levels that implicitly would have required a 25 percent savings from managed care,[29] most of which, based on empirical evidence, was likely to come from reductions in inpatient use (U.S. Congressional Budget Office 1994). Thus, how particular facilities have been affected by TennCare depends heavily on whether the negotiated payments with MCOs, coupled with the size of TennCare enrollments, have provided sufficient revenues to offset the combined loss of traditional Medicaid fee-for-service reimbursements and DSH payments to these facilities.

Although in theory TennCare might have actually improved the financial health of these safety net hospitals (by substituting Medicaid payments for uncompensated care for many uninsured patients), the evidence suggests that

for some, but not all, facilities the program has adversely affected their financial situation. This has occurred even though public hospitals succeeded in reducing their expense per admission by 6.7 percent between 1993 and 1995 (compared with a reduction of 2.9 percent for all community hospitals in Tennessee during the same period) (American Hospital Association 1998).

The Med's fiscal plight has been extensively publicized. Its total margin declined from +0.4 percent in 1993 to –2.7 percent in 1994. In the face of losing $42 million in DSH funding in TennCare's second year (out of a total budget of $210 million) (Brown 1996), along with a further loss of $11.03 million in graduate medical education (GME) funding that year, the hospital's margin fell further to –8.2 percent in 1995. This occurred despite TennCare's special payment of $12 million to cover uncompensated care costs in June 1995. (It should be noted that this latter performance was nearly identical to the 1992 margin of –8.0 percent.) Even though GME funding was restored to previous levels by 1996 and the hospital had closed 200 of the 530 beds it had when TennCare began, the margin plummeted to –23.7 percent in 1996. The Med has suffered a marked decline in its patient base (which might have occurred under *any* arrangement that permitted greater patient choice, not just TennCare). Access MedPlus—the largest TennCare plan in the county—did not have a contract with The Med in the first few years of TennCare. In addition, a 1994 and 1997 survey of patients in Memphis found steep reductions between these two years in the numbers who preferred or used The Med for care. This has forced the hospital to diversify by developing an integrated delivery system that includes The Med, a primary care network of clinics operated jointly by The Med and the Memphis and Shelby County Health Department, and two nursing homes (Roman 1998). It remains to be seen whether this strategy will reverse The Med's financial fortunes.

Similarly, despite a $20 million annual subsidy from the city of Nashville and special payments from TennCare in 1994 and 1995, the Metropolitan Nashville General Hospital was struggling financially in the early years of TennCare, culminating in a January 1998 merger with Meharry Medical College's George W. Hubbard Hospital, which had been forced to close in 1995 because of sustained annual deficits of $5 million (Boyce 1997). Because both facilities had been in financial trouble beforeTennCare, it is difficult to say whether or when this merger might have evolved in TennCare's absence.[30]

Some public hospitals have found a way to improve their performance under TennCare. In Chattanooga, Erlanger Medical Center's profit margin declined from 5.6 percent in 1993 to 3.0 percent in TennCare's first year and to 1.1 percent in 1995. It rebounded to 4.8 percent in 1996—a figure slightly lower than its 5.5 percent rate in 1991 but above the 2.6 percent performance posted in 1990 (Blumstein and Sloan, forthcoming). Erlanger has achieved this despite the fact that indigent care costs remain very stable (8.72 percent of gross revenues in 1993 versus 8.75 percent in 1998) (Associated Press 1998a). In light of the reduction in uninsured numbers achieved by TennCare, it is unclear why

safety net hospitals such as Erlanger would not have experienced some reduction in uncompensated care costs.

Despite the fact that rural hospital closure generally creates difficulties for patients who must drive to more distant facilities (Samuels, Cunningham, and Choi 1991), financial burdens are forcing hospital owners and local county commissioners to consider closing or selling their facilities. Between 1993 and 1996, there were at least 18 changes in hospital ownership, including five conversions of nonprofit facilities to for-profit status. Of three county hospitals that converted, two became nonprofit and one became a city-county facility. Some financially distressed hospitals in the state have shifted toward the provision of clinical services or have become critical access–type hospitals. Some have focused on strong prevention programs such as prenatal care, in order to help reduce the number of high-risk and more costly obstetric cases. Other hospitals have adapted to this burden by updating or moving to newer facilities, presumably to attract an increased paying patient load.

Because of the initial financial problems experienced by public hospitals, the state approved one-time payments in 1994 and 1995 to The Med and Metropolitan Nashville General Hospital to reimburse some of the expenditures made by the respective county governments of each of these facilities.

In 1998, for the first time since implementation of TennCare, the state's hospitals received a payment akin to that received under the Medicaid DSH program. After a great deal of collaboration among the state's hospital industry and the legislative and executive branches of government, the Sundquist administration announced the distribution of $60 million in Essential Access Payments to 58 hospitals across the state that are "essential" providers of uncompensated hospital care (Tennessee Department of Health 1998b). This funding was a portion of a one-time payment from HCFA's reconciliation agreement settling the amount of dollars that could be used to determine the federal match in TennCare's first year. While this funding has been very important for Tennessee's large and small hospitals, it was only provided as a one-time expenditure. Hospital officials hope that these Essential Access Payments indicate a realization of the role of the state's hospitals in the provision of indigent care, and the need for the continuation of such payments to offset the costs of such care.[31]

Teaching Hospitals

Background

Tennessee has nine teaching hospitals associated with its four academic medical centers (AMCs). The University of Tennessee (UT) has two teaching hospitals in Memphis (330 and 113 beds) and one apiece in Chattanooga (536 beds), Jackson-Madison County (567 beds), and Knoxville (542 beds). East

Tennessee State University has a facility in Johnson City (407 beds), Meharry Medical College has a hospital in Nashville (105 beds), and Vanderbilt University Medical Center has its own hospital (609 beds) (Summit, Herrick, and Martins 1998).

TennCare's Impact on Teaching Hospitals

Perhaps the most publicized of the hospitals hit by the changes in financing and patient flow under TennCare was The Med, discussed earlier. A study of three AMCs during the first years of TennCare (Meharry, UT, and Vanderbilt) revealed that some or all had experienced "significant revenue shortfalls, closure of specialty services, adverse patient selection, and loss of the patient volume needed to do clinical research, and had to reduce the number of training program positions" (Summit, Herrick, and Martins 1998). These shifts in hospital dynamics are illustrated by the change in the patient care activity at UT. The hospital observed a 50 percent decline in the number of deliveries, and close to 90 percent of those that remained were high-risk pregnancies (Meyer and Blumenthal 1996). Another study showed that between 1993 and 1994 a teaching hospital specializing in children saw a 44 percent decline in surgical patients attributable to TennCare. While there was no significant change in the number of *urgent* surgical cases, there was a dramatic decline in surgical residents' *elective* pediatric surgical experience (Smith and Lobe 1996). On the other hand, the GME funding changes implemented under TennCare have encouraged more medical training in rural and outpatient settings (Summit, Herrick, and Martins 1998).

According to the AMCs, revenue shortfalls have been precipitated by a combination of factors, including a low TennCare reimbursement rate and the elimination of traditional sources of hospital funding. Lost to the AMC's budgets were approximately $48 million in GME funds in January 1995 with no prior notice (Summit, Herrick, and Martins 1998), and DSH payments that ended in 1994 with TennCare's implementation. While the Balanced Budget Act of 1997 tightened DSH payments to hospitals across the country, this had no impact on Tennessee because it was one of only two states not relying on DSH funding, all pre-TennCare DSH funds having been folded into TennCare and no longer formally considered DSH (Long and Liska 1998).

An essential provider fund was originally initiated to help replace lost GME and DSH hospital payments, but it was eliminated in January 1995 (Meyer and Blumenthal 1996). Additionally, during the first two years of TennCare the state provided a total of $113.7 million in funding to hospitals serving a high volume of indigent patients. These payments were designed to help provide care for those eligible but not enrolled, of which there were many because of the rapid implementation of the program. According to hospital officials, there has been recent discussion of reinstating these payments.

Recognizing the ability of GME funding streams to help influence the characteristics of the physician workforce toward the health care needs of Tennessee, the state implemented a new system of disbursing GME payments in

SFY 1996. The formula, which reinstated $48 million in annual funding (Bonnyman 1996g), called for payments to be made to medical schools rather than to hospitals. A primary focus of this plan has been to ensure that this funding would follow the residents to their training sites. In return for having control of the funds, medical schools pledge to place half of all residents in the primary care specialties by 2000. Any school falling short of its goal would lose 1 percent of its share of the TennCare GME fund for every 1 percent below the goal (Summit, Herrick, and Martins 1998).

While this formula—which is being gradually phased in between FY 1997 and FY 2000—has been helpful to medical schools, it eliminated funding streams going directly to the hospitals. For facilities like The Med that have no direct affiliation with a medical school, losing these long-relied-upon funds raises the possibility they will lose teaching faculty, residents, and interns to other hospitals (*Commercial Appeal* 1995). While The Med does not seem to have had a great deal of attrition as a result of this measure, the hospital reportedly has had to undergo a great deal of reengineering to remain viable.

Although hospitals have not been very supportive of TennCare, the program may have had a positive impact on AMCs in providing a "shock therapy" to help transition them from centers with a traditional focus on inpatient and specialty care toward a focus on integrated, community-based services with accelerated clinical diversification (Meyer and Blumenthal 1996). For example, the obstetrics and medicine program of one AMC has been moved into the community, while another is setting up several community health centers to improve health care access and to compete with local community providers (Meyer and Blumenthal 1996).

Since the beginning of TennCare, several large hospitals have been involved in establishing MCOs. Health care plans set up by hospitals to care primarily for TennCare patients include the University of Tennessee Health Plan, the plan affiliated with The Med (TLC), and the Vanderbilt Community Care Plan. These plans and others have run into financial trouble, causing some to shut down or sell to commercial plans, as discussed in the next section.

TennCare's Impact on MCOs

Background

Much of what happened to MCOs in the first year of TennCare can be attributed to the speed with which the program was designed and implemented, coupled with an inexperience among certain MCOs and those managing TennCare. TennCare was crafted in the spring of 1993, it received legislative approval in April, and its broad outlines were detailed in the waiver request submitted to HCFA in June. Once it became clear that TennCare was likely to happen, five new MCOs (including four HMOs) emerged. By fall 1993, Medicaid recipients were being asked to select an MCO even though many MCOs were still in the

process of establishing their provider networks and it often was not clear which providers would contract with any particular MCO.

Only three of the MCOs originally participating in TennCare were owned by large national companies (John Deere Health Care, PruCare of Memphis, and HealthSource Tennessee). The remaining locally controlled plans included large statewide plans with extensive established networks and managed care experience (e.g., BlueCross BlueShield of Tennessee's Tennessee Preferred Network), long-standing plans with modest Medicaid experience (Tennessee Managed Care Network's Access MedPLUS), and two start-up plans sponsored by academic medical centers (the University of Tennessee and Vanderbilt health plans). The remaining plans were relatively small plans or start-ups (Health Net, Phoenix Healthcare Corporation, Affordable Healthcare Corporation, Preferred Health Partnership, and TLC Family Care Healthplan).

Impacts

Financial Performance

At the end of TennCare's first year, 9 of 12 MCOs (covering 70 percent of enrollees) lost money, amounting to $38.5 million in net losses overall across all MCOs. This should not have been surprising because newly formed MCOs often lose money during their first three years (Ku and Hoag 1998). All of the HMOs would have lost money had it not been for $100 million in supplemental payments paid in the first year (see below) (GAO 1995). Some of the major reasons for the weak financial performance related to (a) apparent errors that resulted in the original capitation rate being set too low; (b) confusion about enrollments that resulted in many newly covered receiving unmanaged services for which MCOs were retrospectively liable; (c) adverse selection against certain plans;[32] and (d) lack of experience among some of the start-up MCOs or those that expanded very rapidly as a result of TennCare enrollment. Despite these losses, all 12 MCOs elected to sign renewal contracts to continue with TennCare through July 1, 1996 (GAO 1995). In 1995, eight plans continued to lose money, although in the aggregate MCOs posted a small profit of $8.4 million. This profit rose to $21.5 million in 1996 (with only three plans losing money) but sharply reversed in 1997, plummeting to an overall loss of $19.6 million even though six plans had net profits for that year. In 1998, MCOs lost a net total of $7.8 million, with six of nine MCOs reporting financial losses, including two that were not in compliance with net worth requirements.

TennCare's biggest plan, run by BCBST, lost $14.2 million overall in 1994 and 1995 but subsequently showed a $10.6 million profit and has remained profitable ever since. In contrast, on March 31, 1999, the Department of Commerce and Insurance took over the operations of Xantus (formerly Phoenix), with the intention of developing a business rehabilitation plan (Benavides 1999). While some have attributed Xantus's financial difficulties to inadequate capitation rates, consumer advocates have noted that, faced with the same cap-

itation rates, other MCOs have managed to remain profitable. These observers have suggested that poor business decisions—particularly the $30 million purchase of HealthNet in July 1997—were responsible for the demise of Xantus. However, another plan, TLC Family Health Care, also is in financial trouble and is seeking to erase a $7 million debt to avoid becoming the second MCO taken over by state regulators (Snyder 1999). Fiscal problems recently led another plan, Preferred Health Partnership, to reduce its service area to east Tennessee.

A recent comparison of four major Medicaid reform states showed that Medicaid MCOs in Hawaii and Rhode Island generally fared better than those in Tennessee—typically earning net annual profits (across all plans) of 2 percent or more in each of the first three years of operation. In contrast, after first-year losses averaging 1.3 percent, MCO profits were only 1.6 percent in the second year and 1.2 percent in the third year of TennCare (Ku and Hoag 1998). On the other hand, Medicaid MCOs in Oklahoma lost 7 percent in the second year of operations; in the last quarter of 1996 (TennCare's third year), publicly traded HMOs nationally lost an average of 1.1 percent on all patients (Hilzenrath 1997, cited in Ku and Hoag 1998). In the first three years, mean administrative expense ratios in TennCare MCOs (10.2 to 12.8 percent) tended to be somewhat higher than those of Medicaid MCOs in Hawaii, Oklahoma, and Rhode Island (Ku and Hoag 1998).

The BHOs also posted losses during the first two years (1996 and 1997) but showed an overall gain in 1998 of $1.9 million. Premier lost $13.7 million during the first two years, followed by a profit of $8.4 million in 1998, whereas Tennessee Behavioral Health had small gains of $325,000 in the first two years, followed by 1998 losses of $6.5 million.[33]

Mergers and Acquisitions

Health Net (a PPO) was purchased and merged into Phoenix Healthcare (an HMO) in 1997. Effective January 1, 1997, HealthSource assigned its members to Phoenix Healthcare and ceased participating in TennCare. Effective December 31, 1995, the University of Tennessee Health Plan was purchased by BlueCross BlueShield of Tennessee and was renamed the Volunteer State Health Plan—Eastern Tennessee (VSHP–ET). Effective January 1, 1998, VSHP–ET's membership, rights, and obligations under its TennCare contract were assigned to Volunteer State Health Plan, Inc., a for-profit HMO wholly owned by BlueCross BlueShield of Tennessee. Thus, as of 1998, there were nine health plans remaining.

Mitigating Measures

In the first six months of TennCare, more than $100 million in supplemental payments (outside the capitation amounts) were provided to MCOs, including (a) $66.9 million for care to those eligible but not enrolled,

(b) $20.5 million for coverage of the first 30 days of care for newly covered eligibles, and (c) $20 million to account for adverse selection. In FY 1994–95 (starting July 1, 1994), another $90 million was provided to MCOs for these purposes. In addition, the renewal contracts for the period starting July 1, 1995, required that all PPOs be subject to the same financial reporting requirements as HMOs. A reorganization gave the Department of Commerce and Insurance authority to perform continual audits of financial records and operations of all MCOs (including PPOs, which previously were not under DCI's regulatory authority). This ensured the availability of current information related to plan solvency and operational compliance with all contract requirements (GAO 1995). On July 1, 1995, the new capitation that became effective was 9.5 percent higher than the 1994 rates, instead of the 5 percent increase originally planned.

Because of an unprecedented increase in behavioral health pharmaceutical costs, and to permit BHOs to concentrate on case management services, the Tennessee Department of Health took over formulary management for all behavioral health patients, effective July 1, 1998 (Tennessee Department of Health 1999). In addition, because of concerns that TennCare capitation rates had never undergone any formal assessment, the state contracted in 1998 with William M. Mercer, Inc., to review BHO rates and with PricewaterhouseCoopers to evaluate MCO and BHO rates. The latter study concluded that "the methods used to develop capitation rates for TennCare are not consistent with generally accepted standards," finding that current rates are 16.5 percent or $16 per member per month below the "minimum acceptable rate" (PricewaterhouseCoopers 1999).

TennCare's Impact on the Hospital Industry

Apart from TennCare's impact on public and teaching facilities, the program also has had a large influence on the overall health of the hospital industry in Tennessee. Where possible, given the evidence that hospital ownership has an impact on performance (Sloan 1998), not-for-profit and for-profit facilities are considered separately in what follows.

Hospital Ownership

Pre-TennCare

In 1993, Tennessee had 56 not-for-profit hospitals accounting for 43.1 percent of facilities but 58.4 percent of community hospital beds. Forty-four for-profit facilities accounted for 33.9 percent of facilities (one of the highest for-profit fractions in the nation) but only 21.1 percent of beds (American Hospital Association 1994). The presence of Columbia-HCA, headquartered in Nashville, has been a factor in the greater acceptance and market penetration of for-profit facilities within the state. Even so, the total number of for-profit beds was 16 percent

lower in 1993 than it had been in 1984, whereas not-for-profit beds had declined only 1 percent during the same period (and the number of not-for-profit *facilities* had increased by 10 percent).

Post-TennCare

Between 1993 and 1994, Tennessee lost one public and three not-for-profit hospitals, while the number of for-profit facilities remained unchanged. Between 1994 and 1995, there was a conversion of two not-for-profit facilities—one to public ownership and one to for-profit ownership. Between 1995 and 1996, there was one additional conversion of a not-for-profit facility to public ownership and the loss of two for-profit facilities. Thus, overall, between 1993 and 1996, Tennessee gained one public hospital while losing six not-for-profit facilities and one for-profit facility. The general decline in not-for-profit ownership was sharply reversed in September 1998 by Columbia/HCA Healthcare Corporation's sale of six Tennessee hospitals to not-for-profit Johnson City Medical Center (Columbia/HCA 1998). TennCare reportedly has "accelerated the restructuring of rural health care delivery in the state, with results as yet unknown" (Bonnyman 1996f).

Hospital Use and Costs

Pre-TennCare

In 1993, Tennessee had 25 percent more short-stay beds per 1,000 total than the U.S. average. There was substantial excess hospital capacity, with only 63.2 percent of staffed beds occupied on average in 1993 (Bonnyman 1996f). Not surprisingly, the state's short-stay hospital admission rate was 22.8 percent higher than the national average, while the rate of hospital emergency room use was 39.0 percent higher (American Hospital Association 1998). Cost per adjusted admission was 5 percent lower than the national average (McCloskey et al. 1995), but this should be viewed in the context that both per capita income and average annual pay per worker were 11 percent lower in Tennessee. Overall hospital spending per Tennessee resident was 11.9 percent higher than the national average that year; the percentage had grown steadily from 2 percent in 1980 (Delaware Health Care Commission 1996). Thus, there were substantial opportunities for managed care savings to be achieved through the reduction of hospital use.

Post-TennCare

By almost any measure, hospital use fell in Tennessee more rapidly than the U.S. average between 1993 and 1996, but as of 1996 there were no measures of use in which Tennessee had fallen below the U.S. average that existed in 1993. In essence, Tennessee hospitals are learning to live in a world that their counterparts in most other states have had to master even before the accelerated

levels of competition seen since 1993. Apart from an overall reduction in use, there was a large shift from safety net hospitals (whose Medicaid inpatient days declined 23.7 percent between 1993 and 1996) to non–safety net hospitals (whose Medicaid inpatient days climbed by 26.2 percent during the same period). A similar pattern has been observed in two other Section 1115 waiver states, Hawaii and Oklahoma (Hoag, Norton, and Rajan 1999).

Hospital Financial Performance

Pre-TennCare

In 1993, the ratio of Medicaid payments to Medicaid costs (inclusive of DSH payments) was 131 percent—the second highest ratio in the entire country. However, after adjusting for hospital taxes, net Medicaid payments to hospitals were only 84 percent of costs, compared with a national average of 93 percent (Prospective Payment Assessment Commission 1995). Overall, Tennessee hospital revenues were 2.1 percent more than costs—less than half the national average margin of 4.4 percent. As a percentage of total hospital costs for all patients in Tennessee, Medicare losses (–7.5 percent) and uncompensated care losses (–5.9 percent) were 83 and 23 percent higher, respectively, than the national average. In contrast, Medicaid gains (+3.9 percent) were substantially higher than the U.S. average (–0.9 percent). Tennessee was one of only 14 states in 1993 with net Medicaid gains and one of only two states in which Medicaid gains outweighed overall gains. That is, without Medicaid revenues, Tennessee hospitals would have experienced net financial losses that year.

Post-TennCare

Reimbursement has been low, as noted by a Tennessee Hospital Association (THA)-sponsored study which found that in 1994 TennCare capitation payments averaged 58 cents of each dollar spent on inpatient care (Meyer and Blumenthal 1996). Based on the reported rate of 58 cents per dollar reimbursement, the THA estimated that hospitals would have to raise prices for non-TennCare payers by 12 percent to offset such losses (Page 1998). In 1996, the situation was nearly identical; TennCare's payment-to-cost ratio was 58.6 percent, and non-TennCare prices would have had to be increased by 13.5 percent to cover the resultant Medicaid losses. In 1996, payments by private payers were 134 percent of costs (Medicare Payment Advisory Commission 1998), allowing the average hospital a substantial margin for recovery of losses it incurred by caring for TennCare patients.

In absolute terms, while TennCare reduced charity care costs by $81 million in 1994 relative to 1993, that savings had been cut in half by 1996 (Snyder 1997). Today, hospitals remain responsible for the burden of charity care that is now as high as it was under Medicaid, despite the increased numbers of those covered by TennCare (Associated Press 1998b). On the other hand, uncompen-

sated care as a percentage of hospital revenues fell from 8.7 percent in 1993 to 7.2 percent by 1996—continuing a downward trend since at least 1990 (when the share was 10.4 percent). Overall, Tennessee hospitals' uncompensated care losses as a percentage of costs were identical to the national average in 1996 (table 12) (Medicare Payment Advisory Commission 1998). But its losses as a result of Medicaid (6.6 percent of costs) were far higher than the national average (0.7 percent). Together, Medicaid and uncompensated care losses in Tennessee were more than double the national average in 1996 (11.7 percent of costs versus 5.8 percent). In contrast, even though Tennessee had higher uncompensated care losses in 1993 relative to 1996 and relative to the United States in 1993, these losses in 1993 were substantially offset by gains on Medicaid. The combined total loss was only 2.0 percent of costs, compared with a national average loss of 5.7 percent.

Notwithstanding TennCare and indigent care losses, hospital gross margins (total revenues minus expenses) in community hospitals in Tennessee grew from $200.6 million in 1993 to $641.9 million in 1996 (American Hospital Association 1998) and reportedly increased another $12.8 million in 1997 (Associated Press 1998a). Because of the Medicare and private-pay patients, total hospital margins exceeded 9 percent. One-third of this improvement in margins was a result of increases in other nonoperating revenues. Tennessee hospital officials report that while hospitals have not yet determined the best formula for *making money,* they have learned to cover fixed costs and are progressively learning how to cover their marginal costs within the new system. However, they are concerned that as private-sector managed care plans become more aggressive in reducing their payments, the ability of the hospital indus-

Table 12 *TennCare's Impact on Hospital Industry*

	Tennessee Hospitals			U.S. Hospitals		
	1992	1993	1996	1992	1993	1996
Payment-to-Cost Ratios						
Medicaid (includes DSH payments)	1.0	1.3	0.6	0.9	0.9	0.9
Medicare	0.8	0.8	NR	0.9	0.9	NR
Private	1.4	1.2	1.3	1.3	1.3	1.2
Medicaid as Percentage of Total Costs	NR	0.1	0.2	0.1	0.1	0.1
Gains or Losses as Percentage of Expenses						
Aggregate total gain*	NR	0.0	0.1	NR	0.0	0.1
Medicaid	<–.5%	0.0	–0.1	–0.0	–0.0	–0.0
Medicare	–0.1	–0.1	0.0	–0.0	–0.0	0.0
Uncompensated care	–0.1	–0.1	–0.1	–0.1	–0.0	–0.1
Private payers	0.1	0.1	0.1	0.1	0.1	0.1
Source	[A]	[B]	[C]	[A]	[B]	[C]

Sources: [A] Prospective Payment Assessment Commission (1994). [B] Prospective Payment Assessment Commission (1995). [C] Medicare Payment Advisory Commission (1998).

Note: For 1992 and 1993, Medicaid as percentage of total costs imputed from figures shown.

*Total gains include state and local operating subsidies up to the level of a hospital's uncompensated care costs, other government payers, and nonoperating sources of revenue.

try to continue to cover its losses through cost-shifting is questionable, particularly for small and very rural facilities.

TennCare's Impact on Physicians

Background

Tennessee had 12,386 physicians in 1996. It slightly exceeds the national average in terms of the supply of generalists (30 versus 28 per 100,000 in 1996), while its supply of specialists is slightly lower than the nation overall (198 versus 204 per 100,000 in 1996) (Lamphere et al. 1998). Although the share of the population living in rural areas is substantially higher than the U.S. average (32.3 percent versus 22.5 percent in 1997) (Lamphere et al. 1998), the problem of geographic access is only slightly worse. In 1998, the population underserved by primary care physicians in Tennessee (10.1 percent) was only slightly higher than the U.S. average (9.6 percent) (Lamphere et al. 1998). There is less reliance on physician assistants and nurse practitioners relative to the rest of the country. In 1993, Medicaid physician fees in Tennessee were 7 percent below the national average, although such fees had increased slightly more rapidly in Tennessee than in the United States between 1990 and 1993 (18 percent versus 15 percent) (Prospective Payment Assessment Commission 1994).

Impacts

Physician Participation in TennCare

Even though beneficiary advocates viewed it as "the single most important consumer protection in TennCare," the strong opposition to the BCBST "cram-down" culminated in thousands of physicians initially dropping out of the Tennessee Preferred Network (TPN). Most, however, had returned before the end of TennCare's first year. The Tennessee Medical Association (TMA) filed a suit against the state of Tennessee in December 1993 hoping to block the program's implementation through summary judgment. This suit was filed on a number of grounds—including the allegation that the state had allowed BCBST to coerce providers through the cram-down—but the suit was dismissed in August 1994 (and upheld on appeal in April 1995) on grounds that the TMA lacked standing to sue (Watson 1995).

Notwithstanding their strong objections to TennCare, physicians continue to participate in higher numbers than under the old TennCare program even though the cram-down ended in 1996.[34] Ironically, despite the negative feelings the cram-down engendered, an empirical analysis concluded that it had no demonstrable effect on physician participation in TennCare. That is, while prior Medicaid participation significantly increased the chances of participating in

TennCare, physicians with high BCBST patient loads in 1993—who presumably were more vulnerable to being "leveraged" by the cram-down—were no more likely to participate than those with few BCBST patients (Sloan, Conover, and Rankin 1999).

Most physician participation and support of the program is "because of the patients" according to Dr. David Gerkin, former president of the TMA. This view is confirmed by a 1997 survey of 300 Tennessee physicians showing the two most important reasons for participation in TennCare were related to social/charity obligations ("Felt it was the right thing to do" and "Have always seen Medicaid patients") (Sloan, Conover, and Rankin 1999). The principal reasons for nonparticipation related to concerns about paperwork (41.9 percent) and low reimbursement (39.5 percent). While the TennCare Bureau maintains no formal statistics on physician participation, a 1997 TMA survey reported that 78.6 percent of TMA membership was participating in TennCare.[35]

Physician Satisfaction

From the program's inception, physicians have consistently expressed very negative feelings toward TennCare. A 1995 survey of 200 physicians in east Tennessee showed that more than 80 percent of respondents rated TennCare as unsatisfactory or unacceptable (Gunter 1996). In a fall 1996 survey of members of the Tennessee Chapter of the American College of Physicians, the vast majority of respondents rated TennCare as either fair (43 percent) or poor (42 percent). Respondents were particularly dissatisfied with the poor access of TennCare recipients to nonformulary medications and with the lack of standardization of these formularies among the various MCOs. Lack of uniformity is also cited as a major problem with regard to the different claim forms submitted to each MCO for payment, which are often returned as "muddy" for small discrepancies of the sort that are likely to happen with physicians providing services to patients in more than one MCO (Bailey et al. 1998). A study of emergency care similarly found much confusion resulting from multiple formularies and inconsistent, nonstandardized guidelines for reimbursable care (Hulen and Beeler 1995). A 1996 Mathematica survey reported primary care physician complaints about difficulties in making referrals to specialists (because of low specialist participation) and complaints across all specialties related to slow payments and frequent payment denials by MCOs (Wooldridge et al. 1997). A mid-1997 Duke University survey of physicians in selected specialties found very similar results: 72 percent of Tennessee physicians were "not at all" or "not very" satisfied with TennCare—with much of the dissatisfaction related to reimbursement issues and constraints on obtaining needed services, especially pharmaceuticals. A 1998 survey of TennCare providers conducted by the Division of State Audit documented provider complaints about slow claims processing, low reimbursement rates, vague medical-necessity standards, outdated or confusing drug formularies, difficulties in obtaining referrals and prior authorizations, and other cumbersome administrative procedures.[36]

Physician Compensation

Although there have been numerous complaints about low physician compensation, there is little hard data on the actual impact beyond anecdotal evidence.[37] Moreover, concerns about low Medicaid reimbursement are not unique to TennCare (Watson 1995). The TMA suit had argued that BCBST payments under TennCare were 30 percent below those for privately insured enrollees, yet nationally Medicaid fees in 1993 were 53 percent lower than private fees (Watson 1995)—a year in which Tennessee's Medicaid fees were 7 percent below the U.S. average (Watson 1995). A 1994 comparison of fees paid by BCBST under TennCare to 1993 Medicaid fees in Tennessee showed that fees under TennCare were slightly higher for visits and consultations, but for many surgical and radiology procedures they were from 20 to 50 percent lower (GAO 1995). Given that TennCare payments almost certainly represented an improvement over the fees collected from low-income uninsured patients, it is not clear whether or how much TennCare might have financially affected physicians previously not participating in Medicaid whose uninsured patient loads fell once TennCare began. Some rural primary care physicians, for example, reportedly have benefited financially from TennCare (Gold, Frazer, and Schoen 1995).

Despite this mixed evidence regarding TennCare's actual impact on fees, physician perceptions of TennCare reimbursement are overwhelmingly negative. An October 1994 TMA survey found that more than three-quarters of physicians thought their practices were somewhat or much worse off financially under TennCare compared with Medicaid, and 77 percent thought that reimbursement was lower under TennCare compared with Medicaid. A Mathematica survey found that except for primary care providers in certain plans, TennCare physicians generally reported lower fees than under Medicaid (Wooldridge et al. 1997). Such opinions have endured. The 1998 survey showed that 81 percent (among primary care physicians) to 97 percent (of OB-GYNs) thought that reimbursement rates under TennCare were not adequate.

Apart from concerns about absolute levels of payment, physicians are vulnerable to adverse financial consequences in the event of MCO financial difficulties. For example, Preferred Health Partnership recently announced plans to reduce physician payments by 15 percent to stem mounting financial losses (Snyder 1998). Most MCOs withhold a portion of physician reimbursements, ranging from 5 to 25 percent. In TennCare's first year, one MCO kept the entire amount of its 5 percent withhold to offset excess costs, while another withheld 25 percent and paid back only one-fourth of these funds (GAO 1995). The TMA has expressed concern about the secrecy surrounding the financial security of TennCare's MCOs and has lobbied for the state to initiate a review of the program. As a result, a state-funded actuarial study was conducted in 1998 by an outside firm, with a report pending in the 1999 legislative session.

TennCare's Impact on the Public

Did TennCare save money, and if so, how much? This section examines TennCare's impact on Medicaid spending and considers whether any or all of the apparent savings from TennCare may have been offset by increased cost-shifting to private patients.

Background

Medicaid Spending

From 1990 to 1992, Tennessee was very similar to other states, posting an average annual increase in total enrollees, expenditures (with and without DSH included), and expenditures per enrollee that only slightly outstripped the national averages for growth in each of these elements (Winterbottom, Liska, and Obermaier 1995). In 1992–1993, Tennessee's growth in the number of enrollees was nearly double the U.S. average, yet total expenditures (with and without DSH) grew more slowly than the national average. Consequently, expenditures per enrollee declined by 5.5 percent in Tennessee while growing by 4.3 percent nationally. Tennessee's experience seems to be a result of a large increase in enrollees who have low average expenditures. In short, Tennessee had already begun to slow its high rate of Medicaid expenditure growth even before TennCare was implemented. Tennessee was one of only 11 states to achieve negative growth in expenditures per enrollee in this period immediately before TennCare.

Judging whether TennCare slowed the growth in Medicaid spending is not easy, given that Tennessee already appeared to be decelerating the very high previous rates of growth even before the program began. The issue is what actual TennCare expenditures should be compared with to estimate any savings. The TennCare Bureau recently has calculated that TennCare saved $7.8 billion in its first five years, of which $2.7 billion represents savings in state funds (Tennessee Department of Health 1999). However, the TennCare Bureau arrives at this conclusion by comparing the amounts originally projected under Medicaid (conceptually similar to line 1a in table 13) with actual cash outlays under TennCare (line 3a). This method both understates actual spending on TennCare (by excluding literally billions of dollars in deductions from capitation rates that were assumed to be financed through patient cost-sharing, hospital cost-shifting, and county appropriations to hospitals) and overstates the amount of spending under the old Medicaid program by not taking into account the nationwide slowdown in medical cost inflation that began in the period when TennCare began.

TennCare's designers originally projected $4.1 billion in federal savings from TennCare in its first five years, compared with what expenditures otherwise would have been under the former Medicaid program (not shown in

Table 13 *TennCare Spending: Actual vs. Projected*

	State Fiscal Year			Annual Change
	1992–1993	1997–1998	Cumulative	FY 94–98
	Billions of Dollars			Percent
1. Original Projections [A]				
a. Former Medicaid	2.893	6.500	24.012	17.7%
b. Expected TennCare	2.893	4.679	21.019	6.8%
2. Adjusted Projections (based on FY 92–93 actual)				
a. Former Medicaid	2.658	5.972	22.060	17.7%
b. Expected TennCare	2.658	4.298	19.311	6.8%
3. Actual Expenditures[a] [B]	2.658	4.720	20.190	10.5%
a. Cash expenditures[b]	2.658	3.616	15.708	
b. Deductions from capitation	NA	1.104	4.483	
1. Charity care	NA	0.766	3.086	
2. Local government	NA	0.061	0.251	
3. Patient revenues	NA	0.277	1.145	
4. Change from Prior Year				
a. Tennessee		9.6%		7.3%
b. Southern Legislative Conference		4.7%		5.4%
c. United States[c]		5.1%		5.1%
5. Hypothetical (If TN = US Growth Rate)				
a. Unadjusted[d]	2.658	3.568	16.376	5.1%
b. Enrollment-adjusted[e]	2.658	4.440	20.168	7.5%
6. Difference				
a. Original projected total savings (1b – 1a)		–1.822	–2.992	
b. Actual vs. adj. former Medicaid (3 – 2a)		–1.252	–1.869	
c. Actual vs. adj. expected TennCare (3 – 2b)		0.422	0.879	
d. Actual vs. hypothetical unadj. (3 – 5a)		1.152	3.815	
e. Actual vs. hypothetical adj. (3 – 5b)		0.280	0.022	

Sources: [A] Exhibit 5.1 in State of Tennessee (1993). [B] Unpublished information provided by Keith Gaither, fiscal director, Office of Business, Finance, and Research, Bureau of TennCare. [C] U.S. Congressional Budget Office (1998).

Note: Figures include administrative costs and expenditures from special pools.

a. Figures for FY 1994, FY 1995, and FY 1996 are estimated final figures. FY 1997 and FY 1998 expenditures are projected.

b. Includes all TennCare expenditures, inclusive of capitation payments and special payments to providers and MCOs as well as non-TennCare expenditures such as long-term care.

c. Total Medicaid spending for FFY 1993–1997 from HCFA 64 reports available at http://www.hcfa.gov/medicaid/. Percent changes for FFY 1998 based on historical data for federal outlays in FFY 1996 and FFY 1997 and projected federal outlays in FY 1998 reported in [C].

d. Figures projected from FY 1993 base assuming growth rate matched U.S. average.

e. Figures projected from FY 1993 base using actual TennCare growth in eligibles, but assuming that growth in average cost per eligible rose at U.S. rate.

table 13). However, when all sources of funding were taken into account (including categorical programs funded by federal and state revenues), federal and state savings combined were not quite $3.0 billion (line 1b – 1a, or line 6a). This is a more accurate way of assessing savings insofar as it accounts for all sources of revenue, but it fails to reflect that actual TennCare expenditures in the FY 1993 base year spending amount were 8.0 percent lower than originally planned. Because this unanticipated slowdown in spending was unrelated to TennCare itself, these original projections properly should be adjusted to reflect this. These adjusted projections show that TennCare should have spent $19.3 billion

in its first five years (line 2b) rather than $21.0 billion (line 1b). By the same token, the former Medicaid program would have spent nearly $2 billion less than originally projected (line 2a). Thus the adjusted projected savings were $2.75 billion (line 2a – 2b).

If actual spending (line 3) of $20.19 billion is then compared with these adjusted projections for Medicaid (line 2a), the savings fall to almost $1.9 billion (line 6b)—a considerable amount given that actual spending was $900 million *higher* than the adjusted TennCare projection (line 2b). However, a fair assessment must take into account that at the time TennCare was designed, growth in Medicaid expenditures was still very rapid but subsequently slowed substantially all across the country. Hence, these original five-year projections for Medicaid overestimate the actual growth in spending that is likely to have occurred even if TennCare had *not* been adopted. In fact, if Tennessee had merely let its Medicaid program grow at the same rate as the national average between FFY 1993 and FFY 1998, expected TennCare expenditures would have been $16.4 billion (line 5a), *lower* than the adjusted TennCare projection of $19.3 billion (line 2b). Actual TennCare spending ($20.2 billion) exceeded this hypothetical amount by $3.8 billion (line 6d).

But again, in fairness, any comparison with national figures must take into account the fact that Tennessee's Medicaid-enrolled population grew four times faster than the U.S. average between 1992 and 1996. If Tennessee had expanded its number of enrollees at the same rate they actually grew during this period, but matched the U.S. experience in terms of growth in spending per eligible, the cumulative spending total would have been $20.2 billion (line 5b), virtually identical to the actual amount spent on TennCare (line 3).

On the other hand, when compared only with actual cash outlays, TennCare appears to have saved nearly $700 million (line 3a – 5a) or, if the alternative baseline is used, almost $4.5 billion (3a – 5b). The difference between actual expenditures and actual cash outlays is $4.5 billion in spending that was deducted from the capitation rates but that implicitly was presumed by TennCare planners to continue to be paid by other parties, including patients ($1.1 billion in assumed patient cost-sharing collections), hospitals ($3.1 billion in assumed charity care), and local governments ($251 million in assumed payments to local hospitals for indigent care). Under the old Medicaid program, the state would have collected $5.4 billion in provider taxes over five years; under TennCare, hospitals no longer had to pay the tax. The provider taxes are included in Medicaid spending; the charity care obligation under TennCare was initially identical in amount and was intended to replace the hospital tax. Therefore, the best estimate of TennCare's impact on Medicaid spending—based on an "apples to apples" comparison of TennCare with Medicaid—is that expenditures increased by less than 0.1 percent over five years (line 6e) if the additional enrollment is included, or by $3.8 billion (line 6d) if it is not.

Two further issues merit attention. First, there were savings to state government, if not to the Tennessee citizenry. Table 13 shows that government

expenditures (federal and state) were lower than the unadjusted baseline (line 5a) by almost $700 million (line 5a minus line 3a). State savings were $245 million and federal $455 million. (Federal savings have been calculated officially to be $5.1 billion (Tennessee Department of Health 1999). However, this is based on program spending compared with a baseline that is conceptually identical to line 1a. The more realistic baseline assumptions we have derived (line 5a) indicate that federal savings were closer to $455 million. Second, actual expenditures (line 3) assumes that hospitals provided charity care of $3.1 billion, patients paid premiums of $1.1 billion, and local governments made payments of $250 million. If, for example, hospitals provided less charity care than estimated, then expenditures by Tennesseans were lower, provider incomes were higher, and there was less provision of charity care. Similarly, if the state collected less revenue from patients or from local governments, expenditures by Tennesseans were lower than indicated in table 13.

Cost-Shifting

In 1993, private-payer hospital payments in Tennessee were 24 percent higher than costs—a margin that produced a 9.2 percent gain as a percentage of overall hospital costs. Only 13 other states had a lower ratio, and the national ratio of private-payer payments to costs was 129 percent, suggesting that reliance on "cost-shifting" to cover unsponsored hospital losses was by no means a bigger problem in Tennessee than in most other states. On the other hand, more than three-quarters of that 9.2 percent gain (7.1 percentage points) was used to cover losses on public patients and net uncompensated care (i.e., net of any tax appropriations from state or local government that were assumed to cover such costs) (Prospective Payment Assessment Commission 1995). Nationally, only 60 percent of the average private patient surplus was used as an offset. As a consequence, the net patient margin in Tennessee hospitals (2.1 percent) was less than half the national average (4.4 percent).

By 1996, private-payer hospital payments in Tennessee were 34 percent higher than their costs—a figure exceeded by only 16 other states—whereas the U.S. average had declined to 22 percent above costs. The payment-to-cost ratio for Medicaid patients fell from 84 percent (exclusive of DSH and provider taxes) to 58.6 percent, the second lowest in the country. Consequently, Medicaid went from producing a surplus of 3.9 percent of overall hospital costs in 1993 to a loss of 6.6 percent in 1996. Uncompensated care losses had declined somewhat from a loss of 5.9 percent of overall hospital costs in 1993 to a loss of 5.1 percent in 1996, but this fell far short of offsetting the substantial increase in Medicaid losses. That is, taking Medicaid and uncompensated care losses together, Tennessee hospitals suffered a loss of 11.7 percent in 1996, compared with a loss of 2 percent in 1993. Ironically, however, because of gains generated by Medicare, other government patients, and nonoperating revenues during 1996, hospitals were left with a healthy 9 percent margin, exceeding the national average of 7.2 percent.

In short, TennCare appears to have resulted in a 9.7-percentage-point increase in the fraction of hospital costs attributable to losses for medically indigent hospital patients. These losses amounted to roughly $100 million in 1993[38] but had risen to $622 million in 1996. In essence, this roughly $500 million may be viewed either as the DSH revenues eliminated under TennCare that were replaced with surpluses from private patients (under the "old" view of Medicaid) or as the reduction in capitation payments that resulted from deducting $600+ million in charity care revenues from TennCare capitation payments. However viewed, this loss effectively has already been accounted for in the previous estimate of TennCare's increased cost to Tennessee.

Efficiency Gains

A final consideration from the standpoint of Tennessee residents concerns any "spillover" effects from TennCare. In theory, managed care plans encouraged providers to deliver care more efficiently, raising the possibility that any changes in how care was delivered also may have benefited private patients. An extensive comparison shows that relative to the changes in use and expenses in the region and the United States between 1993 and 1995 (which in many cases were declining as a result of managed care and heightened competition), Tennessee hospitals "outperformed" in the sense of producing even larger reductions in (a) inpatient days, (b) average length of stay, (c) emergency room visits, (d) outpatient visits, (e) registered nurse (RN) staffing, (f) licensed practical nurse (LPN) staffing, (g) total personnel, (h) expense per adjusted admission, and (i) expense per adjusted inpatient day. Administrative staffing per inpatient day rose 21.4 percent between 1993 and 1995, compared with only 12.0 percent from 1991 to 1993 (Gandjour n.d.). While the total number of full-time equivalent (FTE) RNs and LPNs fell between 1993 and 1996, the number of FTE RNs per patient day rose by 3.4 a year while FTE LPNs per patient day declined by 3.5 percent (American Hospital Association 1998).

A simple way to measure efficiency gains is to examine what would have happened to Tennessee hospital revenues and expenses if they had grown at the same rate as in the country as a whole between 1993 and 1996 (table 14). This simple comparison shows that for the 1994 to 1996 period, total hospital expenses were 8.1 percent lower than they would have been if Tennessee had mirrored national trends (last column in line 4b). However, net patient *revenue* was only 5.5 percent lower than would have been expected using national trends (line 4a). That is, whereas growth in hospital expenses in Tennessee *exceeded* growth in net patient revenue between 1991 and 1993 (not shown), net patient revenue grew by 9.2 percent in the 1993 to 1996 period while total hospital expenses increased only 1.6 percent. This is why hospitals in Tennessee were able to earn greater profits even while being "underpaid" by TennCare.

In the first three years of TennCare, total short-stay hospital expenses were almost $1.6 billion lower than if these had grown at the same rate as the

Table 14 *Trends in Community Hospitals, Tennessee and the United States, 1992–1996*

	1992	1993	1994	1995	1996	1994–1996
	Tennessee Utilization/1,000 Population Index (U.S. = 100)					
Beds	127.8	125.0	122.9	121.2	118.2	120.8
Admissions	129.3	122.8	121.3	119.3	121.0	120.5
Inpatient days	120.2	118.5	116.3	113.9	116.9	115.7
Emergency outpatient visits	132.6	139.0	130.2	121.5	121.8	124.5
Other outpatient visits	80.0	89.8	79.2	80.1	80.6	80.0
Total outpatient visits	93.7	102.2	91.2	89.5	89.3	90.0
Inpatient surgeries	121.2	122.4	119.5	119.1	120.8	119.8
Outpatient surgeries	118.1	116.4	113.2	114.6	112.1	113.3
Total surgeries	119.5	119.2	115.8	116.6	115.5	116.0
Births	96.1	96.7	95.9	98.6	97.9	97.5
Expense per capita	114.1	115.3	108.7	102.0	105.5	105.4
1. Tennessee Actual	Millions of Dollars					
a. Hospital unit net revenue	5,821	6,217.0	6,121.7	6,281.4	6,754.6	19,157.7
b. Hospital unit total expenses	5,535	6,025.0	5,906.8	5,762.1	6,121.0	17,790.0
c. Hospital margin	5.2%	3.2%	3.6%	9.0%	10.4%	7.7%
2. If TN Matched U.S. Growth	Millions of Dollars					
a. Hospital unit net revenue	5,821	6,217	6,473	6,760	7,031	20,264.4
b. Hospital unit total expenses	5,535	6,025	6,247	6,466	6,643	19,356.6
c. Hospital margin	5.2%	3.2%	3.6%	4.5%	5.8%	4.7%
3. Absolute Difference	Actual Minus Hypothetical (#1 – #2)					
a. Hospital unit net revenue	0.0	0.0	–351.5	–478.4	–276.8	–1,106.7
b. Hospital unit total expenses	0.0	0.0	–340.7	–703.6	–522.3	–1,566.6
c. Hospital margin	0.0%	0.0%	0.0%	4.5%	4.5%	3.0%
4. Relative Difference	Actual vs. Hypothetical (#1/#2 = 100)					
a. Hospital unit net revenue	100.0	100.0	94.6	92.9	96.1	94.5
b. Hospital unit total expenses	100.0	100.0	94.5	89.1	92.1	91.9
c. Hospital margin	100.0	100.0	100.7	198.1	177.2	163.9

Source: Calculated from data reported in American Hospital Association (1998).

national average (line 3b). Because net revenues were only $1.1 billion lower during this same period (line 3a), roughly half a billion dollars of this efficiency savings was retained by hospitals. Some of these savings therefore would have been exported to shareholders of for-profit facilities, while the balance presumably would have been retained by locally owned hospitals to benefit Tennessee residents. From a social point of view, if the three-year hospital efficiency savings are annualized and projected to five years, TennCare will save a net of $2.65 billion. Some share of this would be offset to the extent more care was provided outside of hospital settings—in physician offices and clinics or increased post-acute care.

Recent Budgetary Problems

Early in its sixth year (1999), in response to actuarial studies showing that the capitation rates were too low, TennCare officials sought to increase the monthly capitation by $16 monthly. This required an increase in expenditures of $257 million ($190 million in federal funds). At the same time, these officials planned to reform TennCare by (a) closing enrollment to medically uninsurable individuals for six to nine months; (b) increasing efforts to combat fraud and abuse; (c) imposing a six-month residency requirement for TennCare eligibility; and (d) improving financial accounting in participating MCOs (Commins 1999). Reportedly, $30 million of this total was to pay off a portion of the debt of Xantus Healthplan, which had been taken over by the state earlier in the year (de la Cruz 1999).

Summary—The Effect of TennCare on the Delivery System

The evidence regarding TennCare's impact on the health care delivery system and public is rather more mixed than its impact on patients.

- TennCare generally has had a negative effect on safety net providers, resulting in greater financial difficulties for community health centers, public hospitals, and teaching hospitals but having a more neutral impact on local health departments.
- Despite evidence that capitation rates were inadvertently set below actuarially fair levels, most MCOs were able to make modest profits under TennCare in 1995 and 1996. However, in 1997 and 1998 MCOs on balance have lost money and capitation rates have since been raised.
- Hospital losses on Medicaid/TennCare and uncompensated care increased substantially; in 1996 they were twice the national average (11.7 percent of costs versus 5.8 percent). Notwithstanding lower hospital payments under TennCare, the hospital industry on average has prospered and is experiencing higher margins than in the United States as a whole. While revenues have grown more slowly, expenses have slowed even more, resulting in higher margins.
- TennCare is generally perceived by physicians as having had a negative impact because of inadequate reimbursement, red tape, and difficulties in obtaining adequate services for TennCare patients, especially pharmaceuticals. Despite this, physician participation is higher under TennCare than it had been under the former Medicaid program.
- Although TennCare actually spent less than originally projected, it cost $3.8 billion more in its first five years than if Tennessee's Medicaid program had merely grown at the same rate as Medicaid programs did nationally. In effect, the higher expenditures were all attributable to the large expansion in coverage. If the expenditures on the added enrollment are excluded, TennCare had virtually no net effect on expenditures over its first five years.
- TennCare produced across-the-board reductions in many measures of hospital use, ranging from emergency room visits to inpatient days and various

measures of staffing. The net effects were efficiency "savings" that exceeded $500 million a year. Much of these "savings" could have been offset if there had been increases in ambulatory care and in post-acute care.

- The public sector, both state and federal, had lower expenditures relative to the revised baseline of $700 million. Of this, $455 million was savings to the federal government and $245 million was savings to the state of Tennessee. However, when provider, local government, and patient contributions are counted, Tennesseans experienced a net increase in health expenditures for TennCare of $3.8 billion relative to what would have happened in the absence of TennCare. This assumes that the forecast provisions of charity care, local government contributions, and collection of patient revenues took place. To the extent that they did not, Tennessee expenditures on TennCare were lower than estimated in this report. These increased expenditures may have been partially offset by the savings from lower hospital costs.

Challenges for the Future

Tenncare is still a work in progress. By almost any measure, it has accomplished a great deal in its first five years. The state of Tennessee has been able to provide Medicaid coverage to hundreds of thousands of individuals who otherwise would be uninsured. But as recent events have demonstrated, there are structural problems requiring resolution.

The first has to do with the inherent tensions created by implementing "halfway" reforms. So long as TennCare exists in the context of a voluntary insurance market, there will be financial incentives for private insurers to skim the healthiest patients and divert those with the highest costs into the medically uninsurable group covered by TennCare. This is not necessarily a bad outcome either for these patients (whose coverage is substantially more comprehensive than they could possibly afford in the private market) or for those covered in the private market (whose premiums are lower than they otherwise would be). But it creates additional fiscal pressures on TennCare that cannot—because of the federal budget caps—be shifted away from Tennessee citizens. To date, the pressures have been alleviated in a somewhat ad hoc manner, with special payments made to selected providers and MCOs in response to complaints about low capitation payments, adverse selection, and other problems created by the program's rapid start-up. But by 1999 the cumulative pressures had grown large enough to stimulate a debate about whether Tennessee should raise taxes to cover the shortfall—a somewhat ironic turn of events insofar as TennCare had been created precisely to avoid such a politically unpopular outcome.

A related issue concerns whether capitation rates under TennCare ever will be truly market driven. TennCare was originally designed with the intention of

using a "managed competition" model in which the annual capitation rate would be based on the lowest bids from qualified health plans. In this model, the state would have specified the scope of services and any other desired elements of plan performance and left it to market forces to determine the price at which an efficiently organized plan could deliver those services. As implemented, TennCare effectively defined in great detail the scope of services covered *and* established an administered price. Since TennCare's beginning, even though the state has taken the position that the capitation level was adequate, there has been continual evidence using standard actuarial methods that the rates were too low. Without a market method to validate the rates established, there always will be such complaints and concerns. To the degree that such concerns are addressed through ad hoc responses, the results are not likely to be efficient (indeed, the "squeakiest wheels" might well be the least efficient providers or MCOs). But failure of the state to respond when the rates legitimately are too low for the benefits promised is an invitation for the market to produce access barriers (e.g., waiting lines) or reductions in quality that most advocates for low-income people would view as unacceptable.

The future of safety net providers may be linked to how TennCare resolves the foregoing issues. Community health centers, public hospitals, and teaching hospitals generally have fared worse financially under TennCare than under the old Medicaid system, whose payment mechanisms were designed to "level the playing field" between safety net providers and the rest of the market. TennCare eliminated DSH payments even though it is very clear that TennCare never eradicated the basis for these payments—unpaid bills left by the uninsured and underinsured. At the same time, TennCare has accelerated the process of moving the rest of the market in Tennessee into managed care. Recent evidence suggests that, eventually, a growing managed market share is bound to have a negative effect on the willingness of providers to deliver uncompensated services to those without the means to pay and on other public goods—such as medical research—that traditionally have relied on patient "cost-shifting" (Cunningham et al. 1999; Weissman et al. 1999). Thus, TennCare has not yet resolved the tension between encouraging inefficiency by making special payments to such providers or encouraging underprovision by not covering the legitimate costs of activities that the market will not support. The size of this challenge is likely to grow in the years ahead.

Finally, while TennCare appears by most measures to be as good as, if not better than, Medicaid for most patients, evidence regarding its effects on the most vulnerable groups—the disabled and chronically ill—is much thinner. TennCare currently does not have a very sophisticated risk-adjustment system for dealing with adverse selection. Capitation rates vary with age, but beyond that, adverse selection payments are based entirely on whether MCO members have one of ten specified conditions. Thus, there continue to be financial incentives to avoid or underserve patients with high-cost conditions—including cancer, diabetes, high blood pressure, and heart disease—not included among these 10 conditions. Likewise, while Tennessee produces reasonably sophisticated data for evaluating access and quality in MCOs (Tennessee Department of

Health 1999), most of the analytic focus to date has been on general preventive services or use generally, rather than on the most vulnerable subpopulations. In light of some evidence that managed care may jeopardize quality for vulnerable populations (Miller and Luft 1997), TennCare officials may need to pay closer attention to monitoring or assessing MCO performance with certain subgroups in mind (Kuhlthau et al. 1998).

TennCare can be viewed as a glass either half empty or half full. Few states would care to experience the trial by fire resulting from TennCare's rapid implementation and the continued litany of complaints stemming especially from physicians. But TennCare's significant reduction in the number of uninsured cannot be overlooked, nor can the fact that in general it has provided a system of care equal to or better than the fee-for-service Medicaid program it replaced. TennCare has not solved all of the challenging problems it was designed to overcome. But it would be very hard to conclude from its first five years that TennCare did not make any forward progress.

Notes

1. Communication with Gordon Bonnyman, attorney, Tennessee Justice Center, April 22, 1999.
2. For more, see "HHS Approves Tennessee Plan to Insure More Children," September 3, 1999. http://www.hcfa.gov/init/990903tn.htm.
3. Details are contained in a letter from Brian Lapps, director of TennCare, to George Smith, HCFA, on March 19, 1999.
4. Moreover, former governor McWherter had been unsuccessful in his 1992 attempts to impose an income tax. See Koselka (1995).
5. TennCare enrollment figures for this same period list 11 plans because 2 plans that had consolidated financially still maintained separate provider and member lists.
6. PPO administrative fees could not exceed 10 percent of their TennCare revenues. Any PPO savings were to be shared between the PPO (5 percent), medical providers (5 percent so long as providers do not receive more than 105 percent of their negotiated fees), and the TennCare Bureau (90 percent). PPOs that exceeded their capitation payments were required to prorate their payments to providers to avoid incurring a loss to the PPO. The reason for the difference between PPOs and HMOs is that HMOs had legally imposed protections such as reserve requirements to reflect their being at risk, and PPOs did not.
7. PPOs were given three years before they were required to establish a primary care case management system.
8. Interview with Bill Young, deputy commissioner, Department of Commerce and Insurance, TennCare Division. TennCare grievance requirements for MCOs and BHOs are codified in Bureau of TennCare, TennCare Standard Operating Procedure 033, October 25, 1996.
9. Interview with Bill Young.
10. The state did propose a regulation that would have prohibited providers from limiting the number of TennCare patients in their practice (except in instances where the practice is closed to all new patients). The regulation did not take effect.
11. Notably, a November 1993 report by the actuarial firm Milliman and Robertson estimated that TennCare's first-year rates were at least 25 percent too low. See GAO (1995).
12. This includes 36.3 percent enrolled in Blue Cross and 8.4 percent enrolled in Blue Care, the renamed UT Health Plan, which BCBST acquired effective December 31, 1995.
13. Coverage is limited to the first 30 days of an inpatient episode, subject to an annual aggregate limit of 60 days (GAO 1995).
14. For subsequent years, this cap was set at 1.5 million (GAO 1995).
15. The treatment of both the charity care and local government appropriations effectively prevented hospitals and local governments from obtaining windfall savings and instead allowed the state to "capture" these private and local resources and ensure that they continued to be used to provide care for the uninsured. Stated differently, the state assumed that capitation rates could be lower since plans could pay hospitals less because third-party surplus revenues to support charity care and local appropriations would still be forthcoming.
16. Figures provided by Keith Gaither, fiscal director, Office of Business, Finance, and Research, Bureau of TennCare.
17. Interview with Chief Health Officer Dr. Fredia Wadley.
18. Coronary revascularization refers to the process of either clearing out coronary arteries (through percutaneous angioplasty) or replacing them (through coronary artery bypass grafts).
19. This survey was conducted by the Tennessee Alliance for the Mentally Ill. See Tennessee Department of Health (1999).

20. Interview with Dr. David Gherkin, president of the Tennessee Medical Association.

21. As noted earlier, even though only 850,000 were enrolled in TennCare as Medicaid eligibles at the end of FY 1994, pre-TennCare projections suggested Medicaid would have 992,000 average daily eligibles in FY 1994. Some of these may have found it easier to join TennCare as uninsured/uninsurables.

22. This is based on 675 respondents of 1,500 contacted. See Tennessee Department of Health (1999).

23. A detailed description of changes is contained in Blumstein and Sloan (forthcoming).

24. Estimate provided by Robert Hammond, administrative manager for the Bureau of Health Services, Tennessee Department of Health.

25. Figures provided by Robert Hammond, administrative manager for the Bureau of Health Services, Tennessee Department of Health.

26. Most of this section is based on an interview with Kathy Wood-Dobbins, executive director, Tennessee Primary Care Association, on September 4, 1998.

27. Letter from Anthony J. Cebrun, president/CEO, Tennessee Managed Care Network, included in State of Tennessee (1993).

28. Figures based on 1993 American Hospital Association Annual Survey Data Base. Note that the University of Tennessee Memorial Hospital is listed under not-for-profit control in the American Hospital Association data but actually is owned, along with the University of Tennessee Medical Center, by the University of Tennessee.

29. GAO (1995) calculated that the final capitation rates used in TennCare's first year were 25 percent below what Medicaid costs would have been under fee-for-service.

30. For example, one year later, two of Nashville's largest hospitals—both nonprofit—also merged in the face of declining reimbursements attributable to managed care (Green 1999).

31. Telephone discussion with Ann Kerr, government relations director, Tennessee Association of Public and Teaching Hospitals, September 17, 1998.

32. A recent analysis concluded that there was substantial risk selection among the managed care plans serving Supplemental Security Income beneficiaries and that the risk-adjustment payments had only a minor effect in offsetting this. The study was unable to determine with confidence how much this risk selection affected overall MCO financial performance (Hill et al. n.d.).

33. Financial data for 1994–1997 provided by Keith Gaither; 1998 data reported in Performance Audit (Tennessee Department of Health 1999).

34. The cram-down ended as BCBST converted to HMO status. The new provider contracts no longer contained the cram-down provision and became effective in Knox and east Tennessee CSAs in June 1996 and in the balance of the state in November 1996. Communication with Jeff O'Toole, BCBST, May 30, 1999.

35. The TMA had 6,800 members in 1998—somewhat more than half of Tennessee's total physicians. There is no reason to suppose that Medicaid participation rates are significantly different among TMA members.

36. This is based on 675 respondents of 1,500 contacted. See Tennessee Department of Health (1999).

37. See Walker (1995) for an example of negative anecdotal evidence. However, Bonnyman (1996f) reports anecdotal evidence that incomes of primary care physicians with substantial TennCare loads have increased.

38. Based on average expenditures per hospital multiplied by total number multiplied by 2 percent loss. Data from the author's analysis of Tennessee Joint Annual Reports.

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Appendix:

List of People Interviewed

Tennessee Department of Health

Nancy Menke, *Commissioner*	Office of the Commissioner
Fredia Wadley, *Chief Health Officer*	Bureau of Health Services
Wendy Long, M.D., M.P.H., *Acting Director of TennCare/Medical Director*	Bureau of TennCare
Keith Johnson, *Director of Operations*	Bureau of TennCare
Keith Gaither, *Fiscal Director*	Bureau of TennCare
Steve Hopper, *Director of Contract Compliance*	Bureau of TennCare
Dena Crim Bost, *Policy Planner*	Bureau of TennCare, Office of Policy and Intergovernmental Relations
Bill Huffines, *Director of Long Term Care*	Bureau of TennCare
Mary Jane Dewey, *Director of Maternal and Child Health*	Bureau of Health Services
Gary Zelizer, *Director, Health Resources Development*	Bureau of Health Services

Other State Government

Bill Young, *Deputy Commissioner*	Department of Commerce and Insurance, TennCare Division
Mary Ann Calahan, *Director, Medicaid Eligibility*	Department of Human Services and Family Assistance
Ben Dishman, *Commissioner*	Department of Mental Health/Mental Retardation

Provider and Plan Associations

Craig A. Becker, *President*	Tennessee Hospital Association
Ann Kerr, *Government Relations Director*	Tennessee Association of Public and Teaching Hospitals
David G. Gerkin, M.D., *President*	Tennessee Medical Association
Kathy Wood-Dobbins, *Executive Director*	Tennessee Primary Care Association
Dick Sadler, *Executive Director*	Tennessee Health Care Association
Jim Gray, *Vice President of Marketing*	BlueCross BlueShield of Tennessee

Consumer Advocates

Gordon Bonnyman, *Attorney*	Tennessee Justice Center
Joyce Judge, *Executive Director*	Alliance for the Mentally Ill

Consultant

Arnold Nemore

All positions and organizations shown reflect an individual's title at the time she or he was contacted. Some individuals subsequently have moved to other positions or organizations.

About the Authors

Christopher J. Conover is an assistant research professor of health policy at the Terry Sanford Institute of Public Policy and senior fellow in the Center for Health Policy, Law and Management at Duke University. His research focuses on the area of state health policy, with an emphasis on issues related to health care for the uninsured and underinsured, Medicaid managed care, the social burden of illness, and health regulation. He has provided policy advice to governors and legislative groups in several southeastern states.

Hester H. Davies was an associate in research in the Center for Health Policy, Law and Management at Duke University at the time this report was written, and she recently has relocated to Austin, Texas. Her background is in health promotion and health education. She is coauthor of a guide to communities on hospital conversions and of a major research study on health care for the medically indigent in South Carolina.