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STRUCTURE AND IMPLEMENTATION OF STATE PREADMISSION SCREENING PROGRAMS: 1978-1994

By

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ABSTRACT

Structure and Implementation of State Preadmission Screening Programs: 1978-1994

In an attempt to control Medicaid nursing facility utilization and expenditures, states have implemented preadmission screening (PAS) programs to assess applicant need for nursing facility services and, for some programs, their potential to remain in the community with the assistance of alternative long term care services. This study examined the structure and implementation of state PAS programs from 1978-1994 in all 50 states and the District of Columbia. Primary data on state PAS program characteristics were collected from state officials in three separate telephone surveys in 1989, 1992, and 1994.

Twenty-five states screened applicants by a paper or telephone review of information collected by a private provider in 1994. The other twenty-six states used state or contract agency staff to screen all or some applicants. The number of states implementing these types of PAS programs increased steadily until 1990. Most growth took place from 1981 (5 states) to 1984 (16 states). Programs became increasingly comprehensive until 1990, with a higher percentage using state or contract agency staff to conduct assessments, screening hospital and community-based applicants, and screening private pay applicants. A cross-sectional logistic regression of state socio-demographic, economic, and political characteristics found wealthier states with a large elderly population were positively associated with having a PAS program in 1991, while the percent of a state's elderly population with membership in the American Association of Retired Persons was negatively associated.

A stringency index was created by assigning states a score of 0 to 6 based upon the presence of selected program characteristics. Five states received the highest score of 6, while eleven received a score of 0. Sixteen states received a score of 4 or higher. Stringency scores were included in a cross-sectional two-stage regression analysis of state economic, socio-demographic, and health service data from 1992. No association was found between states with high stringency scores and Medicaid nursing facility utilization. A second analysis found PAS programs targeted towards Medicaid eligibles were significantly associated with lower Medicaid nursing facility utilization in 1991 and 1992. Future research should expand the utilization model, pool data from multiple years, and refine the stringency index.

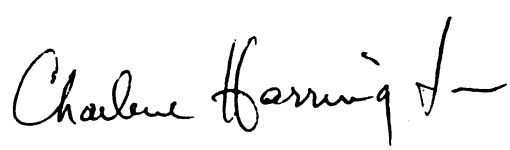

TABLE OF CONTENTS

TABLES

APPENDICES

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CHAPTER 1

INTRODUCTION

A recent report by the U.S. General Accounting Office (1994c) titled "Long-Term Care: Demography, Dollars and Dissatisfaction Drive Reform", outlined three compelling reasons for long term care reform. Of primary importance to policymakers are the amount and distribution of long term care expenditures. Of the $49 billion spent by the Medicaid program on long term care in 1995, $40 billion were spent on nursing facility services, while only $9.5 billion were for community-based long term care services (Burwell, 1996). Second, concern over long term care costs is heightened by recognition that the fastest growing segment of the population are those 85 years of age and older, those most in need long term care services (Mendleson and Schwartz, 1993). This increase in the number of elderly will have a direct impact on the use and cost of nursing facility services, with Medicaid nursing facility expenditures projected to nearly double in a mere 10 years, increasing to $79.1 billion by the year 2005 (Burner and Waldo, 1995). Third, numerous polls have shown the vast majority of elderly, ninety-five percent in one poll, prefer to remain in their own homes even if highly disabled than enter a nursing facility (Weiner and Hanley, 1992).

Despite the disabled elderly's clear preference to remain living independently as long as possible, the high costs associated with an overreliance on nursing facilities as the primary publicly funded long term care service, and the threat

of massive increases in the number needing long term care services, the federal government has provided little guidance or initiative for long term care reform. To date, the federal government's chosen route of action has been the granting of states increased discretion in their Medicaid programs. As a result, states have undertaken lead responsibility in long term care reform efforts.

States are attempting to provide a continuum of long term care services and achieve a better balance between institutional and community-based long term care services by investing heavily in community-based long term care services, especially through the use of Medicaid waivers (GAO, 1994d; Coleman, 1996). States are also controlling nursing facility costs and utilization through certificate-of-need requirements and moratoria on bed construction, increased use of prospective reimbursement mechanisms, and the implementation of preadmission screening (PAS) programs to control the use of nursing facility services.

PAS programs are designed to control nursing facility use by conducting an assessment of applicant care needs prior to placement in a facility in order to determine the need for nursing facility placement. Some PAS programs provide information about, and assistance in, obtaining home and community-based alternatives to institutional care (Polich and Iversen, 1987). A few states are restructuring their long term care systems so that PAS programs serve as a single entry point to a variety of long term care services, including Medicaid waiver and state funded community-based services (Pendelton et al., 1989).

State PAS programs first gained prominence in the early 1980s and have become an increasingly key component of many state long term care systems (Polich and Iversen, 1987). Because PAS programs are developed by individual states, the structure of these programs vary considerably. Levels of support, a state's long term care infrastructure, state politics, and program goals may all influence program development and structure (Justice, 1988). Although a key component of many state long term care systems (Fralich, 1995), little is known about the scope and use of such programs by states or their ability to decrease nursing facility utilization.

STUDY GOALS

Descriptive

The primary goal of this research is to provide descriptive information on PAS program implementation and structure during the 1978-1994 time period. Three types of descriptive data are presented. First, detailed data on the structure of state PAS programs are presented for the 1993-94 period. Data on a number of program characteristics are presented, including data related to program administration, target populations, screening process, type of assessment forms used, diversion efforts, program typology, and barriers to program implementation and maintenance.

Second, an index based on selected program characteristics is developed to facilitate program comparison and provide a measure of stringency. Lastly, descriptive information is provided on program implementation and changes in program structure during the 1978-1994 time period. Five program characteristics

are examined over time: (1) year of implementation; (2) how eligibility is determined; (3) target population; (4) when screens are conducted; and (5) type of assessment staff.

Analytic

This dissertation research will examine two research questions. The first research question examines the characteristics of states associated with having a PAS program. A model including socio-demographic, economic, and political characteristics of states are used in a logistic regression analysis to examine the characteristics of states with PAS in 1991.

The second research question examines the relationship between presence of a statewide PAS program and Medicaid nursing facility utilization. Based on previous research examining predictors of nursing facility utilization, a model including socio-demographic, economic, health service supply, and policy characteristics of states are included in a two-stage least squares regression analysis to examine the relationship between PAS and Medicaid nursing facility utilization. Two distinct sets of analyses are conducted using different measures of PAS. One analysis uses a dichotomous measure of PAS programs which screen Medicaid eligibles and those expected to become Medicaid eligible within six months. A second set of analyses are conducted using scores from the PAS stringency table constructed by this dissertation research to examine if states with more stringent scores are significantly associated with decreased Medicaid nursing facility utilization.

STUDY IMPORTANCE

A national study examining the structure and implementation of preadmission screening programs over a 17 year time period can provide crucial information to both state and federal policymakers. Examining how states are developing their PAS programs offers other states models to choose from in developing or restructuring their own programs (Justice et al., 1988). At the same time, federal policymakers will find data on state long term care reform efforts, of which PAS programs are often a key component, to be of use in considering comprehensive or more limited reform strategies (GAO, 1994c).

Indeed, a number of Medicaid and long term care reforms have been proposed during the past fifteen years (GAO, 1995c; Harrington et al., 1991), with nearly all reform proposals expanding state authority and responsibility in the administration of long term care services. The most notable proposed reform bill was President Clinton's Health Security Act of 1993, which would have substantially increased funding for community-based long term care services to states. A GAO (1994b) critique of the proposed reform plan acknowledged some states were the leading innovators in long term care policy and the federal government should follow their lead, but bemoaned the lack of information about state long term care delivery systems, "[which] underscores our relative lack of data about what works *best*.. ..research and experience are currently both insufficient to proscribe service

packages and financing mechanisms as well as ideal program design." This research presents data on an important component of state long term care infrastructures.

Researchers will find this study useful for a number of reasons. First, there is a lack of descriptive information regarding state screening activities. The most recent study of preadmission screening programs cited in the long term care literature is one conducted by Polich and Iversen in 1985. States have implemented a number of changes in their long term care programs since that time, especially in the growth of publicly financed case management systems (GAO, 1994c; Applebaum and Austin, 1990), of which PAS is often a central component (Pendelton et al., 1989). In light of the major role PAS programs often have in state long term care infrastructures, and their growing complexity, current data of the use and structure of PAS nationwide is needed.

Second, in addition to providing detailed descriptive information of state screening activity in 1994, this dissertation research presents longitudinal data on state screening activities during the 1978-1994 time period. No other study has examined the implementation and structure of state PAS programs for more than a one year time period, much less over seventeen years. State long term care policies since the 1980s have undergone a number of dramatic changes. This research provides annual data on program implementation and changes in program structure during a period of dynamic state long term care policy change.

Third, the proposed dissertation will provide insight into the market for nursing facility services and the effect of Medicaid policy on nursing facility

utilization. Only three studies have examined the effect of PAS on Medicaid nursing facility utilization using aggregate state level data (Scanlon, 1980a; Harrington and Swan, 1987; Liu et al., 1991). The most recent data used by these studies was from 1984 (Liu et al., 1991). This study provides an updated analysis by using 1991 data to examine the effect of PAS on statewide Medicaid nursing facility use rates.

BACKGROUND

Long Term Care Needs

Long term care is needed when a physical disability, medical condition, and/or mental impairment forces an individual to rely on others to meet the basic necessities of life over a continuous time period (Lipson and Donahoe, 1988). A key measure of impairment is the ability to perform basic Activities of Daily Living (ADLs), such as bathing, transferring, dressing, and eating. Long term care needs may also be measured by Instrumental Activities of Daily Living (IADLs), such as transportation, cooking, shopping, laundry, household chores, etc.. Although many in need of long term care have mental and/or medical care needs which require the services of health care professionals, others require a range of social, personal, and supportive services that can be provided by family, friends, or non-skilled providers (Kane and Kane, 1987).

Formal and Informal Long Term Care Services

Long term care needs may be met by formal and/or informal services. The vast majority of all long term care is provided by informal caregivers. The percent of all long term care services provided by informal caregivers is estimated to range from 70 to 85 percent (Doty, 1986; Stone et al., 1987). A national survey by the American Association of Retired People (AARP) reported informal caregivers provided 85% of all long term care, while Tennstedt and McKinlay (1989), in a sample of Massachusetts residents, found 80% of long term care was provided by informal caregivers. The vast majority of informal caregivers, 70 percent in one study, are women (Stone et al., 1987). Usually it is a daughter or wife. The most common type of long term care services provided by informal caregiver are non-technical personal and custodial services to meet ADL and IADL needs (Miller, 1991).

Formal long term care services can be distinguished between institutional and community-based services. Institutionalization is necessary when a person's care needs require 24 hour care. Institutional services include nursing facilities, Intermediate Care Facilities for the Mentally Retarded (ICF-MR), and Institutions of Mental Disease (IMD). Of primary interest are nursing facilities, which provide a wide range of services, including housing, nutrition, medical and nursing care, personal assistance, and social activities (Snow, 1995). These services are provided by trained professionals and are needed for only the most impaired individuals. The scope and intensity of care provided is reflected in the high cost of care. In 1993 the average daily cost was $106 dollars, with annual costs exceeding $38,000 dollars (Levit et al., 1994).

Community-based long term care encompasses a wide range of health and social services, including: (1) medically related, (2) personal and custodial in-home services and (3) community-based out-of-home services (Miller, 1991). Medically related services include skilled nursing, physical and occupational therapy, hospice, durable medical equipment, and nursing aide services. Personal and custodial in-home services are non-technical services designed to meet ADL needs. Out-of-home services are services provided at a site outside the home and includes adult day care, respite, counseling, congregate meals, and adult protective services. Because of the heterogeneous nature of long term care, many require a combination of medical, social, and economic services if they are to remain in the community (Justice, 1988).

Individuals receiving formal community-based long term care services rarely rely solely on these services to have all their needs met. Data from the 1982 National Long Term Care Survey (NLTCS) show that of the 4.4 million non-institutionalize disabled elderly, 3.2 million (almost 75%) relied exclusively on nonpaid sources, while another 1 million (21%) received care from formal and informal sources (Rice, 1989). Only 5.5 percent (240,000) of community-based elderly in need of long term care services relied solely on paid care (ibid.). Doty (1986) examined data from the National Health Interview Survey and found only 9 percent of those in need of long term care residing in the community received care solely from formal community-based long term care services. Of the estimated 5-9 percent of disabled community dwelling elders receiving care solely from paid sources, only 26 percent is estimated to be paid for by public funds, "the vast majority

of long term care is provided informally, and privately, at no public cost" (Tennstedt and McKinlay, 1989).

LONG TERM CARE POLICY

The United States does not have a comprehensive long term care policy. Rather, public support for long term care has developed haphazardly over time, with a number of programs offering specific services. Programs offering long term care benefits include Medicare, Medicaid, Social Security Block Grant (SSBG), Older Americans Act (OAA), and community-based services funded by individual states. The two largest health programs, Medicare and Medicaid, were not developed explicitly to address long term care needs. The following is a brief overview of these two programs.

MEDICARE

Medicare (Title XVIII of the Social Security Act) is a federally administered program designed to meet the acute care needs of the elderly. Only minimal skilled nursing and home health benefits, limited for post-acute rehabilitation, are offered. Skilled nursing care is provided under Medicare only if a person has been hospitalized for 3 or more consecutive days and is admitted to a facility shortly after hospitalization and the individual requires skilled nursing on a daily basis related to their condition that was treated for in the hospital. No more than 100 days of care are paid for. Skilled home health care services are also limited for rehabilitation after an

acute care episode. Services must be provided for rehabilitative and not custodial care.

MEDICAID

Implemented under Title XIX of the Social Security Act in 1965, Medicaid is a third party insurance program designed to pay for medical care for eligible low income people. Although Medicaid is the primary funding source for long term care services, it serves a variety of target populations and provides a wide array of medical services. Altman and Beatrice (1990) observe Medicaid serves three different sets of recipients and can be thought of as three different health programs: (1) a program for low-income women and children, (2) a program for the blind and disabled, and (3) a catastrophic insurance program for the impoverished elderly in need of long term care. The addition of long term care services was added on largely as an afterthought (Carpenter, 1988). Hence, its 'medical bias' in the types of long term care services it provides.

Medicaid is administered by individual states and is jointly funded by state and federal governments, with the amount of money given to states by the federal government ranging from 50% to 83% of program costs and determined by the state's per capita income, with poorer states receiving greater funds. States have some discretion in the structure of their programs in terms of eligibility, reimbursement, and services offered. As opposed to the Medicare program, which has the same rules and benefits nationally for all recipients, state discretion in their

Medicaid programs has resulted in 51 separate programs, with varying eligibility criteria and benefits (Fein, 1989). Variations across states in covered populations and services offered are a result of state's ability to pay, spending priorities of states, and incentives inherent in the federal matching formula (GAO, 1995b).

Eligibility

States must provide coverage to recipients of certain federal cash-assistance programs (Fein, 1989). The "categorically needy" include those who receive Supplemental Security Income (SSI), which guarantees a minimum income for the poor who are aged, blind or disabled; and family members eligible for Aid to Families with Dependent Children (AFDC). Some states have chosen to limit eligibility by using eligibility criteria for their Medicaid program established before the implementation of the SSI program in 1974. States using this more restrictive criteria are known as 209(b) states (Carpenter, 1988).

Some states provide additional funds to recipients of the SSI program, known as State Supplementary Payments (SSP). States may provide SSP for those living either independently and/or those living in residential care settings (Harrington, Newcomer, Estes, and Associates, 1985). Everyone receiving SSP payments is automatically eligible for Medicaid.

States have the option to expand coverage to the "medically needy", individuals who do not meet the welfare eligibility income threshold, but who would if the costs of their medical expenses were considered (Carpenter, 1988). States can

limit eligibility to the medically needy option to certain groups, such as the institutionalized and set income eligibility thresholds to regulate the number who qualify under the medically needy program (Harrington, Newcomer, Estes, and Associates, 1985). Most community-based elderly receiving Medicaid are eligible through their participation in the SSI program (Carpenter, 1988).

State discretion in the setting of eligibility payment levels has resulted in wide variations in the population served, with Nevada extending Medicaid coverage to only 284 recipients for every 1,000 poor, while Rhode Island served 913 recipients for every 1,000 poor in 1994 (GAO, 1995b)

Services

States must provide a core set of 12 services and may offer up to 29 optional services. Mandatory long term care services states must offer include nursing facility and home health care services, while states may choose to offer personal care services (Cromwell et al., 1995). In addition, states may apply for Medicaid 2176 waiver services, pending approval from the federal government, to finance home and community-based services for those medically in need of nursing facility services. All mandatory services and any optional services states offer must be available to all Medicaid eligibles, while waivered services may be offered on a limited geographic basis or for only certain target populations. States can regulate the use of services through the setting of reimbursement rates, mandating copayments, and

through utilization review programs (Harrington, Newcomer, Estes, and Associates, 1985).

Medicaid Expenditures

Total Medicaid expenditures have steadily increased since program implementation in 1965. Total spending in 1970 was only $4.9 billion and increased approximately $20 billion over the next ten years, reaching $25.8 billion in 1980. From 1980 to 1990, Medicaid expenditures increased another $46.7 billion, for a total of $72.5 billion in expenditures by 1990 (Nolan et al., 1995).

Medicaid expenditures have increased at a higher than average rate in recent years. While spending for Medicaid, Medicare, and private health insurance increased at an approximate annual rate of 11 percent during most of the 1980s, beginning in 1989 the rate of growth in Medicaid spending far outpaced these funding sources, with annual growth rates of 27 and 29 percent in 1991 and 1992 (GAO, 1995b). Federal and state spending increased from $72.5 billion dollars in 1990 to $158.0 billion dollars in 1995, representing an increase of $85.5 billion in just five years (Nolan et al., 1995). The General Accounting Office estimates federal spending alone for Medicaid will climb to $150 billion dollars by fiscal year 2000 (GAO, 1995a), and total spending will increase to $260 billion annually (GAO, 1995b). Burner and Waldo (1995) estimate total Medicaid sending to increase to $333.4 billion dollars by the year 2005.

Rising Medicaid expenditures are troublesome for state governments. The state share of Medicaid spending more than doubled during a four year period, with $23.7 billion spent by states in 1988, while by 1992 $50.2 billion was spent. This doubling of program costs in a mere four years caused Medicaid to be the fastest growing part of many state budgets between 1988 and 1992 (Coughlin et al., 1994). Although the federal government pays for the majority of Medicaid costs, states are finding it increasingly difficult to meet their share of costs. A decrease in state fiscal capacity, cuts in overall revenue sharing with the federal government, and most importantly, dramatically rising Medicaid costs have all contributed to Medicaid becoming the fastest rising part of state budgets and the primary area of concern for states (Coughlin et al., 1994; Holahan et al., 1993).

Recent federal policy changes have decreased the ability of states to address these rising costs. Of major importance is the banning of special revenue programs states have used to supplement their Medicaid budgets. Beginning in 1986, many states began to tax and/or solicit "donations" from private providers in order to maximize matching federal funds without allocating state revenues to Medicaid (Pine et al., 1992, GAO, 1995b). After receiving the matching federal funds, states gave back the money received through taxes or donations to the providers and kept the federal match as 'profit'. By 1991, a provider tax and/or a donation program was operating in 23 states, resulting in an estimated $2.4 billion in extra federal funds for state Medicaid programs (Miller, 1992 in Buck and Klemm, 1992). The federal government viewed this as an attempt by states to evade their financial responsibilities

and passed the Medicaid Voluntary Contribution and Provider-Specific Tax Amendments in 1991, limiting federal Medicaid matching payments for states using voluntary donations or provider taxes (Pine et al., 1992). Without this revenue source, more severe cuts in the Medicaid program, or other programs, would had to have been made by states (Coughlin et al., 1994).

Another factor decreasing state ability to manage Medicaid program costs was the passage of the Boren Amendment in 1980 (ORA, 1980). This amendment allowed states to develop prospective reimbursement systems for hospitals and nursing facilities as long as payment rates were set at a reasonable rate. Although this amendment helped states contain Medicaid costs during the 1980s, it also allowed providers to challenge their payment rates in courts of law. The Supreme Court in 1990 ruled providers could sue Medicaid agencies, resulting in numerous lawsuits that were previously dismissed on procedural grounds (Weinberg et al., 1993). By 1993, 43 Boren Amendment suits had been filed by nursing facilities alone (ibid.). Boren Amendment lawsuits brought on by nursing facilities and hospitals may have a significant effect on state Medicaid programs, potentially increasing a "state's annual institutional payments by tens of million of dollars" (Buck and Klem, 1992).

Medicaid Long Term Care Expenditures

Medicaid spending for all long term care services have steadily increased. From 1991 to 1992, Medicaid long term care spending increased from $33.8 billion to $38.9 billion, a 15.1% increase, while $42.0 billion was spent in 1993, an 8% increase

(GAO, 1994c). The $42 billion spent by Medicaid on long term care services in 1993 comprised nearly one-third of total Medicaid expenditures (ibid.). Future expenditures for nursing facility care alone are expected to total 55.7 billion by the year 2000 and increase $23.4 billion in just another five years, reaching $79.1 billion in 2005 (Burner and Waldo, 1995).

Nursing facility expenditures dominate Medicaid long term care spending, with 62.2% allocated to these services in 1993. The next largest area of Medicaid long term care funding went to Intermediate Care Facilities for the Mentally Retarded (ICF-MR), which comprised 21.9% of Medicaid long term care spending. Thus 84.1 percent ($36 billion), or more than 4 out of every 5 Medicaid long term care dollars, went to institutional long term care services. The remaining 15.9% ($6.6 billion) of Medicaid long term care spending went to community-based services, with home and community-based waiver services receiving 6.6% of Medicaid funds, personal care 5.9% and home health 3.4% (GAO, 1994c).

While the vast majority of Medicaid long term care spending is directed towards nursing facility care, state spending for Medicaid long term care services has increasingly been directed towards community-based long term care services. The percent of total Medicaid expenditures allocated to nursing facility services has decreased dramatically, from 35.3% to 25.0% between 1975 and 1993, while expenditures for home health care as a percent of total Medicaid spending increased from 0.6% in 1975 to 5.5% in 1993 (Health Care Financing Review, 1995).

Data examining aggregate Medicaid expenditures conceal important interstate variation in the percent of state Medicaid budgets allocated to nursing facility and community-based long term care services. For some states, nursing facility expenditures are more of a problem than for others. In 1993, only 13 percent of South Carolina's Medicaid budget went to nursing facility services, while Connecticut, New Hampshire, and North Dakota each spent 36 percent of all Medicaid funds on nursing facility services (Berliner and Fuccello, 1995). Arizona spent the lowest on nursing facility services as a percent of its Medicaid budget, with only 1 percent allocated for that type of care (ibid.).

SOCIO-DEMOGRAPHIC TRENDS: IMPLICATIONS FOR LONG TERM CARE

Containing long term care costs is a policy concern not only because of present expenditures, but also because expenditures are expected to dramatically increase in the future. A number of socio-demographic trends are occurring which will increase the number of individuals needing long term care services. In particular, the aging of the population and the decreasing availability of informal caregivers due to declining fertility rates, increasing divorce rates, and increasing female labor force participation.

Of primary importance is the projected increase in the number of elderly. Numerous studies have shown advanced age to be a major factor in the utilization of nursing facility services, especially for those 85 years of age and older (Greene and

Ondrich, 1990; Wan, 1989; Harrington and Swan, 1987; Kane and Matthias, 1984). Only 1.2% of those aged 65-74 require institutional long term care services, while 22% of those 85 years of age and older are in need of institutional long term care services (Rice, 1989).

In 1980 the number of elderly, those 65 years of age and older, totaled 25.7 million. By the year 2030, Rice (1989) estimates the number of elderly persons will constitute 64.6 million people. Nearly 1 out 5 persons will be elderly, as opposed to one in nine in 1980 (Rice and LaPlante, 198). Even more significant, however, are projections for the number of oldest-old, those eighty-five years of age and older. Although projections vary somewhat, all agree the fastest growing segment of the population are those 85 years of age and older (Mendleson and Scwartz, 1993). In 1980 there were 2.3 million persons at least eighty-five years of age and older. These numbers will nearly quadruple by the year 2030, constituting a total of 8.6 million elderly persons over the age of eighty-five (Rice, 1989). Other analysts offer higher estimates, predicting the number of 85 and older individuals to reach 12 million in 2030.

Other socio-demographic changes are occurring which will increase the demand for formal long term care services. Declining fertility rates will decrease the number of available informal caregivers. Whereas 10.6 percent of women aged 65 and older in the year 2010 are estimated to be childless, by 2030 18.5 percent of women age 65 and older are expected to be childless by 2030. In addition, whereas only 10 million elderly lived alone in 1990, Zedlewski and McBride (1992) estimate

almost 26 million elderly will live alone in 2030. Increased numbers of elderly living alone will increase demand for formal long term care services because fewer elderly will be living with others who might have provided informal (unpaid) long term care services. Other socio-demographic changes decreasing the availability of informal caregivers include: (1) more geographically diverse families; (2) increased female labor force participation; and (3) increased divorce rates (GAO, 1995c; Davis and Rowland, 1986).

If these other socio-demographic indicators are considered along with the aging of the population, the demand for formal long term services increases tremendously. Mendelson and Schwartz (1993) predict by the year 2030, anywhere from 4.3 to 5.3 million will be in need of nursing facility services, as opposed to 1.8 million elderly in 1980. The number of disabled elderly living in the community is also expected to increase nearly three-fold. In 1985, there were 5.2 million elderly living in the community with varying degrees of disability who were in need of assistance. Another 10.1 million disabled elderly living in the community will be in need of assistance by 2020 and will increase to 14.4 million by 2050 (Manton and Liu, 1985). There will be increased need for all types of long term care services in the future.

As with Medicaid expenditures, large differences exist among states in the percent of their population over 65 years of age. The national average was 12.7 percent in 1993, but ranged from a high of 18 percent in Florida to a low of 4.3 percent in Alaska (Harrington et al., 1994b). Other states with large elderly populations include Pennsylvania, West Virginia, South Dakota and Rhode Island,

with 16 percent of their population over the age of 65, while Georgia and Colorado have only 10 percent of their population over the age of 65.

SERVICE FRAGMENTATION AND INAPPROPRIATE PLACEMENT

Public funding for long term care services is biased towards institutional rather than community-based care. One reason for the limited funding of community-based long term care is concern over the latent demand for services. In particular, the supply of community-based long term care services has been restricted due to concerns over the 'substitution' and 'woodwork' effects (England et al., 1991). The woodwork effect refers to the concern that if community-based services were offered to those with long term care needs, large numbers of people would attempt to access those services who would have otherwise 'just gotten by' if those services were not offered. Research has shown even when services are strictly targeted to only those medically in need of nursing facility services, many with high disability levels will apply and receive community-based services even though they were not at risk of entering a nursing facility (Weissert et al., 1988). The substitution effect refers to the concern that informal caregivers will decrease the amount of care they provide if publicly funded community-based services were available; with formal community-based services substituting for the informal care provided previously.

Concern over this latent demand combined with a preference for market-based solutions and incremental policymaking, has led to multiple programs funding a limited amount of community-based long term care services (Lee and Benjamin,

1986). This fragmentation of health and social services has been cited as major barrier to the effective delivery of long term care services (Coleman, 1996; Harrington, Newcomer, Estes, and Associates, 1985). These programs usually have their own eligibility criteria, offer only certain services, and some may operate on a limited geographic basis (ibid.). Often, programs are targeted toward specific target populations, such as the elderly, the developmentally disabled, the mentally ill, and children (GAO, 1994c). As a result, services are not matched to the preferences and needs of individuals, but to the eligibility group they belong to (GAO, 1994b).

This patchwork of publicly funded community-based services has made it difficult for the disabled elderly in need of long term care and their caregivers to identify available community-based services which they are eligible for. Exacerbating these access problems is the heterogeneous nature of many long term care needs (Kane and Kane, 1987). Most programs provide only a specified set of services which may not be varied enough to meet an individual's long term care needs (Justice, 1988). Thus, considerable effort must be made to identify services provided by multiple programs and to apply for eligibility for those programs, which may or may not be granted due to the varying eligibility criteria across programs (GAO, 1994c). As a result, the disabled elderly and their families may be unable to piece together the community-based services necessary to remain in the community.

The limited supply and fragmentation of community-based services also presents a formidable obstacle for health care professionals caring for the disabled elderly. Often they are unaware of available services and/or may lack the time to

assist in the coordination of services. Hospital discharge planners often find it easier to discharge individuals directly to nursing facilities instead of taking the time to coordinate available community-based services, while physicians may also not have the time or knowledge about available community-based services to suggest them as an alternative to nursing facility placement (GAO, 1979). Instead, because physicians are trained to focus on the medical needs of individuals, they may be more likely to merely certify need for nursing facility placement rather than consider community-based services as an alternative (ibid.).

PAS AND FEDERAL UTILIZATION CONTROL REQUIREMENTS

Funding, supply, and eligibility barriers to community-based long term care services have forced some disabled elderly to seek nursing facility care because they were unaware of the community-based long term care services available to them or because they could not put together an adequate package of services to meet their needs. To ensure those applying for and receiving nursing facility services are medically and functionally in need of nursing facility care, Section 1902(a)(30) of the Social Security Act requires states participating in the Medicaid program to develop a statewide utilization control program. A number of specific procedures are required. States must comply with minimum federal requirements (Section 1903 (g)(1)(A)) of the Social Security Act that a physician must certify the necessity of admission to enter a nursing facility at the time of admission or at the time of application for Medicaid payment (42 CFR 456.270). Physicians must recertify the necessity of care

periodically (42 CFR 456.370) and states must have a utilization review program which ensures that the necessity for both the admission and the continued stay of Medicaid nursing facility residents is reviewed in accordance with criteria established by medical personnel not directly responsible for the resident's care (42 CFR 456.271) (Section 1903(g)(1)(C) of the Social Security Act).

In 1987, the Nursing Home Reform Law (OBRA, 1987) established the Preadmission Screen and Annual Resident Review (PASARR) and the Minimum Data Set (MDS) requirements. PASARR regulations require states to determine the mental status of an individual prior to their admission into a nursing facility to determine whether they have a mental illness or mental retardation and, if so, if they are medically in need of nursing facility services. If nursing facility services are not needed, but specialized services for mental illness are, then states must transfer these individuals to alternative placement settings outside the facility where their needs can best be met. The mentally ill with nursing facility needs are required to receive specialized services to care for their illness.

The Minimum Data Set (MDS) requires nursing facilities to conduct a comprehensive and standardized assessment of each residents functional capacity and send this information to the state within 14 days of admission, every 3 months thereafter, and whenever there is a significant change in resident condition. The primary goal of the MDS is to ensure residents are having their care needs met by requiring facilities to conduct a multidisciplinary assessment of residents. Some states

are using the data from the MDS to determine casemix payment levels (Harrington et al., 1996b).

Critique of Federal Utilization Controls

Mandatory federal utilization control requirements have been criticized by Knowlton et al. (1982) because most of them take place after admission to the nursing facility. The liquidation of assets, especially homes, and erosion of community supports makes it difficult to discharge residents who are not medically in need of nursing facility services back to the community, even with the assistance of supportive community-based services (Justice, 1988).

Outside of PASARR, which only tests for the presence of mental illness or retardation and not the medical or functional need for nursing facility care, physician certification is the only mandated utilization control mechanism which takes place prior to an individual's placement into a nursing facility. Relying on physician certification is inadequate for identifying those individuals who may be able to remain in the community because of its focus on medical need. Although medical need is a universal condition among nursing facility occupants, it is often not the major factor driving an individual to seek nursing facility care. Rather, the level of functional ability as measured by activities of daily living (ADLs), and an individual's social support network, are more important factors in determining need for nursing facility care (Jette et al., 1992; Shapiro and Tate, 1988).

As public financing of home and community-based long term care services has grown during the past fifteen years, many PAS programs have expanded their duties from merely determining the need for nursing facility care to determining the feasibility of community-based care serving as a substitute for nursing facility care (Jackson et al., 1993). Research has shown even those with high levels of disability are able to remain at home with the assistance of informal and/or formal long term care services. Guralnick and Simonsick (1993) examined the care settings of the 1.4 million individuals aged 65 years and older and highly impaired in ADLs (5-7). While the majority, 826,000 (59%), resided in nursing facilities, 500,000 (36%) highly impaired elders were able to remain at home with a combination of informal and/or formal services. The more comprehensive PAS programs have the potential to rationalize the delivery of long term care services by providing a comprehensive assessment of an individual's care needs, providing case management, and serving as a central access point to a variety of long term care services (Kane and Kane, 1987; Coleman, 1996).

THEORETICAL FRAMEWORK

The implementation of state PAS programs and their effect on Medicaid nursing facility utilization will be analyzed within a political economy framework. The political economy of health care is an interdisciplinary perspective, incorporating sociology, economics, political science, health services research and health policy analysis. Rather than focusing narrowly on specific health policies or the organization

and delivery of health services, political economy emphasizes the interconnection of the economic, political and social structure of society and how they interact to affect the delivery and utilization of health services (Estes, 1991).

The political context of long term care policy is of primary importance. Long term care policy is formulated and implemented within a federalist system of government where states have discretion in determining eligibility levels, reimbursable services, and reimbursement rates for Medicaid recipients within broad federal guidelines. State governments must decide whether to implement certificate-of-need (CON) programs to constrain the supply of nursing facility beds, medically needy programs to expand the number of Medicaid eligibles, fund home and community-based services with Medicaid and/or state-only funds, or implement PAS programs to regulate the utilization of nursing facility services.

States also vary in their socio-demographic and economic characteristics. This is of special importance when analyzing the market for nursing facility services as numerous studies have shown the most important factors related to nursing facility utilization are primarily socio-demographic and economic characteristics outside the control of state policymakers (Wan, 1989). Socio-demographic factors such as age, race, gender, marital status, personal income, and strength of social support networks are all associated with nursing facility utilization (Falcone and Broyles, 1994; George and Maddox, 1989; Harrington and Swan, 1987). This interstate variation in Medicaid policy, socio-demographic, and economic characteristics has contributed to

large differences in the supply and utilization of nursing facility services across states (Harrington et al, 1994b).

A second distinguishing feature of long term care policy is the structure of the nursing facility market. Nursing facility services are delivered by private providers. Decisions by providers to build new beds or admit patients are based upon the potential to achieve profits for proprietary providers, or to break even in operating costs and/or gain a larger market share for non-profits. The supply of nursing facility services is largely shaped by the economic, socio-demographic, and public policies within individual states. Because Medicaid finances approximately half of all care, state policies governing reimbursement rates and eligibility have a large influence on the supply and utilization of services. Differences in the supply and utilization of nursing facility services will vary from state to state depending upon the mix of these factors affecting the market for nursing facility services.

To the extent states vary in their political, socio-demographic, Medicaid policy, and economic characteristics, states should also vary in the implementation of PAS programs. Likewise, PAS should have differential effects on the market for nursing facility services in individual states depending upon how the underlying market for long term care services is structured (Paringer, 1985).

OVERVIEW OF DISSERTATION

The remainder of the dissertation is organized as follows. Chapter 2 begins by reviewing the legislative history of state utilization control efforts, presenting

descriptive and analytic research related to PAS programs, and discussing the capacity of states to develop and implement social policy. The remainder of the chapter discusses the market for nursing facility services, including nursing facility utilization patterns and predictors of use, state cost containment policies, expansion of community-based alternatives, and barriers to PAS program success. Chapter 3 discusses the research methodology, study questions and hypotheses of this research. Chapter 4 presents research findings beginning with descriptive data of program characteristics in 1994, trends in program structure and implementation from 1978-1994, and results of the regression analyses examining program implementation and effect of PAS on Medicaid nursing facility utilization. Chapter 5 discusses the research findings, makes policy recommendations, and provides suggestions for future research.

CHAPTER 2

LITERATURE REVIEW

INTRODUCTION

This chapter provides a conceptual background and literature review for three primary study aims: (1) structure and implementation of state PAS programs during the 1978-1994 time period; (2) effect of PAS on Medicaid nursing facility utilization; and (3) the political, economic and socio-demographic characteristics of states associated with PAS implementation. As an introduction, the legislative history of preadmission screening and state utilization control efforts are discussed followed by a literature review of analytic and descriptive research related to PAS. Because PAS is a program developed by individual states, issues related to state capacity and willingness to take an active role in social policy development are then examined through a discussion of intergovernmental relations and arguments for and against policy decentralization.

The next sections describe strategies used by states to contain nursing facility costs and provide a continuum of long term care services. Research examining predictors of nursing facility utilization and patterns of nursing facility use are first presented along with an overview of the market for nursing facility services. Of particular interst are Medicaid policies affecting the supply and demand for services. Research using aggregate state level data to examine the effect of the

political, economic, health service supply, and socio-demographic characteristics of states on nursing facility utilization are also reviewed.

State efforts to develop alternatives to nursing facility placement and the administrative restructuring of state administration of long term care services are the focus of the following sections. Positive and negative aspects of the various funding sources for community-based long term care services for states are explored along with state efforts to streamline the administration of services at both the state and local level. In addition, the expansion of residential care and other alternative living environments are discussed.

The chapter concludes with a review of findings from community care demonstration projects examining the extent to which community-based care can serve as an alternative to nursing facility services, the role of PAS in these projects, and barriers to PAS program success.

LITERATURE REVIEW OF PAS

LEGISLATIVE HISTORY OF UTILIZATION CONTROL

States were minimally involved in controlling the use of Medicaid nursing facility services during the 1970s. Most state utilization control efforts were based on utilization review committees within nursing facilities. These committees were composed of physicians and other health professionals who were not employees of the nursing facility, but who were responsible for reviewing the medical need for services upon admission and within 90 days of admission for Skilled Nursing Facilities

and 6 months for Intermediate Care Facilities (Vladeck, 1980). As part of their duties, utilization review committees were required to conduct an 'admission review' which consisted of a review of a physician's certification of need for nursing facility care and confirmation of the patient's need for nursing facility care (ibid.). States had the option to review physician evaluations of the need for nursing facility care or delegate this review to utilization review committees in nursing facilities, "under Medicaid requirements for controlling utilization, the facility or the state must review the physician's certification of need to determine that the admission to the nursing facility is appropriate (Knowlton et al., 1982)".

Instead of taking an active role in the assessment of applicants prior to their placement in a nursing facility, state utilization control efforts focused mostly on Medical Reviews for SNF residents and Independent Professional reviews for ICF residents (Vladeck, 1980). Conducted on an annual basis, a multidisciplinary team of professionals evaluated the quality of care and ensured residents were certified at the proper level of care (SNF or ICF). The major effect was the lowering of resident care levels from SNF to ICF and not decreasing nursing facility utilization (Dunlop, 1979).

States which delegated review activities to nursing facility utilization review committees, were only required to ensure these utilization review systems were in place. Although states had a clear financial incentive to ensure only applicants in need of SNF or ICF care were allowed admission, most were lax in their review and assessment activities. Vladeck (1980) criticized state review procedures as being weak and ineffective, characterizing them as a charade, "Many states have

refused to comply with utilization review...in many nursing facilities that practice utilization review, it is done mostly on paper, to satisfy record keeping requirements."

PSRO Long Term Care Review

Federal dissatisfaction with state utilization control efforts led to experimentation with independent professional review bodies, known as Professional Standards Review Organizations (PSROs), to ensure the quality and appropriateness of care given to Medicare and Medicaid recipients. Established under the Social Security Act of 1972, PSROs were developed mainly in response to rising Medicare hospitalization costs (Davis et al., 1990). Although federally funded, PSRO's were comprised of members from local medical boards to review physician practices and relied upon locally developed standards (ibid.).

Starting in 1976, funds were allocated to 15 PSROs to conduct reviews for long term care applicants on a demonstration basis and shortly after the Office of the General Counsel of HEW required PSRO's to conduct long term care reviews in order to gain operational status (Kane et al., 1979). Public Law 95-142 gave states the option of delegating all Medicaid long term care review and utilization control activities to a PSRO. States which contracted out to PSROs would no longer monitor physician certification of need and plan of care, medical review independent professional review, and utilization review in skilled nursing facilities (GAO, 1979). The extent to which states delegated screening activities to PSROs depended upon their history and expertise in long term care utilization review (Kane et al., 1979).

By 1979, 51 out of 190 PSROs were conducting long term care reviews. Since PSROs could occupy small geographic areas or whole states, in some states PSRO and Medicaid screening activities were taking place simultaneously (Kane et al., 1979). Although PSRO screening activities varied widely, they all included some form of a review of applicant needs prior to or shortly after placement in a nursing facility. These review procedures differed from most state utilization control activities because assessment of need for nursing facility services was made prior to placement, not during an annual review which could take place months after a nursing facility utilization review committee approved placement (Kane et al., 1979).

PSRO reviews did not significantly reduce nursing facility utilization (Kane et al., 1979). Three factors worked against PSRO effectiveness in controlling nursing facility utilization: (1) PSROs only reviewed applicants admitted from acute care hospitals; (2) they were only required to determine medical need for nursing facility services, not potential for community placement; and (3) in some states they may only have sole screening authority for Medicaid applicants to skilled nursing facilities and not applicants to intermediate care facilities (GAO, 1979).

The Peer Review Improvement act of 1982, part of the Tax Equity and Fiscal Responsibility Act (TEFRA) of 1982, changed PSRO's to Professional Review Organizations (PROs) and dropped the requirement for states to have PSRO's conduct long term care reviews for Medicaid applicants (Kane et al., 1979). As a result state Medicaid agencies were required to assume responsibility for reviewing

physician certification of need or contracting out this responsibility to a contract agency, such as one of the newly created PROs (Vladeck, 1980).

PREVIOUS EMPIRICAL RESEARCH

Previous research on PAS programs can be divided into four types of studies: (1) evaluations done on particular state programs or parts of individual programs to assess program outcomes (Moscovice, 1985; Ostwald and Monson, 1994); (2) descriptive case studies of individual programs (Jakubiak, 1995; Justice, 1988) (3) national descriptive studies (Knowlton et al., 1982; Isaacs and Goldman, 1984; Polich and Iversen, 1987; Pendleton et al., 1989; Harrington and Curtis, 1995; Snow, 1995); and (4) studies using aggregate state level data to measure the effect of various state policies, including PAS, on the utilization of nursing facility services (Scanlon, 1980b; Harrington and Swan, 1987; Liu et al., 1991). The latter two types of studies are most closely related to the research project and are the focus of review.

National Descriptive Studies

Little research has been conducted documenting the use of PAS programs across states or their characteristics. What research has been conducted is plagued by different definitions of what constitutes PAS. Some have used a narrow definition (Polich and Iversen, 1986; Pendleton et al., 1990), requiring PAS to entail an in-person assessment by a disinterested third party prior to their admission, while others have used a looser definition (Knowlton et al., 1982; Isaacs and Goldman, 1984;

Harrington and Curtis, 1995) where PAS constitutes a review of care needs prior to placement in a facility.

Knowlton et al. (1982) conducted a national telephone survey in 1981 to determine the number of PAS programs implemented by states, the composition of assessment teams used by PAS programs, and assessment instruments used to determine eligibility. They defined PAS as a program which, "exhibits components of client intake, determination of eligibility, client assessment, and placement recommendation". A total of 29 programs were identified. 12 programs were administered by state and/or local agency staff; 10 programs administered by a PSRO; and 7 state and/or locally administered programs operated on a limited geographic basis. The vast majority of states reported they were not evaluating their PAS program outcomes, although Virginia was able to report a diversion rate of approximately 20%, while Massachusetts reported an 8.4% diversion rate.

Isaacs and Goldman (1984) interviewed officials from long term care, state health planning, and/or Medicaid agencies in 32 states to collect information about a number of state long term care program characteristics, including the presence of PAS. Their definition of PAS was vague, "strategies to divert admissions to nursing homes of persons who could be adequately served with community alternatives of housing". Of the 32 states surveyed, 26 had implemented PAS programs. The only aggregate data presented pertained to the target populations, with only one state (Indiana) requiring all applicants to receive a preadmission screen. Inferring from the anecdotal data presented, state Medicaid agencies which conducted paper reviews of

physician certification of need were considered PAS, as were reviews by PSRO/PRO organizations.

The most comprehensive national survey was conducted by Polich and Iversen (1987) in 1985. Data were collected through an initial phone interview and a follow-up survey sent through the mail. Polich and Iversen defined PAS as, "an assessment conducted prior to nursing facility admission which goes beyond financial eligibility and physician's review and includes an assessment team or other disinterested third party who conducts an on-site evaluation of an individual's health status". Thirty-one programs were found to be operating in 29 states. Data were reported for individual states and in summary format.

Programs were found to vary in their program administration, target populations, screening team composition, assessment tools used for screening, program funding sources, and screening outcomes data. Programs were administered by private agencies in 6 programs, while the remaining 25 were administered by public agencies. States used three mechanisms to determine their target population: financial status (Medicaid or private pay); client origin (hospital, community, conversion); and screen-to-screen (initial paper review prior to placement, then on-site assessment for some applicants).

Pendleton et al. (1990) conducted a 1989 national survey of each state's long term care infrastructure delivery system, identifying 8 key variables, of which PAS was one, affecting the delivery of publicly funded long term care services. Telephone interviews were conducted with Medicaid officials and officials from other

major long term care programs for the aged. Their definition of PAS was similar to Polich and Iversen's (1987), "an in-person assessment conducted in the hospital or client's home before physical placement in the nursing facility or initiation of community services" (Pendleton et al., 1990). A total of 25 programs were identified; 15 statewide PAS programs and 10 programs operating on a limited basis geographically or which were limited to screening Medicaid eligibles. One program was in the planning stages. Data on specific program features were not examined.

Harrington and Curtis (1995) presented findings from two national surveys conducted in 1989 and 1992 to provide data on selected program characteristics for the 1978-1992 time period. They defined PAS as, "a review of the level of care needs of clients either before or shortly after nursing facility admission in order to determine whether or not a Medicaid recipient was eligible for Medicaid reimbursement based on 'need' or disability" (Harrington and Curtis, 1995). A unique feature of this study was reporting of program implementation dates, target populations, screening staff, and eligibility determination processes longitudinally during a 15 year time period (1978-1992). The number of states (including the District of Columbia) with PAS programs increased from 24 in 1978 to 42 in 1983 and then increased to 51 in 1990.

Snow (1994) examined how states determined eligibility for nursing facility placement. While the study did not explicitly define what constituted PAS, the information covered is similar to previous descriptive studies of PAS programs. Data from 1995 were collected from all 50 states and the District of Columbia by telephone and a mailed questionnaire. Information collected include: type of organization which

conducts assessments (hospital, nursing facility, attending physicians, contract agency staff, state staff, etc.); type of assessment staff (RN, MD, social worker); who determines eligibility for nursing facility placement (assessment staff; contract agency staff, state/county staff, etc.); and whether screens were completed prior to admission. The term *preadmission screen* was used to describe states which required screens to be conducted prior to admission (24 states), and were distinguished from states which allowed applicants to be screened either before or after placement (27 states). Seventeen states used private providers to conduct assessments, 22 states used state/county staff or Area Agency on Aging staff, while 12 states contract out assessment responsibility to peer review organizations, specific providers, or private assessment agencies.

Discussion

These studies found preadmission screening programs vary along a variety of dimensions including:

- **geographic basis** (state-wide or local)
- **population screened** (Medicaid or private pay)
- **client origin** (hospital discharge or community)
- **program scope** (NF eligibility determination and/or referral to community care)
- **extent of authority** (placement decisions binding or advisory)
- **composition of assessment team** (government, contract agency, or private provider)
- **content of assessment** (medical, social, economic and environmental)
- **timing of screen** (prior or post admission to nursing facilities)
- **how PAS reviews are conducted** (in-person or paper/telephone review)
- **funding**

Four studies provided data on the number of PAS programs nationally at different points in time, while another study (Isaacs and Goldman, 1984) provided data on the number of programs in 32 states. Comparing which states adopted a PAS program over time would seem to be a strength of having five different national studies conducted in 1981, 1984, 1986, 1989 and one longitudinal study covering 1978-92. Data inconsistencies between these studies and the use of different definitions of PAS, however, puts the usefulness of comparing these studies into question. As of 1981, Knowlton et al. reported 22 statewide programs to be in operation, Isaacs and Goldman (1984) reported 26 of 32 states had PAS in 1984, Polich and Iversen reported 31 programs were operating in 29 states in 1985, while Pendleton et al. (1990) found 15 programs operated on a statewide basis in 1989. Longitudinal data provided by Harrington and Curtis (1995) for the 1978-92 time period, found 26 programs were operating in 1981, 38 in 1984, 40 in 1985, and 49 in 1991. Specific states were coded as having a PAS program in some studies, while in other studies no such program was listed.

In addition to the use of different definitions to describe PAS, data inconsistencies across studies may be due to the increase in the number of case managed home and community-based programs (Applebaum and Austin, 1990). For example, Medicaid 2176 home and community-based waiver programs conduct client assessments to determine whether an individual has care needs great enough to meet nursing facility level of care and whether they can remain in the community with the help of home-based services. In many states, these programs operate separately from

PAS programs while other states have integrated these programs with PAS programs. The heterogeneity of state PAS programs and their close association with case managed community-based programs may have led some studies to categorize some programs as PAS, while other studies considered these programs separate from PAS.

Analytic Studies

Few studies have examined the effect PAS has on Medicaid nursing facility expenditures and utilization rates using aggregate state level data (Scanlon, 1980b; Harrington and Swan, 1987; Liu et al., 1991). Scanlon (1980a) used two-stage and ordinary least squares multivariate regression to analyze data from 1969 and 1973 to measure the relative effect of various socio-demographic, economic, supply and Medicaid policy variables (including PAS) in 43 states on the number of nursing facility residents per 1,000 population aged 65 and older. PAS was surprisingly found to be *positively* associated with nursing facility utilization. Scanlon hypothesized the positive coefficient was due to states with historically high levels of utilization implementing PAS.

Harrington and Swan (1987) conducted a similar analysis of the relative effects of state Medicaid policies, health service supply, socio-economic, and demographic variables on Medicaid nursing facility utilization and expenditures in 42 states. They used cross-sectional time-series regression to analyze pooled data for the time period from 1978-1983, and used OLS regression for cross-sectional analysis of annual data. PAS was not found to be significantly associated with Medicaid nursing

facility utilization as measured by the number of Medicaid nursing facility recipients per 1,000 aged 65 and older. They hypothesized their measure of PAS was not sensitive enough to determine significance and suggested that the use of a stringency measure may have been able to detect an effect.

Liu et al. (1991) examined how state policy factors and individual characteristics of noninstitutionalized disabled elderly individuals were related to risk of admission and subsequent length of stay. Data from the 1982 and 1984 National Long Term Care Survey were used in a hazard model to predict risk of nursing facility admission and subsequent length of stay. In addition to individual level data, market factors included in their utilization model were the supply of beds in the state, Medicaid reimbursement rates, and Medicare home health utilization rates. Two measures of PAS were used: a dichotomous variable if the state screened Medicaid eligibles and another dichotomous variable if the state screened private pays at risk of becoming Medicaid eligible within 6 months. Just as for the Scanlon (1980a) study, individuals living in states with PAS had higher utilization rates than those living in non-PAS states.

INTERGOVERNMENTAL RELATIONS

Long term care policy is developed within a federalist system of government. Issues of capacity, commitment, and responsibility differ at each level of government (Estes and Gerard, 1983). Consequently, the distribution of powers and

responsibilities between different levels of government greatly influence how domestic policy is developed and implemented.

The relationship between federal, state, and local levels of government and their corresponding responsibilities has been the subject of debate since the founding of the United States. The relationship between the federal government and its state and local counterparts has been the main focus of debate, especially in regards to health and welfare policies (Litman, 1990). This debate, "has been caught up in philosophical differences that separate not only Democrats and Republicans but also conservatives and liberals within each party (ibid.)."

Responsibility for domestic social policy programs has traditionally been the duty of state and local governments (Litman, 1990). The beginning of federal dominance in the development of domestic policy occurred during the Lincoln Administration, flourished under Franklin Roosevelt's New Deal programs, and culminated with Lyndon Johnson's Great Society domestic social policy initiatives of the 1960's (Estes and Noble, 1983). The "centralization" of policy changed the debate over the proper role of the federal government from *whether* it should participate in domestic social policy, to *how* it should go about assisting state and local governments in the development of social policy (Litman, 1990).

Although federal involvement in the development of domestic policy is clearly established, debate over how much influence it should wield over states and localities has by no means been established. The growing role of the federal government has been met with stiff opposition from Republican administrations

during the past twenty-five years, especially during the Nixon and Reagan administrations (Estes, 1991), and continuing to this day under the Republican controlled congress.

Financing Federalism

A variety of financing mechanisms have been developed between federal, state and local governments to assist in the development and implementation of social policies. These various financing methods have different implications for how social programs are developed, administered, and for which level of government has authority (Estes and Gerard, 1983). The three most common methods of dividing financial responsibility for domestic social programs between the federal government and other levels of government are: *categorical grants*, *block grants*, and *revenue sharing* (Elling and Robins, 1991). Taken as a group, they can be seen as existing along a continuum of greater to lesser federal oversight.

Categorical grants provide funding for specific uses and have been the traditional form of federal assistance to states and localities (Elling and Robins, 1991; Litman, 1990). The federal government takes an active role in assisting states to implement programs funded through categorical funds and provide little discretion in how these funds are to be used (Elling and Robins, 1991). Due to its access to greater revenue sources, categorical grants are a way for the federal government to address domestic policy concerns that state and localities are unwilling or unable to

meet and also help reduce inequities between states in the level of services offered (Litman, 1990; Elling and Robins, 1991).

Block grants offer funding for a wide array of services with little or no federal involvement (Litman, 1990). They differ from categorical grants in a number of distinct ways, including offering recipients the flexibility to allocate resources, identify problems, and design programs how they choose (Estes and Gerard, 1983). In addition, federal requirements such as fiscal reporting and planning are kept to a minimum (Elling and Robins, 1991). The least intrusive financing mechanism is *revenue sharing*. This type of federal financing provides funds to state and local governments with minimal requirements and allows them to use these funds for almost any use

These financing mechanisms, however, do not lock federal, state and local governments into static relationships. Rather, federal, state, and local officials are constantly maneuvering within various revenue sharing programs to serve their own interests, "State and local recipients frequently increase their authority as they become more knowledgeable about regulations and how they can be manipulated to serve their own ends (Elling and Robins, 1991)." Conversely, the federal government may attach new conditions to block grants to increase its influence over the use of those funds. Thus, within any financing mechanism, different levels of government may find creative ways to use funds which either lessen the financial burden on their level of government or increase their scope of control over what purposes the funds should be applied to.

Medicaid is a categorical grant that comes with a number of mandatory requirements set by the federal government. Most federal policy changes since 1981 related to Medicaid long term care provisions have expanded state flexibility, mainly by allowing states to apply for 1915(c) and (d) waivers to provide home and community-based services to nursing facility eligibles. Some federal policymakers have proposed making Medicaid a block grant to give states increased flexibility, but with decreased federal funding (GAO, 1995c). Policymakers advocating such a plan believe any losses in funding will be made up through increases in program efficiency resulting from increased state autonomy from federal requirements. Others, of course, disagree. The following sections discuss arguments for and against an active federal role in policy development.

Positive and Negative Aspects of Federal Involvement

Debate over the nature of intergovernmental relations has been shaped not only by ideology, but also the perceived effectiveness of different levels of government to develop and implement social policy. Advocates of decentralized policies assert the primary advantage decentralized policies have over centralized polices is their ability to implement policy more effectively (Williamson, 1981). This improved effectiveness rests on the assumption that individuals living in different areas have different needs. For example, a GAO (1994b) report acknowledged that while long term care needs in rural and urban areas may be similar, such as the need for transportation services, mechanisms to meet these needs may be very different.

Thus, policies developed and implemented at the local level can better address local needs due to firsthand knowledge of what those needs are and how best to meet them.

Another advantage of decentralized policies is that they are more flexible and better able to adapt and innovate their services when necessary (Ruiz-Gallegos, 1990). Decentralized policies may also be more streamlined and less complicated than centralized systems (Harrington, 1994). Centralized policies, on the other hand, come with specific mandates applicable to all clients. As a result, centralized policies are more likely to treat their clients as a homogeneous entity, overserving some while underserving others (Field, 1989). Secondary benefits of decentralized policies may also include the propensity of decentralized systems to stimulate economic growth (Teune, 1992).

Critics of decentralized policies do not disagree with the main benefit of decentralized policies, that they are better able to address local or regional needs. Rather, they question whether effective policies can or will be developed. Critics assert states have "inherent weaknesses" which limits their ability to organize, finance, and deliver health and human services (Litman, 1991). Specifically, the *commitment*, *capacity*, and *fiscal strength* of localities or states is questioned, "For allocations of authority among governmental levels to work, it is important that governments possess those capacities appropriate to their responsibilities...governments must possess the revenue capacity, the capability to plan and manage polices and programs, and the political will necessary to carry them out (Estes and Gerard, 1983)."

State Commitment

The lack of state *commitment* to social welfare legislation is rooted in many factors. Some hypothesize limited state commitment may be due to the differing nature of the constituencies involved in national as opposed to state politics. Thompson (1986) observes the federal government tends to serve broader and more diffuse interests, including those of the poor and working class, while in states dominant economic interests exercise more control to the exclusion of weaker, less organized groups.

Degree of commitment to social policy development may also be a result of a state's political climate, with some states more committed to social programs than others. Studies of state policy innovation have categorized states as either "pioneers", such as New York, California, and Wisconsin, and others as "laggards" in the addressing of social problems (Laubacher and Goggin, 1992). Elazar (1984) created a typology of three state political cultures to conceptualize state governing philosophies: individualist, moralist, and traditionalist. Most states are a combination of political cultures. An individualistic political culture asserts the primary role of government is to promote economic development. A moralistic political culture supports an activist role for government, while a traditionalist political culture advocates limited government intervention. Grogan (1993) used this typology to predict the likelihood a state would expand its Medicaid eligibility policy, rating a state's political culture along a continuum from moralist (more generous) to

traditionalist (less generous). States with traditionalistic political cultures were found to be significantly associated with limitations in Medicaid eligibility and services.

Researchers have used other measures to examine the relationship between Medicaid policy and political characteristics of states. One commonly used measure is the liberalness measure developed by the Americans for Democratic Action (ADA), which rates Senate and House members on how they voted for 20 key issues, creating a liberal rating score ranging from 0 (least liberal) to 100 (most liberal). Cromwell et al. (1995) used the ADA measure in a study of Medicaid coverage equity and taxpayer burden across states. They found states which elected more liberal House and Senate congressmen, as measured by the ADA index, had more generous Medicaid programs in terms of the number of poor covered. Lanning et al. (1991) and Harrington et al. (1996a) also used ADA scores in addition to a party split between governor, house and senate to predict the likelihood of state implementation of rate setting programs for hospitals and certificate of need for nursing facilities, respectively. Harrington et al. (1996a) found states with higher liberal ADA voting records were more likely to implement CON for nursing facilities, while Lanning et al. (1991) found more liberal states were more likely to implement hospital rate setting programs.

State Administrative Capacity

Even if a state is not lacking in its political will, suspicions exist over the capacity of states to identify what the needs of their populations are and their ability

to develop and implement effective policies to meet these needs. Many states are viewed as having inadequate administrative infrastructures, lacking sophisticated management techniques, and limited capabilities to perform policy analysis and planning (Leichter, 1992). Limited capacity may also exist in the form of legislatures lacking professional staffs, weak program administrators, governors having limited authority over certain departments, and personnel administration plagued by relatively low pay and patronage (GAO, 1994b; Thompson, 1986). All of these deficiencies inhibit the ability of states to ascertain what the needs of their population are, develop policies to address these needs, and effectively implement and evaluate any policies that are developed.

The capacity of states to administer an expanded long term care program was a major concern of a GAO report (1994b) critiquing President Clinton's proposed health reform plan. The ambitious health care reform bill, the Health Security Act, would have significantly expanded the availability of home and community based services by providing states with $38 billion dollars in new federal funding. States would have been responsible for the administration of these funds. The report recognized variation in the capacity of state long term care infrastructures and expressed concern over the capacity of some states to effectively administer the new influx funds, "agency staff in less experienced states may well lack the administrative expertise to arrange for cost effective and appropriate services for large populations...areas may lack sufficient staff to undertake these new administrative roles" (GAO, 1994b). Such was the key role of states, that the report asserted the

capacity of states to administer the program would ultimately determine the success of the program.

State Fiscal Strength

Perhaps the strongest critique of policy decentralization is the fiscal capacity of states to generate enough revenues to cover needy populations (Litman, 1991). States operate within a competitive economic context, with each state competing with one another to create a favorable environment to attract business. State and local governments are at the mercy of private businesses who may leave if another state offers a better tax structure or other economic incentives. The overall economic health of a state is jeopardized if a favorable business climate is not created. States favor policies which are revenue producing and will attract businesses (Estes and Gerard, 1983). These include policies related to law enforcement, transportation, and education, rather than redistributive policies (ibid.). Redistributive policies, such as Medicaid, are costly and do not facilitate business relocation. The federal government is able to levy uniform taxes across the country and does not have the same problems as states in creating a favorable business climate (Hale and Palley, 1981).

Wide variations exist across states in their tax bases. Some have a weak tax base to draw from and cannot afford to finance services. A GAO (1993) report found large differences in state tax capacity and the public services they could support, with southeastern and southwestern states having greater poverty rates and

smaller tax bases to draw from. Another GAO report (1995a) asserted state finances were very sensitive to changes in the business cycle, with state Medicaid expenditures increasing during recession because of increased numbers of eligibles. It recommended the establishment of a 'rainy day' fund for states if Medicaid were to become a block grant program.

Wealthier states, as measured by their tax capacity, spend more on their Medicaid programs and cover a larger percentage of the poor than low income states (Adams, 1995; Wade and Berg, 1995). This is not too surprising given that poorer states have smaller tax bases to draw from, yet more people to provide services too (as a percent of state population) (Cromwell et al., 1987). Harrington et al. (1996a) found implementation of CON requirements to control bed supply (and costs) were more likely by states with lower tax burdens. Cromwell et al. (1995) found poorer states, when freed from federal mandates, were more likely to decrease the number of services and eligibles under their Medicaid programs than wealthier states. Although federal matching payments for Medicaid intend to reduce inequities across states in the level of services they can afford to provide, wealthier states still spend more on their Medicaid programs than poorer states and provide greater coverage to the poor. Some have asserted the federal matching formula, based on a state's per capita income, is flawed and should be substituted with a measure of state tax capacity (Cromwell et al., 1995).

Increased State Capacity

Although historically reluctant to play a major role in social policy, states have increasingly been taking an active role in policy development. States are better equipped and more willing to handle social policy issues than they have been in the past. The retreat by the federal government from many of its ambitious social policy measures enacted during the 1960s, beginning with Nixon's "New Federalism" agenda and continuing through the Reagan administration, was an attempt to reduce the size of social programs through funding cutbacks and granting states greater authority and autonomy (Estes, 1991). As a result, states received a signal that "was as much symbolic as it was substantive: the federal government should and would do less and that states and localities should do more (Leichter, 1992)."

Changes at the state level have also contributed to state participation and capacity in social policy development. First, state governments have become increasingly modernized, which has been facilitated by the widespread use of computers, allowing states to systematically gather and analyze data (Leichter, 1992). In addition, there has been increased interest group activity at the state level, forcing states to confront issues they may have ignored in the past (ibid.). Lastly, and maybe most importantly, states have become more familiar with the administration of social programs, especially Medicaid (Clarke, 1990).

STATE INNOVATIONS IN LONG TERM CARE

Nowhere is state policy innovation more evident than in the health care arena. While historically acting merely as administrators of their Medicaid programs,

states have increasingly been taking an active role in the management of their programs; seeking innovative funding and service delivery solutions to ensure access while containing costs (Rotwein et al., 1995; Kenesson and Clauser, 1990). Medicaid programs have been referred to as 'laboratories for change' (Altman and Beatrice, 1990). A major focus of many state Medicaid cost containment efforts include long term care expenditures.

State efforts at containing rising long term care expenditures have focused on controlling the supply and utilization of nursing facility beds, while also expanding the supply of community-based alternatives (Fralich, 1995). The implementation of PAS is one of several strategies states have used to control nursing facility utilization. Coleman (1996) identified five methods states have used to gain better control of their long term care systems: (1) establishing CON and/or moratoria to limit the supply and utilization of beds; (2) lowering reimbursement rates and/or implementing case-mix reimbursement; (3) and restricting eligibility by decreasing the number of eligibles, raising disability levels, and/or establishing PAS programs. States are also (4) expanding the supply of housing alternatives, such as assisted living and congregate care; and (5) expanding their supply of home and community-based services while also restructuring the state administration of these programs. The following sections discuss these strategies.

NURSING FACILITY MARKETS AND UTILIZATION

This section examines factors associated with nursing facility utilization, the market for nursing facility services, and state policies affecting nursing facility utilization by altering the demand for, and supply of, nursing facility services.

NURSING FACILITY UTILIZATION PATTERNS

Chances are fairly high an individual 65 years of age will enter a nursing facility during the course of his or her lifetime. Using data from the 1985 National Nursing Home Survey, Spillman and Kemper (1995) estimate the lifetime risk of entering a nursing home for those who reach 65 years of age to be 39.3 percent. This finding is consistent with an earlier study estimating the lifetime risk at 37 percent (Kemper and Murtaugh, 1991), while Dick et al. (1992) found the lifetime risk for those 65 years of age and older to be 35 percent. Women are at a higher risk of entering a nursing facility, with a lifetime risk for those 65 years old of approximately 50 percent, than men who face a risk of 35 percent (Spillman and Kemper, 1995).

While the lifetime risk of residing in a nursing facility for those 65 or older is high, few will be in a nursing facility for an extended period of time. Analysis of length of stay show the majority of admissions are for less than a year, and many less than three months (Liu et al., 1994). Research has shown approximately one-third of all admissions are for less than three months (ibid.), while estimates of the percent of admissions spending from three to twelve months in a facility vary from 21 percent (Kemper and Murtaugh, 1991) to 28 percent (Dick et al., 1992). The risk for

entering and remaining in a nursing facility for more than one year has been estimated to be 25 percent (Kemper et al., 1991).

One utilization pattern of interest are estimates for the risk of significant nursing facility stays, those more than five years, since it is this population which accounts for the majority of bed days and Medicaid expenditures. Kemper and Murtaugh estimate the risk at 17 percent, while Dick et al. (1992) offer the lower estimate of 12 percent. Using data from the 1982-84 National Long Term Care Surveys, Liu et al. (1994) examined factors that predict short or long stays in a nursing facility. Individual characteristics predicting a long stay included living alone, cognitive impairment, ADL dependency, and prior nursing facility use. In addition, states with higher than average Medicaid reimbursement rates had longer average lengths of stays for both Medicaid and non-Medicaid individuals. They also found individuals admitted to a facility at age 65 were more likely to be a long stay patient than those admitted at 85 (Liu et al., 1994). This is not surprising, since mortality rates are very high for nursing facility admissions, especially for older individuals. Dick et al. (1992) estimated as many as 42 percent of initial admissions end in death. Persons with neurological conditions are much more likely to be a long stay, while differences for short or long stay did not vary by ADL level. In sum, while the lifetime risk is fairy high, only a small percentage of elders are at risk for a significant nursing home stays. Most will use a nursing facility for short-term rehabilitation after an acute care episode.

Of particular relevance to policymakers are payment source patterns of nursing facility users, in particular Medicaid recipients. Using data from the 1985 National Nursing Home Survey, Spillman and Kemper (1995) found 27 percent entered a nursing facility already eligible for Medicaid, while another 14 percent entered as private pay and then converted to Medicaid. Mor. et al (1993) estimated the risk of spending down at 19 percent for private pays who remained in a nursing facility for at least one year. Women are much more likely to enter a nursing facility already eligible for Medicaid and are more likely spenddown to Medicaid than men (Spillman and Kemper, 1995). Blacks are more likely to enter as Medicaid eligibles and spenddown to Medicaid than whites.

In sum, relatively few elders are at high risk of a significant length of stay in a nursing facility. Variations in length of stay have significant implications for policymakers wishing to reduce Medicaid nursing facility expenditures. Targeting efforts should focus on identifying factors related to prolonged nursing facility stays, which consume the vast majority of funds: women, those lacking a caregiver, high ADL dependency, previous nursing home use, and the cognitively impaired.

INDIVIDUAL DETERMINANTS OF NURSING FACILITY UTILIZATION

Numerous studies have analyzed predictors of nursing facility utilization by the elderly. The vast majority of studies have focused on individual attributes and their relationship to utilization rates. Although studies have differed greatly in their

scope, methods, data sets, and research designs, some consensus has been reached regarding risk factors leading to increased nursing facility utilization.

Socio-demographic characteristics associated with increased risk of nursing facility use include advanced age, Caucasian race, physical disability, mental impairment, living without a spouse and the presence of medical conditions (Jette et al., 1992; Wingard, 1990; Shapiro and Tate, 1988; Branch and Jette, 1982; Dunlop, 1976; Chiswick, 1976). In particular, living alone and high levels of impairment have been found to be very strong predictors of nursing facility utilization (Branch and Jette, 1982, Wan and Weissert, 1981). In an exhaustive review of studies predicting the utilization of institutional care by elders, Wingard et al. (1987) found the four most significant factors cited in the literature were: increased age, female gender, lack of informal caregivers, and high disability levels.

Due to the nature of long term care needs and the dominant role informal caregivers play in the overall provision of care, it is not surprising studies have found the presence of an informal caregiver is one of the most important predictors of nursing facility utilization. George and Maddox (1989) observed the availability of informal caregivers explained much of the variation in the differential impacts of age, sex, residence, and marital status on nursing facility utilization. Other risk factors are inter-related. For example, age is related to increased limitation in ADL performance, while sex is related to the availability of informal caregiving. Women live longer than men and are able to care for their spouses, the availability of an informal caregiver to

provide care for elderly women is not as prevalent. As a result, elderly women are more likely to utilize nursing facility services than elderly men.

Studies conducted by Shapiro and Tate (1988) and Jette et al. (1992) have attempted to go beyond studies examining how much a single predictor, such as disability level, contributed to nursing facility utilization and have instead examined the predictive power of different combinations of risk factors. A primary criticism of previous studies was that a person with only one risk factor would not necessarily be at high risk of nursing facility placement, but if different constellations of risk factors were grouped together, targeting of those at very high risk of institutionalization would increase. Using data from Canada, Shapiro and Tate (1988) found the two most powerful individual predictors of nursing facility placement, advanced age (at least 85 years of age) and living without a spouse, led to only a 19% probability of admission. When these two risk factors were combined with other risk factors (recent hospital admission, living in retirement housing, one or more ADLs, and mental impairment), the probability of admission increased to .62 percent.

Jette et al. (1992) used a statewide probability sample of 1,625 elderly individuals in Massachusetts to identify risk factors related to nursing facility utilization within 10 years. Their findings were similar to Shapiro's and Tate (1988): advanced age, restricted outside mobility and ADL dependency had the strongest effects on nursing facility utilization. Although the presence of only one risk factor had only modest explanatory power, when combined with other risk factors their significance dramatically increased. A female less than 80 years old with restricted

outside mobility and fearful of her neighborhood had a .270 likelihood of entering a nursing facility within the next 10 years, while that risk increased to .718 when combined with at least one ADL, smoking and income less than $5,000 a year.

THE NURSING FACILITY MARKET

Although a large amount of data has been collected and analyzed to develop individual risk profiles to predict institutionalization, the environmental context of nursing facility utilization has received comparatively little attention (Wan, 1989). Environmental factors, such as the supply of alternatives to nursing facility placement and Medicaid policies can have significant effects on nursing facility utilization rates. This section examines the economic, policy, and socio-demographic factors associated with nursing facility use. Of primary interest are state Medicaid policies which affect the demand, supply, and utilization of nursing facility services.

Overview of the Nursing Facility Industry

Nursing facility care is a multi-billion dollar industry with a strong multi-facility and proprietary presence. Using data from the On-Line Survey, Certification and Reporting System, Harrington et al. (1995) found 48 percent of certified facilities were part of chains. In 1991, 71 percent of all facilities were for-profit, 24 percent non-profit, and 5 percent government owned (Sirrocco, 1994). Some states have an extremely high for-profit presence, such as Maine, where over 90 percent of facilities are proprietary (Coburn et al., 1993). The goal of proprietary facilities is to increase

profit margins, while non-profits may act in a similar manner in order to increase their market share (Nyman et al., 1987). Nursing facilities choose which patients to admit and will admit those patients which are most profitable.

Profit margins are generally high, rising 30 percent between 1990 and 1992 (HCIA and Arthur Andersen, 1994). Salary levels of nursing facility staff are low overall, with for-profit and smaller facilities paying the lowest (ibid.). Pay for registered nurse averages approximately 14 percent less than hospital registered nurses (Moses, 1994b). High staff turnover rates are common, reaching from 55 to 100 percent in some facilities (Harrington, 1987). Proprietary facilities have lower RN staffing levels (Jones et al, 1987).

There were 16,959 nursing facilities with 1.74 million beds in 1993 (DuNah et al., 1995). From 1978 to 1993, the number of nursing facilities increased from 14,264 to 16,959, while the number of beds increased from 1.3 million in 1978 to 1.74 million in 1993, an increase of 19 percent and 22 percent respectively (ibid.).

Revenues for nursing facility services are largely comprised of Medicaid and private out of pocket costs. Of the $69.6 billion spent on nursing facility care in 1993, Medicaid financed 51.7 percent ($36.0 billion), while out of pocket sources contributed 33.0 percent or $24.7 billion (Burner and Waldo, 1995). The other major funding sources are Medicare, which contributed $6.1 billion, or 8.8 percent, and private insurance, which comprised only 2.5 percent of total expenditures in 1993 (ibid.).

State Variations in Medicaid Nursing Facility Utilization and Supply

State variation in their economic, policy, and socio-demographic features determine nursing facility supply and use rates across states. The strong influence of individual state markets is clearly shown by examining state variations in nursing facility utilization and supply. The supply of nursing facility beds in 1993 ranged from a low of 289 per 1,000 persons aged 85 and older in Hawaii to a high of 758 beds per 1,000 population aged 85 and older in Indiana; a difference of 469 beds between the two states (DuNah et al., 1995). Nursing facility occupancy rates, a measure of access, ranged from 82 percent in Indiana, Missouri, Texas, and Utah, to 99 percent in New York in 1993 (Harrington et al., 1994).

Of primary interest to state officials are Medicaid nursing facility utilization rates per 1000 aged 65 for individual states and the average number of days of care per Medicaid resident. The number of Medicaid nursing facility recipients per 1000 aged 65 and older in 1991 ranged from 6 in Utah and 19 in Arizona, to a high of 168 in Rhode Island (Harrington, 1994b). The next highest state was Louisiana, with 75 recipients per 1000 aged; less than half of Rhode Island's total. The average days of care for Medicaid recipients ranged from a low of 158 in Florida to 717 in Indiana, while the state with the next highest total was Wyoming at 457 days (ibid.).

Excess Demand

In a normally functioning market, an increase in demand will cause providers to increase the price of goods and/or supply. Conversely, when demand

decreases, providers will either cut prices and/or supply. In this way, the market for goods and services will come to a state of equilibrium where the supply of services is equal to the demand for services, at a given price (Palmer and Vogel, 1983).

While some have asserted the market for nursing facility services is the health market most amenable to traditional economic theory (Bishop, 1988; Scanlon, 1980a), the looming presence of Medicaid policy, which pays for over half of all services, does not allow the nursing facility market to correspond to the market for other goods. Scanlon (1980a) asserts the demand for nursing facility services is artificially high due to a lack of alternatives to nursing facility care and Medicaid's subsidization of nursing facility care. Providers are unable to satisfy this demand by increasing the supply of beds in states with CON or moratoria, and may be unwilling to increase supply if Medicaid reimbursement rates are too low to meet operating costs. Due to a number of factors, including constraints on bed supply, a lack of alternatives, and the aging of the population, the number of people who demand nursing facility care is more than those who receive it, thereby creating excess demand. Because private pay residents pay more than Medicaid reimbursement rates, nursing facility operators will satisfy all private demand for care before admitting Medicaid patients. Thus, excess demand for nursing facility care is excess Medicaid demand (Nyman, 1993).

State discretionary policies may have differential effects in markets with and without excess demand (Paringer, 1985). If a state expands eligibility for services, utilization will not increase because of limited supply. Only the amount of

excess demand will increase. Similarly, depending on the amount of excess demand, utilization controls such as PAS may only decrease the amount of excess demand and have little effect on total utilization.

Because Medicaid rates are set in advance and do not respond to market conditions, there is no automatic market mechanism to raise or lower prices and cure excess demand (Nyman, 1993). Thus, excess demand will persist until the state does one of two things: (1) decrease the demand for services; or (2) expand the supply of nursing facility services. The former can be accomplished by expanding alternative services, such as community-based waivers or by raising eligibility standards, either financially or medically. The latter can be accomplished by repealing any CON laws which may be in place or increase reimbursement rates high enough to encourage providers to expand their bed supply and increase Medicaid admissions. A combination of the two could also decrease excess demand (Nyman, 1988). States, however, are often unwilling to expand the supply of beds or community-based services due to the extra costs involved.

MEDICAID POLICY AND NURSING FACILITY UTILIZATION

States have a variety methods at their disposal to decrease the utilization of nursing facility services, both directly and indirectly. Direct methods include the setting of eligibility levels and preadmission screening programs, which should decrease the demand for care. In addition, states may indirectly control nursing facility utilization by decreasing the supply of nursing home services by decreasing

reimbursement rates and implement certificate of need programs. The following is an overview of key state discretionary policies which affect the market for services.

Certificate of Need

State certificate-of-need (CON) programs are a direct attempt to control the supply of nursing home beds. By controlling the number of nursing home beds, states can indirectly control the utilization of services. Since CON limits entry, existing nursing facility providers can charge higher prices to private pay patients than would be the case without CON regulation and thus admit more private paying patients than Medicaid paying patients.

Certificate of need regulation was once a requirement for all states. The National Health Planning and Resources Development Act (P.L. 93-641) of 1974 required state CON approval for new construction or expansion of health care facilities, including nursing homes. Federal funding for CON was repealed in 1986, however, and since then states have been faced with the task of reevaluating the role of their health planning agencies and CON programs. Many state governments have been reluctant to underwrite the costs of CON programs in light of fiscal constraints. In 1980, 50 states had CON requirements for nursing home's while in 1993 only 39 states had such requirements. In addition, during the same time period, the number of states with a moratorium on nursing home beds increased from two to thirteen (Harrington et al., 1994). Thus, since the federal repeal, state CON activities have

varied greatly, with some states retaining their programs and adding moratoriums and others removing all CON requirements.

The effectiveness of certificate-of-need laws has been the subject of debate. Feder and Scanlon (1980) found CON was successful in limiting the supply of nursing facility beds and that states use CON primarily as a tool to limit their total expenditures for nursing facility care. These findings are supported by Swan and Harrington (1990), who found states with long standing CON programs were more effective in controlling nursing facility bed supply than states with more recently established CON programs.

Other researchers, however, have questioned the effectiveness of CON policies on a number of grounds, including a lack of coordination with other regulatory programs (Mahler, 1981), a lack of significant compliance mechanisms (Colby and Begley, 1983), and a politicized review process (Consedine, Jekel and Dunaye, 1980; Colby and Begley, 1983). In addition, some observers note CON has increased the threshold costs for entry into the market for providers constructing new facilities and may restrict market competition by giving monopoly power to existing providers (Feder and Scanlon, 1980). Thus, instead of controlling growth, CON policies may increase financial speculation in the market by encouraging investors to speculate in existing nursing homes in the hope that controls on the entry of new providers will remain.

Nursing Facility Reimbursement

States may lower Medicaid reimbursement rates as a cost containment measure. In addition to directly reducing expenditures, lowered reimbursement rates may also constrain utilization in two ways. First, low reimbursement levels provide a disincentive for facilities to admit Medicaid patients. Second, low reimbursement rates also discourage facilities from expanding their bed supply since their profit margins will be low or nonexistent. High reimbursement rates, on the other hand, make serving Medicaid eligibles profitable and thus provide an incentive to expand the number of beds to admit more Medicaid patients, thereby increasing utilization (Scanlon 1980a/b; Phillips and Hawes, 1988). However, the ability of states to use lowered reimbursement rates to control utilization and costs has been severely limited by recent court rulings related to the Boren Amendment, which requires states to set rates at an adequate level and allows providers to challenge their level in a court of law (Weinberg et al., 1993). Forty-three such lawsuits were filed by nursing facilities during the 1981-93 time period (ibid.).

The reimbursement method used can directly influence nursing facility utilization and costs (Philips and Hawes, 1988; Swan et al., 1990). States have developed a variety of reimbursement mechanisms. A basic distinction is between retrospective and prospective, of which there are a variety of the latter, including facility-specific, class, and adjusted (Swan et al., 1993). Rates are set in advance under prospective systems, while retrospective payments are made after care is provided, giving facilities an incentive to provide unnecessary services. Prospective systems are by far the most popular with states, while retrospective systems are

almost nonexistent. In 1979, 13 states used retrospective reimbursement systems, while by 1991 only one state used retrospective reimbursement (Swan et al., 1993).

Cohen and Dubay (1990) found nursing facility costs to be higher in states with either retrospective or prospective facility-specific reimbursement but lower in states with prospective class payments. Similar conclusions have been reached by Swan et al. (1993) and Coburn et al. (1993), who both found prospective payment systems decreased Medicaid nursing facility costs. In an analysis of nursing home reimbursement rates and mechanisms for the 1979-92 time period, Swan et al. (1993) also found states with a high demand for services, such as large numbers of aged, had lower reimbursement rates and that states with higher reimbursement rates had greater Medicaid nursing facility utilization.

Use of casemix reimbursement methods are becoming increasingly common. Casemix reimbursement levels are based upon the severity of patient care needs, with higher reimbursement rates paid for residents with high care needs. Only three states used casemix in 1978, increasing to 9 in 1987 and reaching 19 states in 1993 (Swan et al, 1994). A primary goal of casemix systems is to increase access for highly impaired applicants, who under reimbursement mechanisms which pay a flat rate for all patients were avoided by nursing facilities (Butler and Schlenker, 1989). While some studies have found casemix to generally increase access for individuals with higher care needs (Weissert and Musliner, 1992), the supply of beds and differences in Medicaid and private pay rates may mitigate the effects of increased

access for heavy care patients in states with casemix reimbursement (Nyman et al., 1987).

Eligibility

State Medicaid spenddown policy affects utilization by determining eligibility rates. Private pay patients are more likely to spend their assets and become Medicaid eligible quicker if the spenddown level in a State is higher than in States where spend-down levels are lower. Because it is easier for nursing homes not to admit Medicaid patients than it is for them to discharge private pay patients when they become Medicaid eligible, higher spend-down levels should increase the utilization of Medicaid nursing home services (Miller et al., 1992; Cutler and Sheiner, 1993). Thus, one way states can limit Medicaid nursing facility utilization is by setting low Medicaid eligibility levels.

Presence of a medically needy program in a state can greatly increase the number of persons eligible for Medicaid nursing facility services (Harrington and Swan, 1987). States with medically needy programs allow individuals to deduct the cost of nursing facility care from their income level when determining Medicaid eligibility which allows them to enroll onto the Medicaid program sooner than if they had to spenddown to Medicaid eligibility levels (Carpenter, 1988). The majority of states, thirty-seven in 1992, had medically needy programs (Cromwell et al., 1995).

Another way states can reduce the demand and utilization of nursing facility services is through the level of their State Supplement Payments (SSP) for

recipients of Supplemental Security Income funds (SSI). SSI provides low income aged, blind, and disabled individuals to receive a minimum monthly income. All SSI recipients are eligible to receive Medicaid payments. State may also contribute to this program through their own SSP funds. To limit Medicaid eligibility, states can choose not to raise their SSP levels as inflation rates rise (Harrington, Newcomer, Estes and Associates, 1985). Some states, known as 209b states, chose not to participate in the SSI program when the program was implemented in 1974 and have lower SSI rates than federal levels, which decreases the demand for services in those states (Carpenter, 1988).

States may implement PAS programs to more thoroughly assess applicant need for nursing facility care, and/or attempt to divert applicants to community-based alternatives. In addition, states may also increase the medical criteria for placement in a facility. For example, states may increase the number of ADL limitations in from two to three or, for states using a point system, increasing the number of points required for eligibility.

In a 1994 survey, Snow (1995) found three types of medical/functional criteria were used by states to determine eligibility for nursing facility services. 'Medical necessity' criteria, used by two states, requires applicants to require the services of a health professional for medical treatment. Twenty-four states used 'medical/functional' criteria, which focused on ability to perform ADLs and need for nursing services, while twenty-two states used 'comprehensive' criteria. This

includes the medical/functional criteria as well as the ability to perform IADLs and availability of informal social supports (ibid.).

Community-Based Long Term Care Services as Substitutes

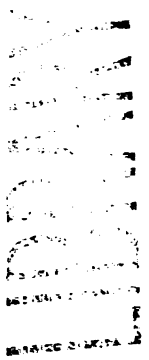
The availability of community-based services may have an effect on nursing facility utilization rates. The supply of publicly and privately funded alternatives to nursing facility services have increased tremendously in the past fifteen years (Harrington, 1994a). Increased state funding of Medicaid 2176 home and community-based waivers has been a key part of this growth (Harrington and DuNah, 1994). In addition, residential care facilities are increasingly being used as alternative living environments (Newcomer and Lee, 1994). Those who need long term care services have greater choices and expanded opportunities of public funding for such programs. The availability of home health and other community services was not found to lower the utilization of nursing facility services by Swan and Benjamin (1990), however.

FACTORS OUTSIDE THE CONTROL OF STATES

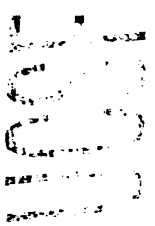
A number of factors outside the control of states can increase or decrease nursing facility utilization. Not surprisingly, many of the individual determinants of nursing facility use discussed in earlier sections are also associated with nursing facility use in research examining state level aggregate data. For example, Miller et al. (1992) found the percentage of a state's population over age 85 to be the principal

demographic determinant of nursing home use, while the percent of women in the labor force affects nursing home utilization (Chiswick, 1976), with increased numbers of women in the workforce leading to increased use of nursing home services (Harrington et al., 1992) due to their inability to provide informal care (Boaz and Muller, 1992).

Other factors associated with nursing facility utilization outside the control of states include personal income per capita (Miller et al, 1992), which decreases Medicaid utilization due to the reduced rate at which nursing home residents spend down to Medicaid eligibility; the percent of the population living in metropolitan areas (Dunlop, 1976; Scanlon, 1980a); and the percent of the population which is non-white, which reduces use (Greene and Ondrich, 1990; Murtaugh et al., 1990).



Other Health Services



The supply of other health services in states may also have an effect on nursing facility utilization rates. Hospitals may perform a substitute role for nursing facility care. An oversupply of hospital beds may lead hospitals to care for patients longer instead of transferring them to nursing facilities, thereby causing the need for skilled nursing care for some patients to be eliminated. A 1987 study by Harrington and Swan found substitution effects may exist as a positive association was found between hospitals and Medicaid nursing facility utilization. However, their study was conducted for the 1978-1983 time period, before the implementation of the Prospective Payment System, which resulted in earlier discharges from hospitals. On

the other hand, a large supply of hospital beds in a state may result in greater numbers of discharges to nursing facilities and thus a greater tendency to institutionalize.

Numbers of office-based physicians per capita may also affect the demand for nursing facility services by offering an alternative to nursing home care. States with a high number of physicians practicing in the community may offer greater access to care, thereby allowing the elderly to remain at home and avoid the need for nursing home care. States with a high number of physicians have lower bed supply than states with lower numbers of physicians (Harrington et al.; 1996a).

PUBLIC POLICY AND NURSING FACILITY UTILIZATION

Relatively few studies have used state level data to examine the effect of Medicaid policy on nursing facility utilization. Scanlon (1980b) reviewed previous studies using multivariate regression analysis at the state or Standard Metropolitan Statistical Area level to estimate risk factors associated with nursing facility utilization. A primary criticism of the studies reviewed was their failure to take into account the 'institutional milieu', the structure of the underlying market, that facilities operated in. These studies assumed demand and utilization were the same. Scanlon asserted when there is an excess demand for Medicaid beds, regression analyses estimating the importance of other variables related to demand will be exaggerated if the supply of beds available is not taken into account.

Scanlon (1980a) used ordinary least squares and two-stage least squares regression to analyze data from 1969 and 1973 to measure the relative impact of

various socio-demographic, economic, supply and Medicaid policy variables in 43 states on the number of nursing facility residents per 1,000 population aged 65 and older. The Medicaid policy variables, which included presence of a preadmission screening program, medically needy coverage, and ICF coverage, were insignificant. The number of empty beds in nursing facilities was used as the bed supply variable and was found to have a significant effect on Medicaid utilization. The percent of a state's population over age 85 had the largest effect on utilization.

Harrington and Swan (1987) examined the effect of state Medicaid policies, health service supply, socio-economic, and demographic variables on nursing facility utilization and expenditures in 42 states. They used cross-sectional time-series regression to analyze pooled data for the time period from 1978-1983, and used OLS regression for cross-sectional analysis of annual data. The dependent variable used to measure utilization was the number of Medicaid nursing facility recipients per 1,000 aged 65 and older. Higher state unemployment rates led to increased Medicaid nursing facility utilization, as did presence of a medically need program and increases in bed supply. Neither a high SSI/SSP payment level or presence of a section 209(b) program had an effect on utilization. Reimbursement rates and PAS also had no effect on Medicaid utilization.

Cutler and Sheiner (1993) used individual and aggregate state level data to examine the effect of Medicaid policy on nursing facility utilization. The presence of a medically needy program and waiver programs were used as measures of demand, while the difference between the private market price for care and the Medicaid per

diem as a measure of supply. These policies were used in a logistic regression equation along with individual level data from the National Long Term Care Survey from 1982 and 1984 to examine the joint effects of state and individual characteristics, such as age, race, and income on utilization. States with spenddown policies and higher reimbursement rates had higher utilization rates, while the presence of a home care waiver had no effect on nursing facility utilization.

Nyman has conducted a number of studies using state and county level data testing for the presence of excess demand, quality differences among nursing facilities under conditions of excess demand, and the ability of case-mix reimbursement to increased Medicaid utilization of heavy care patients in areas with excess demand (Nyman et al., 1987; Nyman, 1988; 1989; 1993). In a 1993 study, he used a three-part test to test for the presence of excess demand in selected counties in Oregon, Wisconsin, and Minnesota using 1988 data. A number of factors associated with nursing facility use were included in a regression model, including: total nursing facility residents, private pay residents and Medicaid residents; beds per 1,000 elderly; number and percent of elderly 85 years of age and older; deaths per 1,000 elderly; percentage of women in workforce; number of residents receiving home care; per capita income; urban or rural county; and private and Medicaid charges for care. Oregon and Wisconsin were found not to have excess demand, while the Minnesota results were less clear, with some results indicting excess demand and others indicating excess demand was not present.

Liu et al. (1991) examined how characteristics of Medicare eligible noninstitutionalized disabled elderly individuals were related to risk of admission and subsequent length of stay. Data from the 1982 and 1984 National Long Term Care Survey were used in a hazard model to predict risk of nursing facility admission and subsequent length of stay. In addition to individual level data, they included market factors which may affect nursing facility use, including the supply of beds in the state, Medicaid reimbursement rates, presence of a PAS program, and Medicare home health utilization rates. The supply of beds was significantly associated with increased utilization for both private pays and Medicaid eligibles, while higher Medicaid reimbursement rates were associated with increased utilization and longer lengths of stay.

EXPANDING COMMUNITY-BASED SERVICES AND RESTRUCTURING STATE ADMINISTRATION OF SERVICES

States are expanding the supply of community-based services in an effort to decrease nursing facility use and provide a continuum of long term care services. Moving away from a reliance on institutional long term care services and towards community-based services forces states to make choices regarding which services to offer and funding sources to emphasize. A variety of funding sources for community-based care are available to states: state general funds, Title III of the Older Americans Act, Social Security Block Grant, Medicaid state plan, and Medicaid waiver. Services funded by each of these funding sources have positive and negative aspects

for state governments (reporting requirements, financing responsibilities, populations served, eligibility requirements, etc.). The following section describes these funding sources in greater detail and their positive and negative aspects for state governments.

Older Americans Act

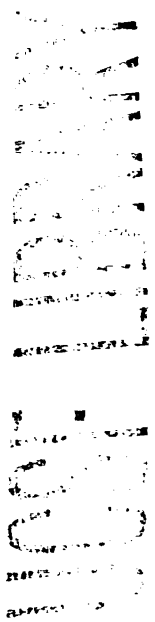
In 1965, the federal government enacted the Older Americans Act (OAA) to assist the emotional, physical, economic, social, and recreational well being of the elderly. Title III of the OAA provides funds specifically for the development of a coordinated system of community-based services for the elderly. A primary goal of the OAA is to increase the independence and well-being of poor and frail elderly (Coleman, 1996) and to provide a continuum of care. State Agencies on Aging administer the funds to local Area Agencies on Aging who asses care needs of the elderly and then provide and/or coordinate services, often using private non-profit sources operating in the community. Although a wide variety of services may be offered, the most common services include, transportation services, in-home services, and information and referral (U.S. Senate, 1988a, in Miller, 1991).

Block grant funds are allocated to states based upon the size of their elderly population (over 60 years of age). Although states must match the federal funds they receive, there are few strings attached in using this block grant money other than to provide services to the neediest elderly. Since there are no income eligibility requirements, many states use these Title III funds to assist the elderly who do not qualify for Medicaid (Lipson and Donahoe, 1988).

Social Security Block Grants

The other major federal funding source for community-based long term care is through Social Security Block Grants (Title XX). Enacted in 1975, this legislation provides block grant funds to states for a variety of target populations, including the aged, disabled and children. A variety of community-based long term care services are provided under this funding, including personal care, adult day care, meals, and case management; under the mandate to reduce the inappropriate of institutional care (Miller, 1991).

The amount of funding allocated to states is based on their population. As opposed to OAA funds, states are not required to match the funds they receive. States have great flexibility in the use of these funds, including the ability to set eligibility levels. OBRA 1981 gave states more discretion in determining the target population and which services to offer (Harrington, Newcomer, Estes, and Associates, 1985). Other federal requirements were eliminated, such as state reporting requirements. Services commonly targeted to the elderly include, homemaker, chore, adult day, and adult foster care (Lipson and Donahoe, 1988). The ability of these funds to assist the frail elderly have been criticized because of the diverse populations it covers, lack of funds, and competing demands have reduced its utility in decreasing inappropriate institutional placement (Miller, 1991; Lipson and Donahoe, 1988).



Medicaid

States are required to provide home health services to individuals eligible for nursing facility care under their Medicaid programs, while they may elect to offer personal care services as an optional service. Specific services provided under home health services include: part time nursing care, home health aide care, physical therapy, occupational therapy, medical equipment, speech pathology, and audiology service (GAO, 1994c). States spent $1.6 billion on Medicaid home health services in 1994 (Coleman et al., 1996).

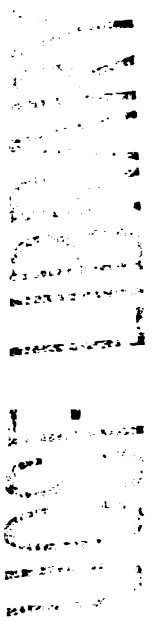
Some states have chosen to offer personal care services through their Medicaid waiver programs, but most use it as a separate optional services (GAO, 1994c). These services are also targeted to only those individuals medically in need of nursing facility services (GAO, 1994c). More than half of all states, 31, used the personal care option (Coleman et al., 1996). While personal care programs are used by many states, the size of these programs have generally been very small, except for New York's, which serves more than 100,000 eligibles per year and accounts for $1.8 billion of the $3 billion spent nationally (Coleman, 1996; Coleman et al., 1996).

An obvious advantage to funding community-based services under the regular Medicaid state plan is the federal funding match, no extra reporting administrative requirements, and no limit on the number of people who can be served. Disadvantages of using these funds are the inability of states to limit these services and test them on a demonstration basis or a limited geographic region. In addition,

states cannot expand the income eligibility to include the 'medically needy' as they can for nursing facility care.

Medicaid-Waiver

The Omnibus Reconciliation Act (PL 97-35, Section 2176) of 1981 (OBRA 1981) amended Section 1915(c) of the Social Security Act to allow states the option to provide community-based services to Medicaid eligible elders who would otherwise require nursing facility services. This law was enacted to allow states greater flexibility in providing alternatives to nursing facility services with the hope of decreasing the cost of institutional care by providing in-home services. Federal rules require the cost of services not to exceed the cost for nursing facility care for individual recipients, and many states set lower caps on the cost of services, oftentimes to 75% of nursing facility costs. Waivered services are exempted from meeting certain Medicaid requirements. States can target specified populations, limit the scope of services offered geographically, and set their own eligibility levels. This allows states great flexibility and allow them to begin programs on a smaller scale before expanding them.



These waivers have been very popular among states. Expenditures for home and community-based waiver programs grew from $3.8 million in 1982 to nearly $4.7 billion in 1991 (Harrington et al., 1994b). While states can choose to offer a variety of different services, those most commonly offered include adult day care, personal care, respite services, homemaker services and case management

(Coleman, 1996). All states but Arizona were using a 1915(c) waiver by 1995 (Coleman et al., 1996).

State options for waivered services were expanded in 1987, when Congress passed Public Law 100-203 as part of the Omnibus Reconciliation Act of 1987. This law, Section 1915(d) of the Social Security Act, is similar to 1915(c) waivers, except that states must set a cap for both community-based and institutional Medicaid long term care expenditures and must be directed only to those 65 years of age and older (Folkemer, 1994). As of 1994, only Oregon was using a 1915(d) waiver. In addition, states may apply for research and demonstration waiver (1115 waivers). Minnesota received a 1115 waiver to integrate acute and long term care services elderly eligible for both Medicare and Medicaid (Coleman, 1996)

Advantages of waivers include the federal funding match for each dollar spent by the states and the ability of states to provide these services on a limited geographic or target population basis. Disadvantages include caps on the number of individuals receiving services, the application process, and administrative costs associated with program reporting.

State Supplemental Payments

States may provide additional State Supplemental Payments (SSP) to the federal Supplemental Security Income (SSI) payments for all or certain recipients. These payments are income transfers and do not directly fund community-based long term care services. However, these payments are often provided to individuals

residing in board and care homes, congregate care facilities and other residential settings and help individuals meet the cost of that care (Miller, 1991; Harrington, Newcomer, Estes and Associates, 1985). The combined SSI/SSP levels usually determine eligibility for Medicaid. These payments provide an incentive to seek independent living alternatives to nursing facility care (Harrington, Newcomer, Estes and Associates, 1985).

State-Only Funds

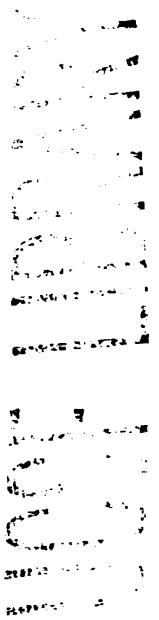
States can fund community-based programs using their own general funds. Benefits of using state general revenues to finance community-based long term care include flexibility and autonomy from federal rules in the design of these programs, most notably the ability to offer services do individuals who do not meet Medicaid financial or medical criteria. In addition to avoiding burdensome federal requirements, innovative programs have been developed by states, including financial support of informal caregivers (Coleman, 1996).

Discussion

States have a variety of options to choose from when considering expanding their funding of community-based long term care services. States have an obvious incentive to maximize the use of programs matched with federal funds, so it would seem sensible for states to emphasize the use of these funding sources. State-only funded programs, however, fulfill an important role by offering services to those

who do not meet criteria set by the other federally funded programs. While it would be easier to administer community-based services funded from just one source, none of the services offered through the various funding sources are comprehensive enough for a state to rely on just that one source (Justice, 1988). Thus, to provide a wide range of services, states must use a variety of funding sources.

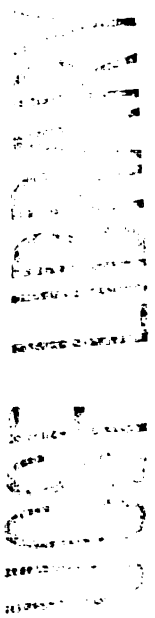
The types of services states choose to emphasize in their funding of community-based long term services are based upon a number of factors including historical funding patterns, size of the elderly population, tax capacity, and the political climate and its commitment to long term care (Lipson and Donahoe, 1988). In a study examining the long term care policies of six states, Justice (1988) found Illinois, Maryland, and Wisconsin used primarily state funds to finance their community-based long term care services, Oregon relied mostly on Medicaid home and community-based waiver funds, Arkansas chose personal care services under their state Medicaid plan, while Maine used a combination of all major funding sources. All states supplemented these services with OAA and SSBG funded services.



ADMINISTRATIVE RESTRUCTURING OF STATE BUREAUCRACY

States are restructuring the administration of programs related to long term care services in order to improve system performance (Coleman, 1996). States are responsible for administering the various community-based programs funded by the federal government and, of course, programs financed by state-only funds

(Harrington, Newcomer, Estes, and Associates, 1985). These programs have varying goals, target populations, service definitions, eligibility criteria and administrative rules. States are required to select a single state agency to administer the Medicaid program, while funds provided by Title III of the Older Americans Act are to be administered by a State Unit on Aging. Social Security Block Grant funds are usually administered by Social or Human Services Departments, since they are used for a variety of purposes and target a varied population (Lipson and Donahoe, 1988), while community-based services financed by state-only funds are usually administered separately from other programs. This has led to a fragmented administrative structure both within state government and at the local level where services are accessed (Coleman, 1996). One study (GAO, 1994c) found funding or administration of long term care programs were the responsibility 10 different state and 3 federal agencies.



Fragmentation of program administration has made it difficult for states to effectively manage the overall delivery of long term care services and determine service supply and unmet needs. Management of publicly funded long term care services is made more difficult because most state agencies were developed with goals other than the delivery of long term care services as their primary goal (Justice, 1988). For example, Medicaid was designed to increase access to health services for the poor, while SSBG funds are targeted to a variety of programs, of which long term care is only one.

States are beginning to directly confront the issue of long term care policy for the elderly and develop a more coordinated system of care by reorganizing the

administration of programs with long term care components to improve service delivery and access (Fralich, 1995). States also hope long term care costs may be constrained through better program management and targeting of resources (Lipson and Donahoe, 1988). Issues state governments need to address when considering any sort of administrative reorganization include: designing a single delivery system supported by multiple funding sources; developing eligibility criteria for individual programs; and examining the mix of community care services supported by various funding sources (Justice, 1988).

Justice (1988) identified three different types of administrative structures. The most comprehensive restructuring is occurring in states which have consolidated all long term care expenditures into a single agency. Only Oregon and Washington have these consolidated administrative structures (Coleman, 1996). A primary benefit is making funding tradeoffs visible between community and institutional care. Other benefits include rationalizing the administration of programs across funding sources, such as "inter-agency battles over which assessment form to use for determining eligibility for institutional and community care" (Justice, 1988). The other two models outlined by Justice (1988) are human service umbrella agencies and those states who keep their programs administered by independent agencies, but have also developed an interagency committee to foster communication between agencies.

A variety of barriers exist to administrative restructuring. Individual departments not willing to decrease their authority, agency staff knowledgeable only about their program, and inherent difficulties in streamlining financing, eligibility

requirements, benefits, and service definitions (Coleman, 1996). In addition, program recipients may fear a decrease in benefits and quality of services and lobby against change (ibid.). Lastly, Medicaid agencies are most familiar with medical services and not familiar with the more social service oriented services funded by OAA or SSBG funds and may serve as a barrier to effective restructuring and administration (Lipson and Donahoe, 1988).

LOCAL LEVEL ADMINISTRATION

Related to the reorganization of state-level administration of long term care services is how these services are delivered at the local level. Justice (1988) argues local level administration is more important than state level administration since this is where consumers come into contact with the long term care system. Fragmentation of services at the local level is a barrier to the access due to a lack of knowledge by providers as well as consumers regarding the range of services available (Applebaum and Austin, 1990; Coleman et al., 1996).

To decrease service fragmentation, some states have designated a local agency to serve as a single access point to a variety of publicly funded services (Pendleton et al., 1990). In addition to improving access, other goals include cost containment and a reduction in the duplication of services (Coleman, 1996). States may use Area Agencies on Aging, regional state agencies, private non-profit organizations, or county health or social service agencies (Lipson and Donahoe, 1988; Applebaum and Austin, 1990). The level of authority delegated to these

agencies may vary from only providing information and referral to authorizing Medicaid eligibility and allocation of funds for a variety of services. Some state preadmission screening programs are part of a single access point to a variety of long term care services (Pendleton et al., 1990).

RESIDENTIAL CARE

Nursing facility services are sometimes used by people because of inadequate housing alternatives (Coleman, 1996). For example, the frail elderly may no longer be able to remain at the private residences they had lived in for many years because they are unable to up keep their homes or can no longer negotiate stairs to leave and enter their homes, or their neighborhoods have become increasingly dangerous. Residential care fills an important role in the long term care continuum by providing a living environment to those who need some assistance with everyday care needs, but not extensive functional and medical needs.

Lack of consensus over what constitutes residential care is reflected in the variety of terms states use to refer to residential care, including but not limited to board and care, adult foster care, assisted living, sheltered care, and personal care (Newcomer and Lee, 1995). These different types of housing arrangements are sometimes subsumed under the heading of either board and care housing or residential care facilities and vary in size, target population, services, funding, and ownership (Harrington, Newcomer, Estes, and Associates, 1985). Approximately 500,000

persons live in licensed residential care facilities, while many more live in unlicensed settings (Hawes et al., 1993).

Increasing attention has been paid to the use of these alternative living environments as a substitute for nursing facility care for elders with low care needs (Sloan et al., 1995; Kane and Wilson, 1993, Kane et al., 1989). There is some support for this interest, with studies finding residents of residential care facilities to have care functional limitations and medical needs similar to many, but not all, nursing facility residents (Kane et al., 1991). Although residential care settings may not be able to completely serve as a substitute for nursing facility care, primarily due to inadequate staffing, they provide an important care option for many elderly and may delay nursing facility placement for some (ibid.).

State funding for residential settings is limited. Barriers to public funding include the lack of consensus over how to define, regulate, and establish the degree of supervision and staffing needed for an unspecified level of care (Newcomer and Lee, 1995). One way states can facilitate the use of residential care settings by extending State Supplemental Payments (SSP) to those living independently or in residential care settings (Harrington, Estes, Newcomer, and Associates, 1985). Oregon has been particularly active in developing their supply of residential care settings (Kane et al., 1991). Public funding for residential care settings (adult foster care) in Oregon comes from a combination of SSI and Medicaid waiver funds for the poor who are nursing facility eligible (Coleman, 1996).

PAS AND THE DIVERSION TO COMMUNITY-BASED ALTERNATIVES

A primary goal of many preadmission screening programs is to divert nursing facility applicants into community-based settings in order to delay the utilization of institutional long term care services and to ensure individuals in need of long term care are placed in the most appropriate care settings. A fundamental assumption of many PAS programs is that large numbers of applicants can be diverted to less expensive community-based settings (Polich and Iversen, 1986). Many states hope to decrease Medicaid expenditures by diverting potential nursing facility users to less expensive community-based settings to delay or eliminate the need for more expensive nursing facility services. However, most research has found community-based care has not served as a cost effective alternative to nursing facility placement. The following is a discussion of research evaluating community care demonstrations and barriers to PAS program effectiveness.

Community Care Demonstrations

Interest in the potential cost savings of substituting community-based care for institutional care led to a number of demonstration projects during the 1970s and 1980s. In three separate literature reviews of evaluations of demonstration projects providing community-based services as a substitute for institutional long term care services, Kemper et al. (1987), Weissert et al. (1988), and Weissert and Hedrick (1994) found the vast majority were not cost effective. While research has shown community-based services can be less expensive than institutional care (Capitman et

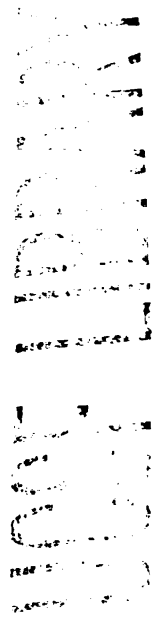
al., 1987), the primary barrier to achieving cost effectiveness for these demonstration programs has been targeting individuals who were actually at risk of nursing facility placement (Weissert 1984; Applebaum and Austin, 1990; Jackson et al., 1993).

In order to be cost effective, home and community-based services must serve individuals who would have entered a nursing facility if community-based services were not available. Similarities in the disability levels of individuals within institutional and community-based settings makes this a difficult task. Oftentimes the major factor in determining whether application for nursing facility services is made is the presence or absence of informal social supports. Thus, only measuring whether an individual's level of disability meets nursing facility criteria is not enough to accurately predict whether they are at risk of institutionalization. If individuals who meet nursing facility level of care are served, but who would not have entered a nursing facility, then these programs will not be cost effective because new services are being used by individuals who would not have used them if they were not available (Weissert et al., 1988).

Targeting individuals at high risk of institutionalization was one of the barriers to cost effectiveness in the most ambitious demonstration project: The National Long Term Care Demonstration (Kemper, 1988). Conducted at 10 sites from 1981-1985, this demonstration project was not successful in achieving costs savings because the target population, although highly disabled, was not at imminent risk of institutionalization and the additional costs from providing case management

and community-based long term care services were not offset by reduction in nursing facility use (ibid.).

Community care programs which achieved cost effectiveness, or came close, were able to target their resources only to those individuals at high risk of institutionalization (Kemper et al., 1987; Weissert et al, 1988). The South Carolina CLTC program, which was linked to a mandatory preadmission screening program, came close to achieving cost effectiveness (Nocks et al, 1986). Its relationship with PAS was seen as a key factor in its effectiveness. The targeting of individuals actually applying for nursing facility care allowed the program to focus its resources on a population who probably would have entered a nursing facility if community-based services were not offered as a substitute. Others have also noted a link between PAS and improved targeting (Weissert, 1985; Capitman, 1986; Yeatts et al., 1987).



PAS: Barriers to Success

Although some community care programs have been able to demonstrate cost effectiveness when linked with a preadmission screening program, a number of barriers exist to PAS program effectiveness. Some researchers suggest that PAS programs may occur too late in the placement process because applicants and their families have already explored community-based alternatives and are unwilling or unable to provide informal care any longer (Polich & Iverson, 1987). Thus, only a few people who apply for admission to nursing facilities can be diverted to community-based alternatives.

Secondly, the woodwork effect may decrease targeting accuracy because more people may apply for nursing facility services than otherwise would have once it is known that application for nursing facility services is a prerequisite to be assessed for, and potentially receive, community-based services (Kane and Kane, 1987; Kemper et al., 1987). Thus, although a PAS program may initially have a successful targeting rate, this may decrease over time as the general population becomes more familiar with the program.

Another factor affecting program effectiveness is the supply of long term care services in a state. In some states, the supply of community-based services may not be keeping pace with the demand from the aging of the population and the post-hospital referral demands, especially with the advent of the prospective payment system for hospitalized Medicare patients (Estes, Swan, and Associates, 1993). As a result, some applicants may be forced to enter a nursing facility when they could have remained in the community (Coleman et al., 1996). In addition, PAS programs operating in states with an undersupply of nursing facility beds are unlikely to decrease overall utilization rates due to the excess demand for these services (Scanlon, 1980a; Liu et al., 1991). The only effect PAS should have in these states is to increase the average acuity level of nursing facility residents by allowing only the most impaired Medicaid applicants access to the limited number of available beds.

The increased bureaucratic expense associated with case management is another issue affecting PAS program effectiveness (Retsinas et al., 1989). Accurate case management must conduct a thorough examination of clients and their families

so that a proper match can be made between needs and resources available. This process requires time and resources and is more expensive administratively than relying solely on physician certification to determine eligibility for placement (Leutz et al., 1993). Thus, PAS may not be cost effective if few applicants are diverted and assessment costs are high.

Differences in goals between policymakers and those implementing the programs may also affect the ability of PAS programs to decrease utilization and overall long term care costs (Polich and Iversen, 1987). While policymakers are interested in containing Medicaid expenditures, those implementing the program may be more interested in providing services to people who are in need of them. Thus, conflict may exist between these two groups as to whether PAS should serve as a general benefit to frail individuals or should serve specifically as a substitute for institutional care (Kemper, 1990).

Lastly, there is some evidence that the nursing facility population has become increasingly frail due to a number of policy changes, including the implementation of PPS, expanded supply of community-based alternatives which may allow persons to remain in the community until they are extremely frail, and the increasing use of case-mix reimbursement systems by state Medicaid programs, which provides financial incentives to nursing facilities to admit heavy care patients over those with low care needs (Shaughnessey and Kramer, 1990). As a result of these numerous changes, there may be fewer candidates for diversion than in the past.

CHAPTER 3

METHODOLOGY AND RESEARCH AIMS

METHODOLOGY

Data for this dissertation research comes from the *Long Term Care Programs and Market Characteristics* project (Charlene Harrington, Ph.D.--Principal Investigator), funded by the Health Care Financing Administration. Study goals include the collection of primary and secondary data on factors affecting the market for Medicare and Medicaid nursing facility and home health care services in all fifty states and the District of Columbia. Socio-demographic, economic, policy and other related variables influencing the demand and supply for Medicare and Medicaid nursing facility and home health services in states were collected from primary and secondary sources. Policy data collected from state officials through structured telephone interviews include: (1) certificate-of-need programs; (2) preadmission screening; (3) Medicaid nursing facility reimbursement; and (4) Medicaid home health reimbursement. This cross-sectional longitudinal data has been used to explain state Medicare and Medicaid long term care supply, utilization, and expenditures for the 1978-1994 time period. This is a unique database which includes primary data on states unavailable from any other source and is the only consistent state data on long term care of its type.

PAS DATA COLLECTION

Data for PAS were collected through structured telephone interviews with program officials in 1989, 1992, and 1994. Data for the 1978-89 time period were collected by Leslie Grant, Ph.D. in 1989, while the author collected data from state officials in the 1992 and 1994 surveys. Program officials were identified through a contact list from the *Long Term Care and Market Characteristics Project.*

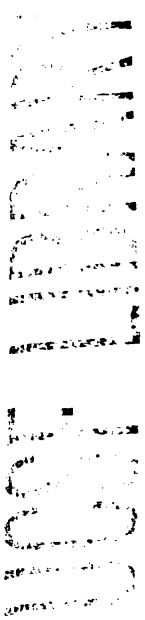
A questionnaire requesting specific information on program characteristics guided the interviews. The questionnaire included questions asked in the 1989 and 1992 surveys pertaining to key program variables, while also exploring additional aspects of program structure for the 1993-94 time period. For example, whereas only state-level administration was explored in the previous surveys, data in how programs are administered at the local level were collected for in the 1994 survey (see Appendix 1 for survey instrument).

At the conclusion of the data collection process, a brief written summary providing a brief overview of program structure was sent to respondents for data confirmation. Enclosed with the program summary was a questionnaire asking respondents their opinion regarding PAS impact on cost, quality, supply, and utilization of nursing facility and community-based services, as well as barriers to successful program implementation and operation. Open-ended questions were also asked regarding the effect of the availability of community-based services on PAS effectiveness and whether any future changes are planned for the PAS program (Appendix 2).

Screening instruments used to conduct applicant assessments were requested at the end of each telephone interview. Program documentation, such as program descriptions, annual reports, regulations, and/or evaluations were also requested. Data on the number and outcomes of screens were collected by faxing a one page sheet to respondents at the conclusion of the interview (Appendix 3).

Data Management

Data were coded and entered into a Paradox database for each year of the study period. Data entered for each state were printed out and reliability checks made by comparing the data printout with interview hardcopies for every question for every state. The Paradox database was converted into an SPSS file using the conversion software DBMS/COPY. The SPSS statistical program was used to provide descriptive statistics on program variables for each year and cumulative data. In addition, SPSS was used to conduct the logistic regression analysis for the implementation hypothesis and two-stage least squares regression analysis to test impact of PAS on Medicaid nursing facility utilization. Data on state political, economic, and socio-demographic characteristics were extracted from the *Long Term Care Programs and Market Characteristics* main data set.



Sources of Bias

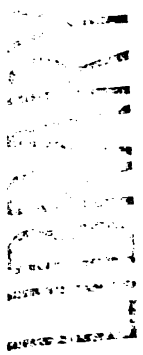
A difficulty of this longitudinal study is the coding of information for years prior to the beginning of the study. The first survey was conducted in 1989 and

requested data for 1978-1989 about PAS program characteristics. The quality of data collected therefore depends on respondent knowledge about past program events and the quality of interviewing conducted during this first round of interviews. The accuracy of this data was checked by verbally describing state screening activity to respondents during the interview. Data for 1978-89 were also checked by including historical data in the program description summary sheets sent back to respondents at the conclusion of interviews conducted in 1994, describing state screening activities for the 1978-94 time period. Of course, the extent to which respondents were able to confirm historical data was dependent upon their experience with the program.

A potential source of bias in this study is the use of multiple respondents to provide data on program characteristics at different points of time. To guard against inconsistent responses over time, a number of steps were taken during the data collection process. Previously obtained data on individual programs were reviewed prior to every interview and respondents were asked to explain any changes from previously collected data. At the conclusion of each interview, data collected were compared again with data obtained from previous surveys. Where data were inconsistent with previously obtained data, telephone follow-up calls were made to clarify differences. Lastly, at the conclusion of the data collection process, a brief written summary providing a brief overview of program structure was sent to respondents for data confirmation.

Another source of bias may be due to respondent error. This is of greater concern for states with multiple types of screening process or for states which have

made changes in the structure of their program over time. One problem encountered was the state of Massachusetts, which screened some applicants by providers over the phone and others in-person with state staff. The respondent from Massachusetts gave conflicting answers regarding the number of PAS reviews conducted in-person by state staff. When first contacted, the respondent reported the vast majority of screens were done by paper review prior to 1993. During a call back to clarify data inconsistencies with information collected from previous surveys, the respondent reported the majority of reviews prior to 1993 were determined in-person. The discrepancy in responses was discussed with the respondent, who eventually decided the majority of screens were conducted in-person by state staff. Thus, even for program changes less than two years old, respondents may give inaccurate answers.



RESEARCH OBJECTIVES

This dissertation research has 5 objectives: (1) provide detailed information about PAS program structure for the 1993-1994 time period; (2) develop an index using key program variables to provide a measure of program stringency and facilitate program comparison; (3) integrate this data with a previously existing cross-sectional longitudinal database of state preadmission screening activities for the 1978-92 period to examine trends in program implementation and structure of key variables over the 1978-1994 time period; (4) determine the social, political and economic characteristics of states associated with having PAS; and (5) examine the relationship

between presence of a statewide PAS program and state Medicaid nursing facility utilization rates.

Research Aim I: Describe the Characteristics of State PAS Programs

A primary goal of this dissertation research was to collect detailed descriptive information of state PAS program structure. A number of areas of state screening activity were examined for the 1993-94 time period, including: program administration; target populations; screening process; type of assessment form used; program goals; and program outcomes, including perceived impact of PAS on the supply and utilization of long term care services and screening data. The following is a list of questions asked about PAS program structure:

- **Program Administration**
  - When was PAS implemented?
  - Do states contract out PAS responsibility?
  - What is the tax status of the contract agency?
  - How are programs administered locally?

- **Target Population**
  - What is the target population (Medicaid eligibles, spenddown, private pay)?
  - If private pays are screened, are they charged for the screen?
  - If private pays are not screened, are there plans to screen them?

- **Screening Process**
  - What type of staff are used to conduct assessments (state, contract, private provider)
    - -asked separately for hospital and community-based applicants
  - Is eligibility determined in-person, over the phone, or by paper review?
    - -asked separately for hospital and community-based applicants
  - Are screens conducted prior to admission?
    - -asked separately for hospital and community-based applicants
  - Is nursing facility admission denied if placement has not been recommended?
  - What is the estimated average length of time it takes to conduct an assessment?

- **Assessment Forms**
  - Is the same assessment form used statewide for all applicants?
  - Is the MDS used to determine eligibility?
  - Is a point system used to determine eligibility?

Rate comprehensiveness of assessment forms

- **Diversion Efforts**
  Are community-based services offered as an alternative to nursing facility care?

- **Program Outcomes**
  How do program administrators perceive the impact of PAS on long term care services?
  -asked separately for community-based and nursing facility services
  -supply, utilization, and cost
  What do program administrators perceive as the greatest barrier to program success?
  How many community-based applicants were screened and how many diverted?
  How many hospital-based applicants were screened and how many diverted?
  What were the administrative costs of the program?

Research Aim II: Develop an Index to Measure Program Stringency

Using data from 1994, a scale to measure program stringency was developed based upon six PAS program characteristics. A stringency score from 0 to 6 was created by adding together the scores on each of these dimensions, with 0 being the least stringent and 6 the most stringent. Criteria examined include:

- **Amount of Information Collected:** Assessment forms were originally rated along a 3 point scale as collecting a minimum, moderate, and extensive amount of applicant information. To make the scoring system consistent across all scale measures, states were rated as either comprehensive (1) or not comprehensive (0). Only four states were rated as collecting a minimum amount of information. Basis for coding decisions were based on the quantity and quality of information collected about the client's health and functional status. A major characteristic of state screening instruments rated as comprehensive was the collection of information about an applicants ability to perform IADLs and extent of informal social supports.

- **Assessment Conducted by Non-Provider:** States that conduct assessments using either governmental staff or contract agency staff rather than private providers are considered to be more stringent in their review and were given a score of 1. Private providers are considered more likely to be more generous in their approvals than independent governmental staff or their representatives. States have more control over the accuracy and consistency of client information if the assessment data are collected by non-providers.

- **Review Prior to Admission:** Programs requiring that all screens be conducted prior to nursing facility admission were given a score of 1 and programs allowing

assessments post-admission were assigned a score of 0. The rationale is that programs requiring screening prior to admission are more stringent because it is more difficult to force a patient out of a nursing facility once they are admitted than to deny placement prior to admission.

- **Reviews Conducted In-Person:** Programs which require in-person reviews were given a score of 1. In-person reviews should be more accurate than telephone or paper reviews of client information.

- **Screen Private Pays:** Programs which screen private-pay patients are considered to be more stringent because these states possibly would be more likely to reduce Medicaid spend-down rates than states without such screening. States screening private pays were given a score of 1.

- **Screening Data:** States that collect screening outcome data are considered to have a greater capacity to evaluate their PAS program and will be given a score of 1.

Research Aim III: Describe Changes In PAS Characteristics Over Time

A third aim of this dissertation research was to examine trends in PAS program implementation and program structure over time. Data from the 1994 survey were merged with previously collected data from the 1978-1992 time period to create a seventeen year database covering 1978 to 1994. Data on five key program variables were collected in each of the three surveys and analyzed over time:

- **When did programs become implemented statewide?**

- **What population is screened?**
  -Medicaid eligibiles, spenddowns, and/or private pays

- **Who conducts applicant assessments?**
  -state staff, contract agency staff, providers, or a combination of the three

- **Is eligibility determined in-person by screening staff?**

- **Are screens conducted prior to nursing facility admission?**

Research Aims IV & V: Analysis of PAS Program Implementation and Impact

Two research questions using aggregate state-level data were tested with PAS as an independent and dependent variable. The first research question examined the political, economic, and socio-demographic characteristics of states that were associated with having a PAS program by conducting a logistic regression analysis using data from 1991. The second research question explored the relationship between presence of a statewide PAS program and Medicaid nursing facility utilization by conducting a two-stage least square regression analysis of socio-demographic, economic, and health service factors known to affect nursing facility utilization. A dichotomous measure of PAS indicating presence of a statewide PAS program was used for one analysis, while other measures of PAS based on their stringency scores were used in other analyses.

Research Question I: What are the political, economic, and socio-demographic characteristics of states associated with having PAS?

Previous research has found a variety of factors influence state Medicaid policy decision making, including the wealth and political characteristics of states (Cromwell et al., 1995; Adams, 1995; Harrington et al., 1996a; Grogan, 1994; Lanning et al., 1991). To determine the characteristics of states associated with having a PAS program, a model including variables measuring state economic health,

political ideology, and socio-demographic factors associated with greater nursing facility utilization were tested in a logistic regression analysis (Table 3.1).

Political Factors

- State Liberalism: Liberal policymakers tend to favor government intervention as a solution to social and economic problems. Because PAS is a regulatory mechanism, states with liberal political leadership should be more likely to implement PAS programs. However, liberal policymakers also tend to be more generous in their Medicaid benefits (Cromwell et al., 1995). If PAS programs are developed to deny access to needed services, states with more liberal politicians may be less likely to implement comprehensive PAS programs. It is hypothesized states with more liberal political leadership will be more likely to implement comprehensive PAS programs. The proxy used to measure state liberalism will be the Americans for Democratic Action liberal ratings of the two state senators added together and averaged for one rating per state (Lanning et al., 1991).

- Percent Population in AARP: To the extent PAS serves as a barrier to nursing facility access, the percent of a state's population with membership in AARP should provide interest group pressure against PAS implementation (Harrington et al.; 1996a).

Economic Factors

- State Tax Capacity: PAS programs cost states money. Wealthier states should be more likely to implement PAS because they are more capable to fund PAS. However, wealthier states are also more able to pay for the cost of nursing facility care and thus do not have as great an incentive as poorer states to regulate nursing facility admissions. It is hypothesized wealthier states are more likely to implement PAS.

- State Tax Effort: State tax effort should affect the likelihood of PAS implementation in the same direction as state tax capacity. States with a larger tax effort should be more willing to fund PAS.

- Percent Unemployed: States with high unemployment should be more likely to implement PAS. Unemployment increases demand for Medicaid nursing facility utilization because individuals have less ability to pay for care privately and Medicaid enrollment should increase (Harrington and Swan; 1987). On the other hand, increased unemployment reflects a decrease in state wealth and may work against PAS implementation. It is hypothesized increased unemployment is associated with PAS implementation.

Socio-Demographic Factors

- Percent Aged 65+: States with a large elderly population are associated with increased nursing facility utilization (Scanlon, 1980a) and face increased pressures to effectively manage the utilization of their long term care resources and will be more likely to implement PAS.

- Percent Non-White Population: States with a large non-white population will be less likely to implement PAS. Most studies have found lower nursing facility utilization rates for non-white populations (Greene and Ondrich, 1990, Murtaugh et al., 1990). In addition, states with more racial heterogeneity may be less likely to form a unified and consistent advocacy movement to lobby against access barrier to nursing facility care (Falcone et al., 1992). Thus, states with a large non-white population should have less demand for nursing facility services and less effective advocacy movements and should therefore be less likely to implement PAS.

- Percent Metropolitan: Because many PAS programs conduct in-person assessments for all nursing facility applicants (Polich and Iversen, 1987), largely rural states should have greater difficulty conducting PAS due to travel costs and increased time it would take to complete the assessment process. In addition, to the extent community-based services are less available in rural states, these states should have less incentive to develop PAS in an attempt to divert applicants to alternate care settings.

TABLE 3.1

ANALYSIS I: CHARACTERISTICS OF STATES ASSOCIATED WITH HAVING PAS IN 1991

Dependent Variable
PAS

Independent Variables	Impact on Implementation
Political Factors	
ADA Rating	+
% AARP	-
Socio-Demographic Factors	
% Aged 65 and Over	+
% Non-White Population	-
% Metropolitan	-
Economic Factors	
% Unemployed	+
Tax Capacity	+
Tax Effort	+

Research Question II: What is the relationship between PAS and Medicaid nursing facility utilization?

The conceptual model used to examine this research question includes variables based on previous research found to have a significant effect on the demand and utilization of nursing facility services (Liu et al., 1991; Nyman, 1991; Harrington and Swan, 1987; Scanlon, 1980a/b). Four major types of variables were examined: socio-demographic, economic, supply of health services, and presence of a PAS program. The dependent variable used to measure nursing facility utilization was the number of Medicaid nursing facility recipients per 1,000 aged 65 and older. See Table 3.2 and Table 3.3 for a list of independent variables.

Two different measures of PAS were used. Based upon a typology of programs presented in Chapter 4, programs which rated as more than 'minimum' programs (paper review of applicant information collected by a private provider) were considered PAS for the first analysis. These programs were further distinguished between those PAS programs which screened only Medicaid eligibles and expected Medicaid eligibles and those which screened all applicants, including private pays. These programs were separated because the dependent variable focuses on Medicaid nursing facility utilization. If excess demand were present in a state, diversion of private pay applicants might lead to an increase in Medicaid residents because, presumably, all private pay demand would be satisfied and the diversion of one private pay applicant should lead to an admission of a Medicaid eligible (Scanlon, 1980a,b).

Thus, programs screening Medicaid eligibles and those expected to become Medicaid eligible within 6 months or less were the focus of this first analysis and were expected to be negatively associated with Medicaid nursing facility utilization. Three separate cross-sectional analyses were conducted using this measure of PAS for the years of 1990, 1991, and 1992.

The second set of analyses were based on scores from the stringency table described earlier under Research Aim II. Four sets of regression analyses were run using scores from the stringency table. In the first analysis, PAS was treated as a continuous variable using individual state stringency scores ranging from 0 (least stringent) to 6 (most stringent). Three separate analyses were also conducted using three different dichotomous PAS variables based upon scores from the stringency table: (1) states with scores of six or higher; (2) states with scores of five or higher; and (3) states with scores of four or higher. Data from 1992 were used for the analyses.

Socio-demographic Factors

- Percent Aged 85+: Nursing facility utilization increases significantly for those 85 years of age and older (Kemper and Murtaugh, 1991; Harrington and Swan, 1987; Scanlon, 1980a). The percent of a state's population over the age of 85 should increase utilization.

- Percent Metropolitan: Previous research has found differences in the utilization of nursing facility services between rural and urban areas (Dunlop, 1976; Chiswick, 1976). Difficulties in providing community-based services in rural areas and a lack of supply may contribute to increased nursing facility utilization. Thus, states with a high percentage of their population living in metropolitan areas should have lower utilization rates than more rural states.

Economic Factors

- Income Per Capita: Some researchers have found increases in personal income leads to higher private pay nursing facility utilization rates and lower Medicaid utilization rates because of consumers' increased ability to purchase care privately and the preference of nursing facility operators to accept private pays first (Shapiro and Tate, 1985; Scanlon, 1980; Chiswick, 1976). Others found decreased private pay utilization rates (Headen, 1990), presumably due to increased ability to purchase community-based services privately and delay institutionalization. It is hypothesized personal income per capita increases private pay utilization and decreases Medicaid utilization.

- Percent Unemployed: Unemployment decreases the ability to pay for in-home services and increases Medicaid enrollment. Harrington and Swan (1987) found a strong positive association between percent of a state's population that is unemployed and Medicaid nursing facility utilization. Thus, the percent unemployed in a state should lead to increased utilization rates.

Health Service Supply

- Nursing Facility Beds Per 1,000 Aged 65+: The supply of nursing facility beds has been found to be a strong predictor of Medicaid utilization (Swan and Harrington, 1987; Scanlon, 1980a). Increases in supply should lead to increases in utilization.

- Medicare Nursing Facility Recipients Per 1,000 Population: Utilization of skilled nursing services by Medicare recipients varies across states and in rural vs. urban areas (Dubay, 1992). Because Medicare pays a higher rate than Medicaid, states with higher numbers of Medicare nursing facility recipients per 1,000 population should have lower Medicaid recipients per 1,000.

State Policy Factors

- PAS: Should decreased Medicaid nursing facility utilization.

TABLE 3.2

ANALYSIS IIa:
PAS AND MEDICAID NURSING FACILITY UTILIZATION

DEPENDENT VARIABLE
Medicaid nursing facility recipients per 1,000 aged 65+

INDEPENDENT VARIABLES	Impact on Utilization
Socio-Demographic Factors	
% Aged 85 and Over	+
% Metropolitan Population	-
Economic Factors	
Income Per Capita	-
% Unemployed	+
Public Policies	
PAS for Medicaid	-
PAS for Private Pay	+
Health Care Services	
NF Beds per 1,000 Aged 65+	+
Medicare SNF Recipients Per 1,000	-

TABLE 3.3

ANALYSIS IIb:
PAS AND MEDICAID NURSING FACILITY UTILIZATION

DEPENDENT VARIABLE
Medicaid nursing facility recipients per 1,000 aged 65+

INDEPENDENT VARIABLES	Impact on Utilization
Socio-Demographic Factors	
% Aged 85 and Over	+
% Metropolitan Population	-
Economic Factors	
Income Per Capita	-
% Unemployed	+
Public Policies	
PAS Stringency Score	-
Health Care Services	
NF Beds per 1,000 Aged 65+	+
Medicare SNF Recipients Per 1,000	-

ANALYSIS PLAN

Descriptive PAS Program Structure Data

A cross-sectional longitudinal database of state by state data for each year of the study period (1978-1994) was used to examine trends in PAS program structure. A total of 867 cases, constituting data from 51 states over a 17 year time period, was analyzed. Descriptive statistics for all variables of interest were generated to analyze comparisons among state PAS programs. Cumulative frequencies for each year of the study period for all variables of interest will be computed to analyze changes in program structure over time. Descriptive statistics were generated by the statistical program SPSS for Windows.

Research Question I: Characteristics of States with PAS

A logistic regression analysis was conducted to determine the socio-demographic, economic and political characteristics of states associated with having PAS in 1991. Logistic regression was used because the dependent variable, implementation of statewide PAS, was dichotomous. Data from 1991 were used because that was the most recent year in which a full set of data was available. Because the political variables were unavailable for the District of Columbia, data from 50 states were used in the analysis. Two-tailed tests of significance were used for all variables.

Independent variables were also tested for multicollinearity, a condition where two or more independent variables are correlated (Lewis-Beck, 1980).

Independent variables were tested for multicollinearity by examining their degree of association using Pearson Product Moment Correlation coefficients. Variables with a measure greater than .70 indicate potential multicollinearity (Menard, 1995). Multicollinearity among independent variables was also tested by examining the *Tolerance* and the *Variance Inflation Factor (VIF)*. A VIF level of 1 shows there is no redundant information in the other independent variables. Glantz and Slinker (1990) suggest VIF levels exceeding 10 indicate serious multicollinearity problems, while levels of 4 or higher warrant further investigation. Tolerance levels are the reciprocal of VIF levels (ibid.). Thus, a general rule is that tolerance levels at .10 or lower indicate strong multicollinearity, while those less than .20 may indicate collinearity and should be examined closer (Menard, 1995). None of the independent variables were found to be highly correlated.

The regression equation used in the model was:

PAS = presence of statewide PAS program

$$PAS = a + X + E$$

where:

X = socio-demographic, economic, political, and health service variables believed to influence Medicaid nursing facility utilization;

E = random error terms.

Research Question II: Relationship between PAS and Medicaid Nursing Facility Utilization

Two-Stage Least Squares (2SLS) regression analyses was used to examine the relationship between the presence of a statewide PAS program and Medicaid nursing facility utilization. 2SLS regression can be used when an independent variable is endogenous and is correlated with the theoretical error terms of the dependent variable (Norusis, 1994). It was hypothesized bed supply was endogenous to Medicaid nursing facility utilization. If OLS regression analysis was used, the coefficient estimates would be biased because a part of the unexplained variance in Medicaid nursing facility utilization would be wrongly attributed to bed supply. 2SLS allows the bed supply variable to be replaced with a constructed variable by using all independent variables and additional 'instrumental variables' known to influence bed supply in a first stage regression model to construct a variable similar to bed supply that is not correlated with the error term of the dependent variable in the second stage. The second stage uses this constructed variable, along with all other independent variables, to measure their relationship with Medicaid nursing facility utilization.

In addition to having a theoretical reason to suspect beds were endogenous, a Hausman test was done to test for endogeneity (Maddala, 1988). Test results found beds should be treated as endogenous. An additional concern was that PAS may be endogenous as well. Results of a Hausman test for PAS indicated PAS

was not endogenous. Thus, only bed supply was treated as endogenous in the two stage least squares regression.

The same threats inherent in regression analysis discussed for Research Question I were addressed for Research Question II. Independent variables were tested for collinearity using the same procedures discussed previously. None were found to be highly correlated.

As discussed earlier, two sets of analyses were conducted using different measures of PAS. For the first regression analysis, three separate cross-sectional 2-stage least squares regressions were conducted for the years of 1990, 1991, and 1992. These years were used because they were the most recent years in which a full set of data was available. Data for the dependent variable, number of Medicaid nursing facility recipients per 1,000 aged 65 and older, were missing for Rhode Island in 1991 and 1992, while data for Arizona were missing for 1990. Thus, data for 50 states were used for each of the three years in the analysis. One-tailed significance tests were done for PAS, two-tailed for the other variables.

The second set of regression analyses, which used data from the stringency table to create different measures of PAS, were forced to use 1992 data for all variables except for the stringency score. Stringency scores from the stringency table reflect state screening activities for 1994. Because the most recent PAS survey collected data for the 1993 to 1994 time period, stringency scores were modified to reflect 1993 data. Only the score for Ohio had to be modified, changing from a score of 5 to 1. Although it would have been preferable to use data from the same year,

socio-demographic, economic, and bed supply data hold relatively constant over the course of a year, the results of the analysis should be similar if a PAS stringency score from 1992 had been available.

The regression equation used in the model was:

$$MNFU\_65 = a + BEDS^* + X + E \qquad (1a)$$

where:

MNFU_65 = Medicaid nursing facility recipients per 1,000 elderly;

$$BEDS^* = a + Y + E \qquad (1b)$$

where:

BEDS* = estimated value for nursing facility beds per 1,000 aged 65 and older constructed from all exogenous variables in (1a) and instrumental variables in (1b);

X = socio-demographic, economic, policy, and health service variables believed to influence Medicaid nursing facility utilization;

Y = all exogenous variables included in (1a) and instrumental variables representing factors affecting bed supply;

E = random error terms.

STUDY LIMITATIONS

The primary limitation of this study is that only one year of data was used to examine both research questions. The number of variables needed for the theoretical models was high relative to the number of cases analyzed. As a result, the

number of variables included in the analysis had to be limited. For example, the model does not include the supply of community-based long term care services or Medicaid reimbursement rates, both of which have important influences on the nursing facility market. Other analytic techniques may have been able to more effectively examine the effect of PAS on Medicaid nursing facility utilization, most notably a pooled analysis. A pooled analysis would have allowed a number of years of data for each state to be analyzed simultaneously, increasing the number of cases and allowing more variables to be analyzed.

Another study limitation relates to the state stringency scores used to examine the relationship between PAS and Medicaid nursing facility utilization. As discussed earlier, 1993 stringency scores had to be used with 1992 data because of data limitations. It would have been preferable to use 1993 data with the 1993 stringency score, but such data were not available.

Using only one year of data was especially problematic for the first research question, characteristics of states with PAS in 1991. States which implemented their programs during the early or middle 1980s may have experienced significant changes by 1991 in some of the independent variables used in the theoretical model. While many characteristics remain relatively steady over a 5 to 10 year time period, they are still subject to change, especially political characteristics, and therefore no inferences can be made regarding causal factors associated with PAS implementation.

OTHER DATA SOURCES

Data on socio-demographic, economic, health service supply, and policy variables used in the regression analyses were obtained from Charlene Harrington's, Ph.D. (Principal Investigator) *Long Term Care Programs and Market Characteristics* project. These data were collected from both primary sources and a variety of secondary sources.

Socio-demographic Variables

Secondary data on the percent of the population 65 and 85 and the total population for each state were collected from the Bureau of the Census (USBOC, 1979-1991). The percent of women in the labor force came from the Bureau of Labor Statistics (USBOLS, 1979-1991). Data on the percent of a state's population that is nonwhite and the percent living in metropolitan areas are from the US Bureau of the Census (USBOC, 1979-91).

Political Variables

When the House and Senate of a state's government were the same, they were coded as 0, and when different parties occupied the House and Senate, they were given a code of one. Barone and Ujifusa's The Almanac of American Politics (1980-1994) was the data source for political party data. The measure of state liberalism also came from The Almanac of American Politics, where the liberal ratings determined by the Americans for Democratic Action of the two U.S. senators from

each state were averaged together. Data on the percent of a states elderly population belonging to the American Association of Retired Persons (AARP) were obtained from the organization.

Economic Variables

The Bureau of Economic Analysis in the U.S. Department of Commerce (USDOC) was the source of data for personal income per 1,000 state population. The percent unemployed in a state came from the U.S. Bureau of Labor Statistics (USBOLS). The Advisory Commission on Intergovernmental Relations (ACIR) provided data on state tax capacity and tax effort.

State Policy Variables

Primary data for certificate-of-need/moratorium programs and bed supply were collected directly from state officials in five separate telephone surveys in 1983, 1986, 1989, 1992, and 1994 for the 1978-1994. Structured questionnaires were used to collect data from state officials from the principal state agency responsible for each of the different data sets. If a state had either or both a CON and/or a moratorium program in place for nursing facility services, they were coded as yes (1). If neither a CON or moratorium was in place for nursing facility services they were coded as no (0).

Health Care Services

Supply of licensed nursing facility beds were collected directly from state officials in five separate telephone surveys in 1983, 1986, 1989, 1992, and 1994 for the 1978-1994. Structured questionnaires were used to collect data from state officials from the principal state agency responsible for each of the different data sets. The number of office-based physicians for each state was collected from American Medical Association (1979-1991) annual reports and standardized by each state's population. Medicare nursing facility recipient data were obtained from HCFA Medicare data and were standardized for each 1,000 state population using Bureau of Census data.

CHAPTER 4: FINDINGS

CHARACTERISTICS OF STATE PAS PROGRAMS

This chapter examines the characteristics of state preadmission screening programs in all 50 states and the District of Columbia (hereafter referred to as a state). The descriptive data focus primarily on PAS screening data in 1994. Four major areas are examined: (1) the screening process; (2) target population; (3) assessment forms; (4) and program outcomes. A table of key PAS program variables is developed to provide a measure of program stringency and a typology of programs is constructed to facilitate comparative analysis of state PAS program structure. A subset of data are presented to describe general program changes during the 1978-1994 period, but the historical data are not as detailed as the data for 1994.

The socio-demographic, economic, and political characteristics of states with PAS in 1991 are examined in a logistic regression analysis. The relationship between PAS and Medicaid nursing facility utilization is examined by testing a utilization model including state level socio-demographic, economic, and health service supply characteristics known to affect nursing facility utilization use in a two-stage least squares regression analysis. One analysis uses a dichotomous measure of PAS indicating presence of a statewide PAS program, while the other analyses use various measures of PAS from a constructed stringency table.

SCREENING PROCESS

TYPE OF STAFF CONDUCTING ASSESSMENTS

A major characteristic of state PAS programs is who conducts applicant assessments. In other words, who collects the information related to an applicant's health status upon which eligibility for nursing facility placement is made. This study focused on the organizational affiliation of the assessment staff. Four types of assessment staff were identified: state staff, contract agency staff, private providers, and "combination". The latter category may include a combination of state staff and private providers or contract agency staff and private providers.

Assessments Completed by Private Providers

Twenty-five states used private providers to conduct all applicant assessments (Table 4.1). Private providers used by states to conduct assessments included personal physicians, home health nurses, hospital discharge planners, and nursing facility staff. The exact mix of private providers which performed assessments varied from state to state. Nine states used nursing facility staff to complete all applicant assessments: Alabama, Arkansas, Iowa, Kentucky, Michigan, Nebraska, Oklahoma, Vermont, and Wisconsin. Other states, such as Connecticut, did not allow nursing facilities to ever conduct patient assessments.

Hospital discharge planners were an integral part of many programs, conducting all or some applicant assessments in 15 of the 25 states. Seven of these states used hospital staff exclusively to conduct assessments for hospital-based

applicants. Most states allowed any licensed provider, regardless of organizational affiliation, to conduct applicant assessments. For example, California and New Mexico had nursing facility staff conduct assessments for community-based applicants and allowed hospital discharge planners or nursing facility staff to conduct assessments for hospital-based applicants.

Assessments Completed by State Staff

Eight states used state staff to conduct all applicant assessments: Arizona, Delaware, Maryland, New Jersey, Nevada, South Dakota, Washington, and Wyoming (Table 4.1). While a number of other states used state staff along with contract agency staff or private providers to complete applicant assessments, these states were unique because they used state staff to conduct all assessments.

Assessments Completed by Contract Agency Staff

Five states used contract agency staff to conduct applicant assessments: Indiana, Montana, Oregon, Pennsylvania, and South Carolina (Table 4.1). If a state used a combination of state staff and contract agency staff to conduct assessments, then they were coded as having assessments completed by contract agency staff. Only Pennsylvania and Indiana used contract agency staff to conduct all applicant assessments, regardless of referral or payer source. Both states used Area Agency on Aging staff to conduct applicant assessments. In South Carolina, approximately 70% of assessments were completed by state staff, while the remaining 30% were done by

contract agency staff. Montana used state social workers to conduct assessments, but if an applicant had a complex medical condition, then a registered nurse from a contract agency would be sent to complete the assessment. Oregon used state or contract agency staff to conduct assessments, but it is not known what percent or under what conditions contract agency staff were used.

Assessments Completed by a Combination Assessment Staff

Thirteen states used a combination of providers and contract agency staff or providers and state staff to conduct applicant assessments: Connecticut, the District of Columbia, Florida, Illinois, Kansas, Massachusetts, Maine, Minnesota, Missouri, New York, Ohio, Rhode Island, and Virginia (Table 4.1). The type of staff these states used to conduct applicant assessments were often based upon the applicants' referral source. For example, many states used state or contract agency staff to conduct assessments for community-based applicants and hospital staff to conduct assessments for all or some hospital-based applicants. Seven states used this strategy to complete assessments: Illinois, Kansas, Maine, Minnesota, Ohio, Rhode Island, and Virginia.

States which used state or contract agency staff to conduct assessments for community-based applicants, but hospital staff for hospital-based applicants, indicated assessment responsibilities were divided this way for two reasons: (1) to facilitate the discharge of patients out of hospitals; and/or (2) they believed community-based applicants were usually less impaired and had the greatest potential to remain in the

community with the assistance of in-home services. One exception was the District of Columbia, which used district staff to conduct assessments of hospital-based applicants and private providers for community-based applicants. The District of Columbia reported using district staff to conduct hospital-based assessments in order to have the most qualified people conduct assessments for those applicants with the most complex medical conditions.

Applicants were sometimes screened by different types of staff within a given referral source. This occurred in Illinois, Minnesota, Connecticut, and Massachusetts. PAS programs in Illinois and Minnesota were administered by individual counties, which had the option of using hospital-discharge planners to conduct applicant assessments. About half of all hospital-based assessments in Illinois were completed by hospital staff, while approximately 65% of hospital-based assessments in Minnesota were completed by hospital staff. In both states, state staff completed the remaining hospital and community-based screens. In Connecticut and Massachusetts, if community-based applicants were receiving care from a visiting nurse at the time of application, then the visiting nurse would conduct the assessment. If the applicant was not receiving care from a visiting nurse, state staff would do the assessment. Hospital-based assessments were completed by hospital discharge planners in both states.

Florida and Missouri used state staff to conduct assessments for only those applicants with a reasonable chance of remaining in the community, while private providers conducted assessments for highly impaired applicants with a clear need for

nursing facility services and little chance of remaining at home. Each state used a different strategy to target the use of state staff to conduct assessments. Florida required all applicants to have a physician fill out a two page assessment form and send it to the state where it was reviewed by a state employed physician and nurse. Applicants with significant care needs and little hope of remaining in the community were determined medically eligible for nursing facility care. Applicants who had a chance of remaining in the community with in-home services received a comprehensive assessment conducted by state staff. The majority of applicants received this comprehensive assessment.

In Missouri, all applicants were required to call a state long term care office and answer 23 questions in consultation with a nurse to determine the extent of applicant care needs. If an applicant had low care needs and was interested in remaining in the community, state staff were sent out to do a comprehensive in-person assessment to determine if community placement was feasible. If the applicant was highly disabled, or declared no interest in remaining in the community, then an "R" number was given to the applicant indicating community-based services had been offered as an alternative to nursing facility care. For these applicants, a physician was required to complete a brief assessment form and send it to state staff who then determined eligibility. The majority of applicants received the comprehensive assessment.

Average Length of Time to Complete an Assessment

Respondents were asked to estimate the average length of time it took to complete an assessment. Thirty-three states were able to offer estimates. There was considerable variation in the length of time it took to complete assessments. Assessment times ranged from 7 minutes to 300 minutes (5 hours). The mean assessment time was 78 minutes, while the median assessment time was 60 minutes. Seven states reported the average length of time it took to complete an assessment was 60 minutes, six states reported 120 minutes, four reported 30 minutes, and three reported 180 minutes. See Table 4.2 for summary data.

HOW ELIGIBILITY IS DETERMINED

A second characteristic of state PAS programs is how eligibility for nursing facility placement is determined. If the person who collected applicant health information had the authority to determine medical eligibility for nursing facility placement, then that state was considered as conducting its screens in-person. In most cases, if the assessment was conducted by state or contract agency staff, then they would also determine eligibility for nursing facility placement. If a private provider, such as a hospital discharge planner or nursing facility staff conducted the assessment, then they usually relayed this information to state or contract agency staff who then determined eligibility for nursing facility placement.

In 1994, 26 states determined eligibility for nursing facility services by a paper review of applicant assessment for all applicants; 6 states determined eligibility by a telephone review, and 19 determined eligibility in-person (Table 4.3).

Paper Reviews

A paper review of information was the most common method for determining eligibility, with 26 states using this method. In most states, a private provider would conduct the applicant assessment and then eligibility would be determined by a review of assessment forms by state or contract agency staff. Five states were exceptions: Indiana, Kansas, Maine, Florida, and Rhode Island. These 5 states used state or contract agency staff to conduct all or the majority of applicant assessments, but determined eligibility by a paper review. Kansas, Maine, and Rhode Island had state or contract agency staff conduct some applicant assessments, but had other state or contract agency staff determine eligibility by a paper review. Area Agency on Aging staff in Indiana conducted all assessments, but sent assessment data to state staff for a paper review. In Florida, state employed nurses conducted assessments, but brought the forms back to regional offices where they determined eligibility in consultation with state employed physicians.

Telephone Reviews

Six states determined eligibility over the phone for all applicants: Georgia, Iowa, Kentucky, North Carolina, North Dakota and Utah. In Kentucky, nursing

facilities assessed applicants and relayed their health information over the telephone to a nurse at a professional review organization (PRO), who then determined eligibility for nursing facility placement. On-site reviews were conducted later during monthly continuing-stay reviews by PRO nurses. In North Dakota, any health care professional could conduct the assessments and relayed this information to a nurse reviewer employed by a contract agency who then determined eligibility for placement. Utah and North Carolina conducted initial reviews over the telephone with nursing facility staff who subsequently mailed the assessment information to the state where a paper review was done. All of these states used contract agencies to determine eligibility except for Utah.

In-Person Reviews

Nineteen states determined eligibility for nursing facility placement in-person. A state was coded as determining eligibility in-person if the majority of applicants had their eligibility determined this way. Generally, those states that conducted in-person PAS reviews were also states that used state or contract staff to conduct the assessment. Three states were exceptions: New York, Virginia, and Massachusetts. In New York private providers, such as home health nurses or physicians, were trained and licensed by the state to conduct assessments and make placement decisions. Hospital-based applicants in Virginia were assessed by discharge planners who also determined eligibility. Similarly, Massachusetts gave

hospital discharge planners the authority to conduct applicant assessments and determine their eligibility for nursing facility placement.

Fourteen of the nineteen states determined eligibility in-person for all applicants coming from both hospital and community-based settings, while the other five states determined eligibility for some applicants by other means as well: the District of Columbia, Illinois, Massachusetts, Minnesota, and Missouri. These states were coded as screening applicants in-person because the majority of applicants received in-person screens. In some Minnesota counties, hospital discharge planners conducted assessments and discussed the results over the phone with state screening staff to determine eligibility. These screens were conducted only for highly impaired individuals in clear need of nursing facility care. Telephone screens in Massachusetts were conducted for community-based applicants receiving care from a visiting nurse at the time of their application. The majority of applicants in Missouri received a comprehensive assessment conducted by state staff who also determined eligibility in-person, while highly impaired applicants were assessed by private providers and had their eligibility determined through a paper review by state staff. Illinois had approximately 50% of its hospital-based screens determined by a paper review of information collected by a hospital discharge planner, while the remainder were determined in-person by state staff. Finally, the District of Columbia determined eligibility in-person for hospital-based applicants, while community-based applicants were screened through a paper review by state staff.

Program Administration: Contract Agency

A substantial number of states, twenty, assigned all or part of their PAS responsibilities to contract agencies. The types of contract agencies included Professional Review Organizations, Area Agencies on Aging, specially licensed private providers, and private home care corporations. Of the 20 states using contract agencies to administer PAS in 1994, five used for-profit contract agencies: Kentucky, New Mexico, North Carolina, North Dakota, and Texas. None of the five for-profit contract agencies conducted applicant assessments, but only reviewed assessment information collected by private providers.

WHEN PAS IS CONDUCTED

A third characteristic of state PAS programs is whether screens are completed prior to or after admission to a nursing facility. A state was coded as requiring the PAS assessment "prior to admission" if all screens were completed prior to admission for both hospital and community-based applicants. For most states, all screens were either completed prior to admission or after admission. Some states, however, completed approximately 75% of all screens prior to admission. These states were not coded as screening prior to admission. Other states reported conducting a very small percentage of screens post-admission, usually for emergency placements. These states were coded as screening prior to admission.

In 1994, 33 out of 51 programs (67%) required all screens to be completed prior to nursing facility admission (Table 4.4). Two states screened clients differently

depending upon their referral source: Pennsylvania and South Dakota. In both these states, hospital referrals to nursing facilities were sometimes screened after admission to a nursing facility. These states also conducted in-person assessments of nursing facility applicants using state or contract agency staff. In an attempt to screen applicants prior to admission, both states prioritized hospital-based assessments to be conducted before any pending community-based assessments. Despite this priority system, some screens were completed after admission.

Other states which used state or contract agency staff to conduct PAS also reported difficulty in completing screens prior to nursing facility admission for hospital-based applicants due to the need for hospitals to discharge them in a timely manner. Some states, such as Illinois and Minnesota, had historically used state or contract agency staff to conduct assessments, but have recently allowed hospital discharge planners to conduct assessments and then relay this information to state staff who determined eligibility. This allowed for quicker patient discharge, ensured screens would be completed prior to nursing facility admission. It has also allowed screening staff more time to assess other applicants and prepare care plans. Some hospital staff will conduct parts of the preadmission assessment before state staff show up in order to facilitate patient discharge.

TARGET POPULATION

Because this study focused on how states determined eligibility for nursing facility placement for Medicaid applicants, all states in this study required Medicaid

applicants to be screened. Increasingly, state Medicaid agencies have also been concerned about the admission of private pay patients into nursing facilities because some of these individuals spend their resources and then apply for Medicaid eligibility, resulting in increased Medicaid expenditures. States may also choose to screen private pay applicants in order to increase access for Medicaid applicants under conditions of low bed supply.

States used three different types of strategies to screen private pay applicants: (1) some states screened all private pay applicants; (2) other states provided private pays the option to receive a screen; and (3) some states screened only those expected to become Medicaid eligible within a specified number of days after entering a nursing facility, usually 90 or 180 days. States which screened expected Medicaid eligibles considered them Medicaid eligible at time of admission and denied them placement if they did not meet nursing facility level of care, while states screening private pay applicants could not deny them access to services.

Mandatory Private Pay Screens

Eight states screened all private pay applicants and determined if they met Medicaid nursing facility level of care: Indiana, Kansas, Minnesota, Nevada, New York, Oregon, South Dakota, West Virginia (Table 4.5). These states indicated they screened private pay applicants to either inform them if they would eligible for nursing facility placement if they were Medicaid eligible and/or to offer community-based services as an alternative to nursing facility placement.

Indiana was particularly active in attempting to keep private paying individuals who did not need nursing facilities care out of nursing facilities. All private pay applicants were screened and given a level of care determination. If the private pay applicant was not medically in need of nursing facility care, or refused to have a preadmission screen, but still entered the facility, Indiana penalized those individuals who become financially eligible for Medicaid within one year of placement by withholding Medicaid per diem for the remainder of the year. This procedure has been appealed and the state has reversed the PAS decisions for some, but no litigation has resulted from this policy.

Private pay applicants in New York were screened because the state's Medicaid payment rates were based on the total number of Medicaid and private pay residents at each casemix level. Higher numbers of private pay residents with low care needs decreased the overall Medicaid reimbursement rate to the facility. The New York casemix reimbursement system was designed to encourage facilities to admit patients with high care needs and to reduce admissions for patients with light care needs. New York was the only state that reported the linking of PAS screening for private pay residents with state Medicaid reimbursement rates.

Four states reported screening private pay applicants to notify them of alternatives to nursing facility placement. Oregon, Nevada, South Dakota, and Minnesota had Medicaid waivers and/or other state funded programs which actively attempted to channel applicants into community care settings and away from nursing homes. In Minnesota, if a nursing facility accepted a private paying person without

PAS assessment, then the private paying person had the right to refuse to pay the nursing home for care provided until a PAS screen had been conducted. Oregon could fine nursing facilities $1,000 if they admitted any patient before they received a screen. Interestingly, North Dakota used to screen private paying individuals from 1988-1991 in an attempt to offer community care alternatives for all applicants to nursing homes. This program, however, was opposed by the nursing home industry and eliminated in 1991.

Kansas and West Virginia screened private pay applicants and made a level of care determination, but did not coordinate or fund community-based services for applicants. The PAS review was conducted to help private pay applicants know if they would be medically eligible if they spenddown to Medicaid. Kansas reported this helped decrease private pay admissions. West Virginia began screening private pay applicants when the PASARR screening requirements were implemented in 1989 in case a PASARR Level II screen was needed. Starting in 1993, the medical and functional status of private pay applicants was reviewed whether or not a PASARR Level II screen was needed and applicants notified if they met Medicaid level of care criteria.

Two states required private pay applicants to be screened, but did not determine if they were medically eligible for Medicaid nursing facility services: Louisiana and Georgia. These states screened private pay applicants in order to have this information available in case they spenddown to Medicaid after they enter a nursing facility. Because they did not determine eligibility for services and notify

applicants of the outcome, they were not considered states which screened private pay applicants.

Optional Private Pay Screens

Ten states reported screening private pay applicants if requested by the applicant: Arizona, Delaware, Florida, Illinois, Massachusetts, Montana, Ohio, Pennsylvania, Washington, and Wyoming (Table 4.5). States reported private pay applicants often requested a preadmission screen to determine if they would meet Medicaid nursing facility level of care if they exhausted their resources. In addition, many programs coordinated state funded or private non-profit services for applicants interested and capable of remaining at home with the assistance of community-based services, but who were not financially eligible for Medicaid. For these programs, PAS provided an information and referral service for private pay applicants.

It is difficult to measure the impact of these programs on private pay admissions since most were unable to report the number of private pay screens or their outcomes during a given year. Few private pays requested preadmission screens in Delaware, while Massachusetts reported screening more than half of all private pay applicants. In the past, nearly twenty percent of all preadmission screens conducted in Florida were for private pay applicants, but staffing constraints coupled with an increase in the number of Medicaid applicants needing screens, had greatly decreased the number of private pay screens, although this may change in the future as additional funds had been allocated to the program to hire more screening staff.

Expected Medicaid Eligibles

Six states screened expected Medicaid eligibles (Table 4.5). New Jersey, Virginia, and Connecticut all required nursing facility applicants expected to become Medicaid eligible within 180 days after entering a nursing facility to undergo a preadmission screen. Nursing facility placement was denied for those who did not meet Medicaid medical criteria. Similar rules were in place in Utah and Oregon, which screened all applicants expected to become financially eligible for Medicaid within 90 days after entering a nursing facility, while Illinois screened those expected to become Medicaid eligible within 60 days after entering a nursing facility. Oregon was the only state which screened all private pay applicants and denied placement to expected Medicaid eligibles.

Were Private Pay Applicants Charged for their Preadmission Screens?

No states reported charging private pay applicants for the cost of the preadmission screen.

States Expected to Screen Private Pay Applicants in the Future

The screening of private pay applicants was an issue of concern for many states. When asked whether they anticipated screening private pay applicants in the future, seven states reported this was being considered: Iowa, Illinois, Florida, Montana, Ohio, Maine, and Pennsylvania. Of these six, only Ohio is known to have

subsequently implemented private pay screens in 1995. Maine enacted legislature in 1993 to conduct a demonstration project in one rural and one urban part of the state to screen private pay applicants. The demonstration was developed to provide private pay applicants with information regarding: (1) medical eligibility for nursing facility level of care; (2) the availability and feasibility of community-based options; (3) the relative cost of care in a nursing facility versus home/community-based care; and (4) a proposed plan of care (Dushuttle et al., 1995). Maine had planned to implement mandatory screening for private pay applicants by the end of 1995.

ASSESSMENT FORMS

The type of assessment form used by states to collect and organize applicant medical, functional and, for some states, social information, is a key part of the preadmission screening process as eligibility for nursing facility placement is made from the data collected on these forms. This section provides the following information about state assessment forms: (1) extent of PAS client information collected on the forms; (2) use of the same assessment form statewide; (3) use of the Minimum Data Set to determine eligibility; (4) use of a point system to determine eligibility; and (5) development of universal screening tools.

Scope of PAS Client Information Obtained

The amount and type of client information collected on assessment forms to determine need for nursing facility placement varied substantially from state to

state. The scope of client information collected by state PAS programs was rated into three categories: minimum, moderate, or extensive (on a 0-2 point scale). Judgment for rating the scope of each state assessment instrument was made based on the amount and quality of data requested on the assessment form.

States classified as collecting a minimum amount of assessment information generally included the following (Chart 1): the clients' primary diagnoses, information on medications, and only a cursory amount of data about client functional and mental status. States collecting a moderate amount of client information, included data on activities of daily living (ADLs) and a variety of other health indicators in addition to the minimum data. Some of these included examination of a patient's skin condition, nutrition/appetite, sociability, continence and restorative potential. The severity of conditions, and not just their existence, was often examined as well. States classified as collecting extensive information included the above information in greater detail and information such as an individual's ability to perform instrumental activities of daily living (IADLs) (such as shopping and cooking). These states also included information on the amount and type of caregiver and social support available, as well as data on the individual's home environment and the amount and type of community-based services needed and received.

Based upon this system of classification, 4 states collected a minimal amount of information, 31 a moderate amount, and 16 an extensive amount of information in 1994 (Table 4.6).

Statewide Assessment Form Use

The vast majority of states used the same assessment form for all applicants on a statewide basis regardless of payer or referral source. Only eight states did not use the same assessment form statewide: Idaho, Kentucky, Massachusetts, Minnesota, North Dakota, Ohio, Pennsylvania, and Rhode Island. Many of these states often used abbreviated assessment forms for hospital-based applicants in order to facilitate their discharge from hospitals. This was the case for: Massachusetts, Ohio, Pennsylvania, and Rhode Island. In Pennsylvania, hospital-based applicants could be assessed using a 16 page form instead of the standard 24 page form, while in Massachusetts, the length of the assessment form decreased from 17 to 4 pages. Assessment staff in Ohio had the option of using an abbreviated form (the Level of Care assessment) for "likely nursing facility candidates", or a more comprehensive form for applicants who may be able to remain in the community with the assistance of Medicaid waiver funded in-home services. Hospitals also had the option to use their own assessment form.

In Idaho, physicians had a choice of using one of two assessment forms. Both forms were very similar in content and structure and there was no apparent rationale for the state's use of two forms. A standardized assessment form was not used in either Kentucky and North Dakota. Both states conducted telephone reviews between contract agency staff and nursing facility staff. Individual counties in Minnesota were allowed to use their own assessment instrument, although most used the form developed by the state.

Use of the Minimum Data Set to Determine Eligibility

Eight states reported using the Minimum Data Set (MDS) by itself, or in conjunction with a state screening instrument, to determine eligibility for nursing facility placement: Alabama, Arkansas, California, Nebraska, Oklahoma, Utah, Vermont, and Wisconsin. Since federal rules dictate the MDS does not have to be completed until 14 days after admission, all of these states screened applicants after admission except Utah, which conducted an initial phone review prior to placement in the facility.

Some states, such as California and Vermont, used marked sections of the MDS and reviewed only those sections to determine eligibility. The other six states used the MDS in conjunction with a brief assessment instrument to determine eligibility. Although Maine and South Carolina did not use the MDS, their assessment instruments were modeled after the MDS. The form used by Maine was very similar to the MDS not only in terms of content, but also layout, while the South Carolina form included about 75 percent of the same information as the MDS. Both states allowed nursing facilities to use data from their PAS form to assist them in completing the MDS.

States Using a Point System to Determine Medicaid Eligibility

Most states determined eligibility using the professional judgment of nurses and/or physicians. In an attempt to make the eligibility determination process more

objective, some states used a point system to determine eligibility for nursing facility services. Point systems assign a certain number of points for certain care needs and their severity, especially level of ADL and IADL impairment. In order to be medically eligible for nursing facility services, applicants must reach a predetermined number of points set by the state. Eight states reported using point systems: Arizona, Delaware, Illinois, Missouri, Maine, Nebraska, Oregon, and Wyoming. Some states reported using specific criteria for nursing facility eligibility, such as a minimum number of ADL's and/or IADL's to qualify. These were not considered point systems.

While it is beyond the scope of this research to thoroughly analyze methods used by states to assign points to applicant levels of impairment, variation in the total number of points needed to be medically eligible for nursing facility placement indicates great variation in methods used by states. The minimum score to gain nursing facility admission in Arizona was 60 points, while 13 points were needed in Wyoming, and 29 points in Illinois. In Illinois, ADL's and IADL's were rated along a 0-3 point scale based upon an applicant's level of impairment and a 0-3 point scale based upon level of unmet need for care. While a total of 29 points were needed to be eligible, a minimum of 15 points must be based on the level of impairment score. In Arizona, some conditions were given more weight than others. Most ADL's were rated along a five point scale based on degree of impairment and then multiplied by 3.0, while urinary incontinence was rated along a four point scale of impairment and multiplied by .50.

Although not asked directly, two states reported using computers to compute eligibility scores: Oregon and Delaware. Delaware used a quasi-point system where different conditions were rated low, medium or high risks. State screening staff entered assessment information into a computer which then computed eligibility scores. The respondent reported the computer was quicker and alleviated worker error in computing scores. In Oregon, assessment data were entered into a computer which collapsed data elements using algorithms to compute a priority number on a scale of 1 (1=most impaired) to 17 (17=needs assistance in bathing or dressing) to determine need and allocate services.

Universal Assessment Forms

A common complaint among consumers and providers is the use of multiple forms to determine eligibility for various long term care programs. While they were not asked directly, some states reported they were developing universal screening instruments that would follow the client from care site to care site. Data provided on these types of forms may be used to determine eligibility for a variety of publicly funded long term care programs and also serve as an information tool for every provider who subsequently cared for the patient. South Carolina, Virginia, Rhode Island, and New York all reported to be developing universal screens. New Jersey is already using a comprehensive screen to determine applicant care needs and eligibility for a variety of long term care programs.

Rhode Island reported developing a uniform comprehensive screening instrument in consultation as part of their Community Options Program for the Elderly (COPE); a demonstration project designed to improve the delivery of long term care for the elderly by developing a coordinated and integrated home and community care system. The instrument was developed in part due to consumer complaints about multiple forms and interviews, family frustration with physicians' lack of knowledge about patient health status, and physician desires to be better informed about their patients' functional status and living situation. It is hoped the universal assessment instrument will: (1) eliminate duplication of administrative procedures and paperwork in placement and care planning; (2) create a common language for consumers, providers, care managers, and administrators; and (3) empower consumers, caregivers and providers by providing a comprehensive review of the functional status of each individual; and (4) and provide the framework for a statewide planning database that can help measure outcome-oriented quality assurance measures.

DIVERSION

Respondents were asked if one of the purposes of their PAS program was to divert applicants to community-based alternatives and to describe the role PAS played in this diversion process. Twenty-five states reported they attempted to divert applicants to community-based alternatives. All of these states used state or contract agency staff to conduct all or some applicant assessments. A few states which used

private providers to conduct assessments indicated an informal diversion process took place. Nursing facilities in California and Kentucky, for example, were supposed to ask applicants if community-based services had been considered and to notify applicants of available services in the community. These states were not coded as having a systematic diversion process because no mechanism was in place to ensure community-based options had been thoroughly explored as an alternative to nursing facility placement and because a clear conflict of interest existed between assessment staff and applicants.

Funding sources for community-based services provided or coordinated by PAS programs varied from state only funds to Medicaid waiver, Older Americans Act and Social Security Block Grant funds. PAS staff in South Carolina referred nursing facility applicants only to their Medicaid 2176 waiver program. Programs in Maine and Connecticut had historically only referred medically eligible Medicaid applicants to their waiver program, but recently added community-based services funded by state general funds for applicants who were not medically eligible. In Missouri, the majority of services were funded by Medicaid and Social Security Block Grant funds, while a very small amount came from Medicaid waiver and Older Americans Act money. Community-based services referred by the Pennsylvania PAS program were mostly funded through state general funds generated from the state lottery.

Most programs did not provide or authorize funding of community-based services themselves, but only referred applicants to community-based programs. Once referred to a program, a second assessment was conducted by staff from that

program to determine applicant care needs and feasibility of remaining in the community. For example, PAS staff in Connecticut, Delaware, Kansas, Florida, and Montana determined eligibility for nursing facility placement and were required to notify medically eligible applicants of the Medicaid waiver program and medically ineligible applicants of state funded services. PAS staff in these states assisted interested applicants with scheduling appointments with representatives from the various community-based care programs. Screening staff in Nevada did not assist in scheduling additional assessments, but only informed applicants of various community-based programs such as the state's "CHIPS" waiver for the elderly or other state funded community-based programs and offered them phone numbers for these programs.

A few states had a single access point for all publicly funded long-term care services. Preadmission screening staff in these states held wider responsibilities, such as providing case management and authorizing service use. In Illinois, preadmission screening responsibilities were delegated to Care Coordination Units (Area Agencies on Aging or county agencies), which received a sum of money from the state to determine eligibility for nursing facility services, provide case management, and coordinate and allocate funds for community-based services. Funding for community-based services came from a variety of sources, with only about 17% of funds for Medicaid waiver services. Indiana had a similar program, where AAA's received a sum of money from a variety of sources (Medicaid waiver, state general funds, Social Security Block Grant, and the Older Americans Act) to

manage and allocate among applicants. Some counties in Minnesota had delegated these expanded duties to PAS staff, while other counties had their PAS staff only refer applicants to community-based programs.

Some PAS programs had limited authority, providing case management and authorizing service use for some community-based services, while referring applicants to programs funded by other sources. Screening staff in Maine administered and coordinated state funded community-based services, but referred applicants to a separate Medicaid waiver office. In Virginia, screening staff developed a plan of care, computed cost effectiveness and initiated service referrals for Medicaid waiver services, but only made referrals to state-funded community-based services. Preadmission screening staff in New Jersey and South Dakota developed an initial care plan, but social workers from the various community-based programs provided further assessment and finalized the care plan.

Extra steps were taken by some state PAS programs to ensure applicants were offered community-based services. Rhode Island and Delaware required applicants to sign a form indicating they had been offered the opportunity to explore community-based alternatives to nursing facility care. Similarly, applicants in Missouri could not apply for nursing facility care until they received an "R" number indicating community-based services had been offered. Massachusetts law required hospital discharge planners (who conducted assessments) to inform nursing facility applicants of community-based alternatives, while contract agency staff were required to do the same for community-based applicants. To ensure community-based services

were offered, contract agency staff did a monthly review of placement decisions made by discharge planners, while placement decisions made by contract agency staff were reviewed by state staff.

One problem PAS programs reported having in their diversion efforts was an adequate supply of community-based alternatives. Although states were not explicitly asked if the availability of community-based services was an obstacle to their diversion efforts, Ohio, South Carolina, and Wyoming all reported difficulties in diverting applicants away from nursing facility placement because their 2176 Medicaid waiver programs were full and they could not accept any additional recipients. Thus, unless an applicant could wait for a slot to open in the waiver program, community-based services could not be offered to delay placement to a nursing facility. Minnesota cited a lack of community-based services in general as a problem.

BARRIERS TO PROGRAM IMPLEMENTATION AND PERCEIVED IMPACT

Respondents were sent a brief questionnaire asking for their opinions regarding barriers to effective program implementation and maintenance and the perceived impact of PAS on the supply, utilization, and cost of nursing facility and community services (Appendix 2). Only 13 (25%)states returned questionnaires: Alaska, Arizona, Colorado, Idaho, Louisiana, Maine, Minnesota, Mississippi, New Jersey, North Dakota, Tennessee, Texas, and Vermont.

Barriers to Program Implementation and Maintenance

States were asked to identify barriers to program implementation and maintenance. They were provided a list of different provider types, levels of government, and consumer characteristics to choose from. Respondents were allowed multiple responses. Four states did not answer this section because they did not consider their programs as constituting a true preadmission screening program: Colorado, Idaho, Mississippi, and Vermont. Three states reported their programs were not impeded in any way by the lack of provider, government, or family/client support. Thus, responses for this question came from only six states: Alaska, Louisiana, Maine, Minnesota, Tennessee, Texas.

Lack of support from private providers in general was cited as the major impediment to effective program implementation and maintenance by the six states answering this question. Three states cited lack of support from hospitals, three cited lack of support from physicians, three cited nursing facilities, and two cited home health care agencies. Interestingly, three states cited lack of support from families or clients as a major impediment. Only one state, Minnesota, cited lack of support from government. Legislators and local government were specifically cited as an impediment, "there is much 'undoing' that takes place by having a state legislative body involved in program planning. It creates continual havoc and prevents meaningful success". Other written comments include:

- "Physicians are often resistant to completing another form"

- "Nursing homes do not always fill out the PreAdmission Evaluation forms truthfully or correctly. Home health providers have even less knowledge of how to properly complete the form."

- "Hospitals complain that the preadmission process delays discharge and increases costs"

- "Families and recipients have a poor understanding of the process and tend to feel that approvals should be based on social issues rather than medical need"

- "Great institutional bias in the state, nursing homes are viewed as the only option. Consumer, family and provider education has been difficult to achieve. Bias is deep in the culture!"

Perceived Impact of PAS: Nursing Facility and Community-Based Services

Respondents were asked what impact PAS had on the supply, utilization, and cost of nursing facility and community-based services. Eleven of the thirteen states returning questionnaires provided data. In general, states believed PAS had a larger impact on community-based services than nursing facility services.

Effect of PAS on Nursing Facility Services: Supply Utilization, and Expenditures

Regarding the supply of nursing facility services, nine states believed PAS had no impact on the supply of services, while 2 believed PAS had increased the supply of services. No states believed PAS had decreased the supply of beds. Respondents were asked if they believed PAS had any impact on nursing facility utilization. One would assume all states would assert PAS had decreased the utilization services since they determine the need for those services. Surprisingly, more states (6) believed PAS had no impact on nursing facility utilization than states

which thought PAS decreased nursing facility utilization (5). Regarding the cost of nursing facility services, two states perceived PAS as decreasing the cost of nursing facility services, while the remaining nine thought costs had remained the same.

Effect of PAS on Community-Based Services: Supply, Utilization, and Expenditures

Regarding the effect of PAS on the supply of community-based services, four states believed the supply had remained the same, while 8 thought PAS had increased the supply of community-based services. These same eight states also thought PAS had increased the utilization of services, while three states cited no impact. One state, North Dakota, believed PAS had led to a *decrease* in community-based service utilization. This response may be due to respondent error--the category "decreased" may have been marked instead of "increased". Alternatively, the respondent may have answered this question in the context of comparing their present PAS program to the one they had previously. Presently, North Dakota conducts paper reviews of information filled out by nursing facilities only for Medicaid eligibiles, but from 1989-1991 they screened all nursing facility applicants using state staff. Thus, relative to their old program, this new program may have led to a decrease in the utilization of community-based services. Lastly, only three states believed PAS had increased the cost of community-based services, while the remaining states perceived no impact between PAS and the cost of community-based services.

Some written comments from respondents about PAS impact:

- "The number of nursing facility beds has increased due to the increasing elderly population and the need for more beds to accommodate [this population]. Most likely PAS has kept this in control by keeping the sicker patients in available beds."
- "We have a case-mix system which rewards nursing facilities to accept heavier care patients and reduce their rate for accepting lighter care residents."

PROGRAM DATA

SCREENING DATA

States were asked to provide data on the number of individuals screened annually, the number denied placement because they were medically ineligible and the number diverted to community-based alternatives. In addition, states were also asked to provide the data separately for hospital and community-based applicants. A majority of states were unable to provide summary statistics in any format. Only 19 programs provided data on the number of persons screened and the outcomes of those screens. Given more time or resources some states that did not provide screening data may have been able to report statistics. States, however, were given ample time and opportunity to provide this information and were called back a couple of times in an effort to collect these data. The data provided do not distinguish between those states where information was unavailable and those states where data were not easily accessible or where states were unwilling to retrieve the data.

Diversion rates varied considerably among states providing screening data. Table 4.7 shows the number of applicants screened and the number diverted from nursing facility placement. The number diverted includes both medical denials and

diversions to alternative care settings. Four states reported a diversion rate of about 1 percent per year and two states had a rate of 2 percent. Many programs had diversion rates well over 10%. Illinois diverted 18% of all applicants, New Jersey diverted 19%, Minnesota diverted 27%, Missouri diverted 32%, and Virginia diverted 43% of applicants in 1994.

Comparisons between programs are difficult to make due to differences in program structure and the applicant pool screened. For example, some states had integrated their PAS and Medicaid 2176 waiver programs and could not distinguish between the number of screens conducted between individuals applying directly to the waiver program and those applying for nursing facility placement. Other states indicated they could not separate financial denials and deaths from medical denials.

Diversion Rates by Referral Source

Some states were able to provide detailed information about the number of applicants screened and the outcomes of those screens. Table 4.8 shows the number screened by referral source for five states: Massachusetts, Missouri, Nevada, New Jersey, and Oregon. The vast majority of screens were conducted for hospital-based applicants in all states but Massachusetts. Since many applications for nursing facility care are often precipitated by an acute episode, this finding is not surprising. Not shown in the table is data from South Dakota, which could only provide detailed information about the percent of screens conducted in various settings. Their data show the majority of screens were conducted in hospital-based settings (35%), as

compared to nursing facilities (31%), private residences (19%), and other settings (14%).

Three of the states provided data on the number of applicants diverted from nursing facility placement by referral source. Community-based applicants were much more likely to be diverted than hospital-based applicants in all states. Only 1% of hospital applicants were diverted in Nevada as compared to 36% of community-based applicants. Nearly half of all community-based applicants were diverted in Missouri (47%) and Oregon (45%), while only 16% and 13% of hospital-based applicants were diverted in Missouri and Oregon, respectively.

Annual Program Reports and Evaluations

Connecticut, Minnesota, Missouri, and Washington were able to provide annual and/or monthly program reports or program evaluations. Connecticut and Minnesota sent a copy of their annual program reports, Washington sent a monthly program report, while Missouri sent a program evaluation conducted for 1993 and the first half of 1994. The Missouri evaluation provided detailed information regarding the socio-demographic characteristics of applicants diverted to their alternative care programs, the cost of individual services funded by Medicaid, Social Security Block Grants, and state funded services. In FY 1993, it was estimated $5.2 million was saved by subtracting the cost of the home and community-based services provided to Medicaid eligibles minus what the costs would have been had they entered a nursing facility.

The Connecticut annual report provided detailed information regarding the characteristics of clients screened, outcomes of those screens, and detailed cost data broken down by funding source and type of service. In addition, data related to consumer satisfaction with the program regarding the accessibility, quality and timeliness of services was also reported. In FY 1994, the report estimated $9.7 million was saved by diverting nursing facility applicants to the Medicaid home and community-based waiver program.

ADMINISTRATIVE COSTS

State PAS programs were asked to report their administrative costs for the most recent fiscal or calendar year. Only two states were able to provide administrative cost data. Minnesota reported its annual costs for their PAS program totaled $2,681,137 in FY 1994. Administrative cost data for the Connecticut PAS program were included in their annual Medicaid waiver program report and totaled $83,294 in FY 1994. This may not be an accurate total of screening costs, however, because it focused on the "health screens" (PAS) which resulted in a referral to the waiver program and it is not known whether these costs refer only for those PAS screens for applicants referred to the waiver program or to all "health screens" conducted by the PAS program. For those states unable to provide cost data, some reported their program costs were part of the larger Medicaid budget and could not be separated from the total budget. It could not be determined if states were unable to report these costs or unwilling to retrieve these data.

Another potential source for PAS administrative expenditures were from Medicaid Form 64 reports. As part of Medicaid reporting requirements, states are required to provide quarterly cost data on Form 64 for the Department of Health and Human Services. These data are used by the Federal government to determine their Medicaid matching payments. States are required to report the administrative costs for "Preadmission Screening". These data include PASARR (Preadmission Screening and Annual Resident Review) costs, which entails both the initial Level I screen to determine whether there is presence of mental illness or mental retardation, and a second more comprehensive Level II screen to determine the extent of applicant impairment and care needs. Follow-up phone calls with officials from state Medicaid departments in Minnesota and Nevada found both included their PAS administrative costs as well as PASARR screening on the Form 64. It was expected the remaining states did the same.

Although expenditures for PAS and PASARR programs are combined, the majority of the expenditures reported on Form 64 should be for the PAS program. The Level I PASARR is a very brief screen taking 10 minutes or less, is usually completed by nursing facility staff, and any expenditures incurred by Medicaid should be very a small percentage of the preadmission screening expenditures reported on Form 64. While the PASARR Level II screen may have a high cost per screen (estimated at $250.00 by one state), only a small percentage of applicants receive this screen.

Table 4.8a provides the annual "Preadmission Screening" cost data reported on the Form 64 for the years of 1989 to 1993. The data are standardized by the number of Medicaid nursing facility residents in each state. Expenditures could not be standardized for Arizona in 1989 and 1990, or for Rhode Island in 1991 and 1992, because of missing resident data. Over half of all states (26) in 1989 reported zero expenditures. It is not known whether they spent no money or failed to report their preadmission screening expenditures. The number reporting zero dollars spent decreased to thirteen in 1990, four in 1991, six in 1992, and three in 1993.

Annual average expenditures are useful to examine from 1991, 1992, and 1993 since few states reported spending no money on their programs during that time. In 1991, nationwide average expenditures totaled $28.23 in 1991, increased over seven dollars to $35.48 in 1992 and then increased less than one dollar in 1993. PAS/PASARR screening costs in 1993 varied dramatically across states, ranging from a high of $340.00 in Delaware to $1.00 for California, Iowa, North Carolina, Vermont, and Washington.

Although it was expected screening cost differences were largely due to the structure of state PAS programs, closer examination questions the utility of this data in estimating PAS administrative costs. Programs which used state staff to conduct all applicant assessments should have much higher screening costs than programs which only conducted a paper review of information collected by private providers. Standardized 1993 expenditures for Washington and South Dakota, which employ state staff to conduct assessments, were only $1.00 and $2.00 respectively, while

standardized screening costs for Georgia and New Mexico, which conduct a paper review of information filled out by private providers, were $101.00 and $60.00 respectively.

The accuracy of this data is further questioned by the discrepancy between data reported by Minnesota PAS program administrators for FY 1994 ($2,681,137) and those reported on the Form 64 for FY 1993 ($101,490), the most recent year of reported. Perhaps the cost data reported by PAS program administrators in Minnesota included costs for case management screens in addition to the preadmission screens. In addition, cost differences in program expenditures may be due to the type of department administering the PAS program at the state level. For example, if PAS administration is housed in a Department of Social Services, PAS costs may be borne by funding sources other than Medicaid.

PAS PROGRAM TYPOLOGY

A primary goal of this research was to update the literature on state PAS programs. Because of conflicting definitions as to what actually constituted PAS, data on all state screening strategies was collected. The preceding sections of this chapter have described the programs states have developed to determine medical eligibility for nursing facility placement. Clearly, the structure of these programs vary dramatically. Usually, if a state used state or contract agency staff to conduct assessments, then eligibility was determined in-person by the screening staff. Likewise, if a private provider conducted applicant assessments, then eligibility was

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usually determined by state or contract agency staff over the phone or by a paper review of applicant information. There were, however, a number of exceptions. To facilitate program comparison, this section provides a typology of program structures.

Minimal PAS

Minimal types of program have the following characteristics: (1) private providers conduct assessments; (2) eligibility determined by a paper review; (3) and, for many states, reviews are conducted after admission. In addition, assessment forms used are very weak, often only one page long, and there is no attempt to divert applicants to community-based alternatives. An example of this type of program is Alaska's, which had private providers, such as personal physicians, discharge planners or nursing facility staff complete a two page assessment form requesting very little medical and functional information which was sent to the state for review. Although a waiver for people age 65 and older operated in the state, this was a separate program and no diversion process was set up to refer applicants to this program.

Twenty-five states had programs categorized as "minimal":

AL, AK, AR, CA, CO, GA, HI, IA, ID, KY, LA, MI, MS, NC, ND, NE, NH, NM, OK, TN, TX, UT, VT, WI, WV

Maximum PAS

At the other end of the spectrum are those state programs which met all the requirements specified in Polich and Iversen's (1987) definition of PAS: (1) on-site assessment; (2) conducted by a disinterested third party; (3) prior to admission. Eight

states conducted all assessments with state or contract agency staff, determined eligibility in-person, and completed all screens prior to admission:

DE, MD, MT, NJ, NV, OR, SD, WA

Four other states came close to meeting all three criteria. Their only shortcoming was they conducted some screens after nursing facility admission:

AZ, PA, SC, WY

Partial PAS

The remaining states are categorized as "partial" programs because they do not meet all requirements to be categorized as a "maximum" program, but go beyond those programs categorized as "minimum". Three different types of partial programs are identified: (A) state or contract agency staff conduct all assessments, but eligibility is determined by a paper review; (B) only some applicants have their eligibility determined in-person by state or contract agency staff; (C) two stage screening programs. Fourteen states had these types of "partial" PAS programs.

(A) State or Contract Agency Staff Conduct Assessment, Eligibility Determined By Paper Review

- **IN**--AAA staff conduct all assessments and send information to the state for a paper review
- **KS**--Contract agency staff assess community-based applicants, discharge planners hospital clients. Paper review done for both at the contract agency
- **ME**--AAA staff assess community-based applicants, discharge planners hospital clients. Paper review done for both by the state.

- **RI**--State staff and attending physicians assess community-based applicants, discharge planners hospital clients. Paper review done by state staff.

(B) Variable In-Person Screen by State or Contract Agency Staff Due to Referral Source

- **DC**--Community clients have private providers fill out assessment forms and send them to the state for paper review. Hospital clients are screened in-person by district staff.
- **IL**-- State staff screen community-based applicants and about half of all hospital-based applicants in-person, while discharge planners do the remainder of hospital screens. Paper review is done if discharge planners do the assessment.
- **MN**--State staff screen community-based applicants, hospital-based applicants screened by state staff (35%) and discharge planners. Telephone review if assessment done by a discharge planner.
- **OH**--AAA staff assess community-based applicants and determine eligibility. Discharge planners assess hospital applicants and the state does a paper review.
- **NY**--The vast majority of assessment staff are private providers trained and licensed by the state to conduct assessments, while the remainder are county public health nurses. Both determine eligibility in-person.
- **VA**--State staff assess and determine eligibility for community-based applicants, while hospital applicants are screened by hospital staff who also determine eligibility.
- **CT**-- If a community applicant is being seen by a visiting nurse, then a telephone review is done, if not, then state staff will conduct an in-person screen. Hospital applicants are assessed by discharge planners with a paper review done by the state.
- **MA**-- If a community applicant is being seen by a visiting nurse, then she conducts the assessment and sends it to the state for a paper review; if not, then state staff will conduct an in-person screen. Hospital clients are screened by discharge planners who determine eligibility in-person.

(C) Two-Stage Screens

- **FL**--All applicants receive an initial brief assessment conducted by a private provider. State staff review applicant health information and decide whether to send out state staff to conduct an-in person comprehensive assessment.
- **MO**--All applicants call a state screening nurse and answer 23 questions regarding their health and social situation. State staff are sent out to conduct assessments if an applicant has a chance of remaining in the community with the assistance of in-home services.

PAS PROGRAM STRINGENCY

A table listing program characteristics was developed as an alternative way to compare program structure and to provide a proposed measure of stringency. Using data from 1994, a scale to measure state PAS program stringency based upon six program characteristics is shown in Table 4.9. First, as described earlier in this chapter, each state's assessment form was rated along a scale of minimum (0), moderate (1), or extensive (2) regarding the amount and quality of PAS information collected about the client's health and functional status. This three-point classification gave more weight to the amount of information assessed. However, because all other criteria used in this table are based on a dichotomous coding scheme, assessment form rating were coded as extensive or not extensive. Thus, the 4 states coded as using 'minimum' assessment forms were collapsed with the 'moderate' category and both were considered 'not extensive'.

Second, programs requiring screens to be conducted prior to nursing facility admission were scored as 1 and programs allowing post-admission screens were assigned a score of 0. The rationale was that programs requiring screens to be conducted prior to admission were more stringent because it was considered more difficult to force a patient out of a nursing home once they were admitted than to deny placement prior to admission.

Third, states that conducted assessments using either state or contract agency staff, rather than private providers, were considered to be more stringent and were given a score of 1. States were considered to have more control over the

accuracy and consistency of the client information if the assessment data were collected by state or contract agency staff (referred to as 'non-provider' in table). For states using a combination of providers, contract, and/or state staff to conduct assessments, a state was considered as conducting its assessments by state or contract agency staff if the majority of screens were conducted this way. Thus, Illinois and Minnesota were coded as having their assessments conducted by a non-provider (state or contract agency staff) because less than half of all assessments were conducted by discharge planners.

Regarding the fourth dimension of the stringency scale, state programs which determined eligibility in-person were scored as 1, and programs which used paper or telephone reviews were scored as 0. PAS programs which allowed the same staff to assess applicants and also determine their medical eligibility for placement should be able to make more accurate decisions regarding placement. States which used a combination of in-person and paper reviews to determine eligibility were coded as determining eligibility in-person if the majority of screens were conducted in-person.

Fifth, states that screened all private-pay patients and those expected to spenddown to Medicaid shortly after entering a nursing facility were considered to be more stringent because these states would be more likely to reduce Medicaid spend-down rates than states without such screening. These states were given a score of 1 on this measure. Finally, states that collected data on the number screened and the outcomes of those screens were considered to have a greater capacity to evaluate

their PAS programs. States were given a rating of one where denial statistics were reported. A stringency score from 0 to 6 was created by adding together the scores on each of these dimensions, with 0 being the least stringent and 6 being the most stringent.

Stringency Score Rating

Table 4.10 shows the results of the stringency rating. For the 51 programs, eleven programs had a score of 0, nine had a score of 1, seven programs had a score of 2, seven programs had a score of 3, six had a score of 4, five had a score of 5, five had a score of 6, and five had a score of 7 in 1994. Thus, Illinois, Minnesota, New Jersey, Oregon, and Virginia were rated as having the most stringent PAS programs. Twenty-seven states had stringency scores of two or less.

Summary data for each category are provided at the bottom of each column in Table 4.9. In 1994, 17 states collected an extensive amount of information on their assessment forms. Thirty-four states screened applicants prior to admission and 17 conducted screens after admission. State or contract agency staff (non-providers) were used to conduct applicant assessments in 23 states. Twenty states determined eligibility for nursing facility placement using in-person reviews of clients, while the other 35 states determined eligibility by a paper review or over the telephone. Lastly, 13 states screened either all private pay applicants or those expected to become private pay within a certain number of days; and 19 states were able to provide data on applicant diversion rates.

PILOT PROGRAMS

Three states had demonstration PAS programs operating on a limited basis in 1994: Colorado, Iowa, and Texas. One state, Nebraska, started a pilot program in 1995. Data pertaining to these pilot programs were not included in the data analysis because the majority of applicants were screened by other means. These pilot programs varied in their target populations, screening staff, eligibility determination processes, efforts to offer community-based long term care options and other program dimensions. Appendix 4 provides a summary of program specifics.

As of 1995, Colorado had implemented its program on a statewide basis, Iowa's program remained a pilot program, while Texas canceled its program. Although Texas originally intended to implement the program statewide by 9/95, it was canceled 3/95. Texas canceled their program because their own evaluation, "indicated that the basic premise of the pilot had had not been realized, i.e., persons seeking nursing facility care were not interested in community care at that time because so much time and emotional effort had been spent by families preparing for/accepting nursing facility care....once the decision is made, the family is very reluctant to consider other options". Texas is now focusing on community awareness and outreach activities to inform the general public about the scope and availability of community-based services.

TRENDS IN STATE PAS PROGRAMS: 1978-1994

This section examines state PAS program implementation and changes in program structure during the 1978-1994 time period. While the 1994 data focused on how states determined eligibility for nursing facility placement, and thus data for all states were analyzed, the data presented here focuses on those states which had more than minimum preadmission screening programs. That is, more than a paper review of information filled out by a private provider.

This is due to limitations in the data collected from 1978-1989. The 1989 survey collected data for the 1978-1989 period. Data from all states were collected in 1989 and coded back to the date of program implementation. States which had implemented comprehensive PAS programs after 1978 only had data collected back to their date of program implementation. For example, information on screening activity in South Dakota begins in 1988 because that is the year they implemented their comprehensive PAS program. Although they probably conducted a paper review of information collected by private providers prior to 1988, this cannot be confirmed. Thus, the longitudinal data presented in this section will focus only on programs doing more than a paper review of applicant information filled out by a private provider.

FINDINGS

Five characteristics of state PAS programs were examined for the 1978-1994 time period: (1) year of implementation; (2) type of assessment staff; (3) how

eligibility was determined; (4) whether screens were conducted prior to admission; and (5) target population.

Program Implementation

There was a steady increase in the number of PAS programs implemented statewide. The number of PAS programs increased from 3 in 1978 to 13 in 1983, increasing to 25 in 1989, and leveling off at 26 programs in 1994 (Table 4.11). The most rapid growth took place in the early 1980's, when 11 states implemented PAS from 1982 to 1984, increasing the percentage of all states with PAS from 10% in 1981 to 31% by 1984. By 1987, the percent of all states with PAS increased to 41% (21 states), and reached nearly 50% (25 states) by 1989. Thus, since 1989, roughly half of all states had statewide PAS programs.

Table 4.12 lists the states which implemented statewide PAS programs during a given year. Maine, New Jersey, and Rhode Island were the first states to develop PAS programs. Maine implemented its program in 1972 and New Jersey in 1973. The most recent state to implement PAS on a statewide basis was Ohio. Except for 1979, a PAS program was implemented nearly every year up until 1991, when no programs were implemented during a three year period (1991, 1992, and 1993). State by state data for the time period of 1981-94 are presented in Table 4.12a.

Once states made a decision to implement PAS statewide, they usually retained their PAS programs during the 1978-1994 period. Exceptions were North

Dakota and Arkansas. North Dakota implemented its program in 1988 and discontinued it in 1991. Stiff opposition from the nursing facility industry was part of the reason given for its cancellation. After operating on a demonstration basis since 1983, Arkansas expanded their program statewide in 1989, but canceled it in 1990, just one year after statewide implementation. Administered by a contract agency, the high cost and low number of diversions because of too many post-admission screens were some of the reasons leading to its closure. Both states now do a paper review of provider information filled out by private providers.

Type of Assessment Staff

Table 4.13 provides data on the type of staff used to conduct assessments. Contract agency staff conducted assessments for approximately 20% of PAS programs during most of the study period. Since 1982, the percent of states using state staff to conduct assessments steadily increased up until 1988, when approximately half of all programs used state staff. The percent of states using state staff to conduct assessments remained steady at about 50% until 1992, when a dramatic decrease occurred. From 1992 to 1994, the number of programs using state staff decreased from 48% to only 31% of programs, while the percent of states using a combination of different assessment staff increased from 32% in 1992 to 50% in 1994.

The shift away from state staff to combination type of assessment system from 1992-94 was the result of a number of states restructuring their programs in an

attempt to decrease program costs and target their screening resources. For example, Minnesota changed from having all assessments conducted by state staff to allowing hospital discharge planners conduct assessments over the phone with state staff for highly impaired individuals. This allowed screening staff to focus their efforts on assessing and diverting applicants with lower care needs, especially those residing in the community.

How Eligibility is Determined

Table 4.14 shows the number of programs determining eligibility in-person during 1978-94. The data is broken down to show the number of states conducting in-person screens for both hospital and community-based applicants and the number of states conducting in-person screens for either hospital or community-based applicants. During most of the study period, approximately 80% of states screened either hospital or community-based applicants in-person. The percent of states screening both hospital and community-based applicants in-person ranged from 60% to nearly 70% for most of the study period. There was a general increase in the number of states screening both hospital and community-based applicants in-person up until 1994, when the percent decreased to 61%.

When Screens Were Conducted

Table 4.15 provides data on when screens were conducted during the 1978-1994 time period for both community and hospital-based applicants. States

were more likely to screen community-based applicants prior to admission than hospital-based applicants. This is not surprising due to hospital discharge pressures and increased time it takes programs using state staff to complete the assessment process. The percent of states screening hospital-based applicants prior to admission increased slightly from 1983, when a low of 69% of programs screened hospital-based applicants prior to admission, increasing to 81% by 1994.

Private Pay Screens

Table 4.16 shows the number of programs screening private pay applicants and those expected to spenddown to Medicaid shortly after nursing facility admission. The screening of private pay applicants became increasingly common during the study period. The number of states screening all private pay applicants increased from 3 in 1987 to 7 by 1989. The first state to screen private pay applicants was Indiana in 1983, followed by Minnesota in 1985. Oregon became the first state to screen applicants at risk of spending down in 1980 and started screening all private pays in 1990. Oregon was the only state to screen all private pay applicants and to deny placement to those at risk of spending down with a specified time period. The number of programs screening expected Medicaid eligibles increased to 3 in 1984, 6 in 1989 and remained at 6 until 1994.

The last column in Table 4.16 shows the number of states screening private pay or spenddown applicants. The greatest increase in states screening private pays came between 1986 to 1989 when 6 of 19 programs (32%) screened either private

pays or expected Medicaid eligibles in 1986, while by 1989 thirteen of 25 (52%) programs were screening private pay applicants. From 1989 to 1994, the percent of states screening private pay or spenddown applicants remained at approximately 50%.

Summary

Longitudinal data shows more states implemented programs and programs became increasing stringent up until 1990, when program implementation and stringency leveled off. The number of PAS programs increased every year up until 1990, when no programs were implemented until Ohio's in 1994.

Likewise, a number of programs became increasingly stringent up until 1990. First, the number of states screening private pays increased continuously until 1989. Second, the number of states using state staff to conduct assessments increased every year up until 1990. Lastly, there was a slight increase in the number of states screening both hospital and community-based applicants in-person up until 1990. After 1990, all of these program features either remained the same or decreased during the 1990-94 period. Thus, when states changed their PAS program characteristics to become more stringent, these states continued the new program characteristics over time up until 1990.

CHARACTERISTICS OF STATES WITH PAS: 1991

This study found large differences in the structure and use of PAS programs by states. Previous research has found numerous factors affect state

Medicaid policy decisions, including the wealth and political characteristics of states (Harrington et al., 1996; Cromwell et al., 1995; Adams, 1995; Grogan, 1994; Lanning et al., 1991). A logistic regression analysis was conducted to examine the socio-demographic, economic and political characteristics of states with PAS programs in 1991. The variables used in the analysis are listed in Table 3.1.

Data from 1991 were used because it was the most recent year with complete data. The dependent variable was presence of a statewide PAS program (more than a minimum program). States with PAS in 1991 are listed in Table 4.12a. The District of Columbia was excluded from the analysis because of a lack of political data. Thus, a total of 50 states were included in the analysis, with 24 states coded as having a PAS program. Table 4.17 shows the means and standard deviations for the independent variables for the 50 states in the model.

Independent Variables

Two variables were used to measure the political characteristics of states. To the extent PAS serves as a barrier to nursing facility access, the percent of a state's elderly population with membership in the American Association of Retired Persons should provide interest group pressure against PAS implementation. The relationship between a states liberal rating and its having a PAS program is difficult to predict. On the one hand, because PAS is a state funded program that interferes with the market for nursing facility services, states which elect liberal political leadership should be more likely to have PAS than more conservative states. On the other hand,

to the extent PAS serves as a barrier to nursing facility services, more liberal states may be less likely to have PAS since they are typically more generous in their Medicaid policies (Grogan, 1994).

Three measures of state economic health were also included in the analysis: (1) percent of the population unemployed, (2) state tax effort, (3) and state tax capacity. The effect of these measures are difficult to predict. On the one hand, wealthier states should be able to afford to provide more long term care services and will thus not have as great a need to constrain nursing facility use as compared to poorer states. On the other hand, poorer states may be more reluctant to pay for a PAS program and choose other mechanisms to control nursing facility expenditures, such as lowering reimbursement rates or implementing a moratorium on bed construction. In general, it is expected wealthier states will be more likely to implement PAS.

Lastly, three socio-demographic characteristics of states associated with nursing facility utilization were included in the analysis. States with a large elderly population, as measured by the percent of the population over the age of 65, have a greater need to control the use of long term care services and should be more likely have a PAS program (Scanlon, 1980a; Harrington and Swan, 1987; Liu et al., 1991). The percent of the population that is non-white should be negatively associated with a state having PAS because most studies have found lower nursing facility utilization rates among non-white populations (Greene and Ondrich, 1990) and thus there should be less demand for nursing facility services. In addition, states with greater racial

heterogeneity may be less likely to form unified interest group pressure against PAS if it is viewed as a barrier to needed services (Falcone et al., 1992). Lastly, the percent of a state's population living in rural areas should be negatively associated with having PAS. This is because many PAS programs conduct in-person assessments using state or contract agency staff and more rural states should have greater difficulty operating a PAS program due to travel costs and increased time it takes to complete the assessment process.

Findings

The results of the logistic regression are shown in Table 4.18. The overall model was significant (Model Chi Square = 24.87, df = 8, $p < .01$). Three state characteristics were significantly associated with having a PAS program in 1991. First, states with a large elderly population were more likely to have a PAS program ($p < .01$) than other states. The second state characteristic associated with having PAS in 1991 was its wealth as measured by their tax capacity ($p < .05$). Lastly, a proxy for measuring the political strength of the elderly, the percent of the elderly population with membership in the American Association of Retired Persons (AARP), was found to be negatively associated with a state having PAS ($p < .05$). In sum, states with a PAS program in 1991 were wealthier states with a large elderly population and weak political clout by their elderly population, as measured by the percent enrolled in AARP.

Discussion

Although a causal model determining predictors of PAS implementation was not tested, the results of this analysis do offer insight into the characteristics of states associated with having PAS in 1991. However, while the extent to which these socio-demographic, economic and political factors affect state decisions to implement PAS cannot be determined, some plausible hypothetical explanations are supported by the direction of the regression coefficients, especially since many socio-demographic, economic, and to a lesser extent the political characteristics of states tend to remain relatively constant over time.

That the percent of a state's population over age 65 was significantly associated with having PAS in 1991 indicates states may respond to a high demand for long term care services by implementing PAS to control access to long term care services. In addition, that wealthier states were more likely to have PAS in 1991 than poorer states may be a function of PAS program costs, with poorer states more reluctant to fund these programs. That states with a high percentage of their elderly population belonging to AARP were less likely to have PAS may indicate states with a politically active elderly constituency view PAS as a barrier to needed long term care services and are more likely to oppose such a measure. These are only hypothesized explanations, however, and further research is necessary to determine causality.

PAS AND MEDICAID NURSING FACILITY UTILIZATION

State PAS programs presumably decrease the utilization of nursing facility services by either denying care to those who are not medically in need of nursing facility level of care or by diverting applicants to alternative care settings. A utilization model including state level socio-demographic, economic and health service supply factors known to influence nursing facility utilization were used in a two-stage multivariate regression analysis to examine the relationship between presence of a statewide PAS program and Medicaid nursing facility utilization. The dependent variable used in the analysis was the number of Medicaid nursing facility recipients per 1,000 state population over the age of 65.

Independent Variables

Because cross-sectional analysis of annual data was conducted with a total of 50 cases per year, the number of independent variables had to be limited. The independent variables included in the analysis are discussed in Chapter 3 and listed in Table 3.2 and Table 3.3. Rationale for their inclusion in the model are reiterated here.

Two socio-demographic characteristics were included in the model. Previous research has found the utilization of nursing facility services increased significantly for those of 85 years of age and older (Kemper and Murtaugh, 1991), the percent of the population over age 85 should increased nursing facility utilization. Previous research has found differences in the utilization of nursing facility services between rural and urban areas (Dunlop, 1976; Chiswick, 1976; Dubay, 1992). It is

expected states with a high percentage of their population living in metropolitan areas will have lower utilization rates than more rural states.

The economic characteristics of states may also influence utilization. A state's personal income per capita has been found to influence nursing facility utilization rates in contradictory ways. Some have found an increase in personal incomes results in higher private pay utilization and lower Medicaid utilization due to consumers' increased ability to purchase care privately and because nursing facility operators admit private pay applicants before Medicaid applicants because they pay at a higher rate (Shapiro and Tate, 1985; Scanlon, 1980; Chiswick, 1976). Headen (1990), however, found a higher personal income per capita decreased private pay nursing facility utilization because of increased ability to pay for in-home services, resulting in decreased nursing facility utilization. A state's unemployment rate increases Medicaid enrollment and is strongly associated with increased Medicaid nursing facility utilization (Harrington and Swan, 1987).

Two health service factors are also included in the model. Perhaps the strongest determinant of nursing facility use is the supply of nursing facility beds, with increased supply leading to increased utilization (Swan and Harrington, 1987; Scanlon, 1980a). The use of skilled nursing service by Medicare eligibiles varies across states and in rural vs. urban areas (Dubay, 1992). Because Medicare rates are higher than Medicaid rates, states with a large number of Medicare nursing facility recipients per 1,000 population should decrease Medicaid utilization because nursing facility operators prefer higher paying Medicare applicants.

Measures of PAS

Two distinct sets of analyses were conducted using different measures of PAS. The first analysis used a dichotomous measure of PAS indicating presence of a statewide PAS program. States classified as having more than a 'minimum' PAS program (states doing more than a paper review of applicant information filled out by a private provider) were considered as having PAS (see Table 4.12a). Because the dependent variable is the number of Medicaid nursing facility recipients per 1,000 aged, these types of programs were further distinguished based upon their target populations. States which screen Medicaid eligibles and expected Medicaid eligibles were included as a separate PAS variable from those states which screen private pays. PAS programs which screen private pays were included as a separate variable because the diversion of private pay applicants may result in an increase in Medicaid utilization if excess demand is present in the market.

A second set of analyses were conducted using scores from the PAS stringency table constructed earlier in this chapter to examine if states with more stringent scores were significantly associated with decreased Medicaid nursing facility utilization. Four regression analyses were conducted. The first analysis measured PAS as a continuous variable, using the individual state stringency scores which ranging from 0 to 6. The other three regression analyses used a dichotomous variable for PAS with the following stringency score cutoffs: (1) states with stringency scores

of six; (2) states with scores of five or six; and (3) states with scores of four, five or six. State stringency scores are listed in Table 4.10

Analysis I: Dichotomous PAS Variable

Three two-stage least squares regression analyses were run using data from 1990, 1991, and 1992. These years were chosen for the analysis because they were the most recent years containing a complete set of data. A two stage least squares (2SLS) regression analysis was used because nursing facility bed supply was considered endogenous to the dependent variable, Medicaid nursing facility utilization. Because annual nursing facility utilization rates were examined, the number of cases in the analysis for each of the three years was 50 cases. Arizona was excluded from the analysis in 1990, and Rhode Island in 1991 and 1992, because of missing data. Table 4.17 shows the means and standard deviations for the independent variables for the 50 states in the model.

Results for the second stage of the three regression analyses are presented in Table 4.19 (see Appendix 4 for first stage). The overall fit of the model was significant ($F = .0001$) for each of the three years. States with PAS programs targeted towards Medicaid and expected Medicaid eligibles were significantly associated with decreased Medicaid nursing facility utilization for the years of 1991 ($p < .01$) and 1992 ($p < .05$). As expected, states with PAS programs screening all applicants were not significantly associated with lower Medicaid nursing facility utilization for any of the three years. Thus, presence of a statewide PAS program

screening Medicaid eligibles and/or expected Medicaid eligibles was associated with decreased Medicaid nursing facility utilization as measured by the number of Medicaid nursing facility per 1,000 aged 65 and older in two of the three years studied.

Analysis II: PAS Stringency Score

The most recent year available with a complete data set was from 1992 for all variables except for the PAS stringency scores, which were from 1994. Because the most recent survey of state PAS programs collected data for both 1993 and 1994, the 1994 stringency table could be modified to reflect state screening activity in 1993, but not for 1992. Only the score for Ohio had to be modified, changing from 5 to 1. Thus, all the data used in the analyses were from 1992 except for the PAS stringency score, which was from 1993. Because socio-demographic, economic, and bed supply data hold relatively constant over the course of a year, the results of the analysis should be similar if PAS stringency scores from 1992 had been available.

Except for the different measures of PAS, the same utilization model and analysis techniques used in Analysis I were used for Analysis II. A total of 50 cases were included in the analysis, with Rhode Island excluded due to missing data. Two-stage least squares regression was used because bed supply was considered endogenous to utilization.

The results of the regression analyses were disappointing. None of the different PAS measures used in the four regression analyses were significant (tables

not shown). In fact, only the continuous measure of PAS stringency and the dichotomous measure listing those states with a stringency score of 6 had negative coefficients. The dichotomous measures of PAS programs with stringency scores of five or higher and four or higher had positive regression coefficients.

Discussion

Results from the first analysis examining the relationship between Medicaid nursing facility utilization and PAS programs screening only Medicaid and expected Medicaid eligibles are encouraging. The two previous studies using PAS in a utilization model (Liu et al., 1991; Scanlon, 1980a) did not find PAS was significantly associated with lower overall nursing facility use, while a third study (Swan and Harrington, 1987) did not find PAS was significantly associated with lower Medicaid nursing facility use. Although only cross-sectional data were analyzed, and the number of independent variables included in the utilization model had to be limited due to the low number of cases analyzed in each regression, two of the three years analyzed found PAS was significantly associated with lower Medicaid nursing facility utilization rates, suggesting further research is needed with an expanded utilization model to examine the relationship between PAS and Medicaid utilization more closely.

Previous studies recognized the heterogeneity of state PAS programs and hypothesized their measures of PAS were not sensitive enough to account for these different program structures. This study attempted to rectify this problem by

developing a stringency score based upon selected program characteristics to provide a measure of program stringency. Unfortunately, none of the four regression analyses conducted using various stringency levels were significantly associated with Medicaid nursing facility utilization. That the variable including states which screened only Medicaid and expected Medicaid eligibles was significantly associated with decreased Medicaid nursing facility utilization underscores the need for further refinements to the stringency table.

TABLE 4.1

TYPE OF PAS ASSESSMENT STAFF: 1994

(n=51)

PROVIDERS (n=25)	STATE (n=8)	CONTRACT (n=5)	COMBINATION (n=13)
Alaska	Arizona	Indiana	Connecticut
Alabama	Delaware	Montana	District of Columbia
Arkansas	Maryland	Oregon	Florida
California	New Jersey	Pennsylvania	Illinois
Colorado	Nevada	South Carolina	Kansas
Georgia	South Dakota		Massachusetts
Hawaii	Washington		Maine
Iowa	Wyoming		Minnesota
Idaho			Missouri
Kentucky			New York
Louisiana			Ohio
Michigan			Rhode Island
Mississippi			Virginia
North Carolina			
North Dakota			
Nebraska			
New Hampshire			
New Mexico			
Oklahoma			
Tennessee			
Texas			
Utah			
Vermont			
Wisconsin			
West Virginia			

TABLE 4.2

ESTIMATED AVERAGE TIME TO COMPLETE ASSESSMENT: 1994

(n=33)

LESS THAN 60 MINUTES
(n=13)

State	Minutes
Kentucky	(53)
Montana	(45)
West Virginia	(45)
Nebraska	(40)
Missouri	(30)
Nevada	(30)
Arkansas	(30)
Colorado	(30)
Michigan	(22)
Hawaii	(15)
Tennessee	(15)
North Carolina	(13)
Iowa	(7)

60 MINUTES OR MORE
(n=20)

State	Minutes
Maryland	(300)
Delaware	(180)
Ohio	(180)
Washington	(180)
Arizona	(120)
Maine	(120)
Minnesota	(120)
New Jersey	(120)
Pennsylvania	(120)
South Dakota	(120)
Florida	(83)
Virginia	(75)
Wyoming	(75)
Dist. of Col.	(60)
Indiana	(60)
Kansas	(60)
Massachusetts	(60)
Oregon	(60)
South Carolina	(60)
Alabama	(60)

Mean: 78.4
Median: 60.0

TABLE 4.3

HOW ELIGIBILITY IS DETERMINED: 1994

(n=51)

PAPER REVIEW (n=25)	TELEPHONE REVIEW (n=6)	IN-PERSON REVIEW (n=19)
Alaska	Georgia	Arizona
Alabama	Iowa	District of Columbia
Arkansas	Kentucky	Delaware
California	North Carolina	Illinois
Colorado	North Dakota	Massachusetts
Florida	Utah	Maryland
Georgia		Minnesota
Hawaii		Missouri
Iowa		Montana
Idaho		New Jersey
Kentucky		Nevada
Louisiana		New York
Michigan		Ohio
Mississippi		Oregon
North Carolina		Pennsylvania
North Dakota		South Carolina
Nebraska		South Dakota
New Hampshire		Virginia
New Mexico		Washington
Oklahoma		Wyoming
Tennessee		
Texas		
Utah		
Vermont		
Wisconsin		
West Virginia		

TABLE 4.4

STATES SCREENING APPLICANTS PRIOR TO ADMISSION: 1994

POST- ADMISSION (n=18)	PRIOR TO ADMISSION (n=33)	
Alabama	Alaska	Missouri
Arkansas	Colorado	Mississippi
Arizona	Connecticut	Montana
California	District of Columbia	New Hampshire
Indiana	Delaware	New Jersey
Kentucky	Florida	New York
Louisiana	Georgia	Nevada
Michigan	Hawaii	North Carolina
Nebraska	Iowa	North Dakota
New Mexico	Idaho	Ohio
Oklahoma	Illinois	Oregon
Pennsylvania	Kansas	Rhode Island
South Dakota	Massachusetts	South Carolina
Tennessee	Maryland	Utah
Texas	Maine	Virginia
Vermont	Minnesota	Washington
Wisconsin		West Virginia
Wyoming		

TABLE 4.5

STATES SCREENING PRIVATE PAY APPLICANTS: 1994

(n=51)

MANDATORY (n=8)	OPTIONAL (n=10)	EXPECTED ELIGIBLES (n=6)	
Indiana	Arizona	Connecticut	(180 days)
Kansas	Delaware	Illinois	(60 days)
Minnesota	Florida	New Jersey	(180 days)
Nevada	Illinois	Oregon	(90 days)
New York	Massachusetts	Utah	(90 days)
Oregon	Montana	Virginia	(180 days)
South Dakota	Ohio		
West Virginia	Pennsylvania		
	Washington		
	Wyoming		

CHART 1

SCOPE OF INFORMATION COLLECTED ON ASSESSMENT FORMS: 1994

MINIMUM

- Primary Diagnoses
- Medications
- Minimal Functional and Mental Status Information

MODERATE

- Activities of Daily Living (ADLs)
- Skin Condition
- Continence
- Restorative Potential
- Behavior
- Physical, Respiratory, Occupational, and Speech Therapies
- Communication/Sensory Functioning

EXTENSIVE

- Instrumental Activities of Daily Living (IADLs)
- Social Supports
- Living Environment

TABLE 4.6

SCOPE OF PAS ASSESSMENT FORMS: 1994

(n=51)

MINIMUM (n=4)	MODERATE (n=30)		MAXIMUM (n=17)
Alaska	Alabama	North Carolina	Connecticut
Idaho	Arkansas	Nebraska	Florida
Kentucky	Arizona	New Hampshire	Illinois
North Dakota	California	New Mexico	Indiana
	Colorado	Nevada	Kansas
	Dist. of Colum.	New York	Massachusetts
	Delaware	Oklahoma	Maryland
	Georgia	Rhode Island	Maine
	Hawaii	Tennessee	Minnesota
	Iowa	Texas	New Jersey
	Louisiana	Utah	Ohio
	Michigan	Vermont	Oregon
	Missouri	Wisconsin	Pennsylvania
	Mississippi	West Virginia	South Carolina
	Montana	Wyoming	South Dakota
			Virginia
			Washington

TABLE 4.7

PAS SCREENING DATA: 1994

(n = 19)

STATE	Screened	Diverted*	Percent Diverted
Arkansas	7,601	405	5%
Colorado	8,839	68	1%
Connecticut	--	--	--
D.C.	1,447	8	1%
Iowa	5,871	47	1%
Illinois	14,605	2,629	18%
Louisiana	13,364**	15	1%
Maryland	9,392	7,419	79%
Massachusetts	26,988	516	2%
Minnesota	--------	-----	27%
Missouri	16,340	5,262***	32%
New Hampshire	3,042	16	1%
New Jersey	18,121	3,470	19%
Nevada	7,963	718	11%
North Dakota	2,922	111	4%
Ohio	55,648	-----	----
Oregon	15,450****	2,170	14%
South Dakota	4,604	757	16%
Virginia	15,248	6,862	45%

* Includes number diverted to community-based alternatives and medical denials
** Includes number of private pays
*** Includes number denied/diverted and deaths prior to admission
**** Includes number of private pays

TABLE 4.8

PAS SCREENING DATA BY REFERRAL SOURCE: 1994

NEW JERSEY: CY 1993	Screened	Diverted
Hospital based applicants	10,287	--------
Community based applicants	2,618	--------
Nursing facility conversions	3,075	--------
TOTAL	18,121	3,470 (19%)

MISSOURI: FY 1993-94	Screened	Diverted
Hospital-based applicants	5,447	849 (16%)
Community-based applicants	2,300	1,079 (47%)
Nursing facility conversions	8,593	937 (11%)
TOTAL	16,340	2,865 (18%)

NEVADA: FY 1993-94	Screened	Diverted
Hospital-based applicants	3,784	47 (1%)
Community-based applicants	1,822	663 (36%)
Nursing facility conversions	2,357	28 (1%)
TOTAL	7,963	718 (9%)

MASSACHUSETTS: FY 1993-94	Screened	Diverted
Hospital-based applicants	12,816	--------
Community-based applicants	14,172	--------
TOTAL	26,988	516 (2%)

OHIO: CY 1994	Screened	Diverted
Hospital-based applicants	44,726	--------
Community-based applicants	10,922	--------
TOTAL	55,648	--------

OREGON: FY 1993-94 (Medicaid)	Screened	Diverted
Hospital-based applicants	3,431	441 (13%)
Community-based applicants	1,626	727 (45%)
Nursing facility conversions	2,745	237 (9%)
TOTAL	7,804	1,405 (18%)

OREGON: CY 1993 (private pay)	Screened	Diverted
Hospital-based applicants	5,756	--------
Community-based applicants	1,890	--------
TOTAL	7,646	765 (10%)

TABLE 4.8A
PAS/PASARR Annual Administrative Expenditures: 1989-1993
Standardized By The Number Of Medicaid Nursing Facility Residents Per State

	1989	1990	1991	1992	1993
AK	0	78	44	48	136
AL	15	68	90	60	38
AR	1	46	11	12	10
AZ	—	—	62	61	71
CA	0	2	1	1	1
CO	0	10	12	14	16
CT	1	15	2	7	5
DC	0	0	0	0	0
DE	0	170	131	390	340
FL	0	43	42	53	49
GA	0	0	6	71	101
HI	0	0	2	0	2
IA	1	6	1	1	1
ID	4	7	8	11	13
IL	5	123	65	35	32
IN	7	27	42	42	29
KS	0	0	3	7	13
KY	0	12	20	8	12
LA	0	0	41	15	8
MA	0	4	9	6	7
MD	0	9	40	40	66
ME	0	0	10	9	13
MI	0	0	0	0	36
MN	0	1	1	2	2
MO	2	11	12	11	9
MS	5	11	15	12	14
MT	6	47	29	50	14
NC	0	2	1	1	1
ND	25	33	29	34	48
NE	0	0	0	0	0
NH	12	18	18	18	19
NJ	1	17	35	34	28
NM	5	18	80	71	60
NV	31	7	9	7	6
NY	0	0	7	4	3
OH	0	5	4	0	13
OK	2	8	10	19	18
OR	6	23	72	116	152
PA	0	0	5	19	17
RI	0	0	—	—	3
SC	110	146	164	212	92
SD	1	1	1	1	2
TN	0	42	14	6	4
TX	0	5	9	10	13
UT	12	0	0	0	0
VA	46	84	87	88	71
VT	1	1	1	1	1
WA	0	0	1	22	1
WI	1	16	20	19	25
WV	0	12	13	18	13
WY	44	143	110	128	177
Mean	$6.96	$25.72	$28.23	$35.48	$35.86
S.D.	(18.26)	(41.48)	(37.24)	(64.38)	(59.28)

TABLE 4.9
1994 State PAS Program Characteristics and Stringency Rating

	Assessment Form	Review Prior To Admission	Assessment by Non-Provier	Review In-Person	Screen Private Pays	Diversion Rate Statistics	Stringency Rating
AK	0	1	0	0	0	0	1
AL	0	0	0	0	0	0	0
AR	0	0	0	0	0	1	1
AZ	0	0	1	1	0	0	2
CA	0	0	0	0	0	0	0
CO	0	1	0	0	0	1	2
CT	1	1	0	0	1	1	4
DC	0	1	1	1	0	1	4
DE	0	1	1	1	0	0	3
FL	1	1	1	0	0	0	3
GA	0	1	0	0	0	0	1
HI	0	1	0	0	0	0	1
IA	0	1	0	0	0	1	2
ID	0	1	0	0	0	0	1
IL	1	1	1	1	1	1	6
IN	1	0	1	0	1	0	3
KS	1	1	1	0	1	0	4
KY	0	0	0	0	0	0	0
LA	0	0	0	0	0	1	1
MA	1	1	0	1	0	1	4
MD	1	1	1	1	0	1	5
ME	1	1	1	0	0	0	3
MI	0	0	0	0	0	0	0
MN	1	1	1	1	1	1	6
MO	0	1	1	1	0	1	4
MS	0	1	0	0	0	0	1
MT	0	1	1	1	0	0	3
NC	0	1	0	0	0	0	1
ND	0	1	0	0	0	1	2
NE	0	0	0	0	0	0	0
NH	0	1	0	0	0	0	1
NJ	1	1	1	1	1	1	6
NM	0	0	0	0	0	0	0
NV	0	1	1	1	1	1	5
NY	0	1	0	1	1	0	3
OH	1	1	1	1	0	1	5
OK	0	0	0	0	0	0	0
OR	1	1	1	1	1	1	6
PA	1	0	1	1	0	0	3
RI	0	1	1	0	0	0	2
SC	1	1	1	1	0	0	4
SD	1	0	1	1	1	1	5
TN	0	0	0	0	0	0	0
TX	0	0	0	0	0	0	0
UT	0	1	0	0	1	0	2
VA	1	1	1	1	1	1	6
VT	0	0	0	0	0	0	0
WA	1	1	1	1	0	1	5
WI	0	0	0	0	0	0	0
WV	0	1	0	0	1	0	2
WY	0	0	1	1	0	0	2
N=	17	33	23	20	13	19	

TABLE 4.10

STRINGENCY RATING SUMMARY: 1994

(N=51)

	NUMBER	STATES
States Scoring 0	11	AL, CA, KY, MI, NE, NM OK, TN, TX, VT, WI
States Scoring 1	9	AK, AR, GA, HI, ID, LA, MS, NC, NH
States Scoring 2	8	AZ, CO, IA, ND, RI, UT, WV, WY
States Scoring 3	7	DE, FL,IN,ME, MT, NY, PA
States Scoring 4	6	CT, DC, KS, MA, MO, SC
States Scoring 5	5	MD, NV, OH, SD, WA
States Scoring 6	5	IL, MN, NJ, OR, VA

TABLE 4.11

NUMBER AND PERCENT OF STATES WITH COMPREHENSIVE STATEWIDE PAS PROGRAMS: 1978-94

YEAR	Number of States	Percent of States
1978	3	6
1979	3	6
1980	4	8
1981	5	10
1982	8	16
1983	13	25
1984	16	31
1985	17	33
1986	19	37
1987	21	41
1988	23	45
1989	25	49
1990	26	51
1991	25	49
1992	25	49
1993	25	49
1994	26	51

TABLE 4.12

IMPLEMENTATION OF PAS STATEWIDE: 1978-94

YEAR	Number	States
1978	3	Maine, New Jersey, Rhode Island
1979	--	-----
1980	1	Oregon
1981	1	Washington
1982	3	District of Columbia, South Carolina, Virginia
1983	5	Indiana, Kansas, Mass., Minnesota, Montana
1984	3	Illinois, Missouri, Nevada
1985	1	Delaware
1986	2	Florida, New York
1987	2	Connecticut, Maryland
1988	2	North Dakota, South Dakota
1989	2	Arkansas, Arizona
1990	2	Pennsylvania, Wyoming
1991	--	-------
1992	--	-------
1993	--	-------
1994	1	Ohio

TABLE 4.12a
STATEWIDE PAS PROGRAMS: 1982-1994

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991-3*	1994
AK	0	0	0	0	0	0	0	0	0	0	0
AL	0	0	0	0	0	0	0	0	0	0	0
AR	0	0	0	0	0	0	0	1	0	0	0
AZ	0	0	0	0	0	0	0	1	1	1	1
CA	0	0	0	0	0	0	0	0	0	0	0
CO	0	0	0	0	0	0	0	0	0	0	0
CT	0	0	0	0	0	1	1	1	1	1	1
DC	1	1	1	1	1	1	1	1	1	1	1
DE	0	0	0	1	1	1	1	1	1	1	1
FL	0	0	0	0	1	1	1	1	1	1	1
GA	0	0	0	0	0	0	0	0	0	0	0
HI	0	0	0	0	0	0	0	0	0	0	0
IA	0	0	0	0	0	0	0	0	0	0	0
ID	0	0	0	0	0	0	0	0	0	0	0
IL	0	0	1	1	1	1	1	1	1	1	1
IN	0	1	1	1	1	1	1	1	1	1	1
KS	0	1	1	1	1	1	1	1	1	1	1
KY	0	0	0	0	0	0	0	0	0	0	0
LA	0	0	0	0	0	0	0	0	0	0	0
MA	0	1	1	1	1	1	1	1	1	1	1
MD	0	0	0	0	0	1	1	1	1	1	1
ME	1	1	1	1	1	1	1	1	1	1	1
MI	0	0	0	0	0	0	0	0	0	0	0
MN	0	1	1	1	1	1	1	1	1	1	1
MO	0	0	1	1	1	1	1	1	1	1	1
MS	0	0	0	0	0	0	0	0	0	0	0
MT	0	1	1	1	1	1	1	1	1	1	1
NC	0	0	0	0	0	0	0	0	0	0	0
ND	0	0	0	0	0	0	1	1	1	0	0
NE	0	0	0	0	0	0	0	0	0	0	0
NH	0	0	0	0	0	0	0	0	0	0	0
NJ	1	1	1	1	1	1	1	1	1	1	1
NM	0	0	0	0	0	0	0	0	0	0	0
NV	0	0	1	1	1	1	1	1	1	1	1
NY	0	0	0	0	1	1	1	1	1	1	1
OH	0	0	0	0	0	0	0	0	0	0	1
OK	0	0	0	0	0	0	0	0	0	0	0
OR	1	1	1	1	1	1	1	1	1	1	1
PA	0	0	0	0	0	0	0	0	1	1	1
RI	1	1	1	1	1	1	1	1	1	1	1
SC	1	1	1	1	1	1	1	1	1	1	1
SD	0	0	0	0	0	0	1	1	1	1	1
TN	0	0	0	0	0	0	0	0	0	0	0
TX	0	0	0	0	0	0	0	0	0	0	0
UT	0	0	0	0	0	0	0	0	0	0	0
VA	1	1	1	1	1	1	1	1	1	1	1
VT	0	0	0	0	0	0	0	0	0	0	0
WA	1	1	1	1	1	1	1	1	1	1	1
WI	0	0	0	0	0	0	0	0	0	0	0
WV	0	0	0	0	0	0	0	0	0	0	0
WY	0	0	0	0	0	0	0	0	1	1	1
N =	**8**	**13**	**16**	**17**	**19**	**21**	**23**	**25**	**26**	**25**	**26**

*No changes from 1991-1993

TABLE 4.13

TYPE OF ASSESSMENT STAFF: 1978-94

YEAR	Programs	State Staff	Contract Agency	Combination
1978	3	1 (33%)	0	2 (67%)
1979	3	1 (33%)	0	2 (67%)
1980	4	1 (25%)	1 (25%)	2 (50%)
1981	5	2 (40%)	1 (20%)	2 (40%)
1982	8	2 (25%)	2 (25%)	4 (50%)
1983	13	4 (31%)	4 (31%)	5 (39%)
1984	16	7 (44%)	4 (25%)	5 (31%)
1985	17	8 (47%)	4 (24%)	5 (30%)
1986	19	8 (42%)	4 (21%)	7 (37%)
1987	21	9 (43%)	4 (19%)	8 (38%)
1988	23	11 (48%)	4 (17%)	8 (35%)
1989	25	12 (48%)	5 (20%)	8 (32%)
1990	26	13 (50%)	5 (19%)	8 (31%)
1991	25	12 (48%)	5 (20%)	8 (32%)
1992	**25**	**12 (48%)**	**5 (20%)**	**8 (32%)**
1993	25	9 (36%)	5 (20%)	11 (44%)
1994	**26**	**8 (31%)**	**5 (19%)**	**13 (50%)**

TABLE 4.14

HOW ELIGIBILITY IS DETERMINED: 1978-1994

YEAR	Programs	In-Person for Hospital Or Community Applicants	In-Person for Hospital And Community Applicants
1978	3	1 (33%)	1 (33%)
1979	3	1 (33%)	1 (33%)
1980	4	2 (50%)	2 (50%)
1981	5	3 (60%)	3 (60%)
1982	8	6 (75%)	5 (63%)
1983	13	10 (77%)	7 (65%)
1984	16	13 (81%)	10 (63%)
1985	17	14 (82%)	11 (65%)
1986	19	15 (79%)	12 (63%)
1987	21	17 (81%)	13 (62%)
1988	23	19 (82%)	15 (65%)
1989	25	21 (84%)	17 (68%)
1990	26	22 (85%)	18 (69%)
1991	25	20 (80%)	17 (68%)
1992	25	20 (80%)	17 (68%)
1993	25	19 (76%)	17 (68%)
1994	26	20 (77%)	16 (61%)

TABLE 4.15

SCREENS CONDUCTED PRIOR TO ADMISSION BY REFERRAL SOURCE: 1978-1994

YEAR	Programs	Community-Based	Hospital-Based
1978	3	3 (100%)	2 (67%)
1979	3	3 (100%)	2 (67%)
1980	4	4 (100%)	3 (75%)
1981	5	5 (100%)	4 (80%)
1982	8	8 (100%)	7 (88%)
1983	13	12 (92%)	9 (69%)
1984	16	14 (88%)	11 (69%)
1985	17	15 (88%)	12 (71%)
1986	19	17 (89%)	14 (74%)
1987	21	19 (90%)	16 (76%)
1988	23	21 (91%)	17 (74%)
1989	25	22 (88%)	19 (76%)
1990	26	23 (88%)	20 (77%)
1991	25	22 (88%)	19 (76%)
1992	25	22 (88%)	19 (76%)
1993	25	22 (88%)	20 (80%)
1994	26	23 (88%)	21 (81%)

TABLE 4.16

STATES SCREENING PRIVATE PAY APPLICANTS: 1978-94

YEAR	Programs	Private Pay	Spenddown	Total
1978	3	0	0	0
1979	3	0	0	0
1980	4	0	1	1 (25%)
1981	5	0	1	1 (20%)
1982	8	0	2	2 (25%)
1983	13	1	2	3 (23%)
1984	16	1	3	4 (25%)
1985	17	2	3	5 (29%)
1986	19	3	3	6 (32%)
1987	21	3	5	8 (38%)
1988	23	5	5	10 (43%)
1989	25	7	6	13 (52%)
1990	26	7	6	13 (50%)
1991	25	6	6	12 (48%)
1992	25	6	6	12 (48%)
1993	25	7	6	13 (52%)
1994	26	7	6	13 (50%)

TABLE 4.17

DESCRIPTIVE STATISTICS USED FOR REGRESSION ANALYSES 1991
(N = 49 States)*

VARIABLES	MEAN	STANDARD DEVIATION
Public Policies		
PAS	0.46	0.50
PAS For Medicaid Only	0.37	0.49
Socio-Demographic Factors		
Percent Aged 65 and Over	12.5	2.13
Percent Aged 85 and Over	1.32	0.34
Percent Women in Labor Force	58.73	4.41
Percent Non-White Population	14.27	11.69
Percent Metropolitan	65.22	21.63
Economic Factors		
Income Per Capita	$18,291	$2,803
Percent Unemployed	3.15	0.71
Tax Effort	95.53	13.26
Tax Capacity	99.87	19.55
Political Factors		
Liberal Voting Record	49.12	30.45
Percent Membership in AARP	97.78	16.67
Health Care Services		
Nursing Facility Beds Per 1,000 Aged 65 and Over	56.09	17.05
Medicaid Nursing Facility Recipients Per 1,000 Elderly	47.30	11.46
Medicare SNF Recipients Per 1,000	2.68	1.22

* Excludes Rhode Island and the District of Columbia

TABLE 4.18

CHARACTERISTICS OF STATES WITH PAS: 1991
LOGISTIC REGRESSION COEFFICIENTS
(N=50)

VARIABLES	Estimate	S.E.	Odds Ratio
Socio-Demographic Factors			
Percent Aged 65 and Over	1.239**	.440	3.453
Percent Non-White Population	.034	.051	1.034
Percent Metropolitan	.033	.021	1.033
Economic Factors			
Percent Unemployed	-.483	.607	.616
Tax Effort	-.002	.032	.997
Tax Capacity Index	.067*	.032	1.069
Political Factors			
Liberal Voting Record	-.016	.014	.983
Percent Membership in AARP	-.088*	.043	.915

Model Chi-Square	24.871**
Degrees of Freedom	8

*P<.05, **P<.01

D.C. not included

TABLE 4.19

PAS AND MEDICAID NURSING FACILITY UTILIZATION: 1990-92
2-STAGE LEAST SQUARES REGRESSION COEFFICIENTS

(Standard Errors in Parentheses)
(N = 50)

VARIABLES	1990	1991	1992
Public Policies			
PAS for Medicaid & Expected Medicaid	-4.733 (3.423)	-6.649** (2.943)	-5.262* (2.912)
PAS for Private Pay	1.920 (4.511)	-.965 (4.033)	-.768 (4.011)
Socio-Demographic Factors			
Percent Aged 85 and Over	11.333 (5.810)	8.988 (4.998)	11.045* (4.997)
Percent Metropolitan	.027 (.085)	-.081 (.076)	-.034 (.078)
Economic Factors			
Income Per Capita	.0005 (.0007)	.0014* (.0005)	.0009 (.0005)
Percent Unemployed	7.750* (2.886)	4.902* (1.910)	5.792** (2.089)
Health Care Services			
Nursing Facility Beds Per 1,000 Aged 65	.577** (.117)	.619** (.100)	.649** (.103)
Medicare SNF Recipients Per 1,000	-2.234 (1.869)	-2.043 (1.471)	-2.434 (1.483)
Adj. R-Square	**.506****	**.621****	**.604****
Standard Error	**9.823**	**8.657**	**8.606**

*p<.05, **p<.01; one-tailed test for PAS

1990-No AZ; 1991-No RI; 1992-No RI

CHAPTER 5: SUMMARY AND CONCLUSION

INTRODUCTION

Three major contributions to the literature on state PAS programs were made by this study. First, detailed information on state screening activities were presented for 1994, updating the literature on the scope and use of PAS by states. Second, longitudinal data covering a 17 year time period provided information on when state states implemented PAS and how program structure has changed over time. Lastly, a two-stage regression analysis for two of three years found states with PAS programs targeted towards Medicaid applicants were associated with lower statewide Medicaid nursing facility use. This chapter discusses the larger policy implications of this research and makes recommendations for areas of future study.

OVERVIEW OF FINDINGS

This study examined the implementation of state PAS programs and their basic program structure covering a 17 year time period from 1978-1994. A barrier to this research was defining what constituted a PAS program. Despite frequent references in the long term care literature, no agreed upon definition of PAS exists. This study did not use a preconceived definition of PAS, but instead examined how all states determined eligibility for nursing facility placement.

In 1994 roughly half of all states (25) determined eligibility for nursing facility placement by a paper or telephone review of information collected by a private provider, usually an employee from a nursing facility or hospital. These states were classified as having 'minimum' programs. The other twenty-six states used a wide variety of screening strategies to determine eligibility for nursing facility placement and, in most cases, divert applicants to community-based alternatives. The number of states with these types of programs steadily increased from 1978 up until 1990. From 1990 to 1994 only one state implemented a statewide PAS program.

DESCRIPTIVE DATA

SCREENING PROCESSES

A primary aim of this study was the documentation of a number of specific program components describing how the process for completing a preadmission screen is accomplished. Two basic processes related to PAS program operation are who conducts the assessment and how eligibility for nursing facility services, and/or initiation of service referrals for community-based care, are made. States used a variety of mechanisms to complete applicant assessments. Some states conducted in-person assessments for all applicants, while other states screened only a subset of applicants in-person, often based upon applicant referral source or acuity level. Some state PAS programs consolidated responsibility for assessment and eligibility

determination among screening staff, while others separated assessment and eligibility determination responsibilities.

How screening processes are organized may have direct effects on consumer satisfaction, system performance, and screening costs. Control over the quality of assessments conducted by screening staff may be lower in decentralized programs that have a variety of assessment staff screen applicants (Jakubiak, 1995), such as those in Connecticut and Massachusetts, which allow state staff, visiting nurses, or hospital discharge planners complete assessments. Ensuring the reliability of assessments completed by each of these different types of assessment staff may be more difficult than for states like Nevada and South Dakota, where state staff conduct all applicant assessments.

Another issue state PAS programs must confront is the completion of preadmission screens in a timely manner, especially for hospital-based applicants. Some states divided assessment responsibility based upon an applicant's referral source, with hospital-based applicants having their assessments completed by hospital staff while community-based applicants were screened by state or contract agency staff. Other states, which conducted in-person assessments for all applicants, prioritized the screening of hospital-based applicants over community-based applicants. States must balance concerns over the reliability of assessments with the completion of applicant assessments in a timely manner.

PAS and Case Managed Services

States were found to use a wide variety of program structures to accomplish the task of preadmission screening and the linking of case managed community-based services. Some states, such as Connecticut, had two distinct departments administer their PAS and case managed community care programs. Screening staff from the PAS program determined eligibility for nursing facility services and initiated referrals to case managers who then conducted a second, more comprehensive assessment, to determine whether community based services are a realistic alternative to nursing facility services. Other states, such as Illinois and Indiana, used Care Coordination Units and Area Agencies on Aging, respectively, to perform both PAS and case management.

The local level organization of these two components of the long term care system may have a direct effect on the responsiveness of the system to consumers. In states where both PAS and case management services are consolidated in one agency, consumers only have to deal with one agency, while consumers may have to interact with multiple agencies under other administrative structures (Jakubiak, 1995). One incentive for states using a consolidated local level agency administration is that they may have greater oversight and control over allocation of resources (Coleman, 1996). Future research should examine the positive and negative aspects of these two general types of program designs.

PAS and the Minimum Data Set

States are developing large computerized databases of nursing facility resident information using the Minimum Data Set. This data is being used for a variety of purposes, including determining reimbursement levels, developing quality indicators, and assisting in licensing and certification facility reviews (Harrington et al., 1996b). States should consider integrating PAS and MDS assessment forms. Sharing this information will decrease applicant/resident burden, assist nursing facilities in completing the MDS and also assist PAS screeners conducting assessments for private pay nursing facility residents who convert to Medicaid. Such a process could be developed into a universal assessment form used to track an individuals' episodes of care from site to site within the health care system.

SCREENING OUTCOMES AND PROGRAM COSTS

PAS programs control nursing facility utilization through stricter enforcement of eligibility criteria and/or by diverting those with light care needs to community-based alternatives. One indicator of screening effectiveness is the number of applicants screened and the number denied placement or diverted to other alternatives. Although states have a clear incentive to track screening outcomes, most states could not provide screening data in any format. Of the 19 states which provided screening data, some states indicated they diverted significant numbers of applicants, but these numbers may be deceptively large because some programs are

integrated with community-based programs and therefore data reported may reflect larger screening processes. Other states reported diversion rates of 1 percent or less.

In addition to the ability of PAS to decrease nursing facility utilization, an important and related question is whether these programs are cost effective. Unfortunately, reliable administrative cost data could not be collected by this study, nor were states able to provide annual data on PAS program expenditures. Program expenditures are important to collect and compare to diversion rates in order to determine program cost effectiveness. States need to conduct program cost effectiveness studies to determine the utility of PAS in decreasing Medicaid expenditures. If program costs are high, but diversion rates relatively low, then it would not make sense for states to invest in PAS if cost savings were the primary goal of the program.

Although administrative expenditures were unavailable, several states reported changing the structure of their program in response to an increased demand for screens and/or state budget cuts. Florida stopped screening private pay applicants, while New Hampshire stopped screening expected Medicaid eligibles, because of increased demand for screens and lack of funds to expand their screening staffs. Montana stopped conducting in-person screens and moved to telephone screens because of increased demand and lack of funds. South Carolina expanded its screening staff by hiring contract agency staff and not increasing the number of state employees because contract agency staff were less expensive to hire than state staff.

Thus, even though administrative expenditures were not available, anecdotal evidence suggests program expenditures are an issue of concern for states.

Targeting Issues

Because of funding concerns, PAS program need to target their screening resources towards applicants with the greatest likelihood of being diverted. Targeting issues for PAS programs are different than for home and community-based programs. The primary targeting issue for home and community-based programs is to identify not only those applicants with a medical/functional need for nursing facility care, but also those who are at imminent risk of entering a nursing facility (Weissert et al., 1988). This is a difficult task because of similarities in disability levels between many community-based dwelling elders and those residing in nursing facilities. PAS programs presumably avoid this problem because they screen only those who are already applying for nursing facility care and are thus at the "doorstep" of the facility.

The unique targeting issue PAS programs face is identifying those applicants who are at risk of extended stays in a nursing facility, not those who are at risk of placement in general. Nursing facility services are used for a variety of reasons and most people entering a nursing facility are there for a short period of time, usually for rehabilitation after an acute episode. For an efficient use of resources, PAS programs need to focus their screening efforts towards applicants at risk of long nursing facility stays who have the potential to remain in the community with the assistance of in-home services.

States have developed a number of techniques to target applicants with diversion potential. One method states have used to target resources towards those with diversion potential, and to conserve program screening costs, was the use of a brief telephone screen between state staff and providers. Some states, which conducted in-person screens for most applicants, used telephone screens only for highly impaired hospital-based applicants who have a clear need for nursing facility services and little chance at diversion (Illinois and Minnesota). Other states used a telephone screen (Missouri) or paper review (Florida) for all applicants in order to decide whether to conduct an in-person comprehensive assessment.

Another method used by states to target applicants with diversion potential was to focus screening efforts towards community-based applicants. Some states (Virginia) used state or contract agency staff to conduct assessments of community-based applicants, but relied on hospital discharge planners to screen hospital-based applicants. States which used state or contract agency staff to conduct assessments for community applicants, but hospital staff for hospital applicants, reported assessment responsibilities were divided to facilitate discharge and/or they believed community-based applicants were less impaired and had the greatest potential to remain in the community and were thus the focus of many PAS programs.

A third way states targeted their screening resources was through the use of multiple assessment forms. Some states used a brief assessment form for likely nursing facility residents and reserved the use of a comprehensive screening instrument for applicants with potential to remain in the community. This was one

goal of Connecticut's Alternative Screening Process, which is a quicker and less comprehensive assessment instrument used for those with little diversion potential.

The limited amount of screening data provided by state PAS programs indicates states which focus their screening resources towards community-based applicants will achieve high diversion rates than hospital-based applicants. Data from Missouri, Nevada, and Oregon show that although at least twice as many hospital-based screens were conducted, community-based applicants were much more likely to be diverted in terms of both percentage and raw numbers. Nevada diverted 36% of community-based applicant and Missouri and Oregon nearly half, while the higher highest diversion rate for hospital-based applicants among the three states was 16% by the Missouri program. One option available to states concerned about program costs would be to focus their screening efforts towards community-based applicants.

If program costs were available, it would be informative to find out what the administrative expenditures and diversion rates were for programs which use state staff to screen all applicants, regardless of disability level or referral source, and compare them with programs which target in-person assessments towards a specified subset of applicants. This would allow states to design their programs to maximize their diversion rates while minimizing screening costs.

If cost concerns are the primary motivation for state implementation of PAS, a basic question states should pursue is how many nursing facility applicants need to be diverted from placement to offset the cost of the alternative services plus the administrative costs of the PAS program. As PAS program costs increase, PAS

program data will no doubt become more important to states. The inability of most states to provide any screening or cost data may place these programs at increased financial risk during times of state fiscal crises.

ANALYTIC FINDINGS

CHARACTERISTICS OF STATES WITH PAS

This study examined the characteristics of states which had a PAS program in 1991 by including a number of political, economic and socio-demographic characteristics of states thought to be associated with PAS implementation in a logistic regression model. The three characteristics associated with having PAS in 1991 were a large elderly population, large tax capacity, and low political elderly influence as measured by the percent of the states elderly population with membership in the American Association of Retired Persons. Although the design of the analysis does not allow for inferences to be made regarding causality, all three of the state characteristics found to be significantly associated with having PAS in the cross-sectional logistic regression analysis may be significant predictors of PAS implementation in a larger pooled analysis.

Further modifications in the analysis can provide greater insight into the particular social, economic, political, and health service supply characteristics of states associated with PAS implementation. For example, determining variation in state implementation of PAS allows us to understand whether differences are due to a

high demand for long term care services or if implementation is dependent upon a state's wealth. Although PAS administrative costs are unknown, expenditures for PAS programs are certainly higher for states than merely implementing a moratorium on nursing facility bed construction or decreasing Medicaid nursing facility reimbursement levels. Are states in good fiscal health more likely to implement PAS or are they less likely to implement PAS because they are better equipped to fund long term care services? If the latter is true, than one would expect poorer states to implement PAS to help contain Medicaid long term care expenditures.

Future studies should pool data from a number of years to examine the state characteristics associated with PAS at the time of implementation. This may provide insight into the reason for the rapid implementation of PAS by states during the 1980s and its leveling off during the 1990s.

The model should also be expanded in a pooled analysis to include additional variables, especially the health service characteristics of states. For example, it is reasonable to assume states may implement PAS in response to previously high Medicaid nursing facility utilization rates. Bed supply may also influence PAS implementation. States with low bed supply may be less likely to implement PAS because utilization is already constrained by bed supply and implementation of PAS would not decrease overall Medicaid nursing facility utilization rates. Additional variables to be considered for a future pooled analysis include: percent population nonwhite, supply of community-based alternatives, and political party split.

The measure of PAS used in one analysis was a dichotomous measure based upon a qualitative analysis of program structures, with states with more than 'minimum' programs coded as having PAS. Of these programs, those screening private pay applicants were included as a second control variable, because there was concern that if state markets had excess demand, diversion of private pays would mitigate the effects of PAS on Medicaid nursing facility utilization. Future analysis should examine whether programs screening private pay applicants have an effect on total nursing facility utilization, not just Medicaid nursing facility utilization.

Lastly, a different measure of PAS could be used as the dependent variable in future analyses. For example, a pooled analysis could examine only those states which screen all applicants, private pay and Medicaid. Reasons for implementing PAS may be different for states which screen all applicants instead of those which screen only Medicaid eligibles. Perhaps states screen private pays in order to increase access for Medicaid eligibles under conditions of low bed supply.

PAS STRINGENCY SCORES

Paringer (1985) observed the scope of a policy change, in addition to the mix of other Medicaid policies and underlying market structure, can have a large influence on nursing facility utilization. PAS programs were found to vary greatly along a variety of dimensions. Previous researchers using a measure of PAS in their analyses recognized the tremendous differences in programs across states and hypothesized their measures of PAS were not sensitive enough to detect a significant

effect (Harrington and Swan, 1987; Liu et al, 1991). This study attempted to differentiate PAS programs by developing a measure of program stringency based on selected program characteristics thought to be related with program stringency. These stringency scores were used as part of a utilization model in a two-stage least squares regression analysis to examine their relationship with Medicaid nursing facility utilization rates for 1992.

Unfortunately, no association was found between state PAS stringency scores and Medicaid nursing facility utilization. Future research should examine the components of the stringency table to more accurately assess the scope and effectiveness of different program structures. A factor analysis of the individual components of the stringency table could allow for the collapsing of certain variables to provide a more refined stringency measure. Other program characteristics that were not considered may also be related to program stringency.

A pooled analysis may have been able to detect a significant association between PAS stringency scores and Medicaid nursing facility utilization and should also be considered in future research. In addition, because data limitations forced the use of 1993 stringency scores to be used with data from 1992 for the other variables included in the utilization model, the analysis should be performed again when 1993 and 1994 data become available.

PAS AND MEDICAID NURSING FACILITY UTILIZATION

This study examined the relationship between PAS and Medicaid nursing facility use by including a measure of PAS in an economic supply and demand model. For analytic purposes, only those states with more than 'minimum' programs were considered as having PAS. These states were further distinguished between those screening Medicaid and expected Medicaid eligibles and those screening all private pay applicants in addition to Medicaid eligibles. Socio-demographic, economic, and health service supply factors known to affect utilization from previous studies were included in a two-stage least squares regression model using data from 1990, 1991, and 1992 to measure the relationship between PAS and Medicaid nursing facility utilization rates. States with PAS programs targeted towards Medicaid and expected Medicaid eligibles were significantly associated with lower Medicaid nursing facility recipients per 1,000 population over the age of 65 in two of the three years studied.

The results of this preliminary analysis raise some interesting issues regarding the effect of a statewide PAS program on the market for nursing facility services. Only three other studies had included a measure of PAS in their models and none found PAS to significantly decrease nursing facility utilization (Scanlon, 1980a; Harrington and Swan, 1987; Liu et al, 1991). While the results of the cross-sectional two-stage regression analyses do not allow a definitive statement to be made about the effect of PAS on Medicaid nursing facility rates, a number of future refinements to the utilization model should be made and tested in future analyses to more accurately assess the effect of PAS on nursing facility utilization.

LIMITATIONS AND FUTURE RESEARCH

Medicaid nursing facility utilization rests upon a number of market forces outside the control of PAS programs. Although this analysis included one of the strongest factors associated with nursing facility utilization, bed supply, the small number of cases examined in the cross sectional analysis required the utilization model to limit the number of variables included in the model. Additional environmental factors known to affect utilization should be taken into account in a future analysis of pooled data covering multiple years.

Two additional socio-demographic characteristics of states that should be considered in future pooled analyses are: percent of the population that is nonwhite and female labor force participation. The percent of a state's population that is non-white may affect overall utilization rates, with some research finding lower utilization among non-white populations. In addition, the percent of a state's female population in the labor force may decrease the availability of informal caregivers, resulting in increased demand for services.

Medicaid policies to include in a revised model include the presence of a medically needy program and Medicaid reimbursement levels. States with medically needy programs increase the number of Medicaid eligible nursing facility applicants by allowing the cost of nursing facility services to be deducted from an individual's income level. The Medicaid reimbursement rate may affect the willingness of nursing facility operators to admit Medicaid applicants depending on their profitability. High

Medicaid reimbursement rates may also provide an incentive for operators to expand the supply of nursing facility beds.

Future analysis should also examine how the supply of community-based alternatives affects the ability of PAS to decrease nursing facility utilization rates. The supply of home and community-based services and residential care facilities are important services to consider since they may delay or provide an alternative to nursing facility services. Some states reported an undersupply and lack of funding for community-based services hampered their efforts to provide alternatives for nursing facility place, with many applicants forced to enter a nursing facility because they were unable to wait for a slot in the state's community care program to become available. Medicaid 2176 waiver expenditures per 1,000 elderly over age 65 and residential care/board and care beds per 1,000 elderly over age 65 are two measures which could be used.

Pooled analyses may reveal several interesting patterns regarding the effect of PAS on Medicaid nursing facility use. Such an analysis may show that PAS has a larger effect during the initial years after program implementation or that length of program operation is associated with lower utilization rates. In addition, a pooled analysis may allow for the control of the effect of PASARR on PAS diversion rates. PASARR is a separate screening mechanism for mentally ill and mentally retarded applicants that went into effect in 1989. Prior to 1989, PAS programs may have experienced higher diversion rates because they might have been screening out the severely mentally disabled.

Lastly, the effects of local markets should be analyzed. Some PAS programs reported denial rates varied by region. Future research should examine regional differences in program outcomes and determine if denial rates are due to differences in within the program, such as different types of screening staff, different levels of screening staff expertise or due to environmental factors such as the supply of beds or community-based long term care services. County level occupancy rates could provide a second measure of bed supply.

CONCLUSION

In the absence of federally mandated assessment procedures for nursing facility applicants, states have developed a variety of mechanisms to determine eligibility for services. These programs vary along a variety dimensions. This study found states have developed a variety of methods to screen applicants for nursing facility care and determine their eligibility. Any federal reform should allow considerable state discretion in program administration so that existing state long term care infrastructures can be used by states based upon their historical delegation of screening responsibility.

Without federal reform, many states will probably continue to use PAS to control the allocation of long term care services because it can be inserted into an existing long term care infrastructure without radical restructuring (Applebaum and Austin, 1990). Unfortunately, most states are not tracking program costs or screening data. Thus, it is difficult to examine the effect of PAS on nursing facility

use or its cost effectiveness. Although preliminary findings from this study examining the effect of PAS on Medicaid nursing facility utilization are encouraging, further research is needed to ascertain the true impact of PAS on utilization rates. Moreover, states should conduct cost effectiveness evaluations of their programs, similar to those required for Medicaid waiver programs, to measure the overall effect of PAS on Medicaid long term care expenditures and utilization. Even if some programs are not cost effective, states may find PAS as one method to ensure those with the greatest need receive available services.

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APPENDIX 1

PAS SURVEY INSTRUMENT

Please describe the PAS program in your state._____

_____

_____

_____

_____

_____

According to data we collected previously, your state PAS program for nursing home residents was first implemented on a statewide basis in: _____

If this information is not correct please explain._____

_____

Is one of the functions of the PAS program to divert patients into community-based care? (For example, diversion into waiver programs) _____ (Yes/No). If yes, please describe the process by which people are diverted.

_____

_____

_____

_____

Does [STATE] use a contract agency to conduct PAS:
PAS: Yes____ No____

If yes, is agency ownership private non-profit, private for-profit, or a public agency?_____

_____

_____

Are counties or regional agencies involved in PAS program administration?
PAS: Yes____ No____

_____

_____

Are there any other goals of your PAS program beyond meeting Federal PASARR requirements or diverting patients into community-based settings. (i.e., preventing inappropriate placement, decreasing NH costs, etc.)_____

_____

_____

Please describe any changes in the above information which have taken place since CY 1992._____

_____

TYPES OF CLIENTS SCREENED

For PAS, which of the following clients are screened on a mandatory basis to gain admission to a nursing home, which are screened on an optional basis, and which are not screened?

	Medicaid Eligibles	Expected Medicaid Eligibles_____(days)	Private Pay Patients
Mandatory	_____	_____	_____
Optional	_____	_____	_____
Not Screened	_____	_____	_____

_____

_____

If private pay clients are screened, are they charged for PAS screens? Yes____ No____

If yes, how much on average?_____

If private pay clients are not screened, are there plans to do so? Yes____ No____

Is nursing home admission denied if placement has not been recommended?

	Yes	No
Medicaid Eligibles	_____	_____
Expected Medicaid Eligibles	_____	_____
Private Pays	_____	_____

_____

_____

Does [STATE] withhold payment of Medicaid funds if clients are admitted to a nursing home without PAS approval? Yes____ No____

_____

_____

Once a person is approved for NH placement, are they required to be re-reviewed at a later date? Yes____ No____

If yes, when?_____

_____

Please describe any changes in the above information which have taken place since CY 1992.

_____

_____

SCREENS

Composition of Assessment Teams

This question pertains to WHO fills out the PAS forms. This question is asked separately for community and hospital-based patients and for PAS screens. Who fills out the **initial** PAS screening forms for new NH admissions?

a) Community-Based Clients		**b) Hospital-Based Clients**	
Type of Staff		**Type of Staff**	
State	_____	State	_____
County	_____	County	_____
Contract Agency	_____	Contract Agency	_____
Hospital	_____	Hospital	_____
Nursing Home	_____	Nursing Home	_____
Attending MD	_____	Attending MD	_____
Other_____	_____	Other_____	_____

_____

_____

Who fills out the PAS forms for private pay patients?

PAS:_____

_____

What is the average length of time required for each screen?

PAS_____ PASARR_____ Combined_____

_____

_____

The next set of questions pertains to who reviews PAS forms and makes the final decision regarding placement. Who reviews the forms and makes the final decision for PAS screens (office and type of staff)?_____

_____

_____

If private pay clients are screened, who reviews the forms and makes the final decision for PAS screens?

PAS:_____

_____

Please describe any changes which have taken place in the screening process since CY 1992.

_____

_____

_____

The next set of questions pertain to HOW reviews are conducted. Specifically, the type of information examined for each review. The questions are asked separately for community and hospital-based patients. Please indicate the percent for each method for PAS.

a) Community-Based Clients	**b) Hospital-Based Clients**
___% Paper review of medical record	_____% Paper review of medical record
___% In-person contact with client/family	_____% In-person contact with client/family
___% Telephone contact with client/family	_____% Telephone contact with client/family
___% Telephone contact with provider	_____% Telephone contact with provider
___% Other_____	_____% Other_____

_____

_____

Have these percents changed since 1992?_____

_____

The next set of questions pertain to the timing of screens. Again, the questions are asked separately for community and hospital-based clients. What percent of PAS screens are conducted:

a) Community-Based Clients	**b) Hospital-Based Clients**
___% Prior to admission	_____% Prior to admission
___% After admission, but within 7 days	_____% After admission, but within 7 days
___% Between 8 and 15 days	_____% Between 8 and 15 days
___% 15+ days or more	_____% 15+ days or more

_____

_____

_____

_____

Has any of the above information changed since CY 1992?_____

_____

_____

SCREENING CRITERIA

What instrument(s) are used to conduct PAS _____

_____

Is the MDS form used? Yes____ No____ _____

Is the same assessment form used statewide for all types of clients? Yes____ No____

What are the basic screening criteria for Medicaid nursing home admissions in (minimum criteria for admission). For example, are there requirements for a minimum number of ADLs, IADLs, or other impairments to qualify?_____

Specifically, are the following considered:

___ADLs	_____Formal Supports	_____Severity of Conditions
___IADLs	_____Informal Supports	_____Point System

Have these criteria changed since 1992? Yes____ No____ If yes, how and why?

SERVICES

Does your PAS program authorize and/or fund community-based services? If yes, please describe.

Are there plans to authorize and/or fund services with PAS in the future?_____

Could you please send any relevant documentation pertaining to your PAS program, including **assessment tools and criteria**, program evaluations, questionnaires, program description, regulations, or interview schedules).

Yes____ No____

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APPENDIX 2

PERCEIVED IMPACT OF PAS

PROGRAM BARRIERS

1) Have any of the following made it difficult to implement and maintain your PAS program? (Please check all that apply)

a) Lack of Provider Support:
_____nursing homes
_____home health care agencies
_____physicians
_____hospitals

b) Lack of Government Political Support:
_____legislators
_____federal government
_____state government
_____local government

_____Lack of public government financial support

_____Lack of family support
_____Lack of client support

Comments:_____
_____
_____
_____
_____

2) The following is a list of questions related to your own personal views on the effects of PAS on various aspects of long term care related to supply, utilization, cost, and quality.

What has been the impact of PAS on :

Nursing Home Services	Increased	Remained the Same	Decreased
a) The **supply** of nursing home services:	_____	_____	_____
b) The **utilization** of nursing home services:	_____	_____	_____
c) The **cost** of nursing home services:	_____	_____	_____
d) The **quality** of nursing home services:	_____	_____	_____

Comments:_____

_____

_____

_____

_____

3) What has been the impact of PAS on:

Community-Based Services	Increased	Remained the Same	Decreased
a) The **supply** of community-based services:	_____	_____	_____
b) The **utilization** of community-based services:	_____	_____	_____
c) The **cost** of community-based services:	_____	_____	_____
d) The **quality** of community-based services:	_____	_____	_____

Comments:_____

_____

_____

_____

_____

4) How has the availability of community-based long term care alternatives affected your state's ability to perform effective preadmission screening?_____

_____

_____

_____

_____

4a) Please describe any positive or negative aspects of your PAS program which are especially unique._____

_____

_____

_____

_____

4b) Please describe any future changes, legislative or otherwise, in your state's PAS program.

_____

_____

_____

_____

APPENDIX 3

PROGRAM DATA

PAS

1) Are data for the PAS programs recorded for CY 1993 or FY 1993-94 ?_____

2) How many people were screened and how many were diverted from nursing home placement by your PAS program in CY 1993 (FY 1993-1994)? If possible, please separate by referral source.

	Number Screened	**Number Diverted**
Hospital-Based Applicants	_____	_____
Community-Based Applicants	_____	_____
Other_____	_____	_____
TOTAL	_____	_____

_____

_____

3) Of the total number of applicants diverted from nursing home placement, how may were recommended for placement in each of the following categories in CY 1993 (FY 1993-94).

_____Remain at home with no services
_____Remain at home with additional community-based services
_____Placement in other type of facility
_____Other_____

_____

_____

4) Please list all program funding sources for PAS screens and the percent contributed from each source in CY 1993 (FY 1993-94)._____

_____

_____

5) What were the total expenditures for PAS screens in CY 1993 (FY 1993-94)._____

_____

6) If community-based services are funded by PAS, what are the funding source(s) for those services?

Medicaid	_____%	Social Security Block Grant	_____%
Medicaid Waiver	_____%	Older Americans Act	_____%
State General Funds	_____%	Other_____	_____%

_____

_____

7) If community-based services are funded by PAS, what were the total expenditures for the community-based services utilized by applicants diverted by the PAS program in CY 1993 (FY 1993-94)._____

8) If there is an appeals process for PAS decisions, please indicate the following for CY 1993 (FY 1993-1994):

_____PAS appeals _____Decisions upheld _____Decisions overturned

9) If Medicaid funds are withheld if an individual is admitted to a nursing home without PAS approval, how many times did this occur in CY 1993 (FY 1993-1994)?_____

APPENDIX 4

PILOT PAS PROGRAMS: 1994

PILOT PROGRAMS

Three states had demonstration PAS programs operating on a limited basis in 1994: Colorado, Iowa, and Texas. One state, Nebraska, started a pilot program in 1995. Data pertaining to these pilot programs were not included in the data analysis because the majority of applicants were screened by other means. The following is a brief description of each of these programs.

Iowa

The purpose of Iowa's pilot program was to make sure elderly nursing facility applicants had the opportunity to make fully-informed choices regarding their long term care options. Nursing facility staff assessed applicants and reviewed this information with an RN from a contract agency over the phone, who then determined whether to refer the applicant to the state's case management program for a comprehensive assessment. Any applicant who could possibly be supported at home with community-based services was to be referred to the case management program -- Case Management Program for Frail Elderly (CMPFE). Diversion rates have been low (in six months 1,567 screens were done, with only 6 applicants choosing community-based services), and "the greatest impact has been the increased communication between nursing facilities and the case management program."

Colorado

The pilot PAS program began in 1993 in Colorado and was implemented on a statewide basis by 7/1/95. A county-administered program, county officials selected an administering body (AAA, private contract agency, or county Departments of Social Services) to conduct assessments for community-based applicants, while hospital-based applicants had their assessment forms completed by hospital staff. In both cases, assessment forms were sent to the Colorado Foundation for Medical Care, a non-profit contract agency, where a paper review was done by registered nurses to determine eligibility for nursing facility placement or community-based placement (waiver program).

Preadmission screens are conducted prior to admission for community-based applicants, post-admission for hospital-based applicants. Only Medicaid eligibles were screened. Local case mangers conducting client assessments are supposed to notify applicants of community-based services offered through the home and community-based waiver, other state funded services, or even private services available in the community. The applicant must sign a form stating community-based services have been explored as an alternative to nursing facility care. Waiver funded services are offered to nursing facility eligibles, while state funded services are offered to people who are not medically eligible for nursing facility placement. There is not a systematic effort to divert nursing facility applicants into community-based settings if they were applying from a hospital-based setting. Only for community-based applicants.

Texas

In 1994 a pilot PAS program was started in 13 counties in Texas. Medicaid nursing facility applicants were screened by state nurses operating out of local state offices prior to admission. Assessment staff had the authority to allow access to nursing facility services, but anyone denied nursing facility placement had their assessment form faxed to the state Medicaid office where a physician reviewed the applicant information. If eligible for nursing facility placement, waivered services were offered as an alternative to nursing facility placement. Applicant's interested in receiving waivered services received a second, more comprehensive assessment done, usually by a social worker, to determine the types of services needed by the client.

Although the original plan was to have this program implemented statewide by 9/95, the program was canceled 3/95. Texas canceled their program because their own evaluation, "indicated that the basic premise of the pilot had had not been realized, i.e., persons seeking nursing facility care were not interested in community care at that time because so much time and emotional effort had been spent by families preparing for/accepting nursing facility care....once the decision is made, the family is very reluctant to consider other options". Texas is now focusing on community awareness and outreach activities to inform the general public about the scope and availability of community-based services.

Nebraska

Staring in 1995, Nebraska started a pilot PAS program in five counties for all Medicaid eligible applicants age 65 and older. It is a two year demonstration project administered by the Department of Aging and depending upon whether it's cost effective, will be expanded statewide.

APPENDIX 5

PAS AND MEDICAID NURSING FACILITY UTILIZATION: 1990-92
2-STAGE LEAST SQUARE REGRESSION
STAGE 1 REGRESSION COEFFICIENTS FOR BED SUPPLY

(Standard Errors in Parentheses)
(N = 50)

VARIABLES	1990	1991	1992
Public Policies			
PAS for Medicaid & Expected Medicaid	.233 (.601)	.635 (.506)	.341 (.431)
PAS for Private Pay	-.966 (.789)	-.440 (.690)	-.654 (.591)
Socio-Demographic			
Percent Aged 85 and Over	1.174 (1.014)	1.564 (.847)	.332 (.737)
Percent Metropolitan	.009 (.015)	-.013 (.013)	-.005 (.011)
Economic			
Income Per Capita	-4.564 (1.235)	-4.051 (1.026)	1.849 (8.441)
Percent Unemployed	-.596 (.506)	-.329 (.326)	-.009 (.308)
Health Care Services			
Nursing Facility Beds Per 1,000 Aged 65 Lagged	.993** (.020)	.985** (.016)	.992** (.015)
Medicare SNF Recipients Per 1,000	-.080 (.347)	-.256 (.253)	.010 (.219)
Adj. R-Square	**.989****	**.992****	**.994****
Standard Error	**1.742**	**1.483**	**1.271**

*p<.05, **p<.01

1990-No AZ; 1991-No RI; 1992-No RI