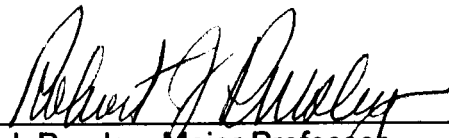


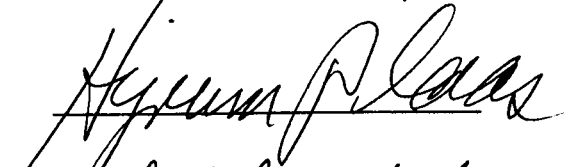
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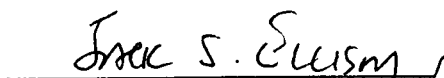


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**KNOX COUNTY TENNCARE HEAD OF HOUSEHOLD ENROLLEES'
ATTITUDES TOWARD THEIR HEALTH CARE SERVICES**

A Dissertation

Presented for the

Doctor of Philosophy

Degree

The University of Tennessee, Knoxville

Cyrus Bernard Nasser

August 1997

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ABSTRACT

On November 18, 1993, the Health Care Financing Administration (HCFA) granted Tennessee a Section 1115a Employee Retirement Income Security Act (ERISA) waiver enabling the state to provide health insurance to its Medicaid beneficiaries through a mandatory managed care program called TennCare. Tennessee moved from deliverer to regulator of Medicaid services.

The purpose of this study was to ascertain and analyze Knox County Tennessee's TennCare heads of household enrollees' attitudes toward their health care services. The sample consisted of 258 head of household enrollees from a population of 23,237 after blind, Medicare dual, under age eighteen, and disabled enrollees were excluded. The data were collected during the spring of 1996 by the method of random digit telephone dialing.

Instrumentation consisted of the Patient Satisfaction Questionnaire III (PSQ-III) (Wilkin, Hallem, and Duggett, 1992). The PSQ-III included items which assessed satisfaction with interpersonal aspects, communication, accessibility, time spent with doctor, financial aspects, technical quality, and overall general satisfaction with health care. A demographic instrument, developed specifically for the study, was also included. Following data collection, One-Way Analysis of Variance and Duncan's New Multiple Range Test were employed to compare and contrast attitudinal means among the categorical groups.

The study conclusions were as follows:

1. On a scale of 0 to 100, Knox County TennCare heads of household enrollees were 63.6 percent satisfied with their health care services.
2. When compared and contrasted by age, managed care organization (MCO), perceived health status, economic standing, initial provider site, most recent encounter, work environment, household income level, and educational level, Knox County TennCare heads of household enrollees' attitudes were significantly different.

Some of the study's recommendations were as follows:

1. More research is needed to further analyze the criterion variables of "Accessibility," "Time Spent With Doctor," and "Financial Aspects," as Knox County TennCare heads of household enrollees were least satisfied with these health care services.
2. A study to determine the association between enrollee satisfaction, compliance, and health outcomes with comparisons among medical specialties would be useful.
3. The TennCare Bureau should emphasize to MCOs the importance of educating enrollees about their health insurance program.

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LIST OF ABBREVIATIONS

AFDC	Aid To Families With Dependent Children
AHCCCS	Arizona Health Care Cost Containment System
DSH	Disproportionate Share Hospital
EPSDT	Early, Periodic, Screening, Diagnosis, and Treatment
ERISA	Employee Retirement Income and Security Act
FFS	Fee-For-Service
HCFA	Health Care Financing Administration
HMO	Health Maintenance Organization
KenPAC	Kentucky Patient Access and Care System
MCO	Managed Care Organization
OBRA-81	1981 Omnibus Budget and Reconciliation Act
PSQ-II	Patient Satisfaction Questionnaire-II
PSQ-III	Patient Satisfaction Questionnaire-III
PHP	Preferred Health Partnership
PPO	Preferred Provider Organization
SSRI	Social Science Research Institute
TCHIP	Tennessee Comprehensive Health Insurance Program
THA	Tennessee Hospital Association
TMA	Tennessee Medical Association
VHP	Vanderbilt Health Plan

CHAPTER I

PROPOSAL

A. INTRODUCTION

Senator Paul Wellstone of Minnesota said it best during the 1992 presidential campaign, "health care reform has become the functional equivalent of kissing babies." Changing relationships between physicians, patients, and health insurers were a challenge facing industrialized nations such as Germany, Japan, and the United States which had retained pluralistic approaches to health care financing and delivery. The nature of their systems was to create different forms of health insurance for different income groups.

One reason for the lack of support for comprehensive health reform and universal coverage in the United States was that since 1965, the poorest ten percent of the population had been covered by Medicaid. By serving as a social safety net, Medicaid allowed the argument to be made that universal coverage was not necessary.

However, forty million Americans were uninsured and total health care costs had risen above fourteen percent of the Gross Domestic Product by 1996. The "Great Society" of the 1960's was no longer the caretaker of social problems. The

"New Federalism" had shifted responsibility away from the federal government to the states. Professionalization of state legislatures and state courts undertaking profound cases in civil rights indicated increased strength of state governments.

Paralleling the shift of resources to the states was the rise of managed health care. Managed care began in the 1940's where industrialist Henry Kaiser's West Coast Kaiser-Permanente Medical Care Program and the Group Health Cooperative of Puget Sound in Seattle, Washington each successfully organized a network of providers. Years later, President Nixon and Congress passed the Health Maintenance Organization (HMO) Act of 1973, awarding nearly \$200 million to nonprofit HMOs to encourage their formation. By 1993, 75 percent of physicians had reported signing a contract with an HMO or a Preferred Provider Organization (PPO), up from 61 percent in 1988 (Iglehart, 1994).

The federal government extended Medicaid responsibility to the states through the 1981 Omnibus Budget and Reconciliation Act (OBRA-81). OBRA-81 set the stage for increased state autonomy to deliver Medicaid. State Medicaid agencies progressed through the same range of mechanisms found in the private sector such as access controls, prospective payment mechanisms, and utilization review. Ultimately, these interventions were subsumed into more comprehensive approaches under the rubric of "managed care." Nothing the federal government did in the 1980's in health care policy was as innovative or controversial as

Oregon's rationing of Medicaid services that was based on cost and treatment effectiveness.

On November 18, 1993, the Health Care Financing Administration granted Tennessee a Section 1115a ERISA waiver enabling the state to provide health insurance to its Medicaid beneficiaries through a mandatory managed care program called TennCare. The role of Tennessee moved from deliverer to regulator of health care services. Since it started on January 1, 1994, TennCare had a significant impact on patients and providers. As a result, TennCare enrollees developed certain attitudes toward their health care services during TennCare's first two operational years.

B. STATEMENT OF THE PROBLEM

The purpose of this study was to ascertain and analyze Knox County, Tennessee's TennCare heads of household enrollees' attitudes toward their health care services.

C. RESEARCH QUESTIONS

Specifically, this study was designed to answer the following questions:

1. What were Knox County, TennCare heads of household enrollees' perceived level of satisfaction toward the following dimensions of their health care services: interpersonal aspects, communication, accessibility, time spent with doctor, financial aspects, technical quality, and overall general satisfaction?

2. What were Knox County, TennCare heads of household enrollees' attitudes when compared and contrasted by age, race, sex, pregnancy status, managed care organization, perceived health status, economic standing, initial provider site, most recent encounter, work environment, household income level, employment status, primary source of transportation, educational level, zip code, health insurance status prior to TennCare, and marital status?

D. BASIC ASSUMPTIONS

The following research assumptions were made:

1. Enrollee attitudes toward TennCare are measurable.
2. The survey instrument is valid and reliable for measuring TennCare enrollee attitudes.
3. The effects of TennCare's ongoing administrative difficulties with over 1.2 million patients being enrolled into private managed care organizations during the first two operational years did not bias enrollee attitudes.
4. Media coverage about TennCare did not bias enrollee attitudes.

E. LIMITATIONS

The limitations of this study were as follows:

1. There was no direct control over the level of consistency in how the survey questions were asked by the interviewers.
2. There was no control over the attitudes toward health care services enrollees had formed prior to enrolling in TennCare.
3. Blue Care bought Total Health Plus January 1, 1996, which could have contaminated former Total Health Plus enrollees' attitudes toward their current MCO's services as the study's data collection occurred only two months later.

F. DELIMITATIONS

The delimitations of this study were as follows:

1. The population was delimited to all Knox County TennCare enrollees except those covered by both Medicaid and Medicare, blind, and disabled enrollees.
2. The population was delimited to self-identified heads of household enrollees eighteen years of age and older.

G. NEED FOR THE STUDY

The national health insurance crusade dated back to the presidential campaign of 1912 when it was an issue of the Bullmoose Party. Later, Harry Truman's national health insurance proposal was defeated by strong opposition from the American Medical Association in the 1950's. Before "The Lost Reform" resurfaces after its most recent demise in 1994, policymakers will no doubt look to the states for solutions to more effectively and efficiently deliver Medicaid services.

While federal efforts had come to a halt, increased costs and decreasing access were forces that propelled several states to apply for Medicaid waivers from HCFA to try to get more health care for their Medicaid dollar. As of June 1995, ten states had Department of Health and Human Services approved statewide Medicaid waivers, eight had applications pending, and five had seriously inquired about submitting an application.

Access to services, quality patient care, cost effectiveness, and patient satisfaction were considered the hallmarks of any managed care plan. Patient satisfaction with medical care had important implications for improving compliance, continuity, outcomes, and for planning optimal systems of health care delivery. Marquis, Davies, and Ware (1983) described patient satisfaction as follows:

... along with health status, patient satisfaction is an ultimate outcome of the delivery of personal medical care services. Patient satisfaction ratings contain useful information about the process and outcomes of care... knowledge about the behavioral consequences of different levels of satisfaction and dissatisfaction may be useful in formulating health policy (p. 821).

At the time of this study, limited evaluations of TennCare had been done. A patient satisfaction evaluation of Knox County TennCare enrollees was needed as Tennessee was the first state to cease fee-for-service (FFS) Medicaid completely and enroll all patients into twelve private managed care organizations utilizing cost control mechanisms such as case management, competition, and capitation. In a prepaid medical model like TennCare, it was essential to assess patient satisfaction because provider incentives could have resulted in underutilization.

TennCare had just started its third operational year at the time of the survey. During the first two years, as enrollees utilized health care services, they developed certain attitudes about both the clinical and administrative aspects of TennCare. Assessment of enrollees' attitudes was one way to evaluate TennCare to determine if it was achieving its goal of providing quality health care within a limited financial framework. Tennessee could have been considered a "laboratory" to test global budgeting within a market-based system.

H. DEFINITION OF TERMS

The following operationally defined the terms necessary to complete the study.

Enrollee attitude: A predisposition, opinion, or mental readiness of a Knox County TennCare head of household enrollee to respond toward TennCare's health care services as measured by the PSQ-III.

Health care services: As ascertained by the PSQ-III, the services investigated in this study included: interpersonal aspects, communication, accessibility, time spent with doctor, financial aspects, technical quality, and overall general satisfaction.

Knox County TennCare heads of household enrollees: Anyone who identified himself or herself as being a head of a household and enrolled in TennCare at the time of the survey.

Medicare dual: Enrollees covered by both Medicare and TennCare at the time of the survey.

TennCare: A mandatory Medicaid managed health insurance program started in 1994 in Tennessee with patients enrolled into private managed care networks that negotiated with providers to supply care.

I. SUMMARY

The purpose of this study was to ascertain and analyze Knox County, Tennessee's TennCare heads of household enrollees' attitudes toward their health care services. The sample population excluded Medicare dual, blind, disabled, and enrollees under the age of eighteen. Limitations included potential inter-interviewer bias, enrollee attitudes that were formed prior to TennCare, and Blue Care's purchase of Total Health Plus just two months before the survey possibly contaminating enrollees' perceptions of their MCO's services.

It was assumed that enrollees' attitudes could be measured and that the instrument used to do so was valid and reliable. In addition, it was assumed that the effects of the operational start-up difficulties and negative media publicity during the first two operational years did not prejudice enrollee attitudes. The need for the study was shown to be substantial as TennCare was the first statewide mandatory Medicaid managed care program to be implemented under a fully capitated system. Operational definitions were established in order to give essential meaning to the study.

J. ORGANIZATION OF DISSERTATION

The remainder of this study inductively answered the statement of the problem: The purpose of this study was to ascertain and analyze Knox County Tennessee's TennCare heads of household enrollees' attitudes toward their health care services. Chapter II is a literature review that discusses Medicaid and its evolution to embrace managed care. The literature review then examines TennCare exclusively. Attitudinal research including instrumentation and attitudes toward the delivery of public services are also considered. In addition, the literature on patient satisfaction with medical care services is explored, and patient satisfaction with Medicaid managed care is reviewed.

Chapter III details the data collection process. It describes the study population, the details of the data collection, instrumentation including the pilot study, and the data analysis procedures. Chapter IV presents the results of the study descriptively and analyzes them. Chapter V presents findings, conclusions, and recommendations based on the results of Chapter IV. Finally, Chapter VI, titled "The Study in Retrospect," offers a post-study review.

CHAPTER II

REVIEW OF LITERATURE

A. INTRODUCTION

Chapter II was a review of the literature necessary to conceptually understand the problem statement: The purpose of this study was to ascertain and analyze Knox County, Tennessee's TennCare heads of household enrollees' attitudes toward their health care services. The review includes discussion of Medicaid, managed care, TennCare, attitudinal research and instrumentation, attitudes toward public services, patient satisfaction with health care services, and patient satisfaction with Medicaid managed care.

B. MEDICAID AND MANAGED CARE

Medicaid legislation was passed in 1965 through Title XIX of the Social Security Act to allow states to provide health care to those who met specified poverty levels. Medicaid guidelines were set by the federal government with individual states administering the program. Depending on the level of state

income, the federal government funded anywhere from fifty to eighty percent of Medicaid costs.

Medicaid had evolved to currently serve nearly thirty-six million low-income Americans (Congressional Research Service, 1995). However, while Medicaid was designed for low-income individuals, over half of all Americans who fell below the federal poverty level in 1992 were not eligible to receive Medicaid assistance (Iglehart, 1993). The Aid to Families with Dependent Children (AFDC) population, who were primarily impoverished women and children entitled to cash welfare payments, made up seventy percent of the Medicaid population utilizing twenty-nine percent of services while the Supplemental Security Income population, consisting of disabled Americans, accounted for twenty-seven percent of the population and used seventy percent of the services (General Accounting Office, 1993). In 1993, the average annual cost to Medicaid per enrolled child (under 21) was \$955 compared to \$1,717 for an adult, \$7,216 for a disabled person, and \$8,704 for those sixty-five and older (Winterbottom, Liska, and Obermaier, 1995).

Medicaid experienced steady growth in patients and expenses in the 1970's. However, during the 1980's expenditures and numbers of patients escalated as Congress expanded eligibility to include single women with children in an effort to reduce infant mortality (Congressional Research Service, 1995). The eligibility requirements evolved to include pregnancy-related services for pregnant women

and children under the age of six with household incomes up to 133 percent of the federal poverty level (Iglehart, 1993).

Medicaid had been historically funded by an FFS system whereby a physician or a hospital billed Medicaid for each service rendered. Providers had to accept Medicaid's payment as payment in full, as balance billing was not allowed. Under such an arrangement neither the state nor any other entity monitored the provision of services. This lack of accountability contributed to uncontrolled costs and a lack of quality assurance. Medicaid costs doubled from 1980 to 1988, from \$24.8 billion to \$51.6 billion (Iglehart, 1993). Total expenditures nearly tripled between 1988 and 1995, from \$51.6 billion to \$152.9 billion (Congressional Research Service, 1995).

In addition to increased costs, other Medicaid problems were identified. Freund (1984) listed universal problems associated with Medicaid: restricted access to mainstream providers, reliance on inappropriate sites and types of care, lack of well-coordinated care, lack of an identified source of primary care, and episodic seeking of care. Hurley, Freund, and Paul (1993) labeled these traditional problems as the "Medicaid Syndrome." In comparison to people insured privately or by Medicare, Medicaid patients were more likely to travel farther to see a physician, use a hospital emergency room, and wait longer once there (Cornelius, Beauregard, and Cohen, 1991).

Access to primary care was further complicated by the number of physicians who participated in Medicaid. According to the American Medical Association, only one-third of physicians fully participated, another one-third limited the number of patients they would see, and about one-third did not accept any Medicaid patients ("Physician Marketplace Update," 1991). State Medicaid directors cited low reimbursement fees for services, the effect of professional liability premiums, and historically complex billing procedures as the top three reasons why physicians did not participate ("Physician Payment Under Medicaid," 1991).

However, Medicaid patients relied on the program for most of their health care needs, especially for primary care. The Institute of Medicine (1977) identified five essential attributes of primary care: accessibility, comprehensiveness, coordination, continuity, and accountability. Continuous provider-patient relationships were found to yield patient disclosure of information (Hill, 1964; Becker, Drachman, and Kirscht, 1974a.) and improved compliance (Fink, et. al., 1969; Stokes, 1980).

In order to remedy the described "Medicaid Syndrome," community health centers were established in the 1970's by the federal government to serve as free-standing outpatient sites. These centers were integral players in the stimulation of primary care case management of the 1980's (Freund, Hurley, Adamanche, and Mauskopf, 1990). Another attempt to remedy the "Medicaid Syndrome" was to enroll patients in private HMOs. While a few of these

undertakings were successful (Luft, 1981) most were immediate failures due to marketing abuse and poor regulation (Chavkin and Treseder, 1977). The "California Experience" of the 1970's (Chavkin and Treseder, 1977) left a residue of discredit on Medicaid managed care that continued. Furthermore, the often intermittent eligibility period of Medicaid patients was a problem for HMOs that needed predictable enrollment numbers to estimate capitation revenues.

Following the "California Experience," the second era of Medicaid managed care began in 1981 with OBRA-81. OBRA-81 stimulated Medicaid managed care demonstrations by allowing states to contract with prepaid plans that met state requirements but were not federally qualified HMOs. In order for states to implement an alternative to the traditional FFS Medicaid system, an ERISA waiver had to be obtained, as ERISA disallowed states to implement alternatives to the FFS system.

The Medicaid demonstration projects of the 1980's implemented managed care using primary care case management through what was known as a gatekeeper. The gatekeeper concept transformed the primary care physician into a cost-conscious allocator of health care services. Gatekeeper physicians agreed to exercise decision-making ability affecting resources consumed by patients and to have their performance monitored while providing primary care and authorizing specialist and emergency room care. The paradoxical assertion that restricting access to care could assure its availability was originally one of the most

controversial features of Medicaid managed care but later, came to be recognized as one of its major contributions.

In order to empirically study managed care in Medicaid, Hurley et. al. (1993) combined distinguishing features of existing Medicaid managed care programs into three program prototypes. Type one was called "Fee-For-Service Primary Care Gatekeeper Enrollment." In this arrangement, state Medicaid agencies contracted with primary care providers or organizations to provide and authorize patient care. The primary care gatekeeper was paid FFS for services directly and was also paid a monthly case management fee per enrollee. Payment mechanisms for other providers were determined by the state's Medicaid agency. This type of delivery system attempted to extend to patients the benefits of a regular source of primary care and then exploit this relationship by encouraging gatekeeper physicians to be discrete managers of health care without direct financial incentives. Most of these programs had a mandatory enrollment requirement which improved continuity for the patient and financial security for participating physicians. Providers enjoyed more independence in this arrangement because their medical decisions were not subject to utilization review found in capitated programs.

Hurley, et. al. (1993) titled their second program prototype, "Risk-Sharing Primary Care Gatekeeper Enrollment." This model was similar to the first except that the method of payment was not FFS. Risk sharing by capitation payment for primary care services plus sharing in losses or gains in referral service accounts

occurred as payment methods for referral providers followed traditional patterns. A variety of financial incentives were used in these programs such as partial capitation payment to primary care gatekeepers or creation of pools of physicians who could be placed at varying degrees of risk for ancillary, specialty, or hospital services. Gatekeeping combined with financial incentives and risk sharing served to distinguish prototype two from prototype one.

The third prototype was titled "Health Maintenance Organization or Prepaid Health Plan Enrollment" (Hurley et. al., 1993). In this arrangement, patients were enrolled into existing HMOs either mandatorily or voluntarily. A contract was usually made between the state and an HMO to enroll Medicaid patients. The agency assumed responsibility for case management and all health care services in exchange for a capitation payment. Payment for providers not in the HMO was negotiated between the HMO and the outside provider. This full assumption of risk by the HMO for health care services distinguished type three from the first two prototypes. For Medicaid, this had special appeal as a means to obtain predictability in expenditures and savings. One assumption was that HMO plans would be willing to serve the Medicaid population for the proposed capitation rate.

It was expected that the first two prototypes, the "Fee-For-Service Primary Care Gatekeeper Enrollment" and "Risk Sharing Primary Care Gatekeeper Enrollment" would evolve more toward the prepaid model. If not, ambiguous messages concerning payment methods would have been sent to providers

restricting the development of integrated delivery networks (Freund and Hurley, 1995). In addition, if more federal support was cut, one would expect states to move further to the prepaid model for their Medicaid plans out of financial desperation. The role of Medicaid agencies would have been similar to that of health insurance purchasing cooperatives envisioned in many health care reform proposals. They would have evaluated plans for their capacity to serve Medicaid populations against objective measures of accessibility and availability (Freund and Hurley, 1995). In addition, standards for contractor performance in crucial areas such as marketing, cultural sensitivity, patient satisfaction, and health outcomes would have needed to have been regulated aggressively (Freund and Hurley, 1995).

Research indicated that Medicaid managed care programs could change utilization patterns and generate cost savings up to fifteen percent relative to FFS care (Freund and Hurley, 1987; Long and Settle, 1988; Freund, et. al., 1989). Yet, Freund et. al. (1989) concluded that HCFA's managed care demonstration projects of the 1980's produced no overall impact on costs to the states or the federal government. Furthermore, Long, Settle, and Stuart (1986) found that Utah's Medicaid managed care plan increased ambulatory care costs twenty-five percent. The literature on HMO's which Medicaid managed care programs were modeled after suggested that managed care could reduce costs primarily by controlling inpatient hospitalizations (Freund and Hurley, 1987). In addition, reduction in

emergency room utilization was one way cost savings had been achieved since up to eighty-five percent of emergency room visits had been found to be for non-life threatening conditions (National Center for Health Statistics, 1983).

While few studies had been done on the impact of Medicaid managed care on the quality of health care (Freund and Hurley, 1987), there were indications that the programs had not yielded improvements. Studies found that immunization levels continued to be low, prenatal care was not delivered more promptly, and birth outcomes were not detectably better (Carey, Weis, and Homer, 1991; Goldfarb, et. al., 1991). A study by Lurie et. al. (1994) found no adverse impacts on the health status of enrollees in the first year of a Medicaid managed care plan; however, neither was quality improved. The Kaiser Commission (1995) on the future of Medicaid concluded:

Most studies show a decline in the use of specialty services and emergency rooms, but no consistent increase or decrease in use of physician services or inpatient hospital care. Evidence about cost savings is almost equally divided between studies that show program savings and those that show program costs similar to or above traditional FFS. Patient satisfaction, affected by most beneficiaries' ability to remain with their previous source of care, is high (p. 21).

In addition, Medicaid managed care did have administrative shortcomings. According to Hurley et. al., (1993) five main areas of concern arose in the 1980's with the implementation of managed care in Medicaid:

(1) adequately informing beneficiaries about their options, (2) avoiding abuses in plan marketing, (3) dealing with persons failing to exercise a choice, (4) handling complaints and decisions to change plans or providers, and (5) monitoring satisfaction and quality of care (p. 32-33).

A study of a Medicaid managed care program known as HealthPASS at the the University of Pennsylvania hospital demonstrated some of Medicaid managed care's administrative difficulties (Hillman, et. al., 1991). Specialists at the hospital viewed the gatekeeper authorization process "as annoying at best, and at worst, as a mechanism for the primary care physicians to profit at the expense of the specialist" (Hillman et. al., 1991). Additional problems HealthPASS encountered included the rate of turnover from voluntary changes made by patients, involuntary turnover due to loss of patient eligibility, and migration of patients to other parts of Philadelphia. The turnover experienced made continuity of care difficult, prevention limited, and overall case management haphazard (Hillman et. al., 1991).

Critics also described managed care in Medicaid as an effort to vacate social responsibilities and introduce strategies attempting to save money while disregarding patient welfare, as Medicaid patients lacked the clout to protest poor care (Spitz and Abramson, 1987; Rosenblatt, 1986). Ellsberg and Stephens (1989) described managed care in Medicaid as a conflict of interest because primary care gatekeepers were offered financial incentives to reduce referrals and possibly even primary care.

During the 1990's traditional Medicaid providers such as public health departments, federally qualified health centers, and community health centers had grown reliant on Medicaid reimbursements. Likewise, academic medical centers had become dependent on Medicaid reimbursements through the disproportionate share hospital program (DSH). These provider groups struggled over whether and how they could participate in Medicaid managed care. Local health departments that had long-standing traditions of well-child clinics, immunizations, and Early, Periodic, Screening, Diagnosis and Treatment (EPSDT) programs were confronted with a dilemma: either develop round-the-clock coverage arrangements and qualify as primary care gatekeepers or develop the capacity to function as at-risk prepaid health plans. Since Medicaid had become a back-door financier of clinical, mental, and social services, the financial stakes were raised when state Medicaid agencies altered their buying habits and aligned with private provider systems (Freund and Hurley, 1995).

While Medicaid managed care had received considerable criticism, its enrollment numbers continued to grow. There were 187,340 patients in 1981. This number increased to 2,837,500 in 1991, enrolled in 235 different plans throughout the fifty states (Office of Medicaid Managed Care, 1991). From 1990 to 1993, the number of Medicaid managed care patients doubled to approximately 4.8 million, thirteen percent of the total eligible population (General Accounting Office, 1993). By June of 1994, penetration increased to twenty-three percent of the total eligible

population with 7.8 million enrollees in Medicaid managed care plans (Iglehart, 1995).

C. TENNCARE

The state of Tennessee implemented a statewide Medicaid managed care program called TennCare in January of 1994. TennCare was conceived out of the need to control escalating Medicaid costs in Tennessee, where costs had grown from approximately \$692 million in fiscal year 1988-1989 to almost \$2.7 billion in fiscal year 1993-1994. Estimates for 1998 placed the cost at over \$6 billion (McWherter, 1993, p. 91-94). In addition, during the 1988-1993 time period, the number of Medicaid-eligible recipients increased from 540,000 to one million (McWherter, 1993, p. 95). This occurred even with a strict eligibility standard as the requirement for Tennessee's AFDC program was higher than that of forty-six other states (Cromwell, et. al., 1995).

In order to cope with uncontrolled costs and increasing beneficiaries, some difficult policy decisions were made. Raising taxes was not an alternative with the median per capita income in Tennessee lower than all but fourteen other states (U.S. Bureau of the Census, 1994). In addition, Tennessee's Constitution prohibited a state income tax. Prior to TennCare, Tennessee had been increasing its disproportionate share dollars for federal matching Medicaid funds by imposing

a 6.75 percent broad-based tax on hospitals and other providers. However, in 1992 Congress enacted the Medicaid Voluntary Contribution and Provider-Specific Tax Amendments curtailing the legality of provider taxes as a way to boost federal matching funds. Finally, reducing reimbursement for Medicaid was not an option as cost shifting would have occurred and emergency room use would have likely increased. Medicaid reform seemed to be the only option.

In May of 1993, state legislators passed then-Governor Ned McWherter's one-and-a-half page endorsement to reform Medicaid as the lesser of the above evils. David Manning, TennCare's architect, and Governor McWherter then slipped the plan through while legislators were out of office in the summer and fall of 1993 before they returned for the legislative session beginning January, 1994. Manning believed Tennessee was paying providers too much for Medicaid services, and the state had more bargaining power than was being exercised (Gottlieb, 1995a). TennCare began operation January 1, 1994, just ten days before the Tennessee legislature reconvened.

Essentially, TennCare was a state administered block grant program. It was fundamentally based on managed care including global budgeting with annual increases tied to inflation, capitated payments, a standard benefits package, pooling of purchasing power, and reallocating resources from more expensive specialist to less costly primary care. TennCare converted Tennessee's Medicaid program from a provider to a buyer-driven system. TennCare's benefits package

was more generous than what the state had offered under Medicaid, yet long term care, Medicare premiums, and some other services were still reimbursed by the FFS Medicaid system. Consumer groups were able to gain assurance that preventive services such as EPSDT and mammograms would be retained from Medicaid without required copayments or deductibles.

HCFA requirements for TennCare approval included capping total enrollment at 1.4 million, providing evidence that each MCO had a physician panel sufficient to provide coverage, documenting adequacies of MCO quality assurance and information management, and agreeing to conduct broad patient satisfaction surveys (Mirvis et. al., 1995). HCFA waived the traditional requirements that Tennessee Medicaid beneficiaries have freedom of provider choice and the requirement that participating MCOs must have at least twenty-five percent privately enrolled patients.

TennCare not only incorporated managed care but also included the interrelated concept of managed competition. Managed competition, named by Alain Enthoven in 1977, was the belief that economic incentives were the principle determinants of how patients, payers, and providers behaved when they sought, financed, or rendered medical care that put patients and providers at risk for the health care choices they made. Aaron and Schwartz (1993) described managed competition as "the ruthless elimination of unjustified activities in the health care sector." TennCare's MCOs were expected to compete for patients as consumers

had a choice of which managed care organization they could join. Blue Care had enrolled forty-nine percent of all enrollees, while the seven smallest MCOs had enrolled only ten percent limiting competition as of May 19, 1995 (cited in Mirvis, et. al., 1995).

Those previously insured by Medicaid were automatically eligible for TennCare as well as those who were uninsurable because of a health condition formerly qualifying them for the Tennessee Comprehensive Health Insurance Program (TCHIP). If one had no access to employer or government-sponsored health insurance they were also eligible, yet if their incomes were above one hundred percent of the federal poverty level they had to pay varying degrees of sliding-scale fees, deductibles, and copayments at the discretion of their MCO. In order to prevent "patient dumping," individuals who were eligible for another health insurance program but chose not to enroll, were not eligible for TennCare.

By 1998, TennCare expenditure savings were estimated to be approximately \$7.2 billion for Tennessee and \$4.8 billion for the federal government (McWherter, 1993 p. 91). Savings were expected to occur by restricting patients to providers within their MCO. If a patient visited a hospital emergency room for something other than a true emergency they were assessed a \$25 fee. For the first time since Tennessee participated in government sponsored health insurance, it controlled how much it spent on Medicaid because it had negotiated an average fee paid to MCOs for each patient enrolled in advance. This arrangement left the financial risk

from over or inappropriate utilization with the MCOs. Whereas HMOs had to assume full financial risk for their patients by guaranteeing rates to providers, PPOs could pass the risk onto providers by adjusting rates if their expenses exceeded capitation payments. As a result, administrative fees and operating profits were originally restricted for PPOs but not for HMOs. While HMOs had to have gatekeeper primary care physicians in place at the start of TennCare, PPOs had until January 1, 1997, at which time they had to function under the same rules as HMOs.

The initial proposed 1994 TennCare budget included \$2.27 billion federal and \$388 million state Title XIX Medicaid funds; \$188 million from state and federal funds from other health care programs such as community mental health programs; \$80 million from the state nursing home tax; \$50 million from local governments; \$230 million from copayments and deductibles; and approximately half of the estimated former Medicaid charity care amounting to \$299 million (McWherter, 1993 p. 91). At the same time the budget eliminated the 6.75 percent tax on providers, a key factor in gaining the support of Tennessee's hospital industry. For every \$1.00 of TennCare expenditures, the federal government paid \$.67 and Tennessee paid \$.33.

The proposed TennCare capitation payment of \$1,641 was patterned after the state of Tennessee's Group Insurance Plan. The rate was then discounted by the amount of anticipated continued charity care in the system, local government

contributions, and average co-payments by beneficiaries, resulting in an average rate to be paid to MCOs of \$1,214 per year per enrollee (Mirvis et. al., 1995). In fiscal year 1992, the Insurance Administration of the Tennessee Department of Finance and Administration determined the mean health benefits paid by the state per employee to be \$1,463 (\$1,194.40 plan cost and \$268.86 out-of-pocket). This was near the initial proposed TennCare capitation rate of \$1,641. Nationally, the individual premium for HMOs in 1993 was \$1,636, almost equal to the proposed TennCare rate (Managed Care Digest, 1994). Thus, Manning was arguing that the anticipated TennCare rates would be comparable to both reported Medicaid and state employee per capita rates, as well as to commercial managed care fees.

Yet, controversy surrounded the established capitation rate. TennCare provided more services than did Medicaid, included the uninsurable who required substantial services, and insured enrollees who were likely less healthy compared to state employees or those in commercial HMOs. Furthermore, the final approved capitation payment rate was reduced twenty-five percent, requiring MCOs to make up the difference by managing patient care. Yet, as earlier indicated, even the most efficient managed care plans had reduced costs up to only fifteen percent (Freund and Hurley, 1987; Long and Settle, 1988; Freund, et. al., 1989). Tennessee's Legislative Oversight Committee on TennCare contracted with Milliman and Robertson Inc. to study the TennCare capitation rate. They found capitation rates were not based on sound actuarial methods and inconsistencies existed between

the TennCare Bureau's methodology and the actual rates. Some, if not all of these reasons, may have contributed to Tennessee raising the capitation rate to \$1,507.

Despite arguments of an insufficient capitation rate, two factors may have justified the reduced rate. One was that continuously enrolled healthy "working poor" enrollees may not have utilized services comparably to traditional Medicaid patients who enrolled only when ill (Mirvis et. al., 1995). Secondly, the new uninsured population may have more closely resembled low income single parent families that constituted seventy percent of all Medicaid beneficiaries but utilized only twenty-nine percent of Medicaid services (General Accounting Office, 1993).

From the beginning, TennCare encountered significant problems. The federal waiver was not officially approved by the federal government until December 1993, just weeks before its scheduled January 1, 1994 start. TennCare enrollees were asked to sign up for an MCO that included their family doctor before November 1, 1993. Yet, most eligibles at the time still had no idea which MCO their doctor would participate in or whether their doctor would even participate at all. Additionally, health care providers were not consulted in the planning stages prompting resistance by physicians. Forty-two percent of Blue Care's Tennessee Provider Network physicians opted out when continued participation was tied to TennCare, only gradually rejoining (Rawlins, 1993). This came to be known as the "cram-down" provision. Although, as of 1996 while only twenty percent of Tennessee's orthopedic surgeons participated in TennCare (Gold, Frazer, and Schoen, 1995),

overall, more physicians were participating in TennCare than did under Tennessee's Medicaid program (Gore, 1996).

When TennCare started, only 5.9 percent of all Tennessee residents and just 2.7 percent of Medicaid patients were enrolled in managed care plans. With the advent of TennCare the percentage of all state residents in managed care plans increased to twenty-five percent (Mirvis et. al., 1995). Hospitals which were not part of a managed care network, such as academic and public institutions, literally lost patients overnight. MCOs with little or no experience were rapidly formed. Andrea Thaler, Director of Public Sector Operations for the Tennessee Managed Care Network referred to Access Med Plus' growth as follows:

Prior to TennCare, our plan had an enrollment of 35,000 members. With the advent of TennCare, our enrollment grew literally overnight to 300,000 members in all ninety-five counties... The size of our staff grew from approximately fifty persons to over three hundred and we incurred major expenditures to accommodate larger demands on our Management Information Systems...(cited in Burns, 1995 p. 32).

Under TennCare, the disproportionate share hospital (DSH) program ended, and the money was used to pay managed care plans to provide coverage to the uninsured in hopes of promoting primary. Yet, academic medical centers continued to receive large volumes of high-cost patients. Thomas Nagle of the Vanderbilt Health Plan (VHP) stated:

VHP has one hundred and forty AIDS members where sixty should be expected for a plan our size. Our plan has twelve Cystic Fibrosis patients where 3.6 is expected; eight receiving growth hormones where 0.3 is expected; and fourteen percent low birth weight versus an expected eight percent (cited in Burns p. 43).

As a result, the Regional Medical Center in Memphis, the state's largest public facility, halted care to uninsured persons from outside its home county; significantly cut oncological, cardiac, mental health, and AIDS programs; reduced residency programs by thirty percent; and reduced its total workforce by eighteen percent as a result of a \$42 million drop in TennCare funding compared to Medicaid (Schear, 1995). At the Laurel Forks-Clear Forks Health Center, in the state's depressed eastern Appalachian region, medical director David McRay took a \$27,000 pay cut and the other five doctors agreed to pay cuts between \$10,000-17,000 in order to keep the operation going without cutting patient care (Gottlieb, 1995a).

Consumer complaints about TennCare were tracked by the state-approved Tennessee Consumer Advocacy Program. During 1994, the agency received 2,720 complaints. Of these, forty-six percent related to the state's TennCare office and thirty-five percent to individual MCOs. The most common state level complaint was delayed processing of applications. MCO complaints centered on inadequate numbers of specialists, disagreement over the medical necessity of procedures, and misrepresentation of benefits (Mirvis, et. al., 1995). One account of a patient dilemma occurred in Maynardville, Tennessee. When a thirty-two-year-old lady

became pregnant, her MCO told her that the closest obstetrician was fifty-five miles away. Because none of the five hospitals in nearby Knoxville were affiliated with her MCO, delivery had to be planned three hours from her home (Gottlieb, 1995a).

The Tennessee Medical Association (TMA) indicated their opposition to TennCare by filing a lawsuit in December 1993 to block implementation. The lawsuit was dismissed by both the Chancery Court and the State Court of Appeals on grounds that the TMA did not have standing because MCOs (which were not parties to the suit), not the state, paid physicians. The major changes the TMA requested in TennCare included: requiring MCOs to give the same notice when changing contracts as physicians did when ending participation; requiring PPOs to establish gatekeepers in the first rather than fourth year; regulating expenditures more closely; and considering TennCare physicians as state employees for malpractice purposes. The TMA also opposed Blue Care's TennCare linkage to its Tennessee Provider Network. The TMA requested a breakage making all MCOs recruit doctors and patients equally, "leveling the medical playing field" among MCOs.

The Tennessee Hospital Association (THA) also voiced opposition to TennCare. The THA sponsored a study by Ernst and Young of thirty-five rural and urban hospitals in January 1995 finding that the hospitals fell short \$47 million of their bottom line costs in 1994 due to inadequate reimbursements (cited in Mirvis et. al., 1995). The THA maintained that without limits on enrollment, charity care

and cost shifting to other insurers would increase, not decrease as intended. Finally, many hospitals reported difficulties with overdue payments from MCOs. In May 1995, hospitals had \$229 million in claims against MCOs (cited in Mirvis, et. al., 1995).

Similar to the "California Experience" of the 1970s, marketing fraud was reported with TennCare. Marty Gottlieb, writing for the New York Times, described TennCare enrollment practices in a 1995 article:

...some promised new members free life insurance and secured credit cards. One offered holiday turkeys to members who enrolled friends. Homeless people recall being besieged by sales representatives and signing up with any number of them.

....a recreation counselor at the state prison farm was arrested for enrolling felons (1995b).

A political campaign worker in charge of instructing sales representatives for an MCO told them:

...If you see a physical problem, you do not need to sign those people. If you see someone who is pregnant, you do not need to sign those people. If you see someone with eyes dilating, you do not need to sign those people (cited in Gottlieb, 1995b).

TennCare did not achieve its primary goal of cost savings either. At the end of the first year, Tennessee reported a \$99 million deficit for TennCare. Complicating matters was pressure from HCFA for Tennessee to return \$100 million in Medicaid matching funds that were inappropriately included as certified

public expenditures in its formula for requesting federal matching funds received during the 1993-1994 fiscal year (Mirvis et. al., 1995). As a result of these financial dilemmas, Tennessee halted new enrollment January 1, 1995, and announced intentions to drop 91,000 enrollees who had not paid their premiums. Enrollment of the uninsured may have decreased as the formerly uninsured left the program and the current uninsured were not allowed to enroll.

Nearly half of the MCOs, representing over sixty percent of TennCare enrollees, reported losses in the first year. Preferred Health Partnership (PHP) indicated that they were receiving \$104 per member per month from the state while providing \$126 of medical care per member per month (cited in Burns, 1995 p. 45). A PHP study found that emergency room visits were more than double for TennCare members and hospital days per 1,000 enrollees were three times higher than privately insured patients (cited in Burns, 1995 p. 45). Glen Watson of Blue Care reported an \$8.8 billion loss on TennCare in 1994, with an expected \$35 billion loss in 1995 primarily because certain supplemental payments were discontinued on January 1, 1995, while utilization was expected to increase. According to Blue Care, a ten percent increase in reimbursement was needed to break even in 1995 (Watson, 1995). Table 1. presents financial and enrollment numbers for certain MCOs for which data could be obtained by the General Accounting Office.

On the brighter side, Tennessee's Medicaid costs increased less than one percent in 1994 while adding 414,000 new working poor patients. Excluding non-capitated long term care and administrative costs, Medicaid costs actually declined. These savings were achieved with a capitation payment that was twenty-five percent below historical Medicaid costs in aggregate. PHP discovered one patient taking the ambulance to dialysis three times each week costing the state \$24,000 per year (Davis, 1994). Blue Care found patients who had been obtaining duplicate prescriptions by going to different pharmacies (cited in Burns, 1995 p. 39).

TennCare also removed the incentive for enrollees to remain on AFDC to avoid loss of their Medicaid coverage, as continued enrollment was allowed of those without access to employer-sponsored insurance. Additionally, TennCare's sliding scale program promoted individual responsibility for health care management and encouraged the use of preventive services. TennCare also eliminated distinctions in coverage based on class by combining publicly supported and commercial groups.

As a result of a two year leap into Medicaid managed care, TennCare enrollees developed certain attitudes toward TennCare. The assessment and analyzation of enrollee attitudes were one way to evaluate TennCare and its goal of providing quality health care within a global budget.

Table 1.

Reported 1994 Earnings and Enrollees for Selected MCOs

HMO or PPO	Net Income	Enrollees(a)
Access Med PLUS	\$66,127	286,639
John Deere	0(b)	17,155
TLC Family Care	\$391,305	35,421
Phoenix Healthcare	\$794,433	34,821
Prudential Community	\$94,743(c)	7,989
Total Health Plus	(\$1,016,839)	6,316
VHP Community Care	(\$4,301,614)	12,558

General Accounting Office, 1995

(a) TennCare enrollment as of May 12, 1995

(b) Both John Deere and Prudential reported for their overall health care organizations rather than only for their TennCare plans. An official of John Deere who reported earnings of \$3.8 million on its Heritage National Health Plan indicated that John Deere broke even on TennCare in 1994.

(c) The Prudential Health Care Plan reported a net income of \$25,497,539 for all its health care plans. For TennCare it reported that it earned \$94,743 after receipt of a supplemental capitation payment.

D. ATTITUDES

Krech, Crutchfield, and Ballachey (1948) defined an attitude as "an enduring organization of motivational, emotional, perceptual, and cognitive processes with respect to some aspect of the individual's world" (p. 152). Later, Triandis (1971) explained that two themes often emerged in the definition of an attitude: "an attitude is a predisposition to respond; and an attitude is represented by consistencies in the responses of individuals to social situations" (pp. 6-7).

Attitudes could be divided into affective, cognitive, and behavioral components (Zimbardo and Ebbesen, 1970). The affective component comprised the individual's emotional response (like or dislike) to some object or person. The cognitive component consisted of a person's perceptual beliefs or knowledge of an object or person. The behavioral component involved the behavior displayed toward an object or person (Zimbardo and Ebbesen, 1970). Since attitudes were considered underlying learned predispositions, any event that resulted in an increase or decrease in learning should have contributed to the attitude change process (Zimbardo and Ebbesen, 1970).

Abelson and Rosenberg (1958) hypothesized that there was consistency between the affective and the cognitive components of attitudes and that attitudes, therefore, consisted of affect toward objects that were believed to be related to other objects of affective significance. They believed that a relationship existed

between psychological events so that a change in the cognitive components should bring a change in the affective or vice versa. Hovland, Janis, and Kelley (1953) suggested that attitude change was a result of learning through reinforcement. "The agent of change is either the actual or anticipated reward for agreeing with the communicator or the awareness of the logical and rational necessity for accepting the information and position advanced" (Zimbardo and Ebbesen, 1970 p. 16).

Persuasive communication could change attitudes through the production of a related opinion change (Hovland, Janis, and Kelley, 1953). Opinions were defined as anticipations and expectations. Attitudes, however, were defined as implicit responses oriented toward reacting favorably or unfavorably toward an object, person, or group. Opinions and attitudes were regarded as implicit responses and both were considered intervening variables with a mutually intimate relationship. Hovland, Janis, and Kelley (1953) explained:

We assume that opinions, like other habits, will tend to persist unless the individual undergoes some new learning experience. Exposure to persuasive communication which successfully induces the individual to accept a new opinion constitutes a learning experience in which a new verbal habit is acquired (p. 10).

Hovland, Janis, and Kelley (1953) further contended there were three important variables in the attitude learning process: attention, comprehension, and acceptance. The communicator must present a stimulus that evokes the listener to

think about both his or her own behavior and the answer recommended by the communicator. The acceptance of a new opinion was contingent upon the incentives offered in the communication. Secondly, if the communication was considered, the individual must understand and be able to assimilate the information (Hovland, Janis, and Kelley, 1953). Lastly, persuasion depends upon acceptance, and acceptance is dependent upon incentives. Incentives included factors such as the expectation of being right or wrong, characteristics of the source, and social approval (Hovland, Janis, and Kelley 1953). Insko (1967) stated:

The principles of learning concerned with attention and comprehension are assumed to operate in persuasion in the same manner as they operate in ordinary instruction. Hence, many of the hypotheses which relate to effective instruction will also relate to effective communication (p. 13).

E. ATTITUDINAL MEASUREMENT

If one utilized attitudinal measurement as a method of evaluation, both convenience and doubt were found. McNemar (1946) commented:

An attitude, however real to the professor, is an abstraction of which the existence is inferred from nonverbal overt behavior, or from verbal or symbolic behavior.

McNemar's (1946) expression of an attitude as "verbal behavior," implied potential to measure an attitude through expression. McNemar (1946) stated that attitudes fall into three categories: intellectual or cognitive (beliefs), emotional or affective (feelings), and behavioral (overt acts). The concept of "feelings" toward an object was one domain that researchers found convenient to try to measure.

Shaw and Wright (1967) examined some techniques used for measuring attitudes. The Equal-Appearing Intervals method, credited to Thurstone, was at one time the most widely used attitudinal technique. Summated Ratings were similar to the Likert-type scale, and Scalogram Analysis, a nonmetric method of scaling attitudes, was usually credited to Guttman (Shaw and Wright, 1967; Lemon, 1973). The Scale Discrimination Technique developed by Edwards and Kilpatrick was a cumulation of Thurstone's, Likert's, and Guttman's methods. The Unfolding Technique of Coombs required discovery and isolation of a latent attitude that would underlie one's preference, yet there was no practical method of assigning numerical values to items. In the concept formation and empirical research area of the behavioral sciences, Lazerfeld used what was later termed a Latent Structure Analysis (Shaw and Wright, 1967). Other techniques for measuring attitudes included Projective Techniques, Sentence Completion Techniques (Oberteuffer, 1972); Cartoons, Pictorial Techniques, Pseudofactorial Questions, Play Techniques, Sociometry, Repetitive-Grid Techniques, Stereotypes, Diaries (Oppenheim, 1966); Disguised Techniques (Shaw and

Wright, 1967); and Rating Scales (Lemon, 1973). Each of these techniques had strengths and weaknesses.

For example, the Error-Choice Technique, which was one of the Disguised Techniques, relied on two statements about an attitudinal object. Each statement was erroneous; one was unfavorable in direction while the other was favorable in direction. Respondents chose between errors, and the direction of choice was supposed to indicate an attitude toward an object. Scoring was based on "hunches" but item analysis was sometimes used. Weschler (1950) reported test-retest reliability of .62 for a scale assigned to measure attitudes toward labor and management.

Rating scales employed a list of statements and the respondent was asked to rank each one by order of preference, importance, and necessity, etc. A Rating scale allowed for objectivity in scoring and the application of powerful statistical tools. Yet, scores had to be independent of one another for statistical tests. Rating scales also forced choices on respondents and destroyed the data in terms of mean positions (Lemon, 1973).

Another method of attitudinal measurement was the Semantic Differential. Thurstone (1928) probably best stated the logic behind this instrument, though he was not referring to it when he wrote "... measurements can be accomplished through employing written test scales on a positive or negative, favorable or unfavorable, attitude continuum." The Semantic Differential relied upon a rating

scale. Its true design had advantages over other rating scales because it could make fine discriminations, and it allowed for assigning numerical values. Lemon (1973) felt that rating scales like the Semantic Differential were "... so easy to construct and use that they will always remain an attractive source for attitude measurement instruments."

One of the most utilized methods of measuring attitudes, the Likert scale was patterned after Thurstone's ideas. Originally, Likert used the five responses of "strongly agree," "agree," "neutral," "disagree," and "strongly disagree." He gave each response a point value and used the total score to measure the attitude. Yet, the total score did not exactly indicate how "favorable" or "unfavorable" an attitude was toward the object in question (cited in Lemon, 1973).

The Likert-type instruments had several characteristics which aided in their popularity. They were easy to construct and score, and they yielded interval level data if one assumed equal intervals on the Likert scale. Another factor to consider was the minimal expense of administration. Furthermore, Oppenheim (1966) wrote that it was not uncommon for the reliability to be as high as .85. Oppenheim stated that the scale was easy to construct and that it was "... possible to include items whose manifest content is not obviously related to the attitude in question..." Oppenheim also noted that the Likert scale was better for some statistical tests than just the "agree-disagree" responses that were part of the Thurstone scale (Oppenheim, 1966). These factors which were important in scale construction

resulted in a high level of use of the Likert-type scale for attitudinal measurement research.

F. ATTITUDES TOWARD PUBLIC SERVICES

Verba and Nie (1972) defined political participation as "acts that aim at influencing government, either by affecting the choice of government personnel or by affecting the choices made by government personnel" (p. 2). Historically, voting and campaigning were the most active ways for citizens to participate in politics. However, in an era of municipal fiscal stress (Bolotin, 1990) and bureaucratic criticism (Fitzgerald and Durant, 1980), the public's dissatisfaction with government services fostered the emergence of citizen-initiated use and more stringent evaluation of public services (Sharp, 1982; Bachelor, 1984; Hero, 1986).

One way to subjectively evaluate public services was with consumer satisfaction surveys. Yet, little empirical research was available. Meyer (1978) suggested that organizations and agencies producing relatively intangible outputs (e.g., public safety services) were evaluated primarily with objective criteria such as technical efficiency. In essence,

While we measure the growth of our economy, efficiency of resource use, and product flows, we have virtually no information indicating that consumers feel the products and services available to them actually conform to their preferences and needs (Handy, 1973).

Paradoxically, consumer satisfaction was generally believed by public administrators, planners, and cognate professionals to be a fundamental objective of public organizations (Njoh, 1994).

Numerous scholars had proposed that the traditional conceptions of public service production and delivery failed to recognize the importance of citizen input (Bish and Neubert, 1977; Percy, Kiser, and Parks, 1980). Savas (1986) argued that "consumer satisfaction with a service will be greatest when the consumer is also the arranger" (p. 20). This approach assumed that service production and delivery arrangements that included consumers or clients in a participatory way would yield positive results and improvements in citizens' evaluations. This approach paralleled the underlying philosophy of coproduction, an alternative for the provision and delivery of public services (Ruchelman, 1989).

City governments traditionally collected data on consumer satisfaction through surveys. However, as noted in the May 1986 issue of the American Planning Association's Planning Advisory Service Memo, such information was relatively underused as a planning tool (Evans, 1986; p. 1). In fact, consumer satisfaction information seldom was employed to assess the effectiveness of public organizations largely because few efforts had been made to enhance the utility of consumer satisfaction information by incorporating it into conceptual models of organizational effectiveness (Njoh, 1994). Furthermore, many individuals did not have direct experience with public agencies. As a result, their evaluation of public

services tended to evolve around their interactions with their peers (Christenson and Taylor, 1983).

Overall, citizen satisfaction with public services was generally high. Four models or explanations of this phenomenon were offered (Dehoog, Lowery, and Lyons, 1990). These include: (1) individual-level explanations which focused on demographics, (Aberbach and Walker, 1970; Brown and Coulter, 1983) community attachment, and political attitudes of local political efficacy (Sharp, 1982; Brown and Coulter, 1983); (2) jurisdictional-level explanations which emphasized the dominant racial composition, average income level, local governmental system, and the actual quality of services in specific jurisdictions (Bish and Ostrom, 1973; Schuman and Gruenberg, 1972; Sharp, 1982); (3) neighborhood-specific models which accentuated the uniqueness of different communities and suggested that urban leadership styles and management practices may have impacted citizen satisfaction with urban services (Yates, 1977; Swanstrom, 1985); and (4) hybrid individual-government models (Dehoog, Lowery, and Lyons, 1990) which found "a parsimonious account of satisfaction, an account that emphasized individual citizens' efficacy relative to local government and their attachment to their community, and the actual level and quality of services provided by local governments" (p. 832).

G. PATIENT SATISFACTION WITH HEALTH CARE SERVICES

Donabedian (1966) suggested that the effectiveness of care in achieving and producing health and satisfaction, as defined by members of a particular society or culture was the ultimate validator of the quality of medical care. Donabedian (1980) later described three approaches to the assessment of quality health care: observation of structure, process, and outcome. Structure referred to the relatively stable characteristics of providers, their resources, and the settings in which they worked. The process of care was defined in terms of the current norms of scientific medicine. Outcome referred to a change in a patient's current and future health status that was attributable to antecedent health care.

While there was a tremendous body of knowledge concerning the technical quality of care, patients could also determine quality by placing values on outcomes. Commonly available outcome measures such as mortality were usually too rare to detect small differences in care and frequently appeared too long after the care was given to be useful. Furthermore, variations in death and serious complications were usually explained by differences in case mix and other factors unrelated to the process of care (Brook, et. al., 1977).

Early concern with patient satisfaction dated back to Koos, Health of Regionville (1954) where satisfaction was considered an outcome measure of health care that determined future utilization. Considering patient satisfaction a

theoretical indicator of quality health care was doubted, though, as quacks and nonmedical healers often used it to support their quasi-medical practices (Korsch, Gozzi, and Francis, 1968). Furthermore, Locker and Dunt (1978) stated that "it is rare to find the concept of patient satisfaction defined and there has been little clarification of what the term means to the researchers who employ it or the respondents who respond to it..." Tessler and Mechanic (1975) claimed that high levels of patient satisfaction were indicative of a patient's refusal to admit that one's source of care was inadequate and that at a given point in time only a small number of patients were truly in a situation that tested the real adequacy of their health care plan. Dissatisfied patients would likely have changed providers during times of poor satisfaction, thus overinflating studies of patient satisfaction (Tessler and Mechanic, 1975).

Nevertheless, patient satisfaction was increasingly considered an indicator of quality health care as the sole reliance on technical care had begun to wane (Wolf, Putnam, and Stiles, 1978). Rising health care costs and a "consumer movement" in the U.S. focused attention on the psychosocial aspects of health care (Hulka, et. al., 1975). Calnan (1988) stated, "the emphasis is placed on consumer sovereignty and the supply of health care is expected to respond directly to patient preferences and demands." Patient satisfaction was considered ethically correct as well as an indicator of system performance where rates of use and compliance increased as satisfaction did (Fitzpatrick, 1991). In addition, the more competitive environment in

which providers functioned made retention of patients more difficult and increased interest in patient satisfaction (Weiss and Senf, 1990).

It was found that patients sought care for five major reasons: medical information, psychosocial assistance, therapeutic listening, general health advice, and biomedical treatment (Uhlmann, Inui, and Carter, 1984). Often physicians did not communicate effectively with their patients because they may have either underestimated a patients' level of understanding of medicine or used medical jargon which patients did not comprehend (Korsch, Gozzi, and Francis, 1968). Ineffective communication may have lead to patient dissatisfaction especially when patients felt the physician understood their physical problem but did not adequately disclose the nature of the illness to them (Lebow, 1974). Patient's perceptions of the affective components of the physician-patient relationship were important antecedents to regimen compliance, (Greenfield, Kaplan, and Ware, 1985; Marquis, Davies, and Ware, 1983; Freeman, Negrete, and Davis, 1971), appointment keeping (Becker, Drachman, and Kirscht, 1974b), their decision to turn to non-medical healers (Cobb, 1954), and their willingness to instigate malpractice litigation against physicians, all of which influenced medical outcomes (Vacarrino, 1977).

In the 1990's era of health care cost containment, defensive medicine, and sophisticated technology, there was a tendency to ignore the interpersonal components of medical care. Yet, patients were better able to understand and

evaluate the interpersonal dimensions than the technical aspects (Ben-Sira, 1976). This may have been especially true of older patients who were socialized to respect and not challenge their doctor's expertise (Haug and Lavin, 1979). Brody, et. al., (1989) found that of adult primary care patients who completed questionnaires before and after their medical visits, those who indicated they received any of the three non-technical interventions of education ($p < .001$), stress counseling ($p < .05$), and negotiation ($p < .01$) were significantly more satisfied than those who did not receive them. None of the technical interventions such as medical tests or prescribed medications were significantly related to patient satisfaction.

It was argued that patients were not competent to judge technical quality and only based their judgments on the interpersonal aspects of the medical care experience. Yet, research indicated that patients could evaluate technical quality if the questionnaire was designed to focus on specific aspects of the patient's medical care experience (Chang et. al., 1984; Roter, Hall, and Katz, 1987; Willson and McNamara, 1982; Linn, 1982). For example, patient accounts of physician information giving were repeatedly found to correlate positively with objective data on information giving gathered from taped medical encounters (Linn, 1982; Roter, Hall, and Katz, 1987). Others, however, found high ratings of care when tests of no diagnostic value were performed (Sox, Margulies, and Sox, 1981). Whether or not

patients could judge technical care, they did make such judgments, and they were very real to them.

Factors thought to influence patient satisfaction included patient demographics, physical and psychological status of patients, expectations of medical care, as well as the structure, process, and outcomes of care. There was no consensus about which of these factors were most important and results from different studies appeared to depend on the type of care rendered and the context in which it was studied (Lebow, 1974; Locker and Dunt, 1978). Important variables according to Like and Zyzanski (1987) included:

(1) whether the patient is being asked about satisfaction with his/her physician, a specific clinical encounter, or doctors and the health care system in general; (2) the patient is being asked when she or he is ill and actively seeking care, as compared to when she or he is healthy and not seeking care; and (3) the study is being undertaken in a hospital, outpatient clinic, private office, or health maintenance organization, versus in the patient's home or place of work.

Patient evaluations of the different dimensions of health care were often correlated. For example, Ware, Davies-Avery, and Stewart (1978) found that measures of the interpersonal aspects and technical aspects of care tapped a common dimension of satisfaction. As a result, specific subscales often may not have reliably measured separate dimensions of care (Pascoe, 1983).

With few exceptions, research indicated that patient satisfaction was positively related to the accessibility, availability, continuity, and convenience of care (Pascoe, 1983; Gray, 1980; Lochman, 1983). If one singled out continuity of care, several studies indicated that a strong relationship existed between having a regular source of care and satisfaction with care as continuity was a characteristic of the medical care experience and satisfaction was an outcome of that experience (Lochman, 1983; Pascoe, 1983). It was not clear, however, whether this was a function of differential dropout rates for satisfied and dissatisfied patients or reflected a tendency toward patients developing increased satisfaction over time (Urquhart, et. al., 1986).

A number of studies found associations between patient satisfaction and sociodemographic variables such as age, social class, race, educational level, family size, income, marital status, occupation, religion, health status, life distress, and attitudes toward various facets of medical care (Fox and Storms, 1981; DiMatteo, Prince, and Taranta, 1979; Korsch, Gozzi, and Francis, 1968; Ben-Sira, 1976; DiMatteo, and Hays, 1980; Eisenthal, Koopman, and Lazare, 1983; Buller and Buller, 1987; Pascoe, 1983; Varlaam, Dragoumis, and Jeffreys, 1972; Zastowny, Roughmann, and Hengst, 1983). Results however were often contradictory (Locker and Dunt, 1978; Fox and Storms, 1981) except for the finding that older patients reported higher levels of satisfaction than did younger patients (Linn, Linn, and Stein, 1982; Hall and Dorman, 1990; Greenley and Schoenherr,

1981; Bertakis, Roter, and Putnam, 1991). In addition, many studies found that patients who reported their health to be optimal were also more satisfied with their health care (Berkanovic and Marcus, 1976; Lochman, 1983). Yet, many of the studies did not use multivariate statistical analyses, thus it was difficult to interpret the associations. Overall, it was difficult to control for differences in pre-existing health status as baseline health status may have been related to some aspects of care but not to others (Linn and Greenfield; 1982; Patrick, Scrivens, and Charlton, 1983). Furthermore, associations between baseline health status and satisfaction with care may have been spurious. Hall et. al., (1990) indicated that patients who reported higher satisfaction with their health care also reported higher satisfaction with other aspects of their lives (Linn and Greenfield, 1982; Roberts, Pascoe, and Atkisson, 1983). Stewart (1983) indicated that each patient had unique relationship needs and there was no one formula for the "ideal" medical care experience.

Several researchers examined the relationship among patient expectations, requests, and satisfaction. Greenley and Schroenherr (1981) found that patients with low expectations were less satisfied with their health care while patients tended to be more satisfied with their care if their providers' behavior conformed to their expectations (Korsch, Gozzi, and Francis, 1968; Lochman, 1983; Like and Zyzanski, 1987). Little was known, however, about which types of patients preferred different behaviors from their physicians. For example, it may have been that some patients preferred to take an active role in the decision-making process,

whereas others preferred that the physician assume full responsibility for all medical care decisions. Researchers knew anecdotally of both types of patients, but there was little empirical research on this topic. Patient expectations could differ greatly among patients as a function of personality, previous contact with medical care providers, cultural values, and the particular context in which care was received (Ellmer and Olbrisch, 1983).

The way in which care was organized and financed was also shown to be related to patient satisfaction. It was often difficult, however, to separate the effects of the organization (e.g., group practice versus solo practitioner) from financing's (e.g., prepaid versus FFS) influence on satisfaction. Furthermore, different types of patients may have been satisfied with different types of arrangements. Patients in large prepaid group practices were less likely to have a personal physician and tended to be less satisfied with their physician than patients in smaller FFS arrangements (Davies et. al., 1986; Luft, 1981; Tessler and Mechanic, 1975; 1978; Mechanic et. al., 1980).

Mechanic, Weiss, and Cleary (1983) found patients who did not terminate their membership in a pre-paid group practice reported that access was difficult, and they were less likely to have established a continuous relationship with a physician. As a result, approximately five to ten percent of new enrollees in prepaid group practices eventually became dissatisfied and left (Ware and Davies, 1983), but others may have become more satisfied as they grew accustomed to the

organization compared to decreased satisfaction over time among patients in FFS plans (Ross, Wheaton, and Duff, 1981). Tessler and Mechanic (1975) stated that if prepaid group practices were to meet their goals of prevention and comprehensive benefits through efficiency and financial disincentives to providers, then a prepaid plan must first attract and satisfy its patients. Therefore, a critical part of the appraisal of the prepaid medical model of managed care revolved around patient satisfaction. Some HMOs had begun to factor patient satisfaction into payments for plan physicians ("Patients' Grades," 1990).

Historically, patient satisfaction research had served the purposes of both marketing and monitoring quality of care. It was straightforward to think of patient satisfaction from a marketing perspective. Patients could be viewed as customers and the medical care profession as providers of services. Just a few years prior to the study, the medical establishment would have considered such a statement unethical. However, the oversupply of physicians, increased patient sophistication, the entry of for-profit organizations into the marketplace, and increased managed competition plans made providers and health care managers increasingly interested in marketing strategies to improve patient satisfaction. Cousins (1985) surveyed more than five hundred patients and found that eighty-five percent had changed their physician in the past five years or were thinking of doing so. The main reason for changing physicians was related to the personality of their physician.

However, when considering patient satisfaction, it was important to separate marketing from quality assurance monitoring. One could have easily imagined situations where factors other than quality medical care would influence patient satisfaction. For example, providing inexpensive ambulatory care services in convenient locations may have improved patient satisfaction but may have resulted in a poor level of medical care. Patients may have also been more satisfied if they received more tests and prescriptions even though they may not have been medically necessary (Marton, et. al., 1982; Cowan, 1987; Vuori, 1987).

Overall, the relationships among patient involvement, satisfaction, and outcomes were complicated, and studies of these relationships yielded inconsistent results. While increased patient involvement may have lead to satisfaction, it may also have been the result of unsatisfactory or poor care. The limited empirical conclusions, however, did not mean that assessment of patient satisfaction was not worthwhile. This literature review suggested certain principles to guide patient satisfaction research efforts. First, and perhaps the most important measure of satisfaction was a specific, well defined, and when possible, a multi-dimensional study. In addition, several investigators had developed detailed, multidimensional instruments, but few investigators had used proven instruments developed by others (Hall and Dorman, 1988). If researchers had used instruments that had been validated and reported in the literature, it would have facilitated comparisons among studies conducted in different settings.

In addition to age and perceived health status, the most consistent finding in the satisfaction literature was that characteristics of the provider or the organization that made care more "personal" were associated with higher levels of satisfaction. Good communication skills, empathy, and trust appeared to be the strongest predictors of how a patient would evaluate the care received. Patients who received care from practitioners in smaller organizations as well as those who had a long-standing relationship with their physician tended to report more satisfaction.

Ultimately patient satisfaction, like many attitudes, was a fleeting trait that was the result of a constantly changing interaction between a patient and his or her health care environment. It seemed reasonable to expect that ongoing satisfaction brought patients to health services, compliance occurred, and satisfaction continued. Equally likely was the possibility of a vicious cycle where dissatisfaction kept patients away from health services so that when encounters were made, they were stressful, resulted in poor compliance, increased, and ultimately poor outcomes (Strauss, 1969).

H. PATIENT SATISFACTION WITH MEDICAID MANAGED CARE

Few studies had analyzed the effect of Medicaid managed care on patient attitudes mainly because managed care was still a new delivery mechanism for Medicaid. In addition, the main function of managed care in Medicaid was financial,

inspiring most research on cost savings with some quality assurance studies on changes in utilization patterns. Difficulty arose in empirically analyzing research efforts concerning the effects of managed care in Medicaid using patient satisfaction as a criterion variable. What was described by Hurley et. al. (1993) as "the learning curve" made evaluations difficult due to staggered enrollment of patients and evaluations of programs that were in different developmental stages. In addition, Medicaid patients were many times allowed to choose their gatekeeper physician leading to potential selection bias. Furthermore, reliability was in question because Medicaid patients were often only eligible for short periods of time (Hurley et. al., 1993). Finally, state programs were designed, organized, and delivered differently to meet individual state needs.

Medicaid populations were useful to study, though, as they provided a known universe in terms of economic status and benefit coverage making them a fairly homogeneous group. Hurley and Freund (1988) described Medicaid managed care as a particularly "pure form of managed care." Douglass and Torres (1994) indicated that patient satisfaction with services provided under Medicaid managed care was an indicator of the durability of a Medicaid system over time and its replicability in other states.

In 1982, Kentucky received a federal waiver to implement a Medicaid managed care program called Citicare. Citicare enrolled AFDC beneficiaries into a Health Insuring Organization to provide medical services for a capitation payment

with physician sharing of overall savings. Patients selected a primary care gatekeeper who managed their medical care. Bonham and Barber (1987) investigated patient satisfaction in Citicare with in-person interviews both before and after the implementation of Citicare. Results indicated that in both the 1983 FFS program and the 1984 Citicare program, seven out of eight recipients felt they received good or excellent care. Bonham and Barber (1987) concluded that the implementation of managed care into Medicaid did not foster a poor quality of care for Medicaid patients. Bonham and Barber (1987) did find significant differences in patient satisfaction depending on the source of care. The percentage of patients who perceived their care to be good or excellent declined by six percent ($p < .05$) in doctor offices after Citicare was implemented, while health center and clinic perceptions of good or excellent care increased nine percent ($p < .05$).

In 1991, a questionnaire was sent to six thousand managed care beneficiaries in Kentucky's primary care case management program known as Kentucky Patient Access and Care System (KenPAC). Beaulieu (1991) obtained a forty-eight percent response rate after sending a follow-up survey. Beaulieu (1991) found that Medicaid beneficiaries were generally satisfied with their access to health care services. Over fifty percent of the beneficiaries responding to the survey reported that their health care was better under KenPAC than FFS, while another forty percent felt it was about the same. Only five percent felt that the quality of their health care was worse.

Minnesota had a fully capitated health care program that contracted with seven HMO-type health plans in nine of the state's eighty-seven counties. Two of these health plans served only Medicaid patients. As part of quality assurance monitoring, patient satisfaction surveys conducted by Minnesota's Department of Human Services during open enrollment periods found high patient satisfaction among individuals who had established relationships with providers in managed care plans. The November 1990 Open Enrollment Survey concluded that the low number of individuals wishing to change health plans were indicative of the excellent level of health care being provided. In addition, only one hundred seventy-three formal grievances were reported from 1986 to 1990 representing less than 0.2 percent of the total enrollment numbers (U.S. General Accounting Office, 1993).

A study by Davies, et. al., (1986) randomly assigned 1,537 patients ages 17 to 61 to an HMO and into the regular FFS system along with a control group of 486 self-selected patients who had already received care at the HMO for at least one year. While not a study of Medicaid managed care, it provided experimental data on the effects of managed care and patient satisfaction. The well-planned research design allowed investigators to estimate the impact of self-selection on patient satisfaction. All pre-experimental differences between the HMO and FFS groups were controlled by regression. Davies et. al. (1986) addressed two research questions: "Do those who voluntarily choose between prepaid and FFS care find

their care equally acceptable?," and "Do prepaid and FFS arrangements differentially affect satisfaction with medical care in the absence of any selection of care?"

Davies et. al. (1986) utilized the 43-item Patient Satisfaction Questionnaire (PSQ-II) to obtain patient perceptions as patients self-administered the instrument before experimental assignment, periodically during the study, and on scheduled exit. Results indicated that overall, patients who were randomly assigned to the HMO and FFS system were satisfied with medical providers and services. Yet, those randomly assigned to the HMO were significantly less satisfied when the specific variables of length of time to schedule an appointment, parking arrangements, availability of hospitals, and continuity of care were analyzed independently. Patient attitudes toward length of office waits and costs of care favored the HMO patients. No differences were found between the two systems of care in rating access to medical information (answering questions), emergency care, office hours, the availability of family doctors, completeness of facilities, or technical aspects of care. Davies et. al. (1986) argued that the ratings for access to care and availability of resources mirrored differences in the organizational structures of the two systems where the HMO was geared to lower costs and less concerned with physician-patient relationships.

Davies et. al. (1986) also utilized a measure of dissatisfaction. Fifteen percent of HMO experimental enrollees were dissatisfied with their medical care

compared to only ten percent of FFS patients. In terms of appointment waits, forty percent of the HMO group expressed dissatisfaction compared to only twenty-five percent of the FFS group. In contrast, forty-seven percent of patients in the HMO group were dissatisfied with office waits compared to fifty-four percent of the FFS group. Davies et. al. (1986) claimed that HMOs make patients wait on appointment lists while the FFS system tends to make patients wait longer in waiting rooms.

Davies et. al. (1986) also explained the low levels of HMO patient satisfaction for hospital and specialist availability as a result of the organizational differences where an HMO's primary mechanism for lowering costs was the limitation of such services. The FFS patients, on the other hand, could choose between a wide variety of hospitals and specialists which likely accounted for their higher degree of satisfaction. Luft (1980) pointed out that HMO members:

like the short waits and comprehensive coverage, but are dissatisfied with the amount of time that it takes to get an appointment, their inability to see their usual physician for urgent visits, and the limited communication and warmth in their patient-physician relationships.

Davies et. al. (1986) also noted that a limited number of health care locations were available to HMO patients which likely intensified their poor attitudes toward travel time and convenience of facilities. In terms of interpersonal aspects of care, Davies et. al. (1986) stated that the transition from a usual provider to a new provider when an HMO comes into being often lowered patient satisfaction levels.

The longitudinal nature of their research study allowed Davies et. al. (1986) to estimate the effect the transition had on patient attitudes. Overall, Davies et. al. (1986) found that the transition did seem to have a marginal effect, but less favorable attitudes toward providers still persisted after five years in the HMO group compared to the FFS group. Davies, et. al. (1986) further found that those HMO patients who entered the study ill had poor attitudes toward the interpersonal and technical aspects of care, especially the high income sick as a reaction to the withholding of services they had been used to receiving in the FFS system.

Monroe County, New York implemented a mandatory Medicaid managed care program in 1986 that allowed enrollees to choose an HMO and primary care physician who authorized inpatient, emergency, and specialist care. Temkin-Greener and Winchell (1991) conducted a pre-survey one year before the program was implemented while patients were still under the FFS system and a post-survey one year after the managed care program was started.

A Likert scale instrument was utilized to measure patient satisfaction. Respondents were given the choices of "Strongly Agree," "Agree," "Uncertain," "Disagree," or "Strongly Disagree." The scales were created in such a way that if agreeing with a statement implied approval of the health care system, the response "Strongly Agree" was coded as one, with other responses coded as two, three, four, and five. A mean score for each scale was calculated in such a way that higher scores reflected more satisfaction with medical care. The researchers

focused on humanness of doctors, quality of care, continuity of care, and general dissatisfaction. Furthermore, using incremental number values for each Likert scale response, researchers developed a measure of satisfaction as a relative measure of dissatisfaction where the dissatisfaction score was presented as the percentage of respondents in each group who were more dissatisfied than the median. Two limitations of the study were that the pre- and post-survey groups were not the same individuals nor was there any attempt to determine if study subjects were actually utilizing Medicaid at the time they were surveyed. The authors further acknowledged the limitation in determining if attitudinal assessments evaluate feelings after having received care or perceptions before receiving care.

When asked what problems the Medicaid managed care group had encountered in obtaining care, 10.6 percent reported transportation difficulties and 9.8 percent reported prolonged waiting room times. Yet, these problems were equally found in the pre-survey among FFS patients. The researchers did find that the process of referral and restricted emergency room usage to be less mentioned than expected, as only 5.8 percent reported dissatisfaction with the referral process and only 4.4 percent reported dissatisfaction with emergency room restrictions.

Patient attitudes, convenience of services, humanness of doctors, quality of care, and general satisfaction were regressed in a simultaneous multiple regression equation against the independent variables of age, ethnicity, education,

source of primary care, gender, and category of Medicaid eligibility. The researchers found that satisfaction increased with age ($p < .05$). Also, those with a higher level of education were more likely to be satisfied with humanness ($p < .001$), technical quality ($p < .001$), and convenience of care ($p < .05$). Those receiving care from office-based physicians were more likely to be satisfied with the technical quality of care and convenience of services ($p < .001$). The authors did not find significant differences between general satisfaction and humanness of doctors by source of care nor were differences found between gender and category of Medicaid eligibility.

General satisfaction was also regressed with provider source and the remaining satisfaction dimensions. While no significant relationship was found between provider source and general satisfaction, general dissatisfaction and other satisfaction variables were highly correlated ($p < .0001$). The pre- and post-survey results indicated significantly lower levels of dissatisfaction by managed care patients for humanness of doctors ($p < .01$) and quality of care ($p < .01$) than patients in the FFS system. Overall, ninety percent agreed with the statement "I am very satisfied with the medical care I receive" while seventy-six percent agreed or strongly agreed that the care they had received from doctors was "just about perfect." Eighty-nine percent also agreed that their doctor respected their feelings. Overall, Temkin-Greener and Winchell (1991) found that Medicaid managed care patients were more satisfied with the humanness of doctors and with quality of care

than their counterparts in FFS which conflicts with other research findings reported in this literature review.

In 1988, Detroit and surrounding Wayne County, Michigan implemented CountyCare, an innovative managed care program designed to deliver health care services to the non-Medicaid poor working poor. Douglass and Torres (1994) interviewed two hundred seventy-nine CountyCare patients to assess utilization of services and patient satisfaction among respondents. CountyCare was implemented to provide health insurance coverage for Detroit's non-Medicaid urban poor adults between the ages of eighteen and sixty-four, an urban population whose ineligibility for Medicaid health benefits placed them at high risk of illness and strained local institutions to provide care.

The researchers had originally planned to interview CountyCare patients at the Department of Social Services to avoid possible contamination if interviewed at or near medical services. However, by the time of the survey, CountyCare patients no longer had to periodically go to the Department of Social Services. As a result, interviews were conducted at shelters, soup kitchens, and warming centers for the homeless. Tube socks were used as an incentive for participation.

Douglass and Torres (1994) indicated that prior research efforts in the realm of patient satisfaction had focused on inpatient care experiences with interviews at the time of discharge making results subject to the halo effect. To avoid this, their instrument was developed to measure attitude development over time using prior

instruments as references. The instrument focused on hospital, outpatient, emergency, and auxiliary services.

Analyses of the survey data were conducted with stratified contingency tests using the standard Chi-Square test and stratified univariate comparisons utilizing the Student's t-test. Respondents averaged thirty-eight years of age, seventy-two percent male and eighty percent African-American. Of the sixty-six zip codes in Wayne County, forty-six were represented by respondents. A high utilization rate was also found as approximately two-thirds of the respondents used medical care services during the survey time period, increasing the validity of the results.

Half of the respondents who used CountyCare services indicated that the managed care plan was "a good medical care system." Overall, 31.1 percent said they were satisfied or very satisfied with CountyCare while thirty-four percent of the respondents said they were not satisfied or very unsatisfied with CountyCare. When asked if CountyCare services were better, the same, or worse than those received under General Assistance which fifty-eight percent of CountyCare beneficiaries had received, CountyCare services were judged better by 25.7 percent, about the same by 51.4 percent, and worse by 22.0 percent of the 108 respondents. Physicians received satisfactory or very satisfactory marks from 67.2 percent of the respondents, while 20.3 percent gave neutral scores. Patient attitudes toward access to care were poor. Thirty-nine percent of respondents were unsatisfied or very unsatisfied with the availability of transportation to their

CountyCare site and twenty-five percent of the individuals reported they had been unable, at least once, to receive medical care because they lacked transportation.

Douglass and Torres (1994) emphasized that the poor CountyCare patients had little incentive to play by the managed care rules, yet did so to a certain degree anyway. This was an important finding as patients had to work harder under managed care. Douglass and Torres (1994) stated that "Clients did not respond negatively to the new system even though they had every reason to do so."

Arizona had demonstrated since 1981 that it was possible to combine Medicaid and managed care with results that satisfied both patients and physicians, as well as the state and the federal government. The Arizona Health Care Cost Containment System (AHCCCS) provided health care to the state's 500,000 eligible beneficiaries through a process of competitive bidding (Paringer, 1991). Plans bid for the opportunity to enroll beneficiaries in seven risk categories, such as welfare mothers and children, the elderly, and the disabled. Because the Arizona system was classified by HCFA as a demonstration program, extensive evaluations were done.

To assess patient satisfaction and access, McCall et. al. (1989) conducted household surveys in the summer of 1985 with 397 AHCCCS AFDC and SSI beneficiaries in Arizona and 553 traditional FFS Medicaid beneficiaries in New Mexico who had at least twelve months of prior enrollment. The samples were selected using a stratified two-stage probability sampling design in which the

primary sampling unit was zip code and the secondary sampling unit was AHCCCS enrollees. The sample was stratified to disproportionately sample various subgroups of the AHCCCS population such as for age, urbanicity, and race. The survey included use of medical care services, preventive care received, health status, access to care, satisfaction with care, demographics, income, and insurance status items.

Completed questionnaires were edited manually and also by machine for accurate information. The final analysis weights were constructed taking account of the differential response rates of the sample groups and the most accurate information on the characteristics of those sampled. The final weights used were based on urbanicity, age and eligibility, and race as reported in the survey. All the data were adjusted using a model that corrected for age, entitlement, race, sex, urbanicity, education, marital status, income, and number of family members. Of those beneficiaries who had been in the county program, almost half thought the medical care received from AHCCCS was better, one-third thought it was the same, while one in ten thought it was worse. Table 2. presents findings concerning access to care. McCall et. al. (1989) discuss their results indicating that it was difficult for AHCCCS members to get emergency medical care. Yet, the authors point out that emergency care was a service thought to be widely abused by Medicaid patients; therefore, it was possible that this finding was due to faulty perceptions of the need for emergency care by beneficiaries in an effectively run

Table 2.

Selected Findings Concerning Access to Care

	AHCCCS	FFS Comparison
Percent needing emergency care who had difficulty obtaining it	25.0	10.2**
Percent of those needing urgent care who had difficulty obtaining it	7.5	4.9
Percent of those needing routine care who had difficulty obtaining it	3.6	9.1*
Percent who said that the place where they usually receive medical care had a place to go for care on the evenings or weekends	64.7	47.5

SRI International Inc., 1989

* significant at .05 level

** significant at .01 level

managed care system that appropriately kept patients out of emergency rooms.

For routine care, significantly larger percentages of people in the comparison site than in AHCCCS had difficulty getting routine care. However, waiting times for appointments and in-office visits were not significantly different between the two groups. The rate of those having difficulty receiving routine care in the comparison site was one in eleven, compared to only one in twenty-eight among AHCCCS members. Fewer than half in both sites had to wait more than two days for an appointment, and overall more than seventy percent were seen within a half hour after arriving at the doctor's office. Knowledge of a place to go for care in the evenings and on weekends was significantly greater in Arizona than in the comparison site. More than two-thirds in Arizona, compared with less than half in the comparison site, said the place where they usually received care was open during the evenings and on weekends.

Specifically for patient satisfaction, respondents were asked to rate their satisfaction with particular elements of the care they received. Elements of care examined were overall medical care and six specific elements of the medical care process: office waiting time, night and weekend availability, convenience, cost, information, and courtesy.

Overall, 55.0 percent of the AHCCCS population were "Very Satisfied" with their medical care, 23.0 percent were "Somewhat Satisfied," 6.0 percent were

"Somewhat Dissatisfied," and 5.0 percent were "Very Dissatisfied," while 10.0 percent responded "Don't Know." The rates of satisfaction were higher for the comparison site, where 71.0 percent reported being "Very Satisfied," 22.0 percent "Somewhat Satisfied," 4.0 percent "Somewhat Dissatisfied," and 1.0 percent "Very Dissatisfied," while 2.0 percent of the comparison site responded, "Don't Know." The authors predicted that these differences found in Table 3. with the comparison group rating "overall medical care" and "courtesy shown by doctors" more highly were indicative of the FFS freedom of provider choice option.

Three independent surveys conducted by random digit telephone dialing of five thousand Tennessee households were done by Fox and Lyons at the University of Tennessee's Center for Business and Economic Research from 1993 to 1994. The researchers surveyed FFS Medicaid patients before the implementation of TennCare (1993), finding that fifty-eight percent felt their health care was "good or excellent" while fifty-seven percent felt the same eight months later (1994a.). However, Fox and Lyons (1994a.) also found that after TennCare's implementation those who rated their health care as poor increased from thirteen to twenty-five percent for adults and from four to sixteen percent for children as rated by their head of household. Additionally, while patients rated their overall quality of health care very highly, when asked the related yet different question about satisfaction with "insurance coverage" which has administrative connotations, significant changes in the degree of satisfaction were found before

Table 3.

Patient Satisfaction With Various Elements of Care

	AHCCCS	+FFS Comparison
Overall medical care	3.4	3.6*
Waiting room time	3.0	3.1
Night and weekend availability	3.2	3.3
Convenience of getting to the doctor	3.2	3.3
Costs paid out of pocket	3.7	3.6
Information given about medical problems	3.4	3.5
Courtesy shown by doctors	3.6	3.8*

SRI International Inc., 1989

1=Very Dissatisfied; 2=Dissatisfied; 3=Satisfied; 4= Very Satisfied

* significant at .01 level

+Values for comparison group eligibles were regression adjusted to correspond to the AHCCCS averages

and after the implementation of TennCare. In 1993, Medicaid patients reported eighty-two percent satisfaction with their "health care insurance." This number dropped to sixty-one percent for the 1994(a) survey while during the same period the percentage of patients with privately purchased insurance, employer provided insurance, and Medicare increased eight percent (1994a.).

The survey also asked TennCare enrollees if their care had gotten better, worse, or stayed the same since TennCare's start. Table 4. indicates that those who were formerly uninsured clearly liked TennCare better while those formerly insured by Medicaid preferred TennCare less (1994a.). A third survey in September of 1994 found that forty-five percent of TennCare enrollees who had previously been on Medicaid said that the care they received under TennCare was worse than under Medicaid citing limited choice of doctors (Fox and Lyons, 1994b.). Enrollees were able to schedule appointments generally within three weeks; however for primary care, it took over three weeks. Twenty-one percent said it took more than three weeks for a follow-up appointment (Fox and Lyons, 1994b.). The survey results indicated that it took enrollees an average of twenty-five minutes to travel to the doctor's office, but the survey did not indicate how often travel time exceeded the thirty minute HCFA limit for primary care. In addition, the average reported waiting room times in physician offices were an hour longer than TennCare's maximum waiting room time of forty-five minutes as was established by HCFA (Fox and Lyons, 1994 b.).

Table 4.

**TennCare Satisfaction Percentage Levels for Prior Medicaid and Uninsured
Patients**

Satisfaction Level	Former Medicaid	Former Uninsured
TennCare-Better	12%	59%
TennCare-Same	37%	31%
TennCare-Worse	51%	10%

Fox and Lyons, 1994b.

I. SUMMARY

This review of literature considered Medicaid managed care and TennCare indicating that Tennessee opted to find salvation for its increasing Medicaid costs in the most provider intrusive model of the Medicaid managed care prototypes, "The Health Maintenance Organization (Hurley et. al., 1993)." After a turbulent start-up, providers and patients settled into their new roles. One way to evaluate TennCare at its midway point was through a patient satisfaction survey. This review found that patient attitudes were unstable research constructs, as numerous variables confound and complicate the total health care experience such as demographics, health care setting, and how the health care is delivered. Yet, it was

concluded that patient satisfaction has important implications for compliance and outcomes and is critical in the HMO model of medical care delivery as underutilization is a risk. Overall, Medicaid patients enrolled into managed care plans were found to have a high degree of satisfaction as long as continuity is maintained. The following "Methods Chapter" presents the procedures to obtain the data to determine Knox County Tennessee's TennCare heads of household enrollees' attitudes toward their health care services.

CHAPTER III

METHODOLOGY

A. INTRODUCTION

The purpose of this study was to ascertain and analyze Knox County, Tennessee's TennCare heads of household enrollees' attitudes toward their health care services. The Patient Satisfaction Questionnaire III (PSQ-III), along with an accompanying demographic/administrative instrument, were administered by random digit telephone dialing to obtain the data needed to answer the research questions.

B. STUDY POPULATION

Knox County, Tennessee heads of households who affirmed they were insured by TennCare when telephoned were included in the study. At the time of the survey, six managed care organizations were operating in Knox County, Tennessee with 65,134 total TennCare enrollees. Medicare dual, blind, disabled, and under age 18 enrollees were excluded from the study thereby reducing the total target population to approximately 23,237.

The method of random digit telephone dialing yielded a total sample of 258 Knox County TennCare enrollees, a sampling fraction of at least 1.1 percent. The literature suggested that Medicaid patients were a fairly homogeneous population in terms of socioeconomic status, educational level, and dependency on Medicaid for their health care needs, reducing the need for a large sampling fraction (Hurley, et. al., 1993).

C. DATA COLLECTION

The use of telephone surveying had greatly increased over the twenty years prior to the study. The chief advantage over face-to-face interviewing was cost savings. Graves and Kahn (1978) estimated savings of fifty percent. A second advantage was that telephone interviewing was much faster than either a mail or interview study. Third, the researcher could select subjects from a much broader area because travel was not involved. Fourth, the respondent and interviewer remained anonymous. Fifth, monitoring of interviews and quality control was much easier because all calls could be made from a central location. Sixth, if no one was home, callbacks could be made with little expense compared to an interviewer returning to a household or business. Seventh, the researcher had access to dangerous neighborhoods. Finally, it was shown by Bradburn and Subman (1981)

that the telephone interview may have been better than the in-person interview for collecting sensitive data.

However, the telephone interview did have drawbacks. Generally, respondents were less motivated and may have seen the interview as a hoax for some ulterior motive. In addition, the use of checklists and visual aids were not possible as with an in-person interview. Further, the telephone interviewer had little control over the situation; all the respondent had to do was hang up the telephone. The historical problem with telephone data collection was that not all people had a telephone. However, the 1990 Census indicated that 95.53 percent of Knox County, Tennessee households had a telephone (U.S. Bureau of the Census, 1990). Consequently, the number of TennCare enrollees without a telephone should have been small and therefore should not have introduced a significant degree of bias into this study.

A related problem was unlisted numbers. The advent of random digit telephone dialing, however, allowed the circumvention of this problem as the computer randomly selected numbers to add to the dialing prefix. In addition, computer assisted telephone interviewing (CATI) virtually eliminated the recording of data in the wrong place and the incorrect asking of questions. Overall, computer assisted telephone interviewing could produce error-free data ready for analysis.

Knox County, Tennessee residents were telephoned by random digit telephone dialing by the University of Tennessee's Social Science Research

Institute (SSRI). SSRI was a research unit within the College of Arts and Sciences at the University of Tennessee, Knoxville. All SSRI employees received an hour-long training orientation upon employment where they were personally supervised. Emphasis during training was placed upon avoiding interviewer bias. During each data collection shift a supervisor was on duty monitoring all telephone interviewers. SSRI's CATI system utilized CI3 Sawtooth Software which compiled the data as it was collected. The data was then exported into SPSS 6.1 for Windows for data analysis.

Twenty thousand random Knox County telephone numbers were purchased from Survey Sampling Inc. for this research study. All of the numbers were loaded into the CATI system. Nineteen thousand three hundred seventy-one of these numbers were dialed. Eleven thousand nine hundred fifty-two of these attempts failed to produce contacts for such reasons as disconnected numbers, no answers, government numbers, fax machines, and answering machines. Seven thousand four hundred nineteen of these numbers resulted in contacts. Of these, 3,324 (44.8 percent) resulted in refusals or were not heads of households. Of the 4,095 Knox County heads of households who agreed to participate, 258 (6.3 percent) were on TennCare and were consequently included in the study sample.

The 258 Knox County TennCare enrollees were asked to voluntarily complete the PSQ-III and the demographic/administrative instrument during one of three different data collection periods. The first period was Sunday, February 18,

1996, from 1:00 p.m. to 5:00 p.m. and each evening from 6:30 p.m. to 9:00 p.m., February 19 to February 22, 1996. The second was Sunday, March 10, 1996, from 1:00 to 5:00 p.m. and each evening from 6:30 to 9:00 p.m., March 11 to March 13, 1996. The third data collection period started April 4, Thursday evening from 6:30 to 9:00 p.m., followed by Sunday, April 7, 1996, from 1:00 to 5:00 p.m. and each evening from 6:30 to 9:00 p.m., April 8 to April 11, 1996. No significant administrative or clinical changes were made in TennCare during the first four months of 1996 voiding history and maturation as threats to internal validity.

D. INSTRUMENTATION

While reviewing the literature it was determined that a Likert scale instrument was most suited for TennCare enrollees as it was simple to understand, convenient, and reliable for ascertaining Medicaid patient's attitudes toward their health care services (Temkin-Greener and Winchell, 1991). Likert instruments also had good utility for telephone sampling procedures. Furthermore, Hall and Doman's (1988) meta-analysis of patient satisfaction studies concluded that a barrier in the theoretical development of patient satisfaction research was the lack of consistent use of well-validated and reliable instruments. As a result, the PSQ-III was selected for this study.

The first Patient Satisfaction Questionnaire was developed and refined by Ware, Snyder, and Wright (1976a; 1976b). It consisted of eighty items and was intended to be applicable to general population studies for planning, administration, and evaluation of health services delivery programs (Ware et. al., 1983). The authors went through lengthy procedures to achieve content validity (Ware et. al, 1976a; 1976b). Subsequent revision led to the Patient Satisfaction Questionnaire II, a sixty-eight item version and a forty-three item short version that was later used in two national surveys (Aday, Anderson, and Fleming, 1980; Aday, Fleming, and Anderson, 1984) as well as the RAND Health Insurance Experiment (Davies, et. al., 1986). The instrument used in this study was the Patient Satisfaction Questionnaire III which was patterned after the first two. It was originally developed by Wilkim, Hallem, & Duggett of the RAND Corporation (1992) for "The Medical Outcomes Study." The Patient Satisfaction Questionnaire-III was developed to survey the general public's attitudes toward their health care services.

As listed in Table 5. the Patient Satisfaction Questionnaire III consisted of fifty items tapping six dimensions of satisfaction with medical services: interpersonal manner (7 items), communication (5 items), technical competence (10 items), time spent with doctor (2 items), financial aspects (8 items), and access to care (12 items). A summary index of overall general satisfaction with health care (6 items) was also included. To control for acquiescent responding, the instrument had

Table 5.

PSQ III Subscale Item Numbers

Subscales	PSQ-III ITEM NUMBERS
TennCare Collectively	All 50 items
Time Spent With Doctor	34,45
Technical Quality	2,8,12,15,23,30,35,40,44,49
Interpersonal Aspects	9,17,26,29,33,38,46
Communication	6,13,18,37,42
Financial Aspects	4,10,14,19,24,27,31,43
Accessibility	1,5,7,16,20,22,25,28,36,39,47,50
General Satisfaction	3,11,21,32,41,48

twenty-five positive and twenty-five negative items. Responses were evaluated on a five point scale ranging from Strongly Agree (5), Agree (4), Undecided (3), Disagree (2), and Strongly Disagree (1) for positively stated items, and the reverse for negatively stated items. Marshall, Hays, Shelbourne, and Wells (1993) found internal consistency reliability estimates for the PSQ-III subscale constructs in the Medical Outcomes Study were as follows: Time Spent With Doctor, .87; Technical Quality, .85; Interpersonal Aspects, .82; Communication, .82; Financial Aspects, .89; Accessibility, .86; and Overall General Satisfaction, .88.

In addition, a demographic/administrative instrument was also developed based on the literature review, discussions with TennCare employees, and TennCare advocate groups identifying the following demographic and administrative variables to be appropriate for investigation: age, race, sex, pregnancy status, managed care organization, perceived health status, economic standing, initial provider site, most recent encounter, work environment, household income level, employment status, source of transportation, educational level, zip code, health insurance status prior to TennCare, and marital status. Both instruments developed for the study were administered in one single telephone interview which lasted approximately ten minutes. The demographic/administrative instrument which solicited more sensitive information was administered after the PSQ-III which was less threatening to respondents.

A pilot study was first conducted for both the PSQ-III and the demographic/administrative instrument. A departmental faculty committee critiqued the demographic/administrative instrument for content validity. Revisions were based on consensus agreement by the departmental faculty committee. Next, the pilot study was conducted for the demographic/administrative instrument and the PSQ-III. Twenty-three telephone interviews of the demographic/administrative and the PSQ-III instruments were done with a convenient sample of Knox County TennCare enrollees also telephoned by the University of Tennessee's Social Science Research Institute. The pilot study served to determine reliability estimates for the PSQ-III and utility for both instruments. The pilot study is presented in Appendix A. The overall Chronbach's Alpha (1951) reliability for the PSQ-III pilot study was .8725. Revisions were made for PSQ-III items that were found to have correlation coefficients below .2156 or negative coefficients when correlated with all other PSQ-III items. The revisions for the PSQ-III are presented in Appendix B. Overall, the demographic/administrative instrument was found to have excellent utility by SSRI interviewers during the pilot study. The final draft of the PSQ-III and the demographic/administrative instrument are presented in Appendix C.

E. INTERVIEW PROCEDURES

Social science researchers have an obligation to protect their subjects from undue harm. Informed consent requires an explanation of the research, identification of the researcher, and description of any possible risks to the subject (Bailey, 1982). Approval to conduct this research study was obtained from the University of Tennessee's Department of Research Administration.

The SSRI interviewers initially explained that they were calling from the University of Tennessee's Social Science Research Institute assisting with a student's research study. After identifying TennCare heads of household enrollees to be included in the study, each enrollee was informed of the right to refuse to answer any or all items for both instruments. Subjects were also assured that the information would be held strictly confidential and that they would remain anonymous. Both instruments were then administered to each enrollee with the PSQ-III given first. Agreeing to respond to the survey constituted informed consent.

F. ANALYSES OF THE DATA

After the data were exported from the CATI System's CI3 Sawtooth Software, SPSS 6.1 for Windows was used to analyze the numbers. The methods of statistical analysis were dependent upon the research questions. The research

questions identified the predictor variables of age, race, sex, pregnancy status, managed care organization, perceived health status, economic standing, initial provider site, most recent encounter, work environment, household income level, employment status, primary source of transportation, educational level, zip code, health insurance status prior to TennCare, and marital status. The research questions also identified the criterion variables of health care services to be: interpersonal aspects, communication, accessibility, time spent with doctor, financial aspects, technical quality, and overall general satisfaction. All criterion variables were also considered collectively as a "TennCare" category.

The task of data analysis was progressive. First, reliability estimates were calculated to determine the validity of the PSQ-III specific to the TennCare population. Reliability estimates were also calculated for the different subscales. Descriptive frequencies and percentages of the responses for each of the demographic/administrative instrument items and the PSQ-III were then tabulated. In tabulating individual item scores, strongly agree, agree, undecided, disagree, and strongly disagree response categories were scored 5,4,3,2,1, respectively for positive items, and vice versa for negative items.

The attitudinal Likert scale data in this study were assumed to be of interval level, therefore having the additive property. A One-Way Analysis of Variance was performed to analyze the significant differences in attitude scores compared on the bases of subgroups within the predictor variables consistent with the data

recategorizations listed in Appendix D. Recategorizations were required in order to secure at least thirty subjects in each predictor variable category. The post-hoc Duncan's New Multiple Range Test was then employed to locate significant differences among means when more than two predictor categories existed. The alpha level of significance chosen was .05.

G. SUMMARY

This chapter explained the methodology used to ascertain and analyze Knox County, TennCare heads of household enrollees' attitudes toward their health care services. The study population was described as at least a 1.1 percent sampling fraction of Knox County, Tennessee heads of household residents who were officially enrolled in TennCare at the time of the survey after excluding specified groups.

Data collection procedures were given including a description of the Social Science Research Institute and its safeguards to insure valid data collection. Initially a pilot study utilizing the PSQ-III as developed by the RAND Corporation and a demographic/administrative instrument prepared specifically for this study were discussed including measures of content validity and reliability. The interview process and informed consent measures were also included.

Data analysis was done by the SPSS 6.1 for Windows statistical program. Statistical calculations included reliability estimates, descriptive frequencies, One Way Analysis of Variance, and Duncan's New Multiple Range post hoc test to locate significant differences between means. The results of both surveys and the statistical analyses described above are found in the forthcoming chapter.

CHAPTER IV

RESULTS

A. INTRODUCTION

The purpose of this chapter was to present and analyze the data obtained from the Knox County, Tennessee TennCare heads of household enrollees concerning their attitudes toward their health care services. Knox County TennCare heads of household enrollees were first summarized descriptively in Appendix E. The remainder of Chapter IV is organized into the following four sections to answer the two research questions:

B. PSQ-III Reliability Estimates

C. Enrollee Attitudes Toward Health Care Services

D. Enrollee Attitudes Analyzed by Predictor Variables

E. Summary

B. PSQ-III RELIABILITY ESTIMATES

In order to establish internal consistency, reliability coefficients for the PSQ-III and each of the subscale criterion variables with respect to the study population were calculated and found to be consistent using Chronbach Alpha reliability test. Chronbach Alpha is a type of rationale equivalence reliability test which relates the variance of each item with the variance for all items of the instrument. Table 6. presents the Chronbach Alpha correlation coefficient for all fifty PSQ-III items identified as a "TennCare" category and for each of the instrument's criterion subscales.

C. ENROLLEE ATTITUDES TOWARD HEALTH CARE SERVICES

Tables 7.-56. present enrollee responses to each of the PSQ-III items organized by each criterion subscale. These data answer the first research question: What were Knox County, TennCare heads of household enrollees' perceived level of satisfaction toward the following dimensions of their health care services: interpersonal aspects, communication, accessibility, time spent with doctor, financial aspects, technical quality, and overall general satisfaction?

Table 6.

Chronbach Alpha Reliability Coefficients

Criterion Variables	Total Items	Chronbach Alpha
TennCare	50	.9350
Interpersonal Aspects	7	.7235
Communication	5	.6848
Accessibility	12	.8190
Time Spent With Doctor	2	.6471
Financial Aspects	8	.8098
Technical Quality	10	.7470
Overall General Satisfaction	6	.8184

PSQ-III INTERPERSONAL ASPECTS ITEMS

Table 7.

Item Number Nine: The doctors who treat me should give me more respect.

Response	Frequency	Percent
Strongly Agree	8	3.2
Agree	78	30.7
Uncertain	26	10.2
Disagree	131	51.6
Strongly Disagree	11	4.3
Total	254	100.0

Table 8.

Item Number Seventeen: The doctors who treat me have a genuine interest in
me as a person.

Response	Frequency	Percent
Strongly Agree	12	4.7
Agree	148	58.5
Uncertain	27	10.7
Disagree	58	22.9
Strongly Disagree	8	3.2
Total	253	100.0

Table 9.

Item Number Twenty-Six: Sometimes doctors make me feel foolish.

Response	Frequency	Percent
Strongly Agree	16	6.3
Agree	79	31.1
Uncertain	9	3.6
Disagree	140	55.1
Strongly Disagree	10	3.9
Total	254	100.0

Table 10.

**Item Number Twenty-Nine: Doctors act too businesslike and impersonal
toward me.**

Response	Frequency	Percent
Strongly Agree	12	4.7
Agree	67	26.4
Uncertain	17	6.7
Disagree	151	59.4
Strongly Disagree	7	2.8
Total	254	100.0

Table 11.

Item Number Thirty-Three: My doctors treat me in a very friendly and courteous manner.

Response	Frequency	Percent
Strongly Agree	26	10.3
Agree	194	76.7
Uncertain	12	4.7
Disagree	18	7.1
Strongly Disagree	3	1.2
Total	253	100.0

Table 12.

Item Number Thirty-Eight: TennCare doctors should pay more attention to my privacy.

Response	Frequency	Percent
Strongly Agree	12	4.8
Agree	101	40.1
Uncertain	55	21.8
Disagree	82	32.5
Strongly Disagree	2	.8
Total	252	100.0

Table 13.

Item Number Forty-Six: Doctors always do their best to keep me from worrying.

Response	Frequency	Percent
Strongly Agree	7	2.8
Agree	160	63.2
Uncertain	28	11.1
Disagree	52	20.6
Strongly Disagree	6	2.4
Total	253	100.0

PSQ-III COMMUNICATION ITEMS

Table 14.

Item Number Six: Doctors are good about explaining the reason for tests.

Response	Frequency	Percent
Strongly Agree	8	3.2
Agree	164	64.8
Uncertain	15	5.9
Disagree	55	21.7
Strongly Disagree	11	4.3
Total	253	100.0

Table 15.

Item Number Thirteen: During my medical visits, I am always allowed to say everything that I think is important.

Response	Frequency	Percent
Strongly Agree	15	5.9
Agree	207	81.5
Uncertain	9	3.5
Disagree	20	7.9
Strongly Disagree	3	1.2
Total	254	100.0

Table 16.

Item Number Eighteen: Sometimes doctors use medical terms without explaining what they mean.

Response	Frequency	Percent
Strongly Agree	22	8.7
Agree	120	47.2
Uncertain	11	4.3
Disagree	96	37.8
Strongly Disagree	5	2.0
Total	254	100.0

Table 17.

Item Number Thirty-Seven: Doctors sometimes ignore what I tell them.

Response	Frequency	Percent
Strongly Agree	8	3.2
Agree	79	31.2
Uncertain	14	5.5
Disagree	144	56.9
Strongly Disagree	8	3.2
Total	253	100.0

Table 18.

Item Number Forty-Two: Doctors listen carefully to what I have to say.

Response	Frequency	Percent
Strongly Agree	9	3.5
Agree	178	69.8
Uncertain	20	7.8
Disagree	45	17.6
Strongly Disagree	3	1.2
Total	253	100.0

PSQ-III ACCESSIBILITY ITEMS

Table 19.

Item Number One: If I need hospital care, I can get admitted without any trouble.

Response	Frequency	Percent
Strongly Agree	7	2.8
Agree	144	56.7
Uncertain	51	20.1
Disagree	43	16.9
Strongly Disagree	9	3.5
Total	254	100.0

Table 20.

Item Number Five: It is easy for me to get medical care in an emergency.

Response	Frequency	Percent
Strongly Agree	10	3.9
Agree	153	60.2
Uncertain	31	12.2
Disagree	48	18.9
Strongly Disagree	12	4.7
Total	254	100.0

Table 21.

Item Number Seven: I am usually kept waiting for a long time when I am at the doctor's office.

Response	Frequency	Percent
Strongly Agree	27	10.7
Agree	88	34.8
Uncertain	17	6.7
Disagree	111	43.9
Strongly Disagree	10	4.0
Total	253	100.0

Table 22.

Item Number Sixteen: It's hard for me to get medical care on short notice.

Response	Frequency	Percent
Strongly Agree	20	7.9
Agree	95	37.4
Uncertain	21	8.3
Disagree	116	45.7
Strongly Disagree	2	.8
Total	254	100.0

Table 23.

Item Number Twenty: The office hours when I can get medical care are
convenient and good for me.

Response	Frequency	Percent
Strongly Agree	6	2.4
Agree	175	69.2
Uncertain	15	5.9
Disagree	56	22.1
Strongly Disagree	1	.4
Total	253	100.0

Table 24.

Item Number Twenty-Two: The office where I get my medical care should be
open for more hours.

Response	Frequency	Percent
Strongly Agree	12	4.7
Agree	98	38.6
Uncertain	28	11.0
Disagree	109	42.9
Strongly Disagree	7	2.8
Total	254	100.0

Table 25.

Item Number Twenty-Five: I have easy access to the medical specialists I need.

Response	Frequency	Percent
Strongly Agree	10	3.9
Agree	131	51.4
Uncertain	27	10.6
Disagree	64	25.1
Strongly Disagree	23	9.0
Total	255	100.0

Table 26.

Item Number Twenty-Eight: Where I get medical care, people have to wait too long for emergency treatment.

Response	Frequency	Percent
Strongly Agree	23	9.1
Agree	93	36.8
Uncertain	45	17.8
Disagree	85	33.6
Strongly Disagree	7	2.8
Total	253	100.0

Table 27.

Item Number Thirty-Six: Places where I can get medical care are very conveniently located.

Response	Frequency	Percent
Strongly Agree	9	3.6
Agree	184	72.7
Uncertain	11	4.3
Disagree	37	14.6
Strongly Disagree	12	4.7
Total	253	100.0

Table 28.

Item Number Thirty-Nine: If I have a medical question, I can reach a doctor for help without any problem.

Response	Frequency	Percent
Strongly Agree	8	3.1
Agree	130	51.0
Uncertain	23	9.0
Disagree	72	28.2
Strongly Disagree	22	8.6
Total	255	100.0

Table 29.

Item Number Forty-Seven: I find it hard to get an appointment for medical care right away.

Response	Frequency	Percent
Strongly Agree	18	7.1
Agree	88	34.6
Uncertain	15	5.9
Disagree	119	46.9
Strongly Disagree	14	5.5
Total	254	100.0

Table 30.

Item Number Fifty: I am able to get medical care whenever I need it.

Response	Frequency	Percent
Strongly Agree	9	3.5
Agree	160	63.0
Uncertain	16	6.3
Disagree	58	22.8
Strongly Disagree	11	4.3
Total	254	100.0

PSQ-III TIME SPENT WITH DOCTOR ITEMS

Table 31.

Item Number Thirty-Four: Those who provide my medical care sometimes
hurry too much when they treat me.

Response	Frequency	Percent
Strongly Agree	22	8.7
Agree	94	37.2
Uncertain	13	5.1
Disagree	120	47.4
Strongly Disagree	4	1.6
Total	253	100.0

Table 32.

Item Number Forty-Five: Doctors usually spend plenty of time with me.

Response	Frequency	Percent
Strongly Agree	13	5.1
Agree	134	52.8
Uncertain	19	7.5
Disagree	73	28.7
Strongly Disagree	15	5.9
Total	254	100.0

PSQ-III FINANCIAL ASPECTS ITEMS

Table 33.

Item Number Four: I worry sometimes about having to pay large medical bills.

Response	Frequency	Percent
Strongly Agree	42	16.5
Agree	129	50.8
Uncertain	6	2.4
Disagree	69	27.2
Strongly Disagree	8	3.1
Total	254	100.0

Table 34.

Item Number Ten: Sometimes it is a problem to cover my share of the cost for
a medical care visit.

Response	Frequency	Percent
Strongly Agree	19	7.5
Agree	97	38.2
Uncertain	16	6.3
Disagree	118	46.5
Strongly Disagree	4	1.6
Total	254	100.0

Table 35.

**Item Number Fourteen: I feel confident that I can get the medical care I need
without being set back financially.**

Response	Frequency	Percent
Strongly Agree	11	4.3
Agree	129	50.6
Uncertain	34	13.3
Disagree	71	27.8
Strongly Disagree	10	3.9
Total	255	100.0

Table 36.

**Item Number Nineteen: Sometimes I go without medical care I need because
it is too expensive.**

Response	Frequency	Percent
Strongly Agree	23	9.0
Agree	103	40.4
Uncertain	7	2.7
Disagree	108	42.4
Strongly Disagree	14	5.5
Total	255	100.0

Table 37.

Item Number Twenty-Four: I have to pay for more of the medical care than I
can afford.

Response	Frequency	Percent
Strongly Agree	11	4.3
Agree	63	24.9
Uncertain	19	7.5
Disagree	154	60.9
Strongly Disagree	6	2.4
Total	253	100.0

Table 38.

Item Number Twenty-Seven: Regardless of the health problems I have now or
develop later, I feel protected from financial hardship.

Response	Frequency	Percent
Strongly Agree	6	2.4
Agree	112	44.1
Uncertain	32	12.6
Disagree	82	32.3
Strongly Disagree	22	8.7
Total	254	100.0

Table 39.

Item Number Thirty-One: The amount I have to pay to cover or insure my
medical care needs is reasonable.

Response	Frequency	Percent
Strongly Agree	17	6.7
Agree	161	63.1
Uncertain	19	7.5
Disagree	50	19.6
Strongly Disagree	8	3.1
Total	255	100.0

Table 40.

Item Number Forty-Three: I feel insured and protected financially against all
possible medical problems.

Response	Frequency	Percent
Strongly Agree	6	2.4
Agree	95	37.3
Uncertain	38	14.9
Disagree	97	38.0
Strongly Disagree	19	7.5
Total	255	100.0

PSQ-III TECHNICAL QUALITY ITEMS

Table 41.

Item Number Two: Doctors need to be more thorough in treating and
examining me.

Response	Frequency	Percent
Strongly Agree	20	7.9
Agree	109	42.9
Uncertain	21	8.3
Disagree	97	38.2
Strongly Disagree	7	2.8
Total	254	100.0

Table 42.

Item Number Eight: I think my doctor's office has everything needed to
provide complete medical care.

Response	Frequency	Percent
Strongly Agree	16	6.3
Agree	161	63.4
Uncertain	27	10.6
Disagree	44	17.3
Strongly Disagree	6	2.4
Total	254	100.0

Table 43.

Item Number Twelve: Sometimes doctors make me wonder if their treatment is correct.

Response	Frequency	Percent
Strongly Agree	15	5.9
Agree	124	48.8
Uncertain	18	7.1
Disagree	91	35.8
Strongly Disagree	6	2.4
Total	254	100.0

Table 44.

Item Number Fifteen: When I go for medical care, they are careful to check everything when treating and examining me.

Response	Frequency	Percent
Strongly Agree	14	5.5
Agree	161	63.4
Uncertain	20	7.9
Disagree	49	19.3
Strongly Disagree	10	3.9
Total	254	100.0

Table 45.

Item Number Twenty-Three: The medical staff that treats me knows about the latest medical developments.

Response	Frequency	Percent
Strongly Agree	8	3.2
Agree	164	64.8
Uncertain	53	20.9
Disagree	24	9.5
Strongly Disagree	4	1.6
Total	253	100.0

Table 46.

Item Number Thirty: Doctors always give me good treatment.

Response	Frequency	Percent
Strongly Agree	12	4.7
Agree	165	65.2
Uncertain	18	7.1
Disagree	50	19.8
Strongly Disagree	8	3.2
Total	253	100.0

Table 47.

**Item Number Thirty-Five: Some of the doctors I have seen lack experience
with my medical problems.**

Response	Frequency	Percent
Strongly Agree	14	5.6
Agree	66	26.2
Uncertain	27	10.7
Disagree	139	55.2
Strongly Disagree	6	2.4
Total	252	100.0

Table 48.

Item Number Forty: Doctors rarely suggest ways to stay healthy.

Response	Frequency	Percent
Strongly Agree	11	4.3
Agree	87	34.3
Uncertain	12	4.7
Disagree	139	54.7
Strongly Disagree	5	2.0
Total	254	100.0

Table 49.

Item Number Forty-Four: I have some doubts about the ability of the doctors
who treat me.

Response	Frequency	Percent
Strongly Agree	7	2.8
Agree	64	25.2
Uncertain	21	8.3
Disagree	143	56.3
Strongly Disagree	19	7.5
Total	254	100.0

Table 50.

Item Number Forty-Nine: My doctors are very smart.

Response	Frequency	Percent
Strongly Agree	13	5.1
Agree	186	73.5
Uncertain	34	13.4
Disagree	19	7.5
Strongly Disagree	1	.4
Total	253	100.0

PSQ-III OVERALL GENERAL SATISFACTION ITEMS

Table 51.

Item Number Three: I am very satisfied with the medical care I receive.

Response	Frequency	Percent
Strongly Agree	21	8.3
Agree	148	58.3
Uncertain	24	9.4
Disagree	52	20.5
Strongly Disagree	9	3.5
Total	254	100.0

Table 52.

Item Number Eleven: The medical care I have been receiving is just about perfect.

Response	Frequency	Percent
Strongly Agree	7	2.8
Agree	123	48.4
Uncertain	28	11.0
Disagree	81	31.9
Strongly Disagree	15	5.9
Total	254	100.0

Table 53.

Item Number Twenty-One: There are things about TennCare that need to be improved.

Response	Frequency	Percent
Strongly Agree	62	24.5
Agree	139	54.9
Uncertain	23	9.1
Disagree	26	10.3
Strongly Disagree	3	1.2
Total	253	100.0

Table 54.

Item Number Thirty-Two: There are some things about my medical care that could be better.

Response	Frequency	Percent
Strongly Agree	34	13.4
Agree	163	64.4
Uncertain	18	7.1
Disagree	37	14.6
Strongly Disagree	1	.4
Total	253	100.0

Table 55.

Item Number Forty-One: All things considered, the medical care I receive is excellent.

Response	Frequency	Percent
Strongly Agree	13	5.1
Agree	144	56.5
Uncertain	28	11.0
Disagree	64	25.1
Strongly Disagree	6	2.4
Total	255	100.0

Table 56.

Item Number Forty-Eight: I am dissatisfied with some things about the medical care I receive.

Response	Frequency	Percent
Strongly Agree	16	6.3
Agree	109	42.9
Uncertain	16	6.3
Disagree	107	42.1
Strongly Disagree	6	2.4
Total	254	100.0

D. ENROLLEE ATTITUDES ANALYZED BY PREDICTOR VARIABLES

Based on the literature review and recommendations from TennCare consumer advocate groups, certain predictor variables were identified as being relevant for comparison among the PSQ-III criterion variables. After the PSQ-III's Likert Scale data were assigned interval values, One Way Analysis of Variance was employed to compare and contrast attitudinal means among the different predictor categories. For those criterion variables found significant as a function of certain predictor variables, the mean attitude scores, standard deviations, and total cases were presented in table format. For predictor variables with more than two categories, Duncan's New Multiple Range Test was performed to determine among which means the significant differences occurred. These analyses answer the second research question: What were Knox County TennCare heads of household enrollees' attitudes when compared and contrasted by age, race, sex, managed care organization, perceived health status, economic standing, initial provider site, most recent encounter, work environment, household income level, employment status, primary source of transportation, educational level, zip code, health insurance status prior to TennCare, and marital status? Data analyses indicated that the predictor variables of race, sex, employment

status, primary source of transportation, zip code, health insurance prior to TennCare, and marital status had no significant influence on enrollee satisfaction based on the study's significance level restrictions and were consequently excluded from further data analyses.

"Age" was significantly related to enrollee attitudes for the criterion variables of "TennCare," "Interpersonal Aspects," "Accessibility," "Time Spent With Doctor," and "Overall General Satisfaction." Tables 57.-61. present the mean attitude scores, standard deviations, and number of cases for the significant criterion variables as a function of "Age."

"Managed Care Organization" was significantly related to enrollee attitudes for the criterion variable of "Technical Quality." Table 62. presents the mean attitude scores, standard deviations, and number of cases for "Technical Quality" as a function of "Managed Care Organization." Duncan's New Multiple Range Test was performed to determine among which "Managed Care Organization" categories the significant differences occurred. The results indicated that significant differences existed between "PHP" (Mean = 35.8) and the combined category of "Access Med Plus," "Phoenix," "Tenn Source," and "John Deere" (Mean = 31.8). A significant difference was also found between "PHP" (Mean = 35.8) and "Blue Care" (Mean = 33.2).

"Perceived Health Status" was significantly related to enrollee attitudes

Table 57.

Enrollee Attitudes Toward TennCare as a Function of Age

Age	Mean	SD	Cases
18-44	156.2	24.4	169
45-64	164.9	25.3	73

p=.0122

Table 58.

Enrollee Attitudes Toward Interpersonal Aspects as a Function of Age

Age	Mean	SD	Cases
18-44	22.7	4.2	171
45-64	24.4	4.1	73

p=.0057

Table 59.

Enrollee Attitudes Toward Accessibility as a Function of Age

Age	Mean	SD	Cases
18-44	37.1	7.3	172
45-64	40.5	6.6	73

p=.0009

Table 60.

Enrollee Attitudes Toward Time Spent With Doctor as a Function of Age

Age	Mean	SD	Cases
18-44	6.0	1.9	173
45-64	6.7	1.9	73

p=.0072

Table 61.

Enrollee Attitudes Toward Overall General Satisfaction as a Function of Age

Age	Mean	SD	Cases
18-44	16.7	4.2	173
45-64	18.2	4.5	73

p=.0090

Table 62.

**Enrollee Attitudes Toward Technical Quality as a Function of Managed Care
Organization**

MCO	Mean	SD	Cases
*AMP, Phx, TS, JD	31.8	6.7	46
Blue Care	33.2	5.1	163
PHP	35.8	4.5	29

p=.0078

***Access Med Plus, Phoenix, Tenn Source, John Deere**

for the criterion variable of "Interpersonal Aspects." Table 63. presents the mean attitude scores, standard deviations, and number of cases for "Interpersonal Aspects" as a function of "Perceived Health Status." Duncan's New Multiple Range Test was performed to determine among which predictor categories the significant differences occurred. The results indicated that significant differences existed between those who perceived their health status to be "Good" (Mean = 22.1) and those who perceived their health status as "Fair" (Mean = 24.3).

The predictor variable of "Economic Standing" referred to whether an enrollee had to pay any out-of-pocket costs for TennCare. "Economic Standing" was significantly related to enrollee attitudes for the criterion variables of "Financial Aspects" and "Overall General Satisfaction." Tables 64.-65. present the mean attitude scores, standard deviations, and number of cases for "Financial Aspects" and "Overall General Satisfaction" as functions of "Economic Standing."

"Initial Provider Site" was significantly related to enrollee attitudes for the criterion variables of "TennCare," "Interpersonal Aspects," "Communication," "Accessibility," "Time Spent With Doctor," and "Technical Quality." Tables 66.-71. present the mean attitude scores, standard deviations, and number of cases for enrollee attitudes toward the significant criterion variables as a

Table 63.

**Enrollee Attitudes Toward Interpersonal Aspects as a Function of Perceived
Health Status**

Health Status	Mean	SD	Cases
Excellent	23.8	3.4	38
Very Good	23.2	4.0	51
Good	22.1	4.7	73
Fair	24.3	4.0	61

p=.0198

Table 64.

**Enrollee Attitudes Toward Financial Aspects as a Function of Economic
Standing**

Economic Standing	Mean	SD	Cases
Paying Enrollee	23.0	5.6	123
Non-Paying Enrollee	26.1	5.1	122

p=.0000

Table 65.

**Enrollee Attitudes Toward Overall General Satisfaction as a Function of
Economic Standing**

Economic Standing	Mean	SD	Cases
Paying Enrollee	16.5	4.3	123
Non-Paying Enrollee	17.9	4.3	121

p=.0141

Table 66.

Enrollee Attitudes Toward TennCare as a Function of Initial Provider Site

Initial Site	Mean	SD	Cases
MD's Office	161.8	24.1	186
Hospital ER	148.2	25.3	38

p=.0019

Table 67.

Enrollee Attitudes Toward Interpersonal Aspects as a Function of Initial
Provider Site

Initial Provider Site	Mean	SD	Cases
MD's Office	23.6	4.0	188
Hospital ER	21.8	4.7	38

$p=.0175$

Table 68.

Enrollee Attitudes Toward Communication as a Function of Initial Provider
Site

Initial Provider Site	Mean	SD	Cases
MD's Office	17.1	3.2	190
Hospital ER	15.9	3.0	38

$p=.0385$

Table 69.

Enrollee Attitudes Toward Accessibility as a Function of Initial Provider Site

Initial Provider Site	Mean	SD	Cases
MD's Office	39.3	7.1	190
Hospital ER	34.3	7.8	38

p=.0001

Table 70.

Enrollee Attitudes Toward Time Spent With Doctor as a Function of Initial
Provider Site

Initial Provider Site	Mean	SD	Cases
MD's Office	6.3	1.9	191
Hospital ER	5.5	1.5	38

p=.0111

Table 71.

Enrollee Attitudes Toward Technical Quality as a Function of Initial Provider
Site

Initial Provider Site	Mean	SD	Cases
MD's Office	33.8	5.4	190
Hospital ER	31.3	5.5	38

p=.0096

function of "Initial Provider Site."

"Most Recent Encounter" was significantly related to enrollee attitudes for the criterion variables of "TennCare," "Interpersonal Aspects," and, "Accessibility." Tables 72.-74. present the mean attitude scores, standard deviations, and number of cases for the significant criterion variables as a function of "Most Recent Encounter." Duncan's New Multiple Range Test was performed to determine among which predictor categories the significant differences occurred. The results indicated that significant differences existed between the category of "Past Two Weeks" (Mean = 168.2) and the category of "Six Weeks to Six Months" (Mean = 153.4) for the criterion variable of "TennCare." A significant difference was also found between the categories of "Past Two Weeks" (Mean = 168.2) and "Greater Than Six Months or Never"

Table 72.

Enrollee Attitudes Toward TennCare as a Function of Most Recent Encounter

Most Recent Encounter	Mean	SD	Cases
Past Two Weeks	168.2	24.5	54
Two - Six Weeks	159.4	26.3	60
Six Weeks - Six Months	153.4	24.7	73
Greater than Six Months/Never	157.8	21.9	58

p=.0102

Table 73.

**Enrollee Attitudes Toward Interpersonal Aspects as a Function of Most
Recent Encounter**

Most Recent Encounter	Mean	SD	Cases
Past Two Weeks	24.5	3.6	55
Two - Six Weeks	23.4	3.6	60
Six Weeks - Six Months	22.3	5.0	74
Greater than Six Months/Never	22.8	4.0	58

p=.0281

Table 74.

**Enrollee Attitudes Toward Accessibility as a Function of Most Recent
Encounter**

Most Recent Encounter	Mean	SD	Cases
Past Two Weeks	40.7	6.8	55
Two - Six Weeks	38.7	7.8	61
Six Weeks - Six Months	36.4	7.5	73
Greater than Six Months/Never	38.1	6.5	60

p=.0094

(Mean = 157.8) for the criterion variable of "TennCare."

The results also indicated that enrollee satisfaction with "Interpersonal Aspects" had significantly different means when analyzed as a function of "Most Recent Encounter." Duncan's New Multiple Range Test was performed to determine among which "Most Recent Encounter" categories the significant differences occurred. The results indicated that significant differences existed between "Past Two Weeks" (Mean = 24.5) and the category of "Six Weeks to Six Months" (Mean = 22.3). A significant difference was also found between

the categories of "Past Two Weeks" (Mean = 24.5) and "Greater Than Six Months or Never" (Mean = 22.8).

The results further indicated that enrollee satisfaction with "Accessibility" had significantly different means when analyzed as a function of "Most Recent Encounter." Duncan's New Multiple Range Test was performed to determine among which "Most Recent Encounter" categories the significant differences occurred. The results indicated that significant differences existed between the categories of "Past Two Weeks" (Mean = 40.7) and the category of "Six Weeks to Six Months" (Mean = 36.4).

"Work Environment" was significantly related to enrollee attitudes for the criterion variables of "TennCare" and "Communication." Tables 75.-76. present the mean attitude scores, standard deviations, and number of cases for the enrollee attitudes toward "TennCare" and "Communication" as functions of "Work Environment."

Table 75.

Enrollee Attitudes Toward TennCare as a Function of Work Environment

Work Environment	Mean	SD	Cases
Work Indoors	160.7	22.6	103
Work Outdoors	150.6	26.0	31

p=.0388

Table 76.

Enrollee Attitudes Toward Communication as a Function of Work Environment

Work Environment	Mean	SD	Cases
Work Indoors	17.2	2.6	105
Work Outdoors	15.3	3.3	32

p=.0008

"Household Income Level" was significantly related to enrollee attitudes for the criterion variable of "Overall General Satisfaction." Table 77. presents the mean attitude scores, standard deviations, and number of cases for "Overall General Satisfaction" as a function of "Household Income Level." Duncan's New Multiple Range Test was performed to determine among which predictor categories the significant differences occurred. The results indicated that significant differences occurred between the categories of "\$10,001-\$15,000" (Mean = 17.9) and "\$20,000 or Greater" (Mean = 15.6). A significant difference was also found between the categories of "\$15,001-\$20,000" (Mean = 18.7) and "\$20,000 or Greater" (Mean = 15.6).

"Educational Level" was significantly related to enrollee attitudes for the criterion variables of "Interpersonal Aspects" and "Technical Quality." Tables 78.-79. present the mean attitude scores, standard deviations, and number of cases for "Interpersonal Aspects" and "Technical Quality" as a function of "Educational Level." Duncan's New Multiple Range Test was performed to determine among which predictor categories the significant differences occurred for the criterion variable of "Interpersonal Aspects". The results indicated that significant differences existed between the categories of "Did Not Complete High School" (Mean = 24.4) and "Completed High School" (Mean =22.2).

Table 77.

**Enrollee Attitudes Toward Overall General Satisfaction as a Function of
Household Income Level**

Household Income	Mean	SD	Cases
\$10,000 or Less	16.9	4.8	93
\$10,001-\$15,000	17.9	4.0	44
\$15,001-\$20,000	18.7	3.7	34
\$20,001 or More	15.6	4.1	46

$p=.0093$

Table 78.

**Enrollee Attitudes Toward Interpersonal Aspects as a Function of Educational
Status**

Education	Mean	SD	Cases
No High School	24.4	3.8	58
High School Diploma	22.3	4.2	108
Some College	23.3	4.3	57

$p=.0053$

Table 79.

**Enrollee Attitudes Toward Technical Quality as a Function of Educational
Status**

Education	Mean	SD	Cases
No High School	34.6	5.0	59
High School Diploma	32.4	5.6	107
Some College	33.4	5.1	58

p=.0422

The results also indicated that enrollee satisfaction with "Technical Quality" had significantly different means when analyzed as a function of "Educational Level." Duncan's New Multiple Range Test was performed to determine among which "Educational Level" categories the significant differences occurred. The results indicated that significant differences existed between the categories of "Did Not Complete High School" (Mean = 34.6) and "Completed High School" (Mean = 32.4).

F. SUMMARY

Chapter IV presented the results to answer the dissertation's problem statement: The purpose of this study was to ascertain and analyze Knox County Tennessee's TennCare heads of household enrollees' attitudes toward their health care services. Chapter IV began with reliability estimates for the PSQ-III items and each of its subscales. Next, a descriptive listing of enrollees' attitudes toward their health care services for each of the fifty PSQ-III items was presented. The data were then analyzed by enrollee attitudes as a function of certain predictor variables utilizing One Way Analysis of Variance and Duncan's New Multiple Range Test. The next chapter is titled, "Findings, Conclusions, and Recommendations." Chapter V inferentially analyzes the results presented in this chapter.

Chapter V

FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

A. INTRODUCTION

The purpose of this study was to ascertain and analyze Knox County, Tennessee's TennCare heads of household enrollees' attitudes toward their health care services. Knox County TennCare heads of household enrollees were surveyed by random digit telephone dialing during the spring semester of 1996 and asked to complete the Patient Satisfaction Questionnaire-III and an accompanying demographic/administrative instrument.

Following a pilot study of both instruments, a random sample of 20,000 Knox County, Tennessee telephone numbers was purchased from Survey Sampling, Inc. Of the 4,095 Knox County heads of households who consented to participate in the study when telephoned, 258 (6.3 percent) reported being enrolled in TennCare and were consequently included in the study sample. Blind, Medicare dual, under age eighteen, and disabled enrollees were excluded from the study.

One Way Analysis of Variance and Duncan's New Multiple Range Test were employed to compare and contrast attitudinal means for the different

predictor variables as they influenced the criterion variables under investigation. The findings presented in this chapter answer the research questions listed in Chapter I.

B. RESEARCH QUESTION NUMBER ONE

What were Knox County TennCare heads of household enrollees' perceived level of satisfaction toward the following dimensions of their health care services: interpersonal aspects, communication, accessibility, time spent with doctor, financial aspects, technical quality, and overall general satisfaction?

Findings For Research Question Number One

Interpersonal Aspects

1. 66.0 percent of enrollees felt their doctors always did their best to keep them from worrying.

2. 33.9 percent of enrollees felt their doctors should give them more respect.

Communication

3. 73.3 percent of enrollees felt doctors listened carefully to what they had to say.

4. 34.4 percent of enrollees felt doctors ignored what they told them.

Accessibility

5. 64.1 percent of enrollees felt it was easy for them to get medical care in an emergency.

6. 45.3 percent of enrollees felt it was hard for them to get medical care on short notice.

Time Spent With Doctor

7. 57.9 percent of enrollees felt doctors usually spent plenty of time with them.

8. 45.9 percent of enrollees felt those who provided their medical care sometimes hurried too much when they treated them.

Financial Aspects

9. 54.9 percent of enrollees felt confident they could get the medical care they needed without being set back financially.

10. 45.7 percent of enrollees felt it was sometimes a problem to cover their share of the cost for a medical care visit.

Technical Quality

11. 69.7 percent of enrollees felt their doctor's office had everything needed to provide complete medical care.

12. 38.6 percent of enrollees felt that doctors rarely suggested ways to stay healthy.

Overall General Satisfaction

13. 61.6 percent of enrollees felt their medical care was excellent.

14. 77.8 percent of enrollees felt there were some things about their medical care that could be better.

C. RESEARCH QUESTION NUMBER TWO

What were Knox County, TennCare heads of household enrollees' attitudes when compared and contrasted by age, race, sex, managed care organization, perceived health status, economic standing, initial provider site, most recent encounter, work environment, household income level, employment status, primary source of transportation, educational level, zip code, health insurance status prior to TennCare, and marital status?

Findings For Research Question Number Two

Age

1. Enrollees ages 45-64 were significantly more satisfied with the interpersonal aspects of TennCare doctors than enrollees ages 18-44.
2. Enrollees ages 45-64 were significantly more satisfied with the accessibility of TennCare services than enrollees ages 18-44.
3. Enrollees ages 45-64 were significantly more satisfied with the amount of time spent with TennCare doctors than enrollees ages 18-44.
4. Enrollees ages 45-64 were significantly more satisfied with TennCare in general than enrollees ages 18-44.

Managed Care Organization

5. PHP enrollees were significantly more satisfied with TennCare's technical medical care services than Blue Care enrollees.

6. PHP enrollees were significantly more satisfied with TennCare's technical medical care services than Access Med Plus, Phoenix, Tenn Source, and John Deere enrollees when considered collectively as a group.

Economic Standing

7. "True" Medicaid patients were significantly more satisfied with the costs of TennCare services than the "working poor" who paid copayments and deductibles.

Initial Provider Site

8. Enrollees who initially sought care at a doctor's office were significantly more satisfied with TennCare than enrollees who went to a hospital emergency room.

9. Enrollees who initially sought care at a doctor's office were significantly more satisfied with the accessibility of TennCare services than enrollees who went to a hospital emergency room.

10. Enrollees who initially sought care at a doctor's office were significantly more satisfied with TennCare's technical medical care services than enrollees who went to a hospital emergency room.

Most Recent Encounter

11. Enrollees who had been to the doctor within the past two weeks were significantly more satisfied with the accessibility of TennCare services than enrollees who had not been for six weeks to six months.

Work Environment

12. Enrollees who worked indoors were significantly more satisfied with their communication with TennCare doctors than enrollees who worked outdoors.

Household Income Level

13. Enrollees whose household income level was \$10,001 to \$15,000 were significantly more satisfied with TennCare in general than enrollees with household incomes greater than \$20,000.

14. Enrollees whose household income level was \$15,001 to \$20,000 were significantly more satisfied with TennCare in general than enrollees with household incomes greater than \$20,000.

Educational Level

15. Enrollees who did not complete high school were significantly more satisfied with the bedside manner of TennCare doctors than enrollees who completed high school.

D. CONCLUSIONS

On the basis of the study findings, the following conclusions were drawn:

1. On a scale of 0 to 100, Knox County TennCare heads of household enrollees were 63.6 percent satisfied with their health care services.

2. When compared and contrasted by age, managed care organization, perceived health status, economic standing, initial provider site, most recent encounter, work environment, household income level, and educational level, Knox County TennCare heads of household enrollees' attitudes were significantly different.

E. RECOMMENDATIONS

The following recommendations were offered based on the literature review, findings, and conclusions of the study.

1. TennCare enrollee satisfaction research should be conducted in other regions of Tennessee utilizing a time-series design with control groups such as a county of an adjacent state utilizing FFS Medicaid.

2. More research is needed to further analyze the criterion variables of "Accessibility," "Time Spent With Doctor," and "Financial Aspects," as Knox County TennCare heads of household enrollees were least satisfied with these health care services.

3. An enrollee satisfaction study of Knox County TennCare heads of household enrollees who do not have telephones should be done.

4. A study to determine the association among enrollee satisfaction, compliance, and health outcomes with comparisons among medical specialties would be useful.

5. The TennCare Bureau should emphasize to MCOs the importance of educating enrollees about their health insurance program.

F. SUMMARY

Chapter V presented the "Findings," "Conclusions," and "Recommendations" that answered the research questions listed in "Chapter I." The research questions were subdivisions of the statement of the problem: The purpose of this study was to ascertain and analyze Knox County, Tennessee's TennCare heads of household enrollees' attitudes toward their health care services. Chapter V was written from an inductive perspective where "Conclusions" were based on "Findings," and "Recommendations" were based on "Findings," "Conclusions," and the literature review. Chapter VI, "The Study in Retrospect," offers a post-study review. It discusses study highlights and obstacles and attempts to shed light on issues not covered in the standard five chapters.

CHAPTER VI

THE STUDY IN RETROSPECT

A. INTRODUCTION

Chapter VI is a less formal presentation of the author's insights pertaining to different aspects of the study not reported in the standard five chapters. "The Study in Retrospect" focuses on observations made while conducting the study and analyzing the results, the relationship of study findings to other research, and implications for health care policymakers as well as health educators.

B. SATISFACTION FINDINGS NOT REPORTED IN CHAPTER V

1. 87.4 percent of enrollees said that during their medical visits they were always allowed to say everything they thought was important.
2. 87.0 percent of enrollees said their doctors treated them in a very friendly and courteous manner.
3. 78.6 percent of enrollees said their doctors were very smart.

C. DISSATISFACTION FINDINGS NOT REPORTED IN CHAPTER V

1. 79.4 percent of enrollees said there are things about TennCare that need to be improved.
2. 67.3 percent of enrollees said they worried sometimes about having to pay large medical bills.
3. 55.9 percent of enrollees said that sometimes doctors used medical terms without explaining what they meant.

D. STUDY INSIGHTS

1. The comparisons of "MCO" as a predictor category should be interpreted with caution as only twenty-nine enrollees were obtained in the "PHP" category.
2. While one might question the fact that forty-six TennCare enrollees had incomes of "\$20,001 or higher," this could have been true as TennCare originally offered coverage to the uninsurable residents regardless of their income level. Similarly, ten enrollees claimed to have a graduate degree. Nonetheless, data collection on income had always been an "Achilles heel" for survey researchers as income was usually inflated.

3. The analyses of the data on "Work Environment" should be interpreted with caution as 114 (44.2 percent) were "Missing Data" for this category.

4. Five enrollees reported that they were disabled. This was unlikely as they would have been eligible for Medicare's SSI program of which the study delimitations would have excluded them.

5. Three enrollees said they relied on taxi service as their primary source of transportation. This was a costly means of travel for Medicaid patients.

6. Seventy-four enrollees (28.7 percent) had no insurance before TennCare.

7. Table 80. indicates the frequency of significant criterion variables based on all the predictor variables investigated in the study. It indicates that the "Interpersonal Aspects" of the delivery of health services in whatever form by TennCare providers encouraged the strongest feelings from enrollees using the predictor variables selected. One could argue that bedside manner was the most important service to TennCare enrollees. This had implications for health education which are discussed later in this chapter.

8. Seventeen percent of Knox County TennCare heads of household enrollees were still accessing their health care services at hospital emergency rooms at the time of the survey even though it was prohibited under TennCare.

9. The marginal amount of enrollee satisfaction could have been one reason why TennCare survived despite political, legal, and economic hardship.

Table 80.

**Frequency of Significant Criterion Variables as a Function of all Predictor
Variables Under Investigation**

Criterion Variable	Frequency
Interpersonal Aspects	5
TennCare	4
Accessibility	3
Overall General Satisfaction	3
Technical Quality	3
Time Spent With Doctor	2
Communication	2
Financial Aspects	1

E. FINDINGS IN RELATION TO OTHER RESEARCH

Some of the study findings were consistent with the patient satisfaction literature, especially the finding that older patients were significantly more satisfied with their health care services than younger patients. Older patients had been socialized to respect and not challenge the doctor's medical expertise while the younger generation expected to play a more active role in the medical care decision making process. It was also possible that physicians may have had a greater sense of urgency in treating older patients, while younger patients because of their lifetime exposure to high quality medical care may have taken modern medical technology for granted. Additionally, older patients may have sought care more often, familiarizing themselves with providers and facilities and enhancing satisfaction as new patient-provider relationships were often burdened with uncertainty. Overall, older patients may have been more concerned with caring while younger patients may have been more concerned with curing. It should be noted that since enrollees were classified into "18-44" and "45-64" age groups, it is important to consider the heterogeneity in these two broad age groupings limiting the generalizability of the results. The low number of enrollees in the sample necessitated having only the two age categories which may have compromised data analyses to a certain extent.

In terms of sex, there was no significant difference between the satisfaction ratings for female and male enrollees which conflicted with some patient satisfaction research which had found that females tended to rate their health care more favorably than males (Shortell, et. al., 1977; Hall and Dornan, 1988). Another contrast to the patient satisfaction literature was that "Perceived Health Status" was significant for the criterion variable of "Interpersonal Aspects" as those who perceived their health status to be "Fair" had a satisfaction rating of 24.3 compared to 22.1 for those who rated their health status as "Good." Other studies had found that those who rated their health status highly were more satisfied with their health care services (Hall, 1987; Lochman, Berkanovic, and Marcus, 1976). Research also indicated that less educated individuals were more satisfied with their health care (Hall and Dornan, 1990). This was consistent with this study's findings which showed those who "Did Not Complete High School" to be significantly more satisfied with the "Interpersonal Aspects" and "Technical Quality" of TennCare than those who "Did Complete High School."

Less favorable attitudes toward "Financial Aspects" were a conspicuous finding of this study as prior research had found that Medicaid patients enrolled into pre-paid health plans had favorable attitudes toward plan costs possibly due to the perception that HMO care was inherently better (Davies, et. al., 1986). In addition, one could have expected that TennCare's working poor

would have been willing to pay for TennCare as some health care at a reduced cost was better than no health care at all. Another reason one would have expected favorable attitudes toward "Financial Aspects" would have been to enhance self-esteem and reduce cognitive dissonance. Most people saw themselves fairing better than others, and no one liked to admit that their health care was inadequate or overpriced. Nevertheless, Knox County TennCare heads of household enrollees expressed considerably less satisfaction toward "Financial Aspects" compared to their other health care services.

This study also found that those who initially sought care at a physician's office were significantly more satisfied with their health care services than those who first went to a hospital emergency room. This was significant for "Interpersonal Aspects," "Communication," "Accessibility," "Time Spent With Doctor," "Technical Quality," and "TennCare" collectively. This finding was consistent with much patient satisfaction research (Hurley, et. al., 1993). Hurley et. al. (1993) described the associated problems of emergency room utilization as follows:

...hospital emergency departments make continuity of care problematic since they exist primarily (or exclusively) to render episodic care. Impersonal care invariably results given the lack of sustained doctor-patient relationships in these settings. A visit is limited to strictly addressing presenting complaints. Amenities are commonly lacking, and long waits followed by brief visits are customary. Referrals might not occur because follow-up tracking is weak and episodic care is thus perpetuated. Records may or may not be maintained, and even when they are, they are not necessarily consulted (p.28).

The fact that 16.9 percent of Knox County TennCare head of household enrollees were still seeking access to health care through hospital emergency rooms was striking as TennCare prohibited and fined enrollees \$25 per visit for doing so. This indicated the heavy dependence on hospital emergency rooms as health care entry points for Medicaid patients. It may have been that a mind-set existed for TennCare enrollees toward emergency rooms as they became social settings for poor people.

F. STUDY OBSTACLES

Telephone surveying was an indirect way to measure patient satisfaction. To objectively assess patient satisfaction a one-way mirror, audiotaping, or videotaping would need to be done. With this in mind, obtaining a sample was the most difficult part of the study as federal law prohibited offering Medicaid

patient's names, addresses, or phone numbers to the public. By delimiting the population to Knox County, Tennessee, the cost of long distance phone charges was avoided. Yet, an incidence rate of only 6.3 percent of consenting TennCare heads of households made data collection costly.

It would have been beneficial to establish that the incidence rate was going to be very low during the pilot study. However, only areas of Knox County with a high number of TennCare enrollees were telephoned for convenience purposes, inflating the projected incidence rate. Once data collection for the actual study was started, no other alternative was available except to continue until an acceptable sample size was achieved. Other researchers utilizing similar research methodology should thoroughly analyze how many subjects their research design expects to yield in advance. Finally, the study may have excluded some subjects because they did not consider themselves to be heads of households. However, it was important to survey heads of households when conducting a health care insurance assessment because these individuals were typically the ones in the best position to evaluate a household's health insurance plan.

Another troublesome area for patient satisfaction research was that it was not clear if attitudes were a reflection of the medical care experience or an antecedent to that experience. For example, did perceived health status influence satisfaction or did satisfaction lead to perceived health status? While

this study treated satisfaction as an outcome variable, in all likelihood, some reciprocal causation operated. The patient was an active participant in the medical care visit. If expectations were not met, dissatisfaction may have occurred. If they were met, satisfaction usually occurred by default. Pre-TennCare Medicaid patients in the study sample might have rated their health care services highly or poorly regardless of the care delivered by TennCare. Patient expectations differed greatly among patients and may have been a function of personality, previous contact with medical care providers, cultural values, and the particular context in which the medical care was rendered. Further potential bias to enrollee attitudes was that the media had denounced TennCare since its onset and possibly rightfully so. If one considers that enrollees with incomes of \$20,001 or more were less satisfied with TennCare in general, it may have been because these higher income enrollees were exposed to numerous negative media messages more often biasing their attitudes toward TennCare especially in the "Overall General" since. These obstacles left the issue of causality in question.

Finally, the data suggested that enrollee perceptions of one aspect of TennCare's services tended to be rather strongly related to their perceptions of other aspects. TennCare enrollees who felt their physicians were effective communicators also considered their doctors to be technically competent and to have provided adequate interpersonal care. As a result, it was difficult to

apply multivariate statistical analyses as the different dimensions assessed were not mutually exclusive.

G. STUDY HIGHLIGHTS

This study utilized the PSQ-III, a well-designed and tested instrument and employed random sampling to a certain degree rather than a convenient sample of patients visiting a medical care site because they were sick or simply liked to go to the doctor. Twenty-seven percent of all patient satisfaction studies were of onsite medical practice samples and another twenty-eight percent were done in person at patient homes, both of which could be threatening to the respondent or subject to the halo effect (Hall and Dornan, 1988).

Timing of the study was also good as over the two years prior to the study, TennCare enrollees became familiar with their health care insurance plan as continuity developed. The frustrating start-up of TennCare with many patient-physician relationships disrupted may not have seriously biased the study's results. Another favorable aspect of this study was that TennCare was mandatory for all Tennessee eligible Medicaid patients so the historic problem of self-selection in Medicaid managed care research was avoided. Furthermore, the PSQ-III had a Chronbach's Alpha reliability coefficient of .935

indicating a high level of consistency among the fifty PSQ-III items specific to the study subjects. Data collectors at SSRI also reported that the instrument's utility was excellent as it was not "disjointed" but consistently kept the focus on enrollee assessment of TennCare's services. Another positive aspect was that the refusal rate was only 44.8 percent which was consistent with the literature as no incentive to participate was offered, G. Neeley (personal communication, February 15, 1997).

H. IMPLICATIONS FOR HEALTH CARE POLICYMAKERS

There was a wide range of consumer satisfaction studies in the literature but little consistency among instruments, populations, or research designs, much of which was not research at all. Hall and Dornan (1988) found that seventy-one percent of patient satisfaction instruments were homemade. Standardization of setting-appropriate instruments, research designs, and methodology would have greatly enhanced patient satisfaction as a valid theoretical research construct.

Overall, this study did not demonstrate whether the patients' perceptions of their health care services were in agreement with the absolute behavior of physicians and MCOs. It is unlikely that patient satisfaction evaluations will prevail over medical algorithms as a quality assurance mechanism.

Furthermore, the study did not predict whether enrollees with optimal satisfaction levels subsequently followed provider regimens. Yet, increased patient sophistication, defensive medicine, the entry of for-profit organizations into the marketplace, and the oversupply of physicians likely spurred continued interest in patient satisfaction research. While we had made tremendous scientific gains in the treatment of diseases, a human relations approach was also a fruitful way to achieve health. Bedside manner was probably as old as the medical profession itself and had implications for compliance. In addition, satisfactory interpersonal care may have been a prerequisite for achieving technical care especially with respect to communication. Furthermore, technical competence likely varied little in patient satisfaction evaluations as the mere label of doctor was sufficient to have conferred high technical competence.

At the same time, caution must have been taken as high patient satisfaction ratings did not always mean improved quality of care. As pointed out in the literature review, providing inexpensive ambulatory care services in convenient locations may have improved patient satisfaction but may have resulted in a poorer quality of medical care. Furthermore, policymakers must not have lost sight of the medical profession's Hippocratic Oath which was above all, "do no harm to the patient." One-day hospital stays for childbirth and outpatient surgeries may have sacrificed quality health care to save capitation dollars. In an FFS reimbursement system, where patients were free to choose

from a wide variety of providers, the issues of access and underutilization, although important, were not of critical importance because patients provided economic benefit to providers by coming in for services. Thus, it was in the provider's best interest to maximize accessibility and the courtesy with which services were delivered. In a capitated system, the economic incentives were in the opposite direction. The provider received more economic rewards the less the client was seen, at least in the short term. Thus, it became necessary to ensure that acceptable levels of access and satisfaction were maintained. This was why Tennessee's HCFA waiver required that patient satisfaction surveys be conducted periodically as a quality assurance mechanism.

The question of whether a TennCare-like Medicaid system was appropriate for other states was not settled by this study. There were obviously areas of concern as 77.8 percent of enrollees felt their were "some things about TennCare that could be better." Hall and Dorman's (1988) meta-analysis of 221 studies found a satisfaction rating of 76.0 percent for the 221 studies reviewed, 12.37 percent higher than this study's overall satisfaction rating of 63.63 percent. This low rating was magnified when one considered that poor Medicaid patients tended to rate their care more highly than the population in general because some care was better than no care and because of cognitive dissonance (Temkin-Winchell, 1991). No one liked to admit that their health care was poor or inadequate. In addition, criticizing what little health care was

provided to TennCare enrollees could have resulted in the loss of such services from their standpoint. Finally, generalizations of study results to other TennCare regions or other Medicaid managed care programs should have been done with caution as East Tennessee and its health care delivery systems were bound in Appalachian culture. Nevertheless, TennCare policymakers especially health care planners and managed care organizations in Knox County, could have used the study findings as a planning guide to develop a more optimal community- wide medical system.

I. IMPLICATIONS FOR HEALTH EDUCATION

Many states out of financial desperation had implemented managed competition into their Medicaid delivery systems. One key element of capitation was the allocation of resources to preventive care services, as the more diseases and accidents prevented resulted in more dollars saved. The importance of preventive measures was evident with TennCare as no copayments or deductibles were required for preventive procedures such as mammograms, immunizations, or EPSDT. As HMOs became intimate with the cost saving benefits of health education, patient satisfaction and its relationship to the delivery of managed health care became increasingly important. Health educators employed by HMOs were usually responsible for conducting patient

satisfaction efforts under the public relations umbrella. Patient satisfaction efforts were one way to promote health education and vice versa. Focus groups combining health education and patient satisfaction assessments were efficient and effective combinations.

More specifically, item number forty of the PSQ-III found that 56.7 percent of enrollees disagreed with the statement that "doctors rarely suggest ways to stay healthy." This indicated that TennCare providers were prescribing nutrition, safe sex, and breast cancer screening as treatment regimens, but there was substantial room for improvement. At the same time, maybe Tennessee was trying to plant bananas. Medicaid enrollees were perhaps more concerned with basic survival rather than reading books on stress management or worrying about getting enough green leafy vegetables.

Table 80. presented the frequencies of all the significant criterion variables as functions of all the predictor variables considered in the study. "Interpersonal Aspects" was the criterion variable found significant most often. This had important implications for health education, as the foundation of the discipline is the ability of the health educator to successfully motivate the target population or individual to change some behavior. Since "Interpersonal Aspects" was mentioned more than any other criterion variable, it indicated that the bedside manner of TennCare providers had important implications for how well treatment regimens were followed, prescriptions were taken, and to what

degree health education messages were internalized. Ultimately, the benefits of having a well-informed and satisfied Medicaid patient were comparable to having a healthy Medicaid patient who accepted responsibility for his or her health, learned to practice disease prevention, and knew when to seek professional health care. Quality patient health education, in addition to enhancing the patient's sense of control, may have also decreased patient's desire for diagnostic tests that had little or no therapeutic value. Anyone providing health education whether a physician or a public health educator should have been aware of the importance of facilitating trust, empathy, and respect.

J. EPILOGUE

The first frontier of Medicaid managed care was forever tarnished with "The California Experience" of the 1970's receiving a failing grade. The second round started by Arizona in 1982 received mixed reviews for medical outcomes, costs, and patient satisfaction. The jury was still out on round three which began with TennCare in 1994. This study provided evidence that TennCare enrollees could play by strict rules and still rate their health care as at least average. However, certain health care services such as "Accessibility," "Time

Spent with Doctor," and "Financial Aspects" could have been significantly improved.

The same health care problems were being faced around the world. Many countries were battling with how to control costs and provide access with limited resources. U.S. strategies included the 1992 development of Medicare's Resource Based Relative Value Scale, the inclusion of Diagnostic Related Groups for Medicare hospital reimbursement in 1983, and the passage of the Health Maintenance Organization Act in 1973. Internationally, a three-tiered health care system was evolving around the world. The three tiers included a publicly supported system delivered with managed care, health insurance through employment including managed care, and a costly FFS patient choice system.

Any nation's approach to health care delivery and the need for reform had traditionally been based upon its culture, economy, political ideology, level of education, the standard of living, and attitudes toward welfare. Social institutions such as health care systems were not created in a vacuum. While the United States placed greater emphasis on individual responsibility, free choice, and pluralism, the goal for most European nations and Canada was access for their entire population. In the U.S., "Life, Liberty, and the Pursuit of Happiness" were Constitutional hallmarks while in Canada "Peace, Order, and Good Government" reigned supreme. The Canadian system of universal coverage was rooted deeply in the conviction that health care was a right, not a privilege. One must have

remembered that after the American revolution, the U.S. discarded British ties while Canada kept a bit of the "Tory Touch." A collective societal culture also pervaded the Japanese business community where "the company is people." This was reflected in Japan's infant mortality rate which was consistently among the lowest in the world. Except for the elderly, participation in the welfare system was not considered normal in the U.S. and those Americans who received Medicaid tended to be stigmatized and socially devalued. One could ask, "Is it ethical to force Medicaid patients into restricted health care plans and control their access?" The values of the American people were reaching a consensus that Medicaid patients were a good pilot study.

Was fourteen cents out of every dollar really too much to spend on an industry that did not wage war, did not often pollute the environment, did not overindulge in foreign aid, increased people's quality of life, and employed six million Americans? Did we really need health care reform? If not, by 2040, the U.S. would have had an entire country devoted to the health care industry. Nonetheless, American preferences for pluralism and anti-government perceptions will not halt the "Lost Reform" from becoming a reality in the 21st Century. Health care will be provided by large networks and regulated for cost, quality, access, and, of course, patient satisfaction. Americans will use less medical care per capita and the power of providers will diminish as the industry becomes increasingly consumer driven and government regulated.

While our behaviors may not have always indicated that we valued our health, you could ask anyone suffering from depression, Acquired Immune Deficiency Syndrome, or a gun shot wound how much they were willing to ante up for optimal health. The challenge was to get all the health we could for the dollars we had without foregoing food, clothing, or shelter.

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APPENDECES

APPENDIX A

PILOT STUDY

Hello. I am a staff person of The University of Tennessee. We are conducting a survey about how satisfied Knox Countians are with TennCare.

(The following three groups of TennCare patients should be excluded from the survey):

1. TennCare patients who also have Medicare.
2. TennCare patients who are classified as "Blind or Disabled." (A person may be enrolled in TennCare as a result of an injury which prevents them from working. These people are officially classified as "Disabled Patients.")
3. TennCare patients under eighteen years of age. (Ask to speak to a parent or legal guardian.)

Our survey is part of a student's research study. Participation in the survey is voluntary and you may refuse to participate or withdraw from answering the questions at any time.

Please respond to each item. Let me know if any question is unclear or could be improved in any way. Your answers will be strictly confidential and no one will ever know who you are or how you answered. It should take only about ten minutes to complete the entire survey.

Please Read The Following Two Paragraphs Slowly and Clearly

The following statements are some things people might say about TennCare. Please think about each statement based on the medical care you are receiving right now. If you have not received medical care recently, think about what you would expect if you needed medical care today.

We are interested in your feelings about the medical care you have been receiving from TennCare, both good and bad. Please respond by answering whether you Strongly Agree, Agree, are Uncertain, Disagree, or Strongly Disagree with each statement.

(Circle One Number for Each Item)

SA = Strongly Agree

A = Agree

U = Uncertain

D = Disagree

SD = Strongly Disagree

	SA	A	U	D	SD
1. If I need hospital care, I can get admitted without any trouble.	5	4	3	2	1
2. Doctors need to be more thorough in treating and examining me.	1	2	3	4	5
3. I am very satisfied with the medical care I receive.	5	4	3	2	1
4. I worry sometimes about having to pay large medical bills.	1	2	3	4	5
5. It is easy for me to get medical care in an emergency.	5	4	3	2	1
6. Doctors are good about explaining the reason for tests.	5	4	3	2	1
7. I am usually kept waiting for a long time when I am at the doctor's office.	1	2	3	4	5
8. I think my doctor's office has everything needed to provide complete medical care.	5	4	3	2	1
9. The doctors who treat me should give me more respect.	1	2	3	4	5

	SA	A	U	D	SD
10. Sometimes it is a problem to cover my share of the cost for a medical care visit.	1	2	3	4	5
11. The medical care I have been receiving is just about perfect.	5	4	3	2	1
12. Sometimes doctors make me wonder if their diagnosis is correct.	1	2	3	4	5
13. During my medical visits, I am always allowed to say everything that I think is important.	5	4	3	2	1
14. I feel confident that I can get the medical care I need without being set back financially.	5	4	3	2	1
15. When I go for medical care, they are careful to check everything when treating and examining me.	5	4	3	2	1
16. It's hard for me to get medical care on short notice.	1	2	3	4	5

	SA	A	U	D	SD
17. The doctors who treat me have a genuine interest in me as a person.	5	4	3	2	1
18. Sometimes doctors use medical terms without explaining what they mean.	1	2	3	4	5
19. Sometimes I go without medical care I need because it is too expensive.	1	2	3	4	5
20. The office hours when I can get medical care are convenient and good for me.	5	4	3	2	1
21. There are things about the medical system I receive my care from that need to be improved.	1	2	3	4	5
22. The office where I get my medical care should be open for more hours than it is.	1	2	3	4	5
23. The medical staff that treats me knows about the latest medical developments.	5	4	3	2	1
24. I have to pay for more of the medical care than I can afford.	1	2	3	4	5

	SA	A	U	D	SD
25. I have easy access to the medical specialists I need.	5	4	3	2	1
26. Sometimes doctors make me feel foolish.	1	2	3	4	5
27. Regardless of the health problems I have now or develop later, I feel protected from financial hardship.	5	4	3	2	1
28. Where I get medical care, people have to wait too long for emergency treatment.	1	2	3	4	5
29. Doctors act too businesslike and impersonal toward me.	1	2	3	4	5
30. Doctors never expose me to unnecessary risks.	5	4	3	2	1
31. The amount I have to pay to cover or insure my medical care needs is reasonable.	5	4	3	2	1
32. There are some things about the medical care I receive that could be better.	1	2	3	4	5

	SA	A	U	D	SD
33. My doctors treat me in a very friendly and courteous manner.	5	4	3	2	1
34. Those who provide my medical care sometimes hurry too much when they treat me.	1	2	3	4	5
35. Some of the doctors I have seen lack experience with my medical problems.	1	2	3	4	5
36. Places where I can get medical care are very conveniently located.	5	4	3	2	1
37. Doctors sometimes ignore what I tell them.	1	2	3	4	5
38. When I am receiving medical care, they should pay more attention to my privacy.	1	2	3	4	5
39. If I have a medical question, I can reach a doctor for help without any problem.	5	4	3	2	1
40. Doctors rarely give me advice about ways to avoid illness and stay healthy.	1	2	3	4	5

	SA	A	U	D	SD
41. All things considered, the medical care I receive is excellent.	5	4	3	2	1
42. Doctors listen carefully to what I have to say.	5	4	3	2	1
43. I feel insured and protected financially against all possible medical problems.	5	4	3	2	1
44. I have some doubts about the ability of the doctors who treat me.	1	2	3	4	5
45. Doctors usually spend plenty of time with me.	5	4	3	2	1
46. Doctors always do their best to keep me from worrying.	5	4	3	2	1
47. I find it hard to get an appointment for medical care right away.	1	2	3	4	5
48. I am dissatisfied with some things about the medical care I receive.	1	2	3	4	5

	SA	A	U	D	SD
49. My doctors are very competent and well-trained.	5	4	3	2	1
50. I am able to get medical care whenever I need it.	5	4	3	2	1

In order to complete the survey, please answer each of the following questions about yourself. All answers will be held confidential and no one will ever know who you are or how you answered.

D1. What is your age?

D2. What is your current marital status?

Single, never married

Married

Separated

Divorced

Widowed

Other

D3. Are you a male or female?

Male

Female

If the person is a female, answer question D4. If not, go to question D6.

D4. Are you pregnant at this time?

Yes

No

D5. Do you work inside or outside?

Inside

Outside

Don't Know

D6. What is your race?

Caucasian

African American

Hispanic

Asian/Pacific Islander

Native American/Eskimo

Other

D7. What is your main source of transportation?

Your Automobile/Your Pick-Up Truck

Free Rides From Others

Pay For Rides From Others

City Bus

Taxi

Walk

Other

D8. Compared to other people your age, how would you describe your current state of health?

Excellent Health

Very Good Health

Good Health

Fair Health

Poor Health

Don't Know

D9. Before becoming enrolled in TennCare what kind of health insurance did you have?

Covered by Medicaid

No Health Insurance

Tennessee Comprehensive Health Insurance Program

Other

Don't Know

D10. Do you currently have to pay for ANY of your TennCare bills?

Yes

No

Don't Know

D11. When you need health care, where do you usually go first?

Doctor's Office

Knox County Health Department

Emergency Room

Other

Don't Know

D12. When was the last time you received health care services from TennCare?

Within Past Two Weeks

Within Past Six Weeks

Within Past Six Months

More Than Six Months Ago

Never

Don't Know

D13. Which of the following Managed Care Organizations are you currently enrolled in?

(Former names are given in parentheses in case the person does not know the new name. Try to distinguish whether Blue Care patients were formerly enrolled in Blue Cross/ Blue Shield or Total Health Plus). (A response of Tennessee Health Partnership should be marked as letter B. Blue Care-Current Name and Total Health Plus-Former Name).

- A. Blue Care (Blue Cross-Blue Shield)
- B. Blue Care (Total Health Plus)
- C. Access Med Plus (Access Med Plus)
- D. Preferred Health Partnership (Preferred Health Plus)
- E. Phoenix Health Care (Phoenix-Advantage Care)
- F. Tenn Source (Tenn Source)
- G. John Deere (John Deere/Heritage)
- H. Other
- I. Don't Know

D14. What is your zip code?

D15. What is your highest level of education?

- Did Not Complete High School
- Completed High School Diploma/GED
- Attended College
- Completed Four Year College Degree
- Graduate or Professional Degree

D16. What is your current employment status?

- Full-Time
- Part-Time
- Unemployed
- Retired
- Disabled

D17. What is your household's current annual income?

Less than \$10,000

\$10,000-\$15,000

\$15,001-\$20,000

\$20,001-\$30,000

\$30,001-\$40,000

\$40,001-\$50,000

Don't Know

APPENDIX B

PILOT STUDY REVISIONS

The following revisions were made to the PSQ-III after reviewing the pilot study results. Revisions were based on the utility of the instruments as reported by SSRI interviewers and correlation coefficients for each of the 50 items.

1. In the instructions for the PSQ-III pilot study, it read, "It should take only about ten minutes to complete the entire survey." This was changed to "It should only take about ten minutes to complete the entire survey."

2. Also in the PSQ-III pilot study instructions, it read, "The following statements are some things people might say about TennCare." This was changed to "The following are some ways people might feel about TennCare."

3. Item number 12. of the PSQ-III had a correlation coefficient of $-.1128$. It was changed from "Sometimes doctors make me wonder if their diagnosis is correct." to "Sometimes doctors make me wonder if their treatment is correct."

4. Item number 21. of the PSQ-III had a correlation coefficient of $-.1070$. It was changed from "There are things about the medical care system I receive my care from that need to be improved." to "There are things about TennCare that need to be improved."

5. Item number 22. of the PSQ-III had a correlation coefficient of $.2155$. It was changed from "The office where I get my medical care should be open for more hours than it is." to "The office where I get my medical care should be open for more hours."

6. Item number 30. of the PSQ-III had a correlation coefficient of $.1536$. It was changed from "Doctors never expose me to unnecessary risks." to "Doctors always give me good treatment."

7. Item number 32. of the PSQ-III had a correlation coefficient of $-.0556$. It was changed

from "There are some things about the medical care I receive that could be better." to "There are some things about my medical care which could be better."

8. Item number 38. of the PSQ-III had a correlation coefficient of $-.1297$. It was changed from "When I am receiving medical care, they should pay more attention to my privacy." to "TennCare doctors should pay more attention to my privacy."

9. Item number 40. of the PSQ-III had a correlation coefficient of $-.1033$. It was changed from "Doctors rarely give advice about ways to avoid illness and stay healthy." to "Doctors rarely suggest ways to stay healthy."

10. Item number 49. of the PSQ-III had a correlation coefficient of $.2100$. It was changed from, "My doctors are very competent and well-trained." to "My doctors are very smart."

APPENDIX C

TENNCARE SURVEY

Hello. I am a staff person of The University of Tennessee. We are conducting a survey about how satisfied Knox Countians are with TennCare.

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2. TennCare patients who are classified as "Blind or Disabled." A person may be enrolled in TennCare as a result of an injury which prevents them from working. These people are officially classified as "Disabled Patients."
3. TennCare patients under eighteen years of age. (Ask to speak to a parent or legal guardian.)

Our survey is part of a student's research study. Participation in the survey is voluntary and you may refuse to participate or withdraw from answering the questions at any time.

Please respond to each item. Your answers will be strictly confidential and no one will ever know who you are or how you answered. It should only take about ten minutes to complete the entire survey.

Please Read The Following Two Paragraphs Slowly and Clearly

The following statements are some ways people might feel about TennCare. Please think about each statement based on the medical care you are receiving right now. If you have not received medical care recently, think about what you would expect if you needed medical care today.

We are interested in your feelings about the medical care you have been receiving from TennCare, both good and bad. Please respond by answering whether you Strongly Agree, Agree, are Uncertain, Disagree, or Strongly Disagree with each statement.

(Circle One Number for Each Item)

SA = Strongly Agree

A = Agree

U = Uncertain

D = Disagree

SD = Strongly Disagree

	SA	A	U	D	SD
1. If I need hospital care, I can get admitted without any trouble.	5	4	3	2	1
2. Doctors need to be more thorough in treating and examining me.	1	2	3	4	5
3. I am very satisfied with the medical care I receive.	5	4	3	2	1
4. I worry sometimes about having to pay large medical bills.	1	2	3	4	5
5. It is easy for me to get medical care in an emergency.	5	4	3	2	1
6. Doctors are good about explaining the reason for tests.	5	4	3	2	1
7. I am usually kept waiting for a long time when I am at the doctor's office.	1	2	3	4	5
8. I think my doctor's office has everything needed to provide complete medical care.	5	4	3	2	1
9. The doctors who treat me should give me more respect.	1	2	3	4	5

	SA	A	U	D	SD
10. Sometimes it is a problem to cover my share of the cost for a medical care visit.	1	2	3	4	5
11. The medical care I have been receiving is just about perfect.	5	4	3	2	1
12. Sometimes doctors make me wonder if their treatment is correct.	1	2	3	4	5
13. During my medical visits, I am always allowed to say everything that I think is important.	5	4	3	2	1
14. I feel confident that I can get the medical care I need without being set back financially.	5	4	3	2	1
15. When I go for medical care, they are careful to check everything when treating and examining me.	5	4	3	2	1
16. It's hard for me to get medical care on short notice.	1	2	3	4	5
17. The doctors who treat me have a genuine interest in me as a person.	5	4	3	2	1

	SA	A	U	D	SD
metimes doctors use al terms without ing what they mean.	1	2	3	4	5
metimes I go without l care I need because o expensive.	1	2	3	4	5
le office hours when I t medical care are ient and good for me.	5	4	3	2	1
ere are things about Care that need mproved.	1	2	3	4	5
le office where I get edical care should be or more hours.	1	2	3	4	5
le medical staff eats me knows about test medical developments.	5	4	3	2	1
have to pay for of the medical care can afford.	1	2	3	4	5

	SA	A	U	D	SD
25. I have easy access to the medical specialists I need.	5	4	3	2	1
26. Sometimes doctors make me feel foolish.	1	2	3	4	5
27. Regardless of the health problems I have now or develop later, I feel protected from financial hardship.	5	4	3	2	1
28. Where I get medical care, people have to wait too long for emergency treatment.	1	2	3	4	5
29. Doctors act too businesslike and impersonal toward me.	1	2	3	4	5
30. Doctors always give me good treatment.	5	4	3	2	1
31. The amount I have to pay to cover or insure my medical care needs is reasonable.	5	4	3	2	1
32. There are some things about my medical care which could be better.	1	2	3	4	5

	SA	A	U	D	SD
33. My doctors treat me in a very friendly and courteous manner.	5	4	3	2	1
34. Those who provide my medical care sometimes hurry too much when they treat me.	1	2	3	4	5
35. Some of the doctors I have seen lack experience with my medical problems.	1	2	3	4	5
36. Places where I can get medical care are very conveniently located.	5	4	3	2	1
37. Doctors sometimes ignore what I tell them.	1	2	3	4	5
38. TennCare doctors should pay more attention to my privacy.	1	2	3	4	5
39. If I have a medical question, I can reach a doctor for help without any problem.	5	4	3	2	1
40. Doctors rarely suggest ways to stay healthy.	1	2	3	4	5

	SA	A	U	D	SD
41. All things considered, the medical care I receive is excellent.	5	4	3	2	1
42. Doctors listen carefully to what I have to say.	5	4	3	2	1
43. I feel insured and protected financially against all possible medical problems.	5	4	3	2	1
44. I have some doubts about the ability of the doctors who treat me.	1	2	3	4	5
45. Doctors usually spend plenty of time with me.	5	4	3	2	1
46. Doctors always do their best to keep me from worrying.	5	4	3	2	1
47. I find it hard to get an appointment for medical care right away.	1	2	3	4	5
48. I am dissatisfied with some things about the medical care I receive.	1	2	3	4	5
49. My doctors are very smart.	5	4	3	2	1

	SA	A	U	D	SD
50. I am able to get medical care whenever I need it.	5	4	3	2	1

In order to complete the survey, please answer each of the following questions about yourself. All answers will be held confidential and no one will ever know who you are or how you answered.

D1. What is your age?

D2. What is your current marital status?

Single, never married

Married

Separated

Divorced

Widowed

Other

D3. Are you a male or female?

Male

Female

If the person is a female, answer question D4. If not, go to question D6.

D4. Are you pregnant at this time?

Yes

No

D5. Do you work inside or outside?

Inside

Outside

Don't Know

D6. What is your race?

Caucasian

African American

Hispanic

Asian/Pacific Islander

Native American/Eskimo

Other

D7. What is your main source of transportation?

Your Automobile/Your Pick-Up Truck

Free Rides From Others

Pay For Rides From Others

City Bus

Taxi

Walk

Other

D8. Compared to other people your age, how would you describe your current state of health?

Excellent Health

Very Good Health

Good Health

Fair Health

Poor Health

Don't Know

D9. Before becoming enrolled in TennCare what kind of health insurance did you have?

Covered by Medicaid

No Health Insurance

Tennessee Comprehensive Health Insurance Program

Other

Don't Know

D10. Do you currently have to pay for ANY of your TennCare bills?

Yes

No

Don't Know

D11. When you need health care, where do you usually go first?

Doctor's Office

Knox County Health Department

Emergency Room

Other

Don't Know

D12. When was the last time you received health care services from TennCare?

Within Past Two Weeks

Within Past Six Weeks

Within Past Six Months

More Than Six Months Ago

Never

Don't Know

D13. Which of the following Managed Care Organizations are you currently enrolled in?

(Former names are given in parentheses in case the person does not know the new name. Try to distinguish whether Blue Care patients were formerly enrolled in Blue Cross/ Blue Shield or Total Health Plus). (A response of Tennessee Health Partnership should be marked as letter B. Blue Care-Current Name and Total Health Plus-Former Name).

- A. Blue Care (Blue Cross-Blue Shield)
- B. Blue Care (Total Health Plus)
- C. Access Med Plus (Access Med Plus)
- D. Preferred Health Partnership (Preferred Health Plus)
- E. Phoenix Health Care (Phoenix-Advantage Care)
- F. Tenn Source (Tenn Source)
- G. John Deere (John Deere/Heritage)
- H. Other
- I. Don't Know

D14. What is your zip code?

D15. What is your highest level of education?

- Did Not Complete High School
- Completed High School Diploma/GED
- Attended College
- Completed Four Year College Degree
- Graduate or Professional Degree

D16. What is your current employment status?

- Full-Time
- Part-Time
- Unemployed
- Retired
- Disabled

D17. What is your household's current annual income?

Less than \$10,000

\$10,000-\$15,000

\$15,001-\$20,000

\$20,001-\$30,000

\$30,001-\$40,000

\$40,001-\$50,000

Don't Know

APPENDIX D

DATA RECATEGORIZATIONS

1. The ages ranged from 18 to 64 years. These were placed into two categories: "18-44" and "45-64."
2. For the predictor variable, race, the categories of "Hispanic," "Asian," "Native American," and "Other" were deleted from the analysis.
3. The predictor variable of pregnancy status was deleted from the analysis as only four pregnant females were obtained in the sample.
4. For the predictor variable, managed care organization, "Access Med Plus," "Phoenix," "Tenn Source," and "John Deere," were placed into the "Other" category. In addition, former "Total Health Plus" enrollees were placed into their new managed care organization category, "Blue Care."
5. For the predictor variable, perceived health status, the categories of "Poor Health," "Don't Know," and "Other" were deleted from the analysis.
6. For the predictor variable, initial provider site, the categories of "Knox County Health Department," "Other," and "Don't Know" were deleted from the analysis.
7. For the predictor variable, most recent encounter, the "Never" category was grouped with the category, "Greater Than Six Months" while the "Don't Know" category was deleted from the analysis.
8. For the predictor variable, work environment, the "Don't Know" category was deleted from the analysis.
9. For the predictor variable, income, the categories of "\$20,001-30,000," "\$30-40,000," and "\$40-50,000" were placed together into a "\$20,001+" category."
10. For the predictor variable, employment status, the categories of "Retired" and "Disabled" were deleted from the analysis.

11. For the predictor variable, primary source of transportation, the categories of "Free Rides," "City Bus," "Taxi," and "Walk" were placed into the "Other" category.

12. For the predictor variable, educational level, the categories of "College Graduate" and "Graduate or Professional Degree" were deleted from the analysis.

13. For the predictor variable, zip code, the following zip codes were placed into a "North Knox County" category: 37709, 37721, 37807, 37849, 37912, 37917 and 37918. The following zip codes were placed into a "South Knox County" category: 37865 and 37920. The following zip codes were placed into an "East Knox County" category: 37764, 37806, 37820, 37871, 37902, 37914, 37915, 37924, and 37876. The following zip codes were placed into a "West Knox County" category: 37909, 37916, 37919, 37921, 37922, 37923, 37931, 37932.

14. For the predictor variable, health insurance status prior to TennCare, the categories of "The Tennessee Comprehensive Health Insurance," "Other," and "Don't Know" were deleted from the analysis.

15. For the predictor variable, marital status, the categories of "Separated," "Widowed," and "Divorced" were combined into an "Other" category while the original "Other" category was deleted from the analysis.

APPENDIX E

ENROLLEES BY PREDICTOR VARIABLE

Table A-1.

Enrollees by Age

Ages	Frequency	Percent
18-44	176	70.4
45-64	74	29.6
Total	250	100.0

Table A-2.

Enrollees by Race

Race	Frequency	Percent
Caucasian	215	86.7
African-American	33	13.3
Total	248	100.0

Table A-3.
Enrollees by Sex

Sex	Frequency	Percent
Male	101	39.1
Female	157	60.9
Total	258	100.0

Table A-4.
Enrollees by Managed Care Organization

MCO	Frequency	Percent
Blue Care	165	68.5
PHP	29	12.0
*Other	47	19.5
Total	241	100.0

*Access Med Plus, Phoenix, Tenn Source, John Deere

Table A-5.

Enrollees by Current Health Status

Health Status	Frequency	Percent
Excellent	40	17.5
Very Good	51	22.4
Good	76	33.3
Fair	61	26.8
Total	228	100.0

Table A-6.

Enrollees by Economic Standing

Economic Standing	Frequency	Percent
Paying Enrollee	125	50.6
Non-Paying Enrollee	122	49.4
Total	247	100.0

Table A-7.

Enrollees by Initial Provider Site

Initial Provider Site	Frequency	Percent
Physician's Office	192	83.1
Hospital ER	39	16.9
Total	231	100.0

Table A-8.

Enrollees by Most Recent Encounter

Most Recent Encounter	Frequency	Percent
Within Past Two Weeks	55	21.8
Two - Six Weeks	62	24.6
Six Weeks - Six Months	74	29.4
Greater Than Six Months/ Never	61	24.2
Total	252	100.0

Table A-9.

Enrollees by Work Environment

Work Environment	Frequency	Percent
Work Indoors	108	77.1
Work Outdoors	32	22.9
Total	140	100.0

Table A-10.

Enrollees by Household Income

Household Income	Frequency	Percent
Less Than \$10,000	96	43.4
\$10,001-15,000	45	20.4
\$15,001-20,000	34	15.4
\$20,001 +	46	20.8
Total	221	100.0

Table A-11.

Enrollees by Employment Status

Employment Status	Frequency	Percent
Full-Time Employed	82	35.2
Part-Time Employed	62	26.6
Unemployed	89	38.2
Total	233	100.0

Table A-12.

Enrollees by Primary Source of Transportation

Transportation Source	Frequency	Percent
Automobile or Pick-Up	217	85.8
*Other	36	14.2
Total	253	100.0

*Free Rides From Others, City Bus, Taxi, or Walk

Table A-13.

Enrollees by Educational Level

Educational Level	Frequency	Percent
No High School	60	26.4
High School Degree	108	47.6
Some College	59	26.0
Total	227	100.0

Table A-14.

Enrollees by Knox County, Tennessee Residence

Knox County Residence	Frequency	Percent
North	60	23.8
South	75	29.8
East	50	19.8
West	67	26.6
Total	252	100.0

Table A-15.

Enrollees by Health Insurance Status Prior To TennCare

Prior Health Insurance	Frequency	Percent
Medicaid	95	56.2
None	74	43.8
Total	169	100.0

Table A-16.

Enrollees by Marital Status

Marital Status	Frequency	Percent
Single	76	29.9
Married	111	43.7
*Other	67	26.4
Total	254	100.0

*Separated, Widowed, or Divorced

VITA

Cyrus Bernard Nasserli was born in Richlands, Virginia on December 13, 1966. He attended Cedar Bluff Elementary School, Richlands Middle School, and Richlands High School where he played trombone in the Blue Tornado Band. After graduating from Richlands High School in June of 1995, Cyrus began his undergraduate studies at Brevard Junior College in Brevard, North Carolina later receiving an Associate of Liberal Arts degree in May of 1987. He continued his education at James Madison University in Harrisonburg, Virginia graduating with a Bachelor of Health Science degree and a minor in Biology in May of 1990. Cyrus was a member of the cross-country and intercollegiate track teams throughout his undergraduate years. In August of 1990, Cyrus entered the Masters of Public Health program at the East Tennessee State University. While at East Tennessee State, he was a graduate teaching assistant for the Department of Health Education and a research assistant for the James H. Quillen College of Medicine graduating in May of 1992. In January of 1994, Cyrus entered the University of Tennessee to pursue a Doctorate of Human Ecology in Community Health Education. While at the University of Tennessee, Cyrus was a Graduate Teaching Associate for the Department of Health, Leisure, and Safety Sciences. The doctoral degree was received August, 1997.