Medicaid Tape-to-Tape findings: California, New York, and Michigan, 1981

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Presented in this report is an overview of Medicaid enrollment, utilization, and expenditures in California during 1981. The California Medicaid program, called Medi-Cal, is the largest in the Nation in terms of program beneficiaries. During 1981, California had one of the most generous Medicaid programs in the country in terms of eligibility and covered services. At the same time, there were benefit limitations and reimbursement restrictions in place that were designed to restrict program expenditures. The data in this report were provided by the State to the Health Care Financing Administration as part of the Medicaid Tape-to-Tape Project. Data from Michigan and New York are also included for comparison purposes.

Introduction

In 1965, Congress passed legislation (Public Law 89-97) amending the Social Security Act to create the Medicare (Title XVIII) and Medicaid (Title XIX) programs. As an expansion to Medical Assistance for the Aged under Kerr-Mills legislation, Medicaid was designed to provide access to health care for low income persons who were aged, blind, disabled, or members of families with dependent children. From the beginning, Medicaid has been a decentralized program. Financing is provided jointly by the States and by the Federal Government. However, the program is administered independently by individual States within broad Federal guidelines that specify coverage provisions, mandatory services, and minimum administrative requirements. Beyond these guidelines, States have considerable flexibility to determine eligibility, additional services, coverage, duration of coverage, administrative structures, and data systems.

During the last decade, Medicaid has grown rapidly, both in the number of recipients and in total expenditures. As a result of this growth, Medicaid has become a large component of many State budgets and has become a highly visible program at the Federal level. As budgets have grown, the Federal Government has attempted to contain Medicaid costs in a variety of ways. The most sweeping changes in Medicaid have resulted from the Omnibus Budget Reconciliation Act of 1981. At the same time, the fiscal crisis existing in many States has forced those States to implement extensive changes in their Medicaid programs.

Because Medicaid was designed as a decentralized program, there has been little detailed data at the national level to measure the impact of change, monitor performance, and forecast program direction. Too often, Medicaid decisions have been made on the basis of intuition or supposition, without "hard" data. As a result, the development of Medicaid data sources has become an important part of the research plan of the Health Care Financing Administration (HCFA). Even with the adequate data, policymakers and administrators will be challenged as they attempt to understand the complexities of the Medicaid program.

One recent data collection project of HCFA is the Tape-to-Tape Project. The primary goals of the Tape-to-Tape Project are to improve HCFA's ability to conduct program evaluation, strengthen program management, evaluate policy alternatives, and assist States in the area of Medicaid financing. The project minimizes the costs and burden of data collection by using person-level data extracted from existing State Medicaid Management Information Systems (MMIS). Because MMIS data are available for enrollment, service use, and expenditures at the person level, they provide maximum flexibility to support a wide variety of analytical activities. Moreover, because enrollment and claims records can be directly linked, MMIS data can be used to produce use and expenditure rates. The list of possible study areas using these data includes enrollment characteristics and turnover, high-cost recipients, institutionalized individuals, cost sharing, inpatient hospital reimbursement, home-based and community-based services, freedom of choice, persons dually entitled, and selected medical conditions. The Tape-to-Tape Project has become an integral part of HCFA's effort to improve Medicaid data capabilities for the coming year.

The Tape-to-Tape Project is being implemented for 1980-84 in the States of California, Georgia, Michigan, New York, and Tennessee. Although these States are not necessarily representative of the national Medicaid program, they account for approximately 40 percent of the Nation's Medicaid recipients and expenditures. The following are major Tape-to-Tape Project tasks:

- Obtain person-level data on Medicaid enrollment, claims, and providers from State MMIS systems.
- Develop "uniform" data file structures to facilitate the comparison of Medicaid programs among States.
- Prepare standard reports describing enrollment, use, expenditures, and provider participation under Medicaid.

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- Conduct special studies that focus on important policy, program management, or other research issues for Medicaid.
- Produce research data bases to analyze and evaluate the Medicaid program.

Medicaid eligibility and benefit structure

Medicaid is designed to reduce financial barriers to health care for certain groups of indigent persons. The program is related to the welfare system in that primary eligibility for Medicaid benefits is extended to cash assistance recipients under the Supplemental Security Income (SSI) and Aid to Families with Dependent Children (AFDC) programs. States may elect to extend Medicaid coverage automatically to SSI recipients or to require that SSI recipients meet more restrictive standards than were in effect prior to implementation of the SSI program.

The Medicaid program is linked to the public welfare system and covers the following two types of eligible persons:

- Categorically needy eligibles: These persons are eligible for Medicaid because they qualify under the Aid to Families with Dependent Children (AFDC) program or the Supplemental Security Income (SSI) program for the aged, blind, and disabled. These eligibles may or may not be receiving cash assistance under the public assistance program when enrolled in the Medicaid program.
- Medically needy eligibles: These persons are eligible for Medicaid because they qualify for either AFDC or SSI except that their income is above the categorically needy program standard but below the medically needy program standard, or their income is higher than the medically needy standard but falls below it after subtracting medical expenses (these are known as "spend-down" eligibles). Coverage for medically needy eligibles is optional for the States.

A special subset of persons enrolled in Medicaid are the elderly and disabled who also are enrolled in Medicare (often called "crossovers"). For these persons, Medicaid covers the coinsurance and deductibles required by Medicare, as well as expenses for services not covered by Medicare. In many States the Medicaid program also pays the premium required by Medicare to enroll in Medicare Part B supplementary medical insurance. Many States include within their Medicaid programs one or more "State-only" eligibility groups of low income persons who do not fall within the categorical or income groups described previously. The services provided under these State-only programs are fully funded by the State; however, the Federal Government shares in the administrative costs.

Because States have considerable flexibility to establish financial criteria for welfare eligibility, they simultaneously control income eligibility levels for Medicaid. Thus, individuals in identical circumstances are not necessarily treated identically across States. Moreover, not all of the poor are covered by Medicaid. In addition to income considerations, people must be in one of the designated groups (aged, blind, disabled, or member of a family with dependent children) to be eligible for Medicaid assistance. Low-income persons who are not eligible for Medicaid include nonelderly single persons, most two-parent families, and families with a father working at a low-paying job (Davis, 1979).

1981 California Medicaid program

Unless otherwise indicated, all program characteristics data are based on data from La Jolla Management Corporation (1982).

During 1981, the California Medicaid program (Medi-Cal) was one of the more generous programs in the country in both eligibility determination and covered services. The annual AFDC payment level for a family of four (the income level below which a family was eligible for Medicaid) in California was $7,212, the second highest AFDC payment level in the country. Its SSI payments, at average annual rates of $5,268 per person for the aged and disabled, were also the second highest in the country in 1981; $2,092 per year was provided as a State supplement to the national SSI payment. California was 1 of the 30 States with a medically needy program. The medically needy protected income level for a family of four was $8,304—115 percent of the AFDC payment level and the highest in the country.

California has elected a number of eligibility options under its Medicaid plan. It is 1 of the 16 States whose plan includes all three of the AFDC groups not required to be included in the AFDC plan under Federal law: families with unemployed parents, pregnant women with no other eligible children, and children 18 years of age who attend school regularly. California is 1 of 11 States covering all individuals under age 21 years of age who do not qualify as dependent children, but who are otherwise AFDC-eligible. California extends eligibility to all SSI recipients and to recipients of State-only supplementary payments.

In 1981, California covered 30 of the 33 optional services permitted by Federal guidelines. Only Illinois covered as many, and only Minnesota covered more. Coverage was the same for categorically needy and medically needy individuals for both mandatory and optional services. The following optional services were provided in California:

- Intermediate care facility services.
- Intermediate care facility services for mentally retarded.
- Inpatient hospital services for individuals 65 years of age or over in institutions for tuberculosis.
- Skilled nursing facility services for individuals 65 years of age or over in institutions for tuberculosis.

NOTE: The information in this section was extracted in part from Cromwell, et al. (1982).

- Intermediate care facility services for individuals 65 years of age or over in institutions for tuberculosis.
- Inpatient hospital services for individuals 65 years of age or over in mental institutions.
- Skilled nursing facility services for individuals 65 years of age or over in mental institutions.
- Intermediate care facility services for individuals 65 years of age or over in mental institutions.
- Skilled nursing facility services for individuals under 21 years of age.
- Inpatient psychiatric services for individuals under 21 years of age.
- Prescribed drugs.
- Clinic services.
- Emergency hospital services.
- Transportation.
- Christian Science sanitoria.
- Optometric services.
- Eyeglasses.
- Dental services.
- Dentures.
- Podiatric services.
- Chiropractic services.
- Other practitioner services.
- Prosthetic devices.
- Physical therapy.
- Occupational therapy.
- Speech, hearing, and language services.
- Diagnostic services.
- Screening services.
- Preventive services.
- Rehabilitative services.

Most mandatory services and all optional services were subject to certain limitations in California, the most frequent being a prior authorization requirement. This was in contrast to the other States, which often had no such limitations on services. California had no cost-sharing provisions for services.

California was one of the five States that reimbursed nursing homes prospectively on the basis of class rates—one of the more restrictive Medicaid nursing home reimbursement approaches in the country. In 1981, facilities were reimbursed for inpatient hospital services according to Medicare reimbursement principles, basically a cost-based approach. California was 1 of 24 States to use the generally more restrictive fee-schedule approach to physician reimbursement.

Therefore, although the California program included very generous eligibility and coverage provisions, it also included program provisions such as benefit limitations and reimbursement approaches that could be expected to limit program expenditures. On the other hand, its maximum allowable physician fees were near or greater than the national averages—for example, $10.80 for a brief office exam by a general practitioner versus $10.41 nationally; $346.75 for an appendectomy in California versus $304.34 nationally; $509.44 for complete obstetric care of a routine pregnancy versus $350.08 nationally.

In fiscal year 1980, the California recipient population was the largest in the country at 3.42 million. Its total Medicaid payments were the second highest in the country, at $2.73 billion. In contrast, the New York program was the second largest in terms of recipients and the largest in terms of expenditures (Sawyer, et al., 1983). The California inpatient hospital program was also the largest in the country, with $1.33 billion and 4.02 million days. (New York was second with $0.74 billion and 3.73 million days.) The California skilled nursing facility (SNF) program was the largest in the country in terms of days, but second to New York in terms of dollars; its intermediate care facility (ICF) program was small, with 2.2 million days of care—27 States had larger ICF programs.

Data sources

The data in this report were extracted from the California Medi-Cal Management Information System (MMIS), a State administrative record system designed primarily to facilitate the timely and accurate payment of Medi-Cal claims and, secondarily, to provide data for program monitoring and research. The data are collected on an ongoing basis as part of program administration and consist of three basic types of files: enrollment files containing individual patient demographics, basis of eligibility, and monthly status; claims files containing data on actual health encounters for all types of services that resulted in the filing of a claim; and provider data on provider type and location. The data presented in this report were extracted from the enrollment and claims files. (The files were used to prepare detailed tables from which the authors prepared the tables in this report. The detailed tables are available on request from the HCFA project officers David K. Baugh and Penelope L. Pine.)

Because several States are participating in the Tape-to-Tape Project, the first steps in working with their MMIS files were to define a uniform set of variables and to recode data from individual States into uniform files. Once the uniform files were complete, a person-level file was constructed containing one record per enrollee for each year. Within the person-level files, each record includes demographic characteristics, utilization, and expenditures. Tables presented in this report were created from these person-level files.

Definitions

Populations

The following four population groups are of interest:

- Eligibles—These individuals are potential Medicaid enrollees because they meet Medicaid program standards. However, some of them were not program participants because they never applied for Medicaid benefits. (This is the parent population for the enrollees; it is not studied in this report.)

- Enrollees—These individuals are Medicaid eligibles who applied for Medicaid benefits and were enrolled as a result of the eligibility determination process.
- Recipients—These individuals are Medicaid enrollees who received at least one Medicaid covered service during a given period of time.
- Users—These individuals are Medicaid recipients further categorized into those who received at least one Medicaid covered service of a specific type during a given period of time. For example, a single recipient could be a user of hospital services and a nonuser of dental services. However, because an individual may be a user of more than one type of service, summation of numbers of "users" across service types does not result in an unduplicated count of recipients.

Counting enrollees

Enrollees can be counted in two ways. The first method is to count the number of persons who were ever enrolled in Medi-Cal in 1981. This procedure yields an unduplicated count of individual enrollees, each person being one unit in the count. The principal limitation of this approach is that all persons are equally weighted, whether they are enrolled in Medi-Cal for the full year or for only part of the year. The second method of counting enrollees adjusts for the variation in enrollment time (the "at-risk" time in this study) by counting enrollees fractionally, according to the portion of the study period (calendar 1981) in which they were actually enrolled—thus, a person who was enrolled in Medi-Cal for 6 months contributes .5 person years to the pool of enrollment experience. On the average, for example, an enrollee contributed .85 person years, and an AFDC adult contributed only .69 person years. The person-year method is used to estimate population at risk because it adjusts for the turnover that is characteristic of Medicaid populations. In this report, utilization and expenditure rates are computed on the basis of person years of enrollment.

Recipients and users

Enrollees who used services covered by Medi-Cal are categorized in two ways. Recipients are the enrollees who received one or more units of service of any kind. Users are the recipients who received one or more units of service of a specified kind. Thus, a recipient is a user with respect to at least one kind of service, but a nonuser with respect to the services he did not receive. User and recipient person years are calculated in the same way as for enrollees.

Eligibility groups

Medi-Cal eligibility and cash assistance vary by age, sex, and health status—all important determinants of health services use and expenditures. Therefore, most of the data presented in this report are arrayed by eligibility group. The following are categorized by eligibility group:

- Aged, blind, and disabled persons under the SSI program.
- Adults and children under the AFDC program.

The following are categorized by cash assistance status:

- Categorically needy receiving cash payments.
- Categorically needy not receiving cash payments.
- Medically needy.

The blind are a very small group (0.7 percent of enrollee person years) and are therefore eliminated from most analyses. The same is true of the categorically needy enrollees who do not receive cash assistance (0.1 percent of enrollee person years in California). Within the medically needy category is a subcategory, "other", that includes children for whom the State provides adoption assistance or foster care payments, as well as children in poor families that did not meet the AFDC dependency requirements.

Type of service

Both utilization and expenditure measures are analyzed by type of service. Three summary classes of service are used: hospital care (including acute hospitals but excluding psychiatric and chronic care hospitals); long-term care (including psychiatric hospitals, chronic hospitals, skilled nursing facilities, and intermediate care facilities); and all other care. In some expenditures tables, the "other services" category is disaggregated into services provided by physicians, dentists, other medical providers such as optometrists and chiropractors, hospital outpatient departments or emergency rooms, clinics, pharmacies, and all other (home health, durable medical equipment, ambulance services, and miscellaneous services).

In several tables, persons are grouped according to their institutional status. Persons are defined as being fully institutionalized when they reside in long-term care facilities for their entire period of Medi-Cal eligibility. If a long-term care stay is interrupted by one or more hospital stays, the person is still defined as fully institutionalized if the remainder of the eligibility period is spent in a long-term care facility. They are defined as semi-institutionalized when residing in long-term care facilities for any part of the eligibility period. Because many skilled nursing facility stays in California are for under 20 days, and therefore fully covered by Medicare and not represented in the Medi-Cal claims files, the semi-insitutionalized counts are underestimated.

Utilization and expenditure measures

Utilization measures for hospital care are discharges, days of care, and average length of stay. For long-term care services, the measure is days of care; for pharmacy use, it is number of prescriptions, including refills. For other services, the number of visits

is the utilization measure: physician visits (in the hospital as well as in the office or home), outpatient department or emergency room visits, clinic visits, other medical provider visits, dental visits, and home health visits. An aggregate statistic, ambulatory care visits, is the sum of physician, outpatient department or emergency room, clinic, and other provider visits. This category, though referred to as ambulatory care, contains some services, such as physician visits to inpatients that could not be readily grouped with hospital care. Total use and use per person year of enrollment, per recipient person year of enrollment, and per user person year of enrollment are presented.

The measure for expenditures is total Medicaid payments for specified enrollee or recipient or user services in 1981. Again, both total expenditures and expenditures per person year and per recipient person year are presented.

Crossovers

For aged and disabled persons covered by Medicare, Medi-Cal covered coinsurance and deductibles for those services covered by Medicare, as well as expenses for services not covered by Medicare. These persons are called "crossovers."

Limitations

Tape-to-Tape data were drawn directly from the California MMIS and include data for all Medi-Cal enrollees for 1981. Some characteristics of the California data that may affect its interpretation and utility are presented.

Eligibility determinations were carried out at the county level. When an enrollee moved to another county, the unique Medi-Cal identification number used to link records for each person was changed. Enrollment and claims data were matched using Social Security number (and, at times, birthdate and name), but some undetermined number of unmatched or mismatched records certainly exists. This results in counts of eligibles, recipients, and users that are not completely unduplicated.

Claims for services that were partially covered by Medicare lacked the complete service detail of Medi-Cal claims. This made it difficult to count visits accurately. The assumption was made that only one ambulatory visit occurred per unique date of service. When it occurred that claims for inpatient or long-term care were submitted without claims for per diem charges, expenditures were the claimed costs for the ancillary services. The number of days was imputed as equal to the number of days between the first and last dates of service.

For some medically needy enrollees (those with spend-down liability), the amount paid by Medi-Cal on the claims file represented the amount prior to subtracting the spend-down liability. This means that payments shown in this report are slightly higher than actual payments by the State. This difference is greatest for long-term care payments. For example, California officials report an average payment of $38 per long-term care day, but the amount shown in this report is $42 per day. Only about 5 percent of the Medi-Cal enrollees had any spend-down liability in 1981, so the resulting bias for aggregate expenditures is quite small (less than 1 percent).

Charges for both delivery and newborn babies were grouped on claims, giving rise to problems in counting the number of discharges and hospital days. For claims with labor, delivery, and nursery charges, we allowed twice the number of reported days, but counted the episode as only one discharge. Discharges are therefore underestimated. Length of stay in California, for hospitals and long-term care facilities, is the number of Medi-Cal covered days of stay. (This is different from other Tape-to-Tape States: Michigan and New York hospital service data are the actual number of days, whether covered by Medicaid or not.)

There were claims for 39,624 persons in the claims files who could not be identified in the enrollment files using recipient identification numbers. Claims for those persons were excluded from the utilization and expenditures tables in this report, because corresponding enrollment data were not available.

Conversely, 218,473 persons enrolled in health maintenance organizations had enrollment records but no corresponding claims records. Their enrollment records have been excluded from all tables.

Enrollment

In 1981, 3,586,036 persons, approximately 15 percent of California's population, were at some point enrolled in Medi-Cal. National data on enrollees are not readily available, but aggregate Federal reports suggest that California's enrollees represent between 15 and 20 percent of Medicaid enrollees nationally (Muse and Sawyer, 1982). Because of enrollee turnover, these individual enrollees had a total of only 2,631,904 person years of enrollment in 1981. From Table 1, it can be seen how these enrollees were distributed (by total number and by person years) across eligibility and cash assistance groups. Mean length of enrollment for each group can also be seen in this table.

Assistance groups

By far, the largest assistance group in California in 1981 was the categorically needy receiving cash, who were 74 percent of the enrollees and 80 percent of the person years. Of the remaining enrollees, essentially all were medically needy (26 percent of persons ever enrolled). The categorically needy not receiving cash payments were a very small proportion of enrollees and of person years (less than 1 percent), and they are not studied further in this report. Although national data on Medicaid enrollees are not available, program data on Medicaid recipients indicate that the proportion of medically needy recipients in the California Medicaid population is somewhat larger than the

national average. The medically needy averaged about 17 percent of the total recipient population in 1982 across all States with medically needy programs (Rymer, 1983).

Table 1

Percent distribution of persons ever enrolled in Medicaid and of person years of enrollment, by cash assistance status, eligibility group, and mean length of enrollment: California, 1981

Cash assistance and status eligibility group	Persons ever enrolled	Person years of enrollment	Mean length of enrollment in months
	Percent distribution		
Total Medicaid[1]	100.0	100.0	8.8
Aged	13.6	15.7	10.2
Disabled	12.8	15.7	10.8
AFDC child	44.0	42.5	8.5
AFDC adult	21.7	20.4	8.3
Other	7.4	5.0	5.9
Categorically needy receiving cash	73.8	79.9	9.5
Aged	9.4	11.5	10.7
Disabled	11.2	14.0	11.0
AFDC child	36.0	36.8	9.0
AFDC adult	16.6	16.9	9.0
Categorically needy not receiving cash	0.2	0.1	5.4
Medically needy	26.0	20.0	6.7
Aged	4.2	4.2	8.9
Disabled	1.6	1.7	9.2
AFDC child	7.8	5.6	6.4
AFDC adult	5.0	3.5	6.1
Other	7.4	5.0	5.9

[1]Includes blind.

NOTE: AFDC is Aid to Families with Dependent Children.

Eligibility groups

Sixty-six percent of persons ever enrolled in California in 1981 were AFDC-related; about two-thirds of AFDC enrollees were children (44 percent of all Medi-Cal enrollees). AFDC adults accounted for 22 percent of the 1981 Medi-Cal enrollment. Both AFDC children and AFDC adults were primarily cash recipients.

The aged comprised 14 percent of the Medi-Cal enrollment. The disabled group was 13 percent of persons ever enrolled.The great majority of the disabled (89 percent) were cash recipients. The blind represented less than 1 percent of all persons enrolled. For this reason, they are not analyzed further.

Age and sex distributions

Age and sex distributions of each enrollment group are provided in Table 2. In 1981, 61 percent of Medi-Cal enrollees were female. Females were a majority in all enrollment groups except the medically needy disabled, which was only 36 percent female.

The age distribution of the Medi-Cal population is quite different from the general population because of the categorical restrictions of Medicaid. Almost one-half the population was under 21 years of age (48 percent) and another 19 percent were elderly. In addition, the aged Medi-Cal population was older than the California total elderly population; more than one-half of the aged Medi-Cal enrollees was over 75 years of age, but only 39 percent of the State's elderly population was 75 years of age or over (Bureau of the Census, 1982).

Table 2

Percent distribution of Medicaid enrollees, by age, sex, eligibility group, and cash assistance status: California, 1981

Eligibility group and cash assistance status	Sex			Age								
	Total	Male	Female	Total	Under 6	6-17	18-20	21-44	45-64	65-74	75-84	85+
				Percent distribution								
Total Medicaid enrollees	100	39	61	100	17	26	5	23	10	9	7	3
AFDC child	100	49	51	100	35	56	10	0	0	0	0	0
AFDC adult	100	19	81	100	0	0	0	87	12	0	0	0
Aged	100	31	69	100	0	0	0	0	0	37	42	20
Categorically needy	100	30	70	100	0	0	0	0	0	37	46	17
Medically needy	100	34	66	100	0	0	0	0	0	37	34	29
Disabled	100	44	56	100	1	4	2	30	43	20	0	0
Categorically needy	100	42	58	100	1	4	2	30	41	22	0	0
Medically needy	100	64	36	100	0	1	1	28	61	8	0	0
Other	100	48	52	100	39	36	20	5	0	0	0	0

NOTE: AFDC is Aid to Families with Dependent Children.

Table 3

Percent of Medicaid enrollees receiving services, by cash assistance status and eligibility group: California, 1981

Cash assistance status	Total	SSI		AFDC	
		Aged	Disabled	Children	Adults
		Percent			
Total Medicaid enrollees	87	92	93	84	89
Categorically needy and receiving cash	89	92	93	85	91
Medically needy	81	91	88	76	80

NOTES: SSI is Supplemental Security Income. AFDC is Aid to Families with Dependent Children.

Utilization of services

Recipients

During 1981, 87 percent of Medi-Cal enrollees received one or more covered health services (Table 3). This proportion ranged from 84 percent for AFDC children to 93 percent for the disabled. Generally, medically needy groups experienced lower overall recipient proportions than the categorically needy—81 percent and 89 percent, respectively. This rather surprising finding has been observed in New York as well, and it is probably the result of the inclusion in medically needy cases of family members without health problems. Medically needy AFDC children had the lowest proportion of recipients (76 percent), and the categorically needy disabled had the highest (93 percent).

Relatively more females than males received services—90 percent as compared with 84 percent (Table 4). The highest proportions of recipients were 85 years of age or over (95 percent); the lowest proportion of recipients was 6-17 years of age (81 percent).

Table 4

Percent of Medicaid enrollees receiving services, by sex and age: California, 1981

Sex and age	Recipients as a percent of enrollees
Sex	
Male	84
Female	90
Age	
Under 6 years	86
6-17 years	81
18-20 years	84
21-44 years	89
45-64 years	92
65-74 years	91
75-84 years	93
85 years or more	95

Hospital care

Fourteen percent of the Medi-Cal population received hospital care in 1981 (Table 5). This proportion varied by eligibility group, with the lowest rate exhibited by AFDC children (7 percent), and by far the highest by medically needy disabled persons (25 percent). Twenty-three percent of the aged were hospitalized during the year, as were 17 percent of the AFDC adults.

AFDC children exhibited the lowest values of all measures—percent of recipients (7 percent), discharges per 1,000 enrollees (112), days of care per 1,000 enrollees (486), and average length of stay (4.3 days). The highest rates were shown by the medically needy groups, especially the disabled, who had very high values for three of the four measures (25 percent recipients, 491 discharges for 1,000 enrollees, 4,689 days of care per 1,000 enrollees, and average length of stay of 9.6 inpatient days). The AFDC adult values

Table 5

Percent of Medicaid enrollees receiving inpatient hospital services, number of discharges and days of care, and average length of stay, by eligibility group and cash assistance status: California, 1981

Eligibility group and cash assistance status	Percent receiving inpatient hospital services	Discharges per 1,000 enrollees	Days of care per 1,000 enrollees	Average length of stay in days
Total Medicaid enrollees	14	243	1,529	6.3
AFDC child	7	112	486	4.3
AFDC adult	17	300	1,363	4.5
Aged	23	352	2,940	8.3
Categorically needy	24	352	2,720	7.7
Medically needy	21	353	3,537	10.0
Disabled	22	396	3,148	8.0
Categorically needy	22	384	2,962	7.7
Medically needy	25	491	4,689	9.6
Other	10	283	1,382	4.9

NOTE: AFDC is Aid to Families with Dependent Children.

roughly approximated the rates for the total Medi-Cal population—17 percent of recipients, 300 discharges per 1,000 enrollees, 1,363 days of care per 1,000 enrollees, and average length of stay of 4.5 days. The disabled categorically needy, on the other hand, had moderate measures except for the discharge rate, which was high (384 per 1,000 enrollees). For the aged enrollees, their length of stay and proportion of recipients were high, but their discharge and days of care rates were in the midrange. This may be the result of some missing claims for stays completely covered by Medicare. A comparison of medically and categorically needy groups shows that, for the disabled, all values for the medically needy are substantially higher than those for the categorically needy. The aged categorically and medically needy had the same discharge rate, 353 and 352, respectively. However, days of care and average length of stay were higher for the medically needy aged than for the categorically needy aged.

The hospital discharge rates from these data can be compared with those from the 1981 Health Interview Survey of noninstitutionalized persons in the United States (National Center for Health Statistics, 1982). For example, the national discharge rate for children under 17 years of age was 65 discharges per 1,000 enrollees, compared with 111 discharges per 1,000 enrollees for noninstitutionalized California AFDC children. Nationally, noninstitutionalized persons 65 years of age or over had 284 discharges per 1,000 compared with our observation of 322 for noninstitutionalized aged Medi-Cal enrollees.

Long-term care

Four percent of Medi-Cal enrollees received institutional long-term care services in 1981 (Table 6). Long-term care services include nursing home services provided in skilled nursing facilities (SNF's), intermediate care facilities (ICF's), and intermediate care facilities for mentally retarded (ICF's/MR). This important high-cost group of users of long-term care services is discussed separately in a later section. Briefly, as expected, AFDC enrollees were institutionalized only to a negligible extent. For all enrollees, long-term institutional days of care averaged 11 days. Among users (persons who had any long-term care days), the average was 271 days, about three-quarters of a year. Medically needy aged had the highest use (51 percent of enrollees used services, with 319 days per user), followed by medically needy disabled (23 percent used services, with 307 days per user).

Ambulatory care

Data on ambulatory care use are presented in Table 7. Two-thirds (67 percent) of all Medi-Cal enrollees had one or more ambulatory visits in 1981, with an average annual rate of 5.3 visits per enrollee per year and 7.9 visits per user per year. Eighty-two percent of AFDC adults and 75 percent of AFDC children used ambulatory services during 1981. These groups had the highest proportions of users, but only moderate utilization per enrollee (4.7 and 7.6 visits per person year, respectively) and per user (6.3 and 9.2 visits per person year, respectively). The disabled had a lower proportion of users (65 percent), but the highest utilization rates (8.2 visits per enrollee per person year and 12.5 visits per user per person year). Overall, Medi-Cal visit rates are near those reported from the 1981 Health Interview Survey which showed an average of 4.6 physician visits per person year for the U.S. noninstitutionalized population (National Center for Health Statistics, 1982).

Table 6

Percent of Medicaid enrollees receiving long-term care services and days of care per enrollee and per user, by eligibility group and cash assistance status: California, 1981

Eligibility group and cash assistance status	Percent receiving long-term care services	Days of care per	
		Enrollee	User
Total Medicaid enrollees	4	11	271
AFDC child	0	0	90
AFDC adult	0	0	50
Aged	18	50	280
Categorically needy	6	9	151
Medically needy	51	163	319
Disabled	7	18	258
Categorically needy	5	12	232
Medically needy	23	71	307
Other	0	0	180

NOTE: AFDC is Aid to Families with Dependent Children.

Table 7

Percent of Medicaid enrollees receiving ambulatory care services and average number of ambulatory care visits per year per enrollee and per user, by eligibility group and cash assistance status: California, 1981

Eligibility group and cash assistance status	Percent receiving ambulatory care services	Average number of ambulatory visits per year	
		Enrollee	User
Total Medicaid enrollees	67	8.4	7.9
AFDC child	75	4.7	6.3
AFDC adult	82	7.6	9.2
Aged	NA	NA	NA
Disabled	65	8.2	12.5
Categorically needy	67	8.4	12.6
Medically needy	55	6.5	11.8
Other	65	5.2	7.8

NOTES: AFDC is Aid to Families with Dependent Children. NA is not available.

Ambulatory visit rates for the aged could not be separately computed because of missing claims for services covered primarily by Medicare, and the lack of individual visit counts on crossover claims.

About three-quarters of ambulatory visits (72 percent) were to physicians (Table 8). Another 22 percent of visits were to hospital outpatient departments, emergency rooms, and clinics. This proportion varied from a low of 12 percent for the medically needy disabled to 26 percent for AFDC children and 27 percent for other medically needy. Enrollees visited other practitioners such as chiropractors, podiatrists, and optometrists less often (7 percent of visits).

Table 8

Percent distribution of Medicaid enrollees, by source of ambulatory care, eligibility group, and cash assistance status: California, 1981

Eligibility group and cash assistance status	Source of care			
	Total	Physician	Hospital outpatient department, emergency room, other clinic	Other practitioner
	Percent distribution			
Total Medicaid enrollees	100	72	22	7
AFDC child	100	70	26	4
AFDC adult	100	71	24	5
Aged	NA	NA	NA	NA
Disabled	100	77	15	8
Categorically needy	100	77	15	8
Medically needy	100	80	12	8
Other	100	69	27	3

NOTES: AFDC is Aid to Families with Dependent Children. NA is not available.

Dental care

About one-third of the Medi-Cal enrollees (32 percent) received dental care services in 1981 (Table 9). AFDC adults and children were the most likely to receive dental care—40 and 34 percent, respectively, of these groups who received one or more units of care during the year. The aged were least likely to use dental care; only 20 percent of them did so. Data on units of dental service were not available because data were aggregated by month, and units of service could not be enumerated.

Prescribed drugs

As with ambulatory care visits, the proportion of Medi-Cal enrollees using Medi-Cal covered drug services was high (69 percent). The aged most frequently (81 percent) had at least one prescription filled in 1981

Table 9

Percent of Medicaid enrollees receiving dental services, by eligibility group and cash assistance status: California, 1981

Eligibility group and cash assistance status	Percent receiving dental care services
Total Medicaid enrollees	32
AFDC child	34
AFDC adult	40
Aged	20
Categorically needy	22
Medically needy	17
Disabled	33
Categorically needy	33
Medically needy	26
Other	27

NOTE: AFDC is Aid to Families with Dependent Children.

Table 10

Percent of Medicaid enrollees using prescription drugs and average number of prescriptions per year, per enrollee, and per user, by eligibility group and cash assistance status: California, 1981

Eligibility group and cash assistance status	Percent receiving at least one prescription	Average number of prescriptions[1] per year	
		Enrollee	User
Total Medicaid enrollees	69	8.9	13.0
AFDC child	60	3.5	5.8
AFDC adult	73	7.3	10.0
Aged	81	17.2	21.2
Categorically needy	81	15.0	18.4
Medically needy	81	23.4	28.9
Disabled	80	19.0	23.7
Categorically needy	82	19.2	23.5
Medically needy	69	17.5	25.4
Other	48	3.1	6.4

[1]Including refills.

NOTE: AFDC is Aid to Families with Dependent Children.

(Table 10). AFDC children had relatively low use rates (60 percent) as did the medically needy other group (also primarily children) at 48 percent. The number of prescriptions per enrollee varied from 3.5 per year for AFDC children to 23.4 per year for medically needy aged.

Expenditures

Total reported expenditures for Medi-Cal in 1981 were $3.81 million, or $1,447 per person year of

Table 11

Expenditures per Medicaid enrollee, by eligibility group and cash assistance status: California, 1981

Cash assistance status	Total	Eligibility group			
		SSI		AFDC	
		Aged	Disabled	Children	Adult
	Expenditure				
Total Medicaid enrollees	$1,447	$2,632	$3,028	$519	$1,325
Categorically needy and receiving cash	1,127	1,073	2,608	492	1,264
Medically needy[1]	2,735	6,875	6,248	697	1,632

[1]Includes patient liability for spend-down enrollees.

NOTES: SSI is Supplemental Security Income. AFDC is Aid to Families with Dependent Children.

enrollment (Table 11). AFDC children had the lowest expenditures per person year ($519) of the eligibility groups, and disabled enrollees the highest ($3,028). The medically needy had substantially higher expenditures than cash-assisted enrollees ($2,735 and $1,127 per person year, respectively). The greatest difference, however, was shown by the aged, whose cash-assisted enrollees had expenditures of $1,073 per enrollee per year, but whose medically needy had expenditures of $6,875 per enrollee per year. Expenditures for the medically needy include patient liability for spend-down enrollees.

As is to be expected, enrollees and expenditures are dissimilar in their distribution across cash assistance and eligibility categories (Table 12). AFDC adults are the only group with almost equal proportions of total expenditures and enrollees (19 percent and 20 percent). AFDC children have the highest proportion of enrollees (43 percent), but only a moderate proportion of expenditures (15 percent). The reverse picture occurred among the aged (16 percent of enrollees and 28 percent of expenditures) and disabled (16 percent of enrollees and 34 percent of expenditures). Viewed another way, the majority of the enrollees were in the AFDC groups (63 percent), but the majority of the expenditures were for the SSI groups (66 percent).

Table 12

Percent distribution of Medicaid enrollees and total expenditures, by eligibility group and cash assistance status: California, 1981

Eligibility group and cash assistance status	Enrollee	Expenditure
	Percent distribution	
Total Medicaid enrollees	100	100
AFDC child	43	15
AFDC adult	20	19
Aged	16	28
Categorically needy	12	8
Medically needy	4	20
Disabled[1]	16	34
Categorically needy	14	26
Medically needy	2	7
Other	14	4

[1]Includes blind persons.

NOTE: AFDC is Aid to Families with Dependent Children.

Hospital care

Expenditures by type of service and enrollment group are displayed in Table 13. Hospital care was roughly one-third of the total expenditures per enrollee ($506 out of $1,447) for the total Medi-Cal

Table 13

Expenditures per Medicaid enrollee for types of service, by eligibility group and cash assistance status: California, 1981

Eligibility group and cash assistance status	Total	Type of service					
		Inpatient hospital	Long-term care	Ambulatory visits	Dental	Drug	All other
Total Medicaid enrollees	$1,447	$506	$455	$281	$44	$85	$76
AFDC child	519	241	6	175	39	24	34
AFDC adult	1,325	696	2	361	63	63	141
Aged	2,632	291	1,833	254	32	163	59
Categorically needy	1,073	264	321	255	34	148	51
Medically needy[1]	6,875	367	5,945	142	28	201	192
Disabled	3,028	1,118	1,014	496	45	215	141
Categorically needy	2,641	1,066	685	493	45	215	136
Medically needy[1]	6,248	1,547	3,750	520	42	214	190
Other	1,075	706	26	208	42	23	70

[1]Includes patient liability for spend-down enrollees.

NOTE: AFDC is Aid to Families with Dependent Children.

population, but it was about one-half of the expenditures for the AFDC groups ($241 out of $519 for children, and $696 out of $1,325 for adults). Hospital costs were about one-third of the costs for the disabled (37 percent). For the aged, however, hospital care represented only 11 percent of the expenditures, because of the almost universal Medicare coverage that is the primary payer for acute hospital services. Medi-Cal pays only for deductibles, coinsurance, and services not covered by Medicare.

Long-term care

When averaged across the entire Medi-Cal population, expenditures for long-term care ($455 per Medicaid enrollee per year), were about 10 percent lower than those for acute hospital care (Table 13). The AFDC groups had very low mean long-term care expenditures ($6 for children and $2 for adults). In contrast, the aged had long-term care costs that exceeded hospital costs by a ratio of 6:1, for medically needy aged, the ratio was 16:1. The situation was somewhat different for the disabled, whose expenditures per enrollee for long-term care were close to those for hospital care ($994 versus $1,100 per enrollee per year, respectively). The categorically and medically needy disabled differed in their expenditure patterns, with hospital costs being greater for the categorically needy disabled and long-term care costs being greater for the medically needy disabled.

Ambulatory care

Ambulatory expenditures per enrollee averaged $281 in 1981—the third most expensive type of service. AFDC children ($175) and the aged ($254) experienced the lowest levels of ambulatory expenditures per enrollee, and the disabled experienced the highest ($496). As with hospital care, ambulatory care for the aged is frequently covered by Medicare, which may explain these relatively low expenditure rates. Ambulatory care accounted for 19 percent of overall expenditures per person, and this figure ranged from 4 percent for the medically needy aged (a majority of whose expenditures went to long-term care) to 34 percent for AFDC children.

Dental care

Dental expenses were a relatively minor part of the expenditures—$44 per Medicaid enrollee per year. The medically needy aged had the lowest annual per capita expenditures ($28), and AFDC adults the highest ($63). Dental expenses were about 3 percent of the overall expenses; no group exceeded 7 percent.

Prescribed drugs

Prescribed drugs cost, on the average, $85 per Medicaid enrollee per year. This figure was lowest for AFDC children ($24) and for AFDC adults ($63) and highest for disabled enrollees ($215). Drug expenditures for the aged were $163 per year, but they varied between the categorically needy and the medically needy ($148 per year for the categorically needy aged and $201 per year for the medically needy aged).

Type of service and eligibility

The per capita expenditures by summary service type and eligibility group are presented in Figure 1. Shown also are the very high expenditures for long-term care for the medically needy, especially the aged population. For the total population, nearly equal amounts per enrollee year were spent for the three summary service categories (inpatient hospital, long-term care, and all other care).

Mean expenditures for all enrollees are compared in Table 14 with mean expenditures for only those enrollees who actually used a particular service (users). Per user costs differed greatly from costs per enrollee for inpatient and long-term care services, but much less so for all other services. Per user costs did not vary as greatly across eligibility groups as per enrollee costs. For example, per user long-term care costs varied from $4,293 for AFDC adults to $16,305 for the medically needy disabled.

Comparisons with other States

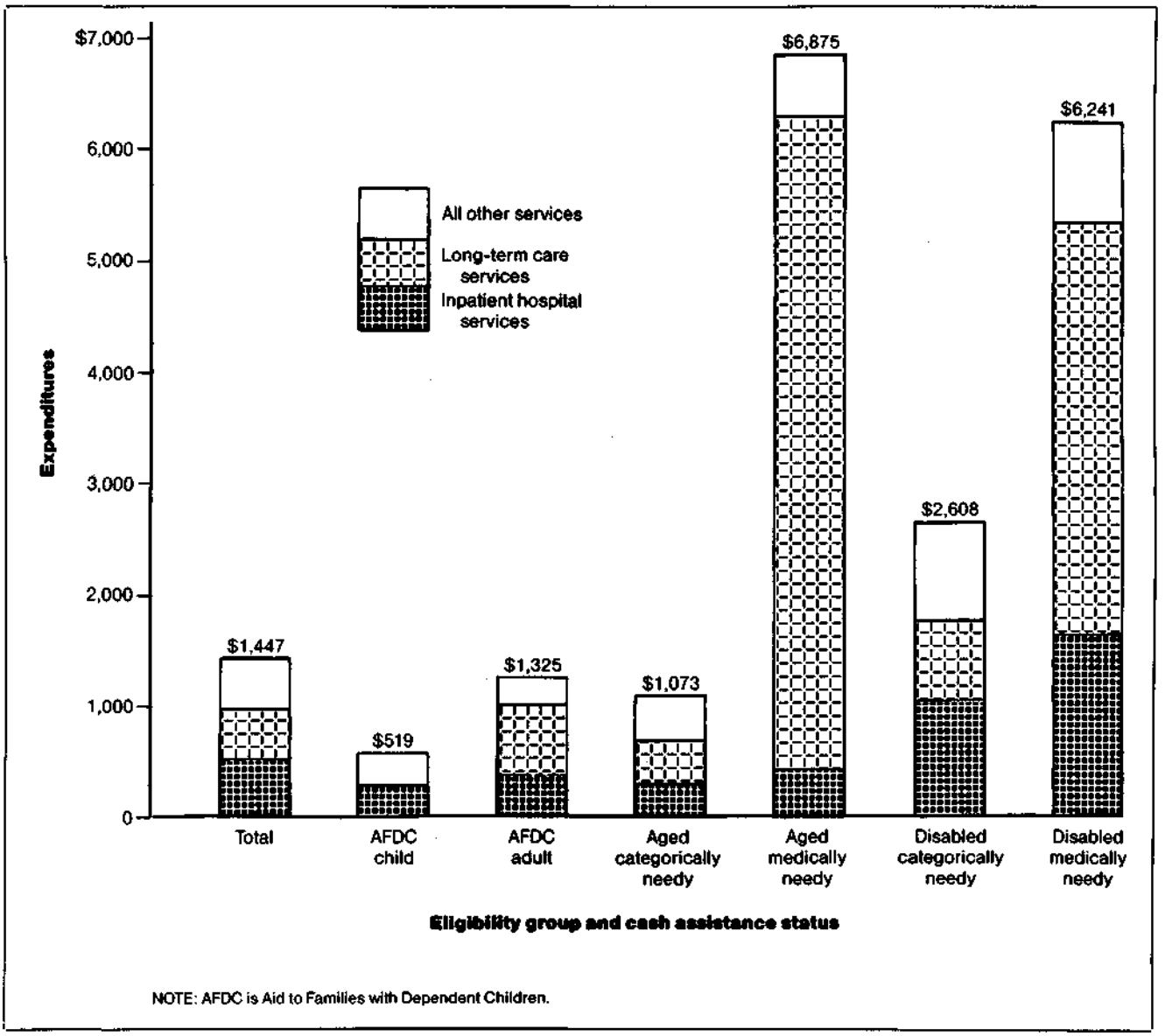
Enrollment, utilization, and expenditure patterns of the California Medi-Cal population can be compared with patterns for 1981 in two other States (New York and Michigan), because complete claims, eligibility, and provider files have been obtained from these States under the Tape-to-Tape Project. Before making these comparisons, it is important to highlight the differences in the three States' Medicaid programs that might lead to observed differences.

These three States were among the four largest programs in total program expenditures during fiscal year 1980. As mentioned earlier, New York and California ranked first and second, respectively. Michigan ranked fourth. Table 15 contains a summary of selected key characteristics for the three State Medicaid programs in 1981. All States had relatively generous programs. All States included the three optional AFDC groups in their AFDC plans: unemployed parents, pregnant women, and children under age 18 regularly attending school. All States also automatically extended Medicaid coverage to SSI recipients. However, the three States had quite different AFDC payment levels and medically needy protected income levels. California had the highest AFDC payment level for a family of four. Unlike the other two States, California set its medically needy protected income level above its AFDC payment level. California also covered more optional services.

Muse and Sawyer (1982) report that, as of December 1980, these three States imposed varying levels of limitations on hospital, nursing home, and physician

Figure 1

Medicaid expenditures per person year of enrollment, by eligibility group, cash assistance status, and summary service type: California, 1981



services. New York had no limitations at all on hospital, physician, and SNF services and required only preauthorization for ICF services. California and Michigan generally required preauthorization for services and had other service limitations. For example, Michigan covered only one physician visit to a nursing home patient per month and only two speech or hearing evaluations per year. Therefore, New York was the most generous of the three programs in terms of benefit restrictions.

For California, hospital reimbursements in 1981 were based on Medicare principles. Michigan and New York had prospective hospital reimbursement systems. Michigan began implementing its system in 1980; therefore, not every hospital was on this system in 1981. The New York prospective reimbursement system was somewhat different from those of the other States, because it was based on hospital peer groups. Hospitals were grouped according to their characteristics (e.g., bed size and teaching status), and per diem rates were established based on the historical cost pattern within the peer group. In the case of physician reimbursement, all three States used fee schedules. All three States used prospective systems for reimbursing nursing homes (Bartlett and Hanson, 1981).

Table 14

Expenditures per Medicaid enrollee and per user for summary service types, by eligibility group and cash assistance status: California, 1981

Eligibility group and cash assistance status	Summary service type					
	Inpatient hospital services		Long-term care services		All other services	
	Enrollee	User	Enrollee	User	Enrollee	User
	Expenditure					
Total Medicaid enrollees	$506	$3,568	$455	$11,361	$468	$560
AFDC child	241	3,659	6	10,259	272	324
AFDC adult	696	4,074	2	4,293	628	707
Aged	291	1,249	1,833	10,188	508	555
Categorically needy	264	1,094	321	5,559	488	532
Medically needy	367	1,731	5,945	11,609	563	620
Disabled	1,118	4,961	1,014	14,582	896	977
Categorically needy	1,066	4,793	685	13,634	889	961
Medically needy	1,547	6,217	3,750	16,305	951	1,119
Other	706	6,781	26	9,721	169	527

NOTE: AFDC is Aid to Families with Dependent Children.

Table 15

State summary, by Medicaid program characteristics: California, Michigan, and New York, 1981

Medicaid program characteristic	California	Michigan	New York
Presence of optional groups in AFDC plans:[1]			
Unemployed parents	X	X	X
Pregnant women	X	X	X
Children under 18 years of age regularly attending school	X	X	X
Medicaid coverage of all Supplemental Security Income recipients	X	X	X
AFDC annual payment level (family of four)	$7,212	$5,640	$6,180
Annual SSI payment level for aged SSI recipients living independently	5,268	3,468	3,936
Annual medically needy protected income level (family of four)	8,304	5,580	6,000
Number of optional services covered	30	25	25

[1]If these groups are in the AFDC plan, Medicaid coverage must be extended to them.

NOTES: AFDC is Aid to Families with Dependent Children. SSI is Supplemental Security Income.

SOURCE: La Jolla Management Corporation: *Analysis of State Medicaid Program Characteristics*, 1982.

Resource characteristics of the three States are shown in Table 16. The number of hospital beds per 1,000 population in Michigan and New York were comparable to the national rate of 4.4 per 1,000. However, California had fewer hospital beds per 1,000 (3.4). The number of nursing home beds per 1,000 in California was comparable to the national average (6.8 per 1,000), however, Michigan greatly exceeded the national rate (8.7 per 1,000). The rate of physicians per 1,000 for Michigan was only slightly lower than the national average of 1.9 per 1,000, but the rate for both California and New York exceeded the national average.

In addition to variations in Medicaid program characteristics and the supply of health services, other reasons why findings differed between States related to data artifacts. Only partial data are available for certain upstate New York counties in 1981 that were being phased into the MMIS of that State. The result is that data for New York are dominated by New York City. Also, some long-term care claims are missing for both Michigan and New York. For Michigan, about 1 month of nursing home claims are missing; and for New York, most of the mental health and mental retardation institutional claims and claims for personal care services are missing.

And, finally, although every attempt was made to recode State variables to achieve uniformity and comparability across States, it is always possible that differences in variable definitions or methods of acquiring and processing data across States have affected the data presented.

Table 16

State and United States summary, by health services resource characteristics: California, Michigan, New York, and United States, 1981

Health services resource characteristics	United States	California	Michigan	New York
Short-term hospital beds per 1,000	4.4	3.4	4.3	4.6
Nursing home beds per 1,000 population[1,2]	6.8	6.9	8.7	5.9
Active, non-Federal physicians per 1,000 population[3]	1.9	2.3	1.6	2.7

[1]For resident population, including members of the armed services living in the United States.

[2]1980 data.

[3]For civilian population, excluding members of the armed services living in the United States. Excludes doctors of osteopathy.

SOURCE: U.S. Bureau of the Census: *Statistical Abstract of the United States, 104th Edition*, U.S. Department of Commerce, Dec. 1983.

Enrollment

The distribution of person years of enrollment by enrollment group across three States are compared in Table 17. The three States were strikingly similar in enrollment group composition, particularly the two largest States, New York and California. The only major difference between them was the large proportion of medically needy in New York's aged population.

Michigan differed from the other two States in its heavier concentration of enrollees within the AFDC groups. For example, about 54 percent of Michigan enrollees were AFDC children, but only about 44 and 45 percent, respectively of the enrollees in California and New York were in that group. Michigan differed from California (and resembled New York) in its heavier concentration of medically needy within its aged population.

Table 17

Percent distribution of Medicaid enrollees, by eligibility group and cash assistance status: California, Michigan, and New York, 1981

Eligibility group and cash assistance status	California	Michigan	New York
	Percent distribution		
Total Medicaid enrollees	100.0	100.0	100.0
AFDC child	44.0	53.7	45.0
AFDC adult	21.7	28.5	21.2
Aged	13.6	7.6	14.9
Categorically needy	9.4	3.4	7.7
Medically needy	4.2	4.2	7.2
Disabled[1]	13.4	9.3	13.3
Categorically needy	11.7	6.7	11.0
Medically needy	1.7	2.6	2.3
Other	7.4	0.9	5.6

[1]Includes blind.

NOTE: AFDC is Aid to Families with Dependent Children.

Utilization

Data on the utilization of acute hospital services in the three States are presented in Table 18. Also, a comparison of days of hospital care per 1,000 person years of enrollment for each enrollment group is made. The patterns of utilization were quite different in the different States. Service utilization varied from 1,529 days of care per 1,000 for all enrollees in California to 2,500 per 1,000 in New York. Michigan, with 1,620 days of care per 1,000, more closely resembled California in hospital utilization patterns. For example, for medically needy groups, California enrollees had fewer than one-half as many inpatient hospital days as did New York enrollees, as shown in the ratios of California to New York rates in the last column of the table.

All three States provided the mandatory inpatient hospital service benefit to all categories of enrollees. California did have substantial prior authorization requirements. Also, New York and Michigan data include denied days; California data exclude those days.

Table 18

Days of inpatient hospital care per 1,000 Medicaid enrollees, by eligibility group and cash assistance status: California, Michigan, and New York, 1981

Eligibility group and cash assistance status	California	Michigan	New York	Ratio of California to Michigan	Ratio of California to New York
		Days of hospital care			
Total Medicaid enrollees	1,529	1,620	2,500	.94	.61
AFDC child	490	560	910	.88	.54
AFDC adult	1,360	1,730	1,750	.79	.78
Aged	2,940	3,900	6,100	.75	.48
Categorically needy	2,720	4,140	4,400	.66	.62
Medically needy	3,540	3,610	8,320	.98	.43
Disabled	3,150	4,940	5,170	.64	.61
Categorically needy	2,960	3,830	4,150	.77	.71
Medically needy	4,690	8,380	11,980	.56	.39
Other	1,380	1,940	1,980	.71	.70

NOTE: AFDC is Aid to Families with Dependent Children.

Differences between States in hospital benefits do not appear to explain these substantial variations in hospital utilization.

Differences in inpatient hospital use between the three States follow patterns that have been observed in the Medicare population. In 1977, the Medicare days of care rate was 4,017 per 1,000 in the Northeast and 2,816 in the West (Gornick, 1982). The ratio of hospital use West to Northeast for Medicare in 1977 was, therefore, 0.70. This is similar to the 0.61 ratio of California to New York for Medicaid in 1981. So the differences between the States may be, in large part, the result of regional medical care practice differences rather than of differences in State programs. Also, California had a lower ratio of hospital beds to the population of the State than the other States did.

A long-term care service comparison is presented in Table 19. As with inpatient hospital care, in general, the pattern of service utilization for California was lower than that of the comparison States, in spite of the exclusion of some long-term care service utilization from the New York and Michigan files, as mentioned earlier. The one enrollment group whose utilization in California exceeded the two other States was the medically needy disabled. The aged (the group most often receiving long-term institutional care in all States) showed a lower pattern of service use in California than in New York or Michigan. The aged

Table 19

Days of long-term care per 1,000 Medicaid enrollees, by eligibility group and cash assistance status: California, Michigan, and New York, 1981

Eligibility group and cash assistance status	California	Michigan	New York	Ratio of California to Michigan	Ratio of California to New York
		Days of long-term care			
Total Medicaid enrollees	10,860	11,890	15,090	.91	.72
AFDC child	50	360	50	.14	1.00
AFDC adult	20	130	90	.15	.22
Aged	50,320	110,080	87,060	.46	.58
Categorically needy	8,740	20,030	13,570	.44	.64
Medically needy	163,420	198,740	182,780	.82	.89
Disabled	17,960	27,130	13,320	.66	1.34
Categorically needy	11,640	18,610	5,850	.63	1.99
Medically needy	70,510	56,370	62,920	1.25	1.12
Other	480	10,520	1,310	.05	.37

NOTES: Long-term care includes inpatient psychiatric care, chronic care, skilled nursing care, and intermediate care. AFDC is Aid to Families with Dependent Children.

Table 20

Mean ambulatory care visits per person year, by Medicaid eligibility group and cash assistance status: California, Michigan, and New York, 1981

Eligibility group and cash assistance status	California	Michigan	New York	Ratio of California to Michigan	Ratio of California to New York
		Mean visits			
Total Medicaid enrollees	5.3	5.3	9.3	1.00	.57
AFDC child	4.7	4.1	5.9	1.15	.80
AFDC adult	7.6	6.5	11.4	1.17	.67
Aged	NA	4.9	10.2	NA	NA
Disabled	8.2	8.8	17.8	.93	.46
Categorically needy	8.4	8.2	18.1	1.02	.46
Medically needy	6.5	10.7	15.7	.61	.41
Other	5.1	5.0	6.1	1.02	.84

NOTES: Visits include physician, other practitioner, outpatient hospital, clinic and rural health clinic visits but exclude dental visits. AFDC is Aid to Families with Dependent Children. NA is not available.

had 50,320 days of care per 1,000 persons in California, compared with 110,080 days in Michigan and 87,060 days in New York. These differences occurred in spite of the absence of great program differences between the States in 1981. Again, other differences (such as the supply of long-term care beds) may explain the patterns.

Ambulatory care visit rates are compared across States in Table 20. Although overall ambulatory visit rates were the same in California and Michigan (5.3 visits per person year), rates for New York were much higher for all enrollment groups. In California, Medicare crossover claims for physician services often group several visits on one claim, without separately identifying each visit. Therefore, visit rates for California's aged cannot be compared with those for Michigan and New York.

Expenditures

Because utilization patterns were generally lower in California than in the comparison States, one would expect Medi-Cal expenditures per enrollee to be substantially lower also. Surprisingly, this is not the case as illustrated in Table 21.

The 1981 expenditures per enrollee for California were, on the average, higher than those for Michigan ($1,447 versus $1,171) and only $440 below those for

Table 21

Mean expenditures per Medicaid enrollee, by eligibility group and cash assistance status: California, Michigan, and New York, 1981

Eligibility group and cash assistance status	California	Michigan	New York	Ratio of California to Michigan	Ratio of California to New York
			Mean expenditure		
Total Medicaid enrollees	$1,447	$1,171	$1,887	1.24	.77
AFDC child	519	412	527	1.26	.98
AFDC adult	1,325	1,096	1,067	1.21	1.24
Aged	2,632	3,357	6,034	.78	.44
Categorically needy	1,073	1,218	1,856	.88	.58
Medically needy	[1]6,875	5,466	11,475	1.26	.60
Disabled	3,028	3,526	3,405	.86	.89
Categorically needy	2,641	2,801	2,618	.94	1.01
Medically needy	[1]6,248	5,947	8,625	1.05	.72
Other	1,075	2,096	710	.51	1.51

[1]Includes patient liability for spend-down enrollees.

NOTE: AFDC is Aid to Families with Dependent Children.

Table 22

Medicaid expenditures per service unit, by selected expenditure measures: California, Michigan, and New York, 1981

Expenditure measure	California[1]	Michigan	New York	Ratio of California to— Michigan	Ratio of California to— New York
		Expenditure			
Expenditures per day of hospital care	$331	$227	$198	1.46	1.67
Expenditures per day of long-term care	42	36	62	1.17	.68
Expenditures per physician visit	23	11	16	2.09	1.44

[1]Includes patient liability for spend-down enrollees.

New York ($1,887). California's expenditures for its aged and disabled groups were lower than the other States, but its expenditures for the AFDC population matched or exceeded those for the two other States.

Although service utilization patterns were lower in California, the greater similarities between the States in expenditures must be the result of the use of higher cost services by California enrollees. This is illustrated in Table 22. California paid $100 a day more than both Michigan and New York for hospital care. Medi-Cal rates were $331 per hospital day compared with $227 in Michigan and $198 in New York. They also paid $23 per physician visit, substantially more than the $11 in Michigan and the $16 in New York. On the other hand, the $42 per day for long-term care was about the same as that for Michigan ($36) and lower than that for New York ($62). Because the $42 per day in California includes patient spend-down liability and California reported Medicaid payments of $38 per day, actual program payments were close to those for Michigan. Obviously, service mix and intensity may explain many of these differences, because a day of hospital or long-term care or a physician visit is only a gross measure of the actual services provided.

Special interest groups

High-cost recipients—The previous analyses have suggested that there are high-cost groups of persons for example, users of hospital and long-term care services. Figure 2 is a Lorenz Curve displaying the cumulative percent of the total expenditures as a function of the cumulative percent of all Medi-Cal enrollees. As illustrated by the dashed line, 90 percent of the enrollees accounted for 28 percent of the total California Medi-Cal expenditures in 1981. Another way of viewing this is that the top 10 percent of enrollees accounted for 2.7 billion dollars, or 72 percent of the total Medi-Cal expenditures.

The high-cost group (i.e., those recipients with the top 10 percent of Medi-Cal expenditures) represent a substantially different mix of enrollment groups than those comprising the total Medi-Cal population (Table 23). Although AFDC children comprised about 43 percent of the total Medi-Cal enrollee population, they represented about 12 percent of high-cost recipients. In contrast, the medically needy aged and the medically needy disabled comprised about 4 percent and about 2 percent, respectively, of the total Medi-Cal population. However, they represented about 24 percent and about 6 percent, respectively, of all high-cost recipients. About 63 percent of the total Medi-Cal enrollees were AFDC adults or children; and about 62 percent of high-cost enrollees were aged, blind, or disabled.

Several utilization and expenditure measures for high-cost recipients are compared with those for all Medi-Cal enrollees in 1981 in Table 24. High-cost recipients consumed 10,910 inpatient hospital days and 1,370 discharges per 1,000 recipient person years. In comparison, total enrollees had 1,530 inpatient hospital days and 240 discharges per 1,000 persons.

Figure 2

Cumulative percent of all Medicaid recipients, by percent of expenditures: California, 1981

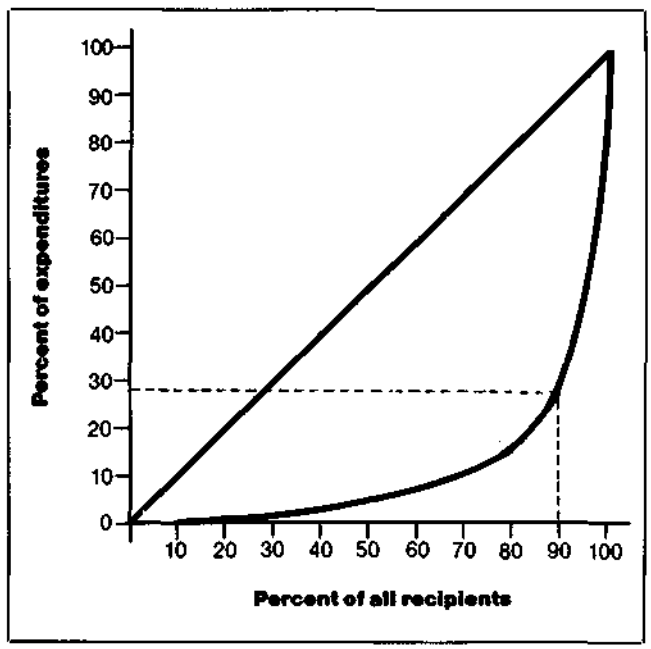


Table 23

Percent distribution of high-cost recipients and total Medicaid enrollees, by eligibility group and cash assistance status: California, 1981

Eligibility group and cash assistance status	High-cost recipients[1]	All enrollees
	Percent distribution	
Total Medicaid enrollees	100.0	100.0
AFDC child	11.8	42.5
AFDC adult	23.2	20.4
Aged	31.4	15.7
Categorically needy	7.7	11.7
Medically needy	23.7	4.2
Blind and disabled	31.4	16.4
Categorically needy	25.2	14.7
Medically needy	6.2	1.7
Other	2.2	5.0

[1]Top 10 percent of expenditures.

NOTE: AFDC is Aid to Families with Dependent Children.

Thus, high-cost recipients used 7 times more hospital days and had nearly 6 times more discharges than the average enrollee. High-cost recipients also used an average of 120 long-term care days per year and had 15 ambulatory care visits per year. In comparison, the total Medi-Cal population averaged 11 long-term care days and 5 ambulatory care visits per year. High-cost recipients had 11.1 times greater long-term care use and 3 times greater ambulatory care use than the total Medi-Cal population in 1981.

Institutionalized enrollees

One of the most expensive recipient groups is the institutionalized. In this analysis, the institutionalized Medi-Cal population is compared with the noninstitutionalized. For some parts of the analysis, the institutionalized are divided into two subgroups—the fully institutionalized (recipients who spent their entire enrollment period in a long-term care facility) and the semi-institutionalized (recipients in an institution for only part of their enrollment period). Noninstitutionalized recipients are those persons who did not spend any part of their enrollment period in a long-term care facility.

Table 24

Total Medicaid enrollees and high-cost recipients, by service utilization and expenditure: California, 1981

Service utilization and expenditure	High-cost recipients[1]	Total enrollees	Ratio of high-cost recipients to total enrollees
Service utilization			
Inpatient hospital days per 1,000 persons	10,910	1,530	7.1:1
Inpatient hospital discharge per 1,000 persons	1,370	240	5.7:1
Long-term care days per person	120	11	11.1:1
Ambulatory care visits per person	15	5	3:1
Expenditure			
Total	$11,688	$1,447	8.1:1
Inpatient hospital expenditures	4,873	506	9.1:1
Long-term care expenditures	5,060	455	11.1:1
Other expenditures	1,735	486	3.6:1

[1]Top 10 percent of expenditures.

Table 25

Percent distribution of Medicaid enrollees, institutional status of enrollee, by eligibility group, and cash assistance status: California, 1981

Eligibility group and cash assistance status	Total	Institutional status		
		Noninstitutionalized	Semi-institutionalized	Fully institutionalized
		Percent distribution		
Total Medicaid enrollees	100	96	2	2
AFDC child	100	99	1	0
AFDC adult	100	100	0	0
Aged	100	82	9	9
Categorically needy	100	94	5	1
Medically needy	100	49	22	30
Disabled	100	93	4	3
Categorically needy	100	95	3	2
Medically needy	100	77	10	13
Other	100	100	0	0

NOTE: AFDC is Aid to Families with Dependent Children.

In 1981, there were some 105,456 institutionalized Medi-Cal enrollees—only 4 percent of the total Medi-Cal enrollee population. The fully institutionalized and the semi-institutionalized were each about 2 percent of overall enrollment (Table 25). The institutionalized aged were 18 percent of all aged enrollees, and the institutionalized disabled were 7 percent of all disabled enrollees.

The institutionalized population is compared with the noninstitutionalized population with regard to sex composition in Table 26. The institutionalized population was even more predominantly female than the noninstitutionalized. Sixty-eight percent of the California institutionalized in 1981 were female. For the aged institutionalized, there were proportionally more females than in the noninstitutionalized aged population. This pattern was not true for the disabled. Fifty-one percent of the institutionalized disabled were male, but only 44 percent of the noninstitutionalized disabled were male.

Table 26

Percent distribution of Medicaid enrollees, by sex, institutional status, and eligibility group: California, 1981

Institutional status and eligibility group	Total	Male	Female
	Percent distribution		
Institutionalized	100	32	68
Aged	100	24	76
Disabled	100	51	49
Noninstitutionalized	100	39	61
Aged	100	32	68
Disabled	100	44	56

The age distribution of Medi-Cal enrollees by institutional status and eligibility group is presented in Table 27. Only 17 percent of noninstitutionalized enrollees were 65 years of age or over, compared with 76 percent of the institutionalized. The "old" old (or the frail elderly) were a sizable proportion of the institutionalized population. Thirty-four percent of institutionalized recipients were age 85 or older.

Thus, the institutionalized aged conform to commonly held expectations regarding the demographic characteristics of an institutionalized population. They were very old and had a very high percent of women. However, the institutionalized disabled were demographically quite different in that they were most often under 65 years of age and almost evenly split between males and females. It is common to equate the institutionalized population with the elderly; however, it is important to remember that approximately 27 percent of the institutionalized population was disabled and had a markedly different demographic composition.

Patterns of utilization and expenditures were also quite different for the institutionalized aged and

Table 27

Percent distribution of Medicaid enrollees, by age, eligibility group, and institutional status: California, 1981

Eligibility group and institutional status	Total	Under 65 years	65-84 years	85 years or over
		Percent distribution		
Total				
Institutionalized	100	24	42	34
Noninstitutionalized	100	83	15	2
Aged				
Institutionalized	100	0	53	47
Noninstitutionalized	100	0	86	14
Disabled				
Institutionalized	100	85	15	0
Noninstitutionalized	100	79	21	0

disabled (Table 28). The fully institutionalized disabled were decidedly more costly than the fully institutionalized aged. Fully institutionalized disabled recipients incurred long-term care expenditures of $21,380 per person year compared with $13,323 per person year for fully institutionalized aged recipients (Table 29). Semi-institutionalized disabled recipients incurred expenditures of $7,909 per person year for long-term care compared with $7,212 per person year for semi-institutionalized aged recipients.

An analysis of utilization and expenditures by type of long-term care service shows even greater differences between the institutionalized aged and disabled. No aged recipients received care in ICF/MR facilities. However, the fully institutionalized disabled spent 191 days per person year receiving ICF/MR care, and semi-institutionalized disabled recipients spent 41 days per person year receiving ICF/MR care (Table 28). ICF/MR recipients were very costly; fully institutionalized disabled recipients had expenditures of $14,625 per person year for ICF/MR care (Table 29). ICF/MR care, thus, was a sizable proportion of the total Medi-Cal expenditures for the institutionalized disabled.

The institutionalized differed from the noninstitutionalized with regard to hospital utilization patterns (Table 28). The semi-institutionalized had by far the heaviest use rates for hospital care, with the highest use by the disabled group. Semi-institutionalized recipients also had the highest expenditures ($1,697 per person year) for inpatient hospital care (Table 29). Fully institutionalized recipients had expenditures of only $399 per person year for inpatient hospital care. Noninstitutionalized enrollee expenditures for inpatient hospital care amounted to $557 per person year.

Institutionalized recipients also had higher levels of ambulatory care utilization and expenditures than noninstitutionalized enrollees had (Tables 28 and 29). For example, semi-institutionalized disabled recipients had 13.1 physician visits per person year and 28 prescription drug purchases per person year. They had expenditures of $351 per person year for physician visits and $319 per person year for prescription drugs.

Table 28

Units of service category per Medicaid enrollee, by eligibility group and institutional status: California, 1981

Eligibility group and institutional status	Service category							
	Long-term days of care per person				Inpatient hospital days per 1,000 persons	Hospital discharges per 1,000 persons	Physician visits per person	Prescription drugs per person
	Psychiatric	ICF/MR	Other ICF	SNF				
Total								
Fully institutionalized	1.9	54.7	15.1	295.5	2,040	150	2.2	33.3
Semi-institutionalized	1.6	11.3	7.6	160.4	9,770	860	4.8	30.0
Noninstitutionalized	0	0	0	0	1,550	270	4.5	9.2
Aged								
Fully institutionalized	1.8	0	15.4	350.2	1,820	140	0.4	37.0
Semi-institutionalized	1.0	0	8.4	187.0	8,890	800	1.0	31.3
Noninstitutionalized	0	0	0	0	2,660	360	0.9	15.1
Disabled								
Fully institutionalized	2.2	191.0	14.3	159.1	2,440	190	6.5	24.0
Semi-institutionalized	1.9	41.0	6.1	102.9	11,910	1,000	13.1	28.2
Noninstitutionalized	0	0	0	0	3,090	410	6.6	20.1

NOTES: ICF/MR is intermediate care facility for mentally retarded. ICF is intermediate care facility. SNF is skilled nursing facility.

Table 29

Medicaid expenditures per enrollee, by service category, eligibility group, and institutional status: California, 1981

Eligibility group and institutional status	Service category								
	Total	Long-term expenditure per person				Inpatient hospital	Physician visits	Prescription drugs	Other care
		Psychiatric	ICF/MR	Other ICF	SNF				
Total									
Fully institutionalized	$16,645	$98	$4,171	$437	$10,909	$399	$51	$278	$302
Semi-institutionalized	10,141	170	909	222	6,083	1,697	130	276	1,654
Noninstitutionalized	1,101	0	0	0	0	557	103	88	353
Aged									
Fully institutionalized	14,013	79	0	447	12,797	142	8	292	248
Semi-institutionalized	8,780	45	0	244	6,922	723	23	265	557
Noninstitutionalized	807	0	0	0	0	288	20	153	346
Disabled									
Fully institutionalized	23,193	135	14,625	413	6,207	983	153	244	433
Semi-institutionalized	13,404	137	3,314	178	4,280	3,942	351	319	883
Noninstitutionalized	2,054	0	0	0	0	1,105	159	229	561

NOTES: ICF/MR is intermediate care facility for mentally retarded. ICF is intermediate care facility. SNF is skilled nursing facility.

These figures are signficantly higher than comparable data for noninstitutionalized recipients.

The institutionalized disabled, as shown in Table 30, were more expensive than the institutionalized aged when expenditures per day of service were considered as well. Within both the institutionalized aged and disabled groups, the expenditures per long-term care day for fully and semi-institutionalized subgroups were about equal.

Institutionalized and noninstitutionalized aged recipients had lower Medi-Cal hospital expenditures per day and per discharge than other Medi-Cal groups. These low totals are because Medicare benefits for hospital care to the aged are substantial. In comparison, inpatient hospital expenditures for the institutionalized disabled were much higher per day and per discharge. The fully institutionalized disabled had both the highest expenses per day ($403) and per discharge ($5,183) of any group.

In conclusion, all institutionalized groups were far more expensive per person year than the noninstitutionalized. The utilization and expenditure patterns of the institutionalized were largely shaped by aged recipients who were 70 percent of the institutionalized Medi-Cal population. However, disaggregation of the total Medi-Cal population by both eligibility group and institutional status uncovers the differences in utilization and expenditures for the institutionalized

Table 30

Medicaid expenditures per service category unit, by eligibility group and institutional status: California, 1981

Eligibility group and institutional status	Long-term care expenditure per day	Hospital expenditure per day	Hospital expenditure per discharge
Total			
Fully institutionalized	$43	$196	$2,592
Semi-institutionalized	41	174	1,977
Noninstitutionalized	—	360	2,082
Aged			
Fully institutionalized	36	78	1,022
Semi-institutionalized	37	81	904
Noninstitutionalized	—	108	797
Disabled			
Fully institutionalized	58	403	5,283
Semi-institutionalized	52	331	3,941
Noninstitutionalized	—	357	2,669

NOTE: Includes patient liability for spend-down enrollees.

disabled group that contribute to making it the most expensive of the institutionalized groups examined. Similarly, the fully institutionalized and semi-institutionalized had very different utilization and expenditure patterns in part because of the greater likelihood of the latter group having had a hospital stay. This points to the substantial underlying diversity of the institutionalized Medi-Cal population.

Spend-down enrollees

Some people who become eligible for Medicaid must spend a portion of their income on their health care costs before they are able to receive Medi-Cal benefits. This process, commonly known as "spend-down," is an important, but often overlooked, cost-sharing provision in the Medicaid program. Spend-down varies somewhat for noninstitutional and institutional enrollees; therefore, these groups are analyzed separately.

For the noninstitutionalized, the spend-down process allows Medicaid eligibility to be extended to persons whose income is higher than the medically needy income level, provided they have medical expenses great enough to reduce their income to the level of the medically needy. Few persons qualify for Medicaid under this provision. Only 3 percent of noninstitutional Medi-Cal enrollees in 1981 (71,544 persons) went through the spend-down process to become eligible for Medi-Cal benefits.

Almost all of these enrollees were in the medically needy population; therefore, this analysis focuses only on that population. Fifteen percent of the noninstitutional medically needy were spend-down enrollees (Table 31). Eight percent of the noninstitutionalized medically needy had spend-down liabilities of less than $1,200 per year (Table 31). However, only 2 percent of the noninstitutionalized medically needy contributed $3,600 or more per year toward their medical expenses before Medi-Cal coverage. The remaining 5 percent had spend-down liabilities of $1,200 to $3,600 per year. Noninstitutionalized spend-down enrollees were fairly evenly distributed across medically needy groups (Table 32). The spend-down population was 24 percent AFDC children, 23 percent aged, 16 percent AFDC adults, 23 percent other medically needy, and 15 percent disabled. However, the disabled and aged were overrepresented in the spend-down population relative to their proportion in the medically needy group overall.

Medicaid expenditures per noninstitutionalized medically needy spend-down recipient are shown in Table 33. The average person without a spend-down liability generally had a higher Medicaid expenditure ($1,466) per recipient in 1981 than those with a spend-down liability ($1,427). However, Table 33 does show very high expenditures per recipient for those with spend-down liabilities of $3,600 per year toward the cost of their medical care. These persons had Medicaid expenditures per recipient of $2,701 annually, compared with $1,466 for those without spend-down liabilities. Those in the highest spend-down liability group required extensive services. Not only were their costs to Medicaid high ($2,701 per year), but also they

Table 31

Percent distribution of noninstitutionalized medically needy Medicaid enrollees, by annual spend-down liability and eligibility group: California, 1981

Eligibility group	Total	Annual spend-down liability					
		None	$1-599	$600-1,199	$1,200-2,399	$2,400-3,599	$3,600 or more
		Percent distribution					
Total	100	85	5	3	3	2	2
AFDC child	100	89	3	2	3	1	2
AFDC adult	100	88	3	2	3	2	2
Aged	100	72	13	7	5	2	1
Disabled	100	70	11	7	7	3	2
Other	100	88	2	2	3	2	3

NOTE: AFDC is Aid to Families with Dependent Children.

Table 32

Percent distribution of total and spend-down noninstitutionalized medically needy, by eligibility group: California, 1981

Eligibility group	Noninstitutionalized medically needy	
	Total	Spend-down
	Percent distribution	
Total	100	100
AFDC child	32	24
AFDC adult	20	16
Aged	12	23
Disabled	7	15
Other	28	23

NOTE: AFDC is Aid to Families with Dependent Children.

were personally contributing at least $3,600 annually in spend-down contributions toward the cost of their medical care. Thus, the cumulative annual cost for medical care to this group exceeded $6,300 per capita in 1981. This group is also of interest because it includes higher income enrollees than other Medi-Cal groups. The size of the spend-down liability means this group is closer to the middle income population—coverage not often thought of as occurring with Medicaid.

A type of spend-down also occurs with the institutionalized population. Indeed, most of the Medi-Cal institutionalized population in 1981 contributed toward the cost of their medical care. This occurred because institutionalized Medicaid enrollees are required to contribute any income they have toward the cost of their nursing home care, except for a small amount they are allowed to retain each month to cover their personal needs (usually $25). Then Medi-Cal pays for the cost of care not covered by the enrollee contribution.

As mentioned earlier, 4 percent of Medi-Cal enrollees in 1981 were institutionalized. Of this group, 44 percent had no spend-down liability and 56 percent contributed through spend-down each month to the cost of their care (Table 34).

The institutional spend-down population in 1981 contributed substantial amounts toward the cost of their institutional care. Twenty-nine percent of the institutionalized medically needy population contributed $3,600 or more yearly. An additional 24 percent contributed between $1,200 and $3,599.

These contributions represent significant additional dollars spent on health care for Medi-Cal enrollees, yet they are often overlooked. If the spend-down amounts are conservatively estimated at $3,600 per year for all enrollees who had yearly spend-downs of $3,600 or more and the same approach is used to estimate the contributions for the balance of the spend-down population, the size of the overall spend-down

Table 33

Medicaid expenditure per medically needy noninstitutionalized recipient, by annual spend-down liability and eligibility group: California, 1981

Eligibility group	No spend-down liability	Annual spend-down liability					
		Total	$1-599	$600-1,199	$1,200-2,399	$2,400-3,599	$3,600 or more
		Medicaid expenditure per enrollee					
Total	$1,466	$1,427	$1,037	$1,185	$1,551	$1,804	$2,701
AFDC child	915	777	688	738	662	947	1,098
AFDC adult	2,012	1,950	1,620	1,602	2,011	2,104	2,766
Aged	1,272	731	605	577	613	1,494	3,825
Disabled	3,150	2,598	1,761	2,099	3,309	3,717	7,377
Other	1,359	1,536	1,082	1,249	1,570	1,536	2,434

NOTE: AFDC is Aid to Families with Dependent Children.

Table 34

Percent distribution of institutionalized Medicaid enrollees, by annual spend-down liability and eligibility group: California, 1981

Eligibility group	Total	Annual spend-down liability					
		None	$1-599	$600-1,199	$1,200-2,399	$2,400-3,599	$3,600 or more
		Percent distribution					
Total	100	44	1	2	10	14	29
Aged	100	33	1	2	12	16	37
Disabled	100	69	1	1	7	9	13

Table 35

Percent distribution of total and spend-down institutionalized Medicaid enrollees, by eligibility group: California, 1981

Eligibility group	Institutionalized population	
	Total	Spend-down
	Percent distribution	
Total	100	100
Aged	70	84
Disabled	27	15
Blind	1	1
AFDC child	1	0
AFDC adult	0	0

NOTE: AFDC is Aid to Families with Dependent Children.

contribution to the cost of institutional care can be calculated. This approach produces an estimate of over $160 million in 1981 in spend-down contributions by institutionalized enrollees.

Unlike the noninstitutionalized spend-down population, almost all institutionalized spend-down enrollees were aged or disabled. As shown in Table 35, 84 percent of the institutionalized spend-down population were aged and 15 percent were disabled. The institutionalized aged were more likely than the disabled to have a spend-down liability. This seems logical, because the aged were more likely than the disabled to have Social Security income.

Total expenditures per institutionalized spend-down enrollee are shown in Table 36. The reader is reminded that these amounts include spend-down liability; and, therefore, they more closely represent total cost of care, rather than Medi-Cal payments. Data are presented separately for the semi-institutionalized and the fully institutionalized. Only the aged and disabled are included because they compose 99 percent of the institutionalized spend-down group.

The average semi-institutionalized spend-down enrollee costs far more per capita than those who did not spend-down. Total expenditures per semi-institutionalized enrollee without spend-down liability were $9,103, compared with $11,825 for the spend-down group. However, for the fully institutionalized without spend-down liability, total expenditures per enrollee were much higher ($21,490) than for those with spend-down liability ($15,020).

Turnover in Medi-Cal enrollees

The Medi-Cal population can be divided into two distinct groups: those enrolled for the full year and those enrolled for only part of the year. Yearly turnover rates of Medi-Cal program enrollment groups are compared here. The data presented in Table 37 show that about 75 percent of enrollees in 1981 were enrolled in Medi-Cal for the full year. Thus, only 25 percent of all enrollees had not been Medi-Cal enrollees for the full calendar year. However, there was substantial variation in rates of turnover across enrollment groups.

As shown in Table 37, the aged and disabled eligibility groups had relatively low turnover compared with the AFDC adult and AFDC child groups. There was also lower turnover in the categorically needy enrollment groups than in the medically needy enrollment groups. Although 80.1 percent of the categorically needy enrollees were on Medi-Cal for the full year, only 53.7 percent of the medically needy enrollees were enrolled for the full year. Within the categorically needy group, the AFDC adult and AFDC child enrollment groups had higher rates of turnover that either the categorically needy aged or disabled. Among the medically needy, 74.1 percent of the aged enrollment group and 77.9 percent of the disabled enrollment group were on Medi-Cal for the full year. In contrast, the medically needy AFDC adult and AFDC child enrollment groups had only 44.6 percent and 47.5 percent, respectively, who were enrolled for the full year. The medically needy-other had only 43.3 percent of enrollees who were on Medi-Cal for the full year. This was the highest level of turnover in any eligibility group.

Table 36

Total expenditure per institutionalized enrollee, by Medicaid eligibility group and spend-down liability: California, 1981

Institutional status and eligibility group	No spend-down liability	Annual spend-down liability					
		Total	$1-599	$600-1,199	$1,200-2,399	$2,400-3,599	$3,600 or more
	Total expenditure per enrollee[1]						
Semi-institutionalized							
Total	$9,103	$11,825	$7,834	$11,000	$11,950	$12,133	$11,856
Aged	6,841	11,109	5,894	9,746	11,079	11,139	11,328
Disabled	12,775	15,545	10,954	14,413	15,669	16,442	15,470
Fully institutionalized							
Total	21,490	15,020	17,918	15,724	15,458	15,446	14,582
Aged	14,628	13,938	14,111	13,898	13,964	13,864	13,964
Disabled	24,628	21,069	22,137	23,782	21,988	22,363	19,240

[1]Includes Medicaid and patient liability for spend-down enrollees.

Table 37

Percent of persons continuously enrolled in Medicaid for the entire year, by eligibility group and cash assistance status: California, 1981

Cash assistance status	Total	Eligibility group				
		SSI		AFDC		
		Aged	Disabled	Child	Adult	Other
		Percent				
Total Medicaid enrollees	74.6	88.1	92.9	69.5	69.5	43.3
Categorically needy	80.1	93.4	94.8	73.0	74.9	—
Medically needy	53.7	74.1	77.9	47.5	44.6	43.3

NOTES: SSI is Supplemental Security Income. AFDC is Aid to Families with Dependent Children.

Data on expenditures per enrollee for eligibility group by length of program enrollment are shown in Table 38. These data do not show consistent differences in expenditures across groups with varying durations of enrollment. Overall, expenditures for those enrolled for less than 6 months were $1,531 per person year, those enrolled 6-11 months spent $1,353 per person year, and full-year enrollees spent $1,472 per year. However, higher turnover groups were more costly for all eligibility groups except the aged and disabled medically needy. For those groups, full-year enrollees were more expensive to Medi-Cal.

Table 38

Total expenditures per Medicaid enrollee, by selected lengths of enrollment, eligibility group, and cash assistance status: California, 1981

Eligibility group and cash assistance	Length of enrollment		
	1-5 months	6-11 months	12 months
	Expenditure		
Total Medicaid enrollees	$1,531	$1,353	$1,472
AFDC child	822	612	430
AFDC adult	1,516	1,388	1,260
Aged	3,483	3,508	2,450
Categorically needy	2,055	1,776	965
Medically needy	4,706	5,321	7,614
Disabled	5,031	4,104	2,835
Categorically needy	4,474	3,750	2,485
Medically needy	6,262	5,202	6,643
Other	1,917	1,022	553

NOTE: AFDC is Aid to Families with Dependent Children.

Crossovers

Those eligible for both Medicare and Medicaid benefits (commonly referred to as "crossovers") have been found to be older, to be in poorer health, and to have higher levels of utilization and expenditures than either the total Medicare or total Medicaid population (McMillan et al., 1983; McMillan and Gornick, 1984). Here we will examine how Medicaid enrollees who also received Medicare benefits differed from the total State Medicaid enrollee population with regard to enrollment group composition, demographics, utilization of services, and Medi-Cal expenditures.

In 1981, approximately 25 percent of the Medi-Cal population were crossover enrollees. The enrollment group composition of the crossover population compared with the total Medi-Cal population is shown in Table 39. Fifty-five percent of the crossover population were aged enrollees; only 16 percent of the total Medi-Cal population were aged. Likewise, 40 percent of the crossover population were disabled and only 16 percent of the total Medi-Cal population were disabled.

Other characteristics of the crossover population as compared with the total Medi-Cal population are displayed in Table 40. The crossover population was decidedly older than the total Medi-Cal population. The percent of elderly was 3.6 times greater in the crossover population. Sixty-four percent of the crossover population were female, similar to the proportion (61 percent) who were female in the total Medi-Cal population. Fourteen percent of all crossovers were institutionalized.

Crossovers used more services per person year than the average Medi-Cal enrollee, a direct result of the

Table 39

Percent distribution of crossovers and total enrollees, by eligibility group and cash assistance status: California, 1981

Eligibility group and cash assistance status	Crossovers	All enrollees
	Percent	
Total Medicaid enrollees	100	100
AFDC child	1	43
AFDC adult	2	20
Aged	55	16
Categorically needy	41	11
Medically needy	14	4
Disabled	40	16
Categorically needy	35	14
Medically needy	5	2
Other	3	6

NOTE: AFDC is Aid to Families with Dependent Children.

Table 40

Crossovers and total Medicaid enrollees, by selected demographic characteristics, service utilization, and expenditure: California, 1981

Characteristic, service utilization, and expenditure	Crossovers	Total Medicaid enrollees	Ratio of crossovers to total
Demographic characteristic			
Percent 65 years or over	68	19	3.6
Percent female	64	61	1.1
Percent institutionalized	14	4	3.5
Service utilization			
Inpatient hospital days per 1,000 persons	3,270	1,530	2.1
Inpatient hospital discharges per 1,000 persons	410	240	1.7
Long-term care days per 1,000 persons	37.19	10.86	3.5
Physician visits per year	2.70	3.84	.8
Prescription drug purchases per person	19.6	8.9	2.2
Expenditure			
Total Medicaid expenditures per person	$2,729	$1,447	1.9
Inpatient hospital expenditures per person	575	506	1.1
Long-term care expenditures per person	1,448	455	3.2
Physician expenditures per person	64	89	.8
Prescription drug expenditures per person	200	85	2.3

higher concentration of the aged and disabled groups in the crossover population. Crossovers had twice the inpatient hospital days and nearly twice the number of discharges compared with the total Medi-Cal population. Crossovers also had 3.5 times the number of long-term care days and 2.2 times the number of prescription drug purchases of the total Medi-Cal population.

Crossovers had higher expenditures per person year than the total Medi-Cal population. Medi-Cal expenditures were 1.9 times higher for crossovers than for the total, in spite of the major contribution of Medicare to the cost of care for these enrollees.

Medically needy other

The medically needy other group consists of persons up to 21 years of age who qualify for Medicaid assistance under the California optional eligibility provisions. In 1981, this group included non-AFDC foster care and adoption children, as well as children in poor families that did not meet the AFDC dependency requirements. This latter group are often referred to as "Ribicoff kids," because Senator Ribicoff sponsored the Medicaid legislation establishing such children as an optional Medicaid group. For purposes of this discussion, the medically needy other children are compared with AFDC children, a group of similar age.

There were 264,320 medically needy other children enrollees in 1981, 7.4 percent of all Medi-Cal enrollees (Table 41). Because of their short average duration of enrollment, however (5.9 months as compared with 8.5 months for AFDC children), they comprised only 5 percent of total enrollee person years. They were

Table 41

Total Medicaid enrollees, medically needy other, and AFDC children, by selected characteristics: California, 1981

Characteristic	Total enrollees	Medically needy other	AFDC children
Number of persons ever enrolled	3,586,036	264,320	1,576,543
Number of person years	2,631,904	130,359	1,119,601
Mean length of enrollment in months	8.8	5.9	8.5
Percent under 6 years	16.8	38.6	34.7
Percent 6-17 years	26.1	35.9	55.7
Percent 18-20 years	5.4	20.5	9.6
Percent recipients	87.1	75.4	83.9
Percent institutionalized	4.0	0.3	0.0

NOTE: AFDC is Aid to Families with Dependent Children.

somewhat older, on the average, than AFDC children, with comparatively more teenage children.

Three-fourths of the medically needy other children were recipients, compared with 83.9 percent of AFDC children and 87.1 percent of all enrollees; less than 1 percent were institutionalized. Utilization measures per enrollee for this group were higher than those for AFDC children (Table 42). They had nearly three times the number of acute hospital inpatient days and about 2.5 times the number of discharges; their average length of stay was, however, similar (4.9 versus 4.3 days). The medically needy other children also had higher long-term care utilization than AFDC children or all enrollees (483 days per 1,000 enrollees versus 52). On the other hand, physician services were utilized at only a slightly higher level than for AFDC children (3.6 and 3.4 visits per enrollee per year, respectively). For prescription drugs, the rates for medically needy other children were about the same as for AFDC children, (3.1 prescriptions per enrollee).

Table 42

Medically needy other and AFDC children, by selected Medicaid utilization measures: California, 1981

Utilization measure	Medically needy other	AFDC children
Inpatient hospital days per 1,000 enrollees	1,382	486
Inpatient hospital discharges per 1,000 enrollees	283	112
Average length of stay in days	4.9	4.3
Physician visits per enrollee	3.6	3.4
Long-term care days per 1,000 enrollees	483	52

NOTE: AFDC is Aid to Families with Dependent Children.

Expenditures for the medically needy other children were about double those for AFDC children (Table 43). This is primarily the result of their relatively high expenditures for inpatient hospitalization ($706 per year compared with $241 for AFDC children). Long-term care expenditures and other expenditures were also higher than those for AFDC children. These higher utilization and expenditure patterns imply that medically needy other children have significantly greater health care needs than AFDC children.

Table 43

Medically needy other and AFDC children, by selected Medicaid service expenditures: California, 1981

Service expenditure	Medically needy other	AFDC children
Expenditure per enrollee	$1,075	$519
Inpatient hospital expenditures per enrollee	706	241
Long-term care expenditures per enrollee	26	6
All other expenditures per enrollee	343	272

NOTE: AFDC is Aid to Families with Dependent Children.

Other Federal and State-only enrollees

Two groups of Medi-Cal enrollees do not fall under the provisions of the Title XIX Medicaid program. For analysis, these are referred to as "other Federal" and "State-only" enrollees. The "other Federal" group consists of low income refugees and Cuban and Haitian entrants who do not meet the categorical requirements of Medicaid. The Medi-Cal costs for these enrollees were paid entirely by the Federal Government in 1981, provided the enrollees had been in the United States for less than 36 months.

In 1981, there were 74,370 other Federal enrollees on Medi-Cal. Data for the other Federal group are provided in Table 44. These enrollees had few group members over 65 years of age; they were predominantly male; and they were almost exclusively noninstitutionalized. They were less likely than the average Medi-Cal enrollee to use inpatient hospitals, to have long-term care, or to purchase prescription drugs. However, other Federal enrollees did use more physician visits, on the average, than all Medi-Cal enrollees. Other Federal enrollees had lower expenditures, on the average, for hospital visits, prescription drugs, and long-term care than the total Medi-Cal enrollees. However, other Federal enrollees averaged higher levels of expenditures for physician visits and dental visits. For total per capita expenditures, they were a lower cost group than the Medi-Cal enrollees.

The State-only Medi-Cal group in 1981 consisted of various low-income persons who did not meet Medicaid eligibility requirements. California opted to extend Medi-Cal benefits to them even though Federal matching monies were not available for their direct service costs. However, the Federal Government does share in the administrative cost for State-only enrollees.

In 1981, State-only Medi-Cal enrollees numbered 580,653. State-only enrollees were almost all under 65 years of age and noninstitutionalized (Table 45). There was a greater percent of males in the State-only population than in the total Medi-Cal population, although both groups were predominantly female. There were few crossovers in the State-only population.

State-only enrollees had 1.8 times more inpatient hospital days and discharges per year than the average Medi-Cal enrollee. They also had 2.7 times more physician visits. Thus, the State-only population consumed significantly more ambulatory care and hospital services per enrollee than the total Medi-Cal population. However, State-only enrollees used almost no long-term care services and fewer prescription drugs than the total Medi-Cal population.

The State-only population was also a high-cost population. As can be seen in Table 45, total expenditures were 1.7 times higher for State-only enrollees per year than for the average Medi-Cal enrollee. Inpatient hospital expenditures per year averaged 3.2

Table 44

Other Federal Medicaid enrollees and total enrollees, by selected demographic characteristics, service utilization, and expenditures: California, 1981

Characteristic, service utilization, and expenditure	Other Federal enrollees	Total Medicaid enrollees	Ratio of other Federal to total Medicaid enrollees
Characteristic			
Percent 65 years or over	7	19	0.4
Percent female	44	61	0.7
Percent institutionalized	0	4	0.0
Service utilization			
Inpatient hospital days per 1,000 persons	630	1,530	0.4
Inpatient hospital discharges per 1,000 persons	130	240	0.5
Long-term care days per 1,000 persons	0.1	10.9	0.0
Ambulatory care days per person	6.3	5.3	1.2
Physician visits per person	4.7	3.8	1.2
Prescription drug purchases per person	7.4	8.9	0.8
Expenditure			
Total expenditure per person	$820	$1,447	0.6
Inpatient hospital expenditures	339	506	0.7
Long-term care expenditures per person	7	455	0.0
Physician visit expenditures per person	125	89	1.4
Dental visit expenditures per person	99	44	2.3
Prescription drug expenditures per person	50	85	0.6

times higher for State-only enrollees than for the average Medi-Cal enrollee. State-only enrollees had higher expenditures per year, on the average, for physician services and for dental services than total Medi-Cal enrollees. However, expenditures for long-term care were much lower. Therefore, it is primarily their high expenditures for hospital care that determine their overall high expenditures pattern.

Conclusion

This overview of 1981 Medi-Cal program experience highlights the diversity of the California Medicaid population and the resulting variation in utilization and expenditures patterns for the many groups falling under the umbrella of Medi-Cal. California has a more diverse Medicaid population than most States, resulting from its broad eligibility provisions that cover many optional groups and its inclusion of several "State-only" programs under its Medicaid administration.

Although the Medi-Cal program is relatively generous in eligibility provisions and in the number of services that are covered, there are several benefit restrictions (such as prior authorization requirements) that appear to limit somewhat the levels of service utilization experienced in 1981. In general, utilization rates for California were equal to or lower than those experienced in the Michigan and New York Medicaid programs in the same year. Other factors may obviously have been important in determining these differences, such as case-mix differences in the populations compared or differences in regional patterns of medical care.

Although utilization levels for California were lower, the same was not true of expenditure levels. This is because the cost of individual services was higher in California than in the other two States, except for long-term care services in New York. The result was that the per enrollee expenditures for California were higher than those for Michigan and about the same as those for New York, with the exception of long-term care services, which were much

Table 45

State-only enrollees and total Medicaid enrollees, by selected demographic characteristics, service utilization, and expenditures: California, 1981

Characteristic, service utilization, and expenditure	State-only enrollees	Total Medicaid enrollees	Ratio of State-only to total Medicaid enrollees
Characteristic			
Percent 65 years or over	1	19	0.1
Percent female	52	61	0.9
Percent institutionalized	1	4	0.3
Percent crossovers	8	26	0.3
Service utilization			
Inpatient hospital days per 1,000 persons	2,780	1,530	1.8
Inpatient hospital discharges per 1,000 persons	420	240	1.8
Long-term care days per 1,000 persons	0.7	10.9	0.0
Ambulatory care days per person	9.2	5.31	1.7
Physician visits per person	6.6	3.84	1.7
Prescription drug purchases per person	8.2	8.94	0.9
Expenditures			
Total expenditure per person	$2,408	$1,447	1.7
Inpatient hospital expenditures per person	1,603	506	3.2
Long-term care expenditures per person	37	445	0.1
Physician visit expenditures per person	164	89	1.8
Dental visit expenditures per person	71	44	1.6
Prescription drug expenditures per person	77	85	0.9

more expensive in New York. This shows the importance of controlling both utilization of services and costs per service when attempting to control overall program costs. The selective contracting program for hospital services that began in 1983 in California should have a dramatic impact on costs per day in California hospitals. It will be interesting to observe whether changes in utilization levels or in the mix of services will compensate, either fully or partially, for the reduced per day costs.

Another important factor in differences in program costs by State is the composition of the population being served. Because of the many eligibility options that it has chosen within its AFDC and State-only programs, California has a relatively young population, as has Michigan. New York has a much older population. In fact, in 1981, about one-half of the New York Medicaid expenditures were for the aged. In all three States, the disabled were a very expensive group; in California they were the most expensive and were responsible for the largest proportion of program costs (33 percent). A large portion of those costs were for institutional care for the mentally retarded. Initiatives within the State to deinstitutionalize the mentally retarded are likely to affect the relative mix of program expenditures for the disabled population in the future.

A variety of information for several special populations has been analyzed. Most of the higher-cost groups within Medi-Cal have high levels of utilization and expenditures for hospital and long-term care. The variations that have been observed point to the diversity within Medi-Cal, and the importance of analyzing these populations separately.

These results from California will provide a baseline for analyzing the many changes that have been implemented in Medi-Cal and in other State Medicaid programs throughout the 1980's. The continuation of the Medicaid Tape-to-Tape Project for service dates through 1988 will facilitate those analyses.

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