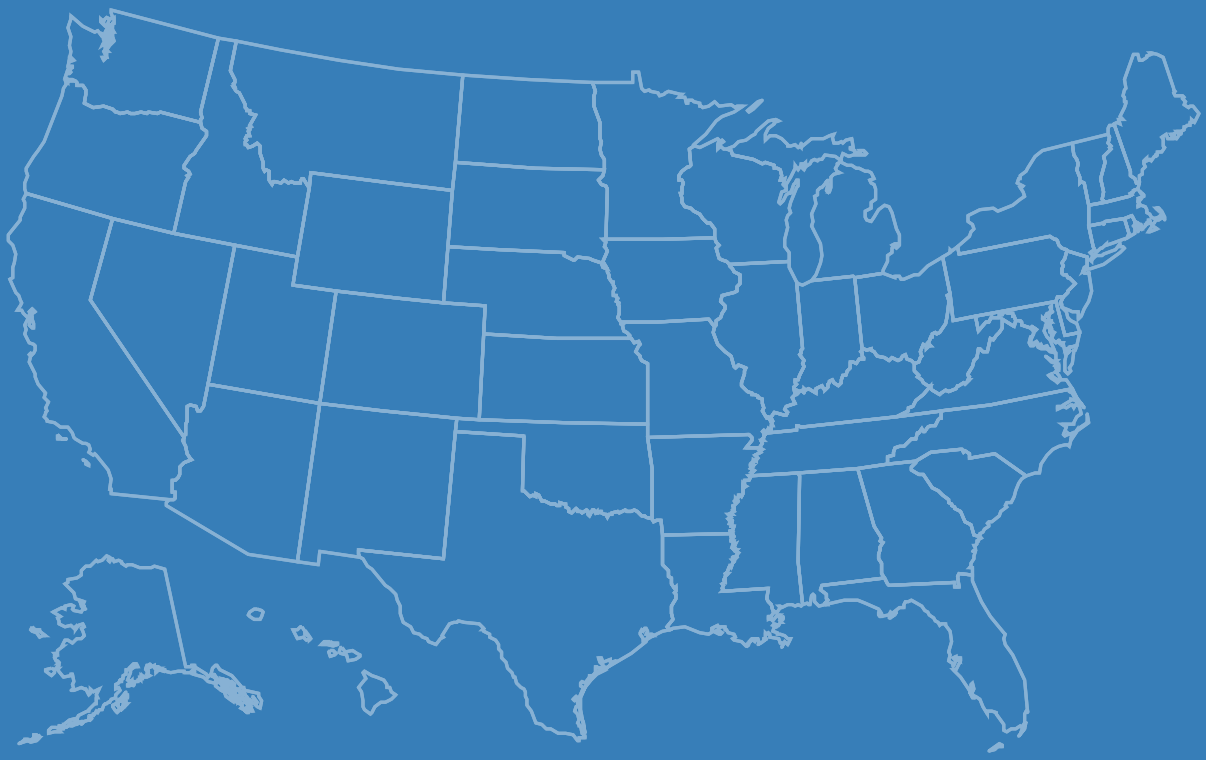
MAX

CENTERS FOR MEDICARE & MEDICAID SERVICES

The Medicaid Analytic eXtract Chartbook



2007

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The Medicaid Analytic eXtract Chartbook

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Acknowledgments

We would like to thank Sue Dodds, Marilyn Ellwood, and David Baugh for spearheading the development of the MAX data system and instigating the creation of this chartbook. We additionally thank William Clark, Marilyn Ellwood, and James Verdier for their careful review and helpful comments and suggestions. Many other people contributed directly or indirectly to this chartbook. We are grateful to Karyn Anderson, Ann Cherlow, Gary Ciborowski, Bob Schmitz, Susan Williams, and Ander Wilson for reviewing some of the material it contains; Leah Hackleman and Walt Brower for editorial support; and Joyce Hofstetter for graphic design. We also wish to thank the following people for providing initial suggestions for the chartbook's content: M. Beth Benedict, Gerrie Barosso, Paul Boben, and Elicia Herz and her colleagues at the Congressional Research Service. A chartbook based on MAX data would not have been possible without the efforts of the MAX development team. We particularly acknowledge the work of Matthew Gillingham and Mei-Ling Mason in producing the analytic files.

*Work performed for this project was funded by the Centers for Medicare & Medicaid Services under research contract 500-95-0047/8.

Contents

1. Introduction

The Medicaid Analytic eXtract (MAX) is a data system derived from the Medicaid Statistical Information System (MSIS) that contains extensive information about Medicaid enrollees and the Medicaid health services they use during a calendar year. This chartbook is primarily based on the 2002 MAX data and presents an overview of enrollee demographic and enrollment characteristics, service utilization, and expenditures at the national and state levels in 2002. The Centers for Medicare & Medicaid Services (CMS), the producer of both MAX and MSIS, has developed this chartbook to serve as a resource to state Medicaid administrators, policymakers, researchers, and others interested in the Medicaid program and the people it serves.

This introduction provides an overview of the Medicaid program and the MAX data system. The remaining chapters of the chartbook present figures and tables that reflect the Medicaid population in 2002: Chapter 2 provides a national profile of Medicaid enrollees and their Medicaid experience, Chapter 3 presents state-level statistics, and Chapters 4 through 6 provide supplemental information on special topic areas (managed care, dual Medicare/Medicaid enrollees, and service use and expenditure information by detailed service type, respectively). The chartbook concludes with a glossary and list of references. A separate appendix contains the source data tables used to construct the materials presented in this chartbook.

The Medicaid Program in 2002

Medicaid is a means-tested entitlement program that provides health care coverage to many of the most vulnerable populations in the United States, including low-income children and their parents and the aged and disabled poor. The program was enacted along with Medicare in 1965 by Title XIX of the Social Security Act. Medicaid has since grown to become the third largest source of health care spending in the U.S. after Medicare and employer-provided health insurance. Since the 1990s, the number of persons served by Medicaid has exceeded the number enrolled in Medicare.

In 2002, Medicaid covered over 50 million persons, providing health insurance coverage to over 18 percent of the U.S. population and accounting for approximately 15 percent of total U.S. health expenditures. Medicaid is the largest insurer for nursing home care in the nation, covering almost 45 percent of nursing home costs in 2002 (CMS 2006).

Medicaid is administered by states under general guidelines established by the federal government and is financed jointly by federal and state funds. The federal match rate, called the Federal Medical Assistance Percentage (FMAP), differs in each state and is calculated by taking into account the average per capita income in a given state in relation to the

national average. In fiscal year 2002, the FMAP ranged from 50 percent in 11 higher-income states to 76 percent in Mississippi.

To receive federal matching funds, a state's Medicaid program must cover basic health services for all individuals in certain mandatory Medicaid eligibility groups:[1]

- *Low-income children:* all children under age 6 with family income at or below 133 percent of the federal poverty level that satisfy certain asset requirements are eligible for Medicaid. Children between age 6 and 19 in families at or below 100 percent of the poverty level (satisfying similar asset requirements) are also eligible if they were born after September 30, 1983.
- *Pregnant women:* pregnant women with family income at or below 133 percent of the poverty level that satisfy certain asset requirements remain eligible from the time they become pregnant through the month of the 60th day after delivery, regardless of change in family income.
- *Infants born to Medicaid eligible pregnant women:* all infants under age one are eligible if their mother resides in the same household and was eligible for Medicaid at the time of birth.
- *Limited-income families with dependent children:* people who meet the state's Aid to Families with Dependent Children (AFDC) requirements effective on July 16, 1996, are eligible for Medicaid.
- *Supplemental Security Income (SSI) recipients:* with the exception of some individuals living in Section 209(b) states, aged and disabled people receiving SSI are eligible for Medicaid.[2]
- *Medicare beneficiaries:* most aged and disabled low-income Medicare beneficiaries are eligible for Medicaid. Those with income below 100 percent of poverty and assets below 200 percent of SSI asset limits are known as Qualified Medicare Beneficiaries (QMB) and receive Medicare premiums and cost-sharing payments. Medicare beneficiaries with income between 100 percent and 120 percent of the poverty level are known as Specified Low-Income Medicare Beneficiaries (SLMBs), and those with income between 120 percent and 135 percent are known as Qualifying Individuals 1 (QI1s). SLMBs and QI1s qualify for assistance with Medicare premiums, but not cost sharing. (The vast majority of QMBs and some SLMBs also qualify for full Medicaid benefits.)
- *Other:* several other specified groups are mandatorily eligible for Medicaid benefits. For further detail, see Schneider et al. (2002).

Generally, Medicaid is mandated to cover those who have low incomes and few resources and are aged, disabled, children, pregnant women, or adults with dependent children. For these groups, Medicaid must cover all "mandatory services," which include but are not limited to inpatient and outpatient hospital services, physician services, laboratory and X-ray services, family planning services, early and periodic screening for those under age 21, and nursing facility services.

[1] Medicaid has historically been linked to welfare receipt. Although the tie between welfare and Medicaid for children and their parents was severed in 1996 under the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA), some of the mandatory eligibility groups still reflect this history.

[2] Section 209(b) states are states that elected to use more restrictive eligibility requirements than those of the SSI program, but these requirements cannot be more restrictive than those in place in the state's Medicaid plan as of January 1, 1972. Section 209(b) states include Connecticut, Illinois, Minnesota, New Hampshire, Ohio, Virginia, Hawaii, Indiana, Missouri, North Dakota, and Oklahoma.

Table 1.1

Optional Services Covered by State Medicaid Programs in 2002

	2002 FMAP	Institutional Long-Term Care				Other Types of Services																
		Inpatient Psychiatric (Under Age 21)	Intermediate Care Facility for Mentally Retarded	Institution for Mental Disease (65 and Older)	Nursing Facility (Under Age 21)	Dental	Dentures	Home Health–Audiology	Home Health–Occupational Therapy	Home Health–Physical Therapy	Home Health–Speech and Language Therapy	Hospice	Mental Health Rehabilitation/Stabilization	Personal Care	Physician Directed Clinic Services	Prescription Drugs	Primary Care Case Management	Private Duty Nursing	Religious (Non-Medical) Health Care Institution	Speech, Hearing, and Language Disorder Therapy	Targeted Case Management	Transportation (Not Administrative)
Alabama	70.45	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●		●	●	●
Alaska	57.38	❍	❍	❍	❍	❍		❍	❍	❍	❍	❍	❍	❍	❍	❍	●			❍	❍	❍
Arizona	64.98	●	●	●	●	●	●		❍	❍	❍	❍	●	❍	●	●		❍	●	●	❍	●
Arkansas	72.64	●	❍		❍	●	●		●	●	●	●	●	❍	●	●	●	●		●	●	●
California	51.40	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			●	●	●	●
Colorado	50.00	●	●	●	●			●	●	●	●	●	●		●	●	●	●		●	●	●
Connecticut	50.00	●	●	●	●	●	●	●	●	●	●				●	●				●	●	●
Delaware	50.00		❍	❍	❍			❍		❍	❍	❍	❍	❍	❍	❍		❍				
Dist. of Columbia	70.00	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●		●	●	●
Florida	56.43	❍	❍	❍	❍	●	●	●	●	●	●	●	●	●	●	●		●		●	❍	❍
Georgia	59.00		●		●	●	●	●	●	●	●	●	●		●	●	●	❍		●	❍	●
Hawaii	56.34	●	●	●	●	●	●	●	●	●	●	●			●	●				●	●	●
Idaho	71.02	❍	❍	●	❍	❍	❍	❍	❍	❍	❍	❍		❍	❍	❍	❍			❍	❍	❍
Illinois	50.00	●	●	●	●	●	●	●	●	●	●	●	●		●	●			●	●	●	●
Indiana	62.04	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍		❍	❍		❍	❍	❍	●	❍
Iowa	62.86	❍	●	❍	❍	●	●	●	●	●	●	●	●		●	●	●			●	●	❍
Kansas	60.20	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			●	●	●
Kentucky	69.94	❍	●	❍	●	●		●	●	●	●	●			●	●				●	●	●
Louisiana	70.30	❍	●	❍	●		❍		●	●	●	●			●	●					●	●
Maine	66.58	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Maryland	50.00	●	●	●	●	●		●	●	●	●	●	●	●	●	●		●		●	●	●
Massachusetts	50.00	●	❍	●	●	●	●	●	●	●	●	●		●	●	●	●	●		●	●	●
Michigan	56.26	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			●		●	●
Minnesota	50.00	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●
Mississippi	76.09	●	●		●	●		●	●	●	●	●	●		●	●	●			●	●	●
Missouri	61.06	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍				❍	
Montana	72.83	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●
Nebraska	59.55	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●		●	●	●
Nevada	50.00	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●		●	●	●
New Hampshire	50.00	●	●	●	●	●		●	●	●	●		●	●	●	●		●		●	●	●
New Jersey	50.00	❍	❍	❍	❍	●	●	●	●	●	●	❍	●	❍	●	●			❍	●	❍	●
New Mexico	73.04	●	●			●	●	●	●	●	●	●	●	●	●	●				●	●	●
New York	50.00	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●
North Carolina	61.46	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●		●	●	●
North Dakota	69.87	●	●	❍	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●
Ohio	58.78	●	●	●	●	●	●	●	●	●	●	●	●		●	●		●	●	●	●	●
Oklahoma	70.43	●	❍	❍	●	●							●	●	●	●	❍				❍	
Oregon	59.20	❍	❍	●	●	●	●	●	●	●	●	●	●	●		●		❍		●	●	●
Pennsylvania	54.65	●	●	●	●	●	●	●	●	●	●	●	●	●	●	❍	●	●	●	●	●	●
Rhode Island	52.45	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●					●	●
South Carolina	69.34	●	●		●	●		●	●	●	●	●			●	●					●	●
South Dakota	65.93		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			●	●	●
Tennessee	63.64	●	●	●	❍	●	●	●	●	●	●	●	●		●	●	●	❍		❍	●	❍
Texas	60.17		●		●				●	●		●	●	●	●	●			●		●	●
Utah	70.00	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●		●	●	●
Vermont	63.06		❍		❍	❍	❍	●	●	●	●	●	●	❍	●	●		●		●	❍	❍
Virginia	51.45		●	❍	●	●		●	●	●	●	●	●		●	●	●		●	●	●	●
Washington	50.37	●	●	●	●	●	●	●	●	●	●	●	●	❍	●	●		●		❍	❍	●
West Virginia	75.27	●	●		●	●		●	●	●	●	●	●	●	●	●	●	●		●	●	●
Wisconsin	58.57	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●
Wyoming	61.97		●	●	●	●			●	●	●	●	●		●	●				●	●	●

● covers all eligible groups in state ❍ covers some eligible groups in state (blank) covers no eligible groups in state

Source: Centers for Medicare & Medicaid Services, "Medicaid-at-a-Glance 2002."

States have the flexibility to provide optional coverage to certain individuals who do not meet the income and resource thresholds set by the federal government for mandatory coverage:

- *Medically needy:* states may provide coverage to "medically needy" individuals—those who have incurred sufficiently high medical costs to bring their net income below a state-determined level.
- *Pregnant women:* states can cover pregnant women at a higher income threshold than set for mandatory coverage.
- *Children, including Medicaid expansion SCHIP children:* states can cover children at a higher income threshold than set for mandatory coverage. The enactment of the State Children's Health Insurance Program (SCHIP) in 1997 provided enhanced funding for states to expand Medicaid coverage for children up to 250 percent of poverty (or higher in some circumstances).[3]
- *Institutionalized aged and disabled:* states can cover aged and disabled persons in nursing homes and other institutions at a higher income threshold, up to 300 percent of the SSI standard.
- *Participants in 1115 waiver demonstrations:* states can apply for demonstration waivers enabled under Section 1115 of the Social Security Act to extend Medicaid coverage to groups that would not otherwise be covered, such as childless adults or higher income adults who are parents.[4]

For further detail on other optionally eligible groups, see Schneider et al. (2002).

States may also choose to cover certain services, such as dental care or prescription drugs, that are not required by federal mandate. As a result, the Medicaid program varies greatly between states. Table 1.1 shows variation in the types of select optional services that were covered by each state's Medicaid program in 2002 and the enrollees who were eligible for these services. All states covered several key optional services, such as prescription drugs and intermediate care facility services for the mentally retarded.[5]

State variation in Medicaid coverage, both with regard to eligibility groups and the services that are covered, can result in differences in enrollment rates and expenditures between states. Other factors —including the age distribution, the rate of poverty, and the rate of Medicaid reimbursement to providers within a state—can also contribute to variation among states in enrollment, service use, and costs. These differences should be kept in mind when interpreting the national- and state-level statistics presented in this chartbook. It should also be kept in mind that this chartbook reflects the Medicaid program and legislative environment in 2002, before the enactment of the Medicare Prescription Drug Improvement and Modernization Act of 2003 and the Deficit Reduction Act of 2005.

The Medicaid Analytic eXtract (MAX)

The MAX data system contains extensive information on the characteristics of Medicaid enrollees and the services they use during a calendar year. MAX contains individual-level information regarding age, race and ethnicity, monthly enrollment status, eligibility group, and use and costs of services during the year. MAX also includes claims-level records that

[3] States also have the option to establish separate SCHIP programs for children.

[4] Section 1115 waivers are also used to waive certain statutory and regulatory Medicaid provisions for research purposes and Medicaid demonstration projects.

[5] For further detail about state provision of optional services, see CMS (2002).

can be used for more detailed analysis of patterns of service utilization, diagnoses, and cost of care among Medicaid enrollees.

MAX includes both summary information and claims data for all Medicaid enrollees in the 50 states and the District of Columbia. It does not include information about Medicaid enrollees in Puerto Rico or other U.S. territories. All Medicaid SCHIP (M-SCHIP) expansion enrollees are included in MAX, but MAX contains only limited information for enrollees of separate SCHIP (S-SCHIP) programs. M-SCHIP enrollees, but not S-SCHIP enrollees, are included (but not separately reported) in the figures and tables of this chartbook.

MAX data are research extracts of MSIS. MSIS data, which have been collected from each state since 1999, contain enrollee eligibility information and Medicaid claims paid in each quarter of the federal fiscal year (FFY).[6] Given a standard lag of several months between service use and claim payment, claims paid in a given period are not always for services used during the same period. The MAX data system was developed to provide a calendar year utilization rather than a payment-focused version of MSIS data to serve as a research tool for the examination of Medicaid enrollment, service utilization, and expenditures by subgroup and over time. Unlike Medicaid expenditure data reported in MSIS and CMS Form-64, MAX enables the examination of Medicaid utilization and service expenditures at the individual enrollee level.

To construct MAX, MSIS claims are merged with person-level enrollment information to reflect services utilized by each enrollee during a calendar year. The MAX data system differs from MSIS in a number of ways:

- While MSIS claims files contain separate claim records for initial claims, voided claims, and positive or negative adjustments, such records are combined to reflect final service event records in MAX.
- Changes in eligibility that are reported retroactively are incorporated in MAX monthly enrollment measures.
- MSIS type-of-service information is remapped in MAX to reflect further type-of-service detail that may be helpful to researchers.
- MSIS eligibility information is remapped in MAX to correct coding inconsistencies where possible.
- MAX data have been linked to the Medicare Enrollment Database (EDB) to help identify people dually enrolled in Medicare and Medicaid. Some additional Medicare enrollment information from the EDB is included in MAX.
- MAX prescription drug claims have been linked to codes identifying drug therapeutic classes and groups. However, access to these data is limited to researchers covered under a CMS licensing agreement.

The 2002 MAX data system consists of a person summary (PS) file and four claims files for each of the 50 states and the District of Columbia. The PS file contains summary demographic and enrollment characteristics and summary claim information for each person enrolled in Medicaid in the state during a given year. Four claims files—inpatient (IP), institutional long-term care (LT), prescription drug (RX), and other service (OT)—contain claim-level detail regarding date of service, expenditures for utilized

[6] MSIS replaced the required state Medicaid reporting in Form HCFA-2082. Prior to 1999, MSIS data submission by states was optional.

services, associated diagnostic information, and provider and procedure type for all individual-level Medicaid paid services during the year.

Limitations of MAX

There are some limitations to the breadth of information contained in the MAX files. Because it contains only Medicaid-paid services, it does not capture service use or expenditures during periods of non-enrollment, services paid by other payers, or services provided at no charge. Because MAX consists only of enrollee-level information, it does not include prescription drug rebates received by Medicaid, Medicaid payments made to disproportionate share hospitals (DSH)—hospitals that serve a disproportionate share of low-income patients with special needs—payments made through upper payment limit (UPL) programs, and payments to states to cover administrative costs. DSH payments, for example, accounted for about $15.9 billion, or 6.2 percent, of total Medicaid expenditures in federal fiscal year (FFY) 2002 (Holahan and Ghosh 2005).

In addition, there are specific Medicaid subpopulations for which service information may be missing or incomplete in MAX. This is particularly important for two groups: individuals enrolled in both Medicaid and Medicare (dual enrollees) and persons enrolled in Medicaid prepaid or managed care plans (either comprehensive or partial plans).

Because Medicare is the first payer for services used by dual enrollees that are covered by both Medicare and Medicaid, MAX will capture such service use only if additional Medicaid payments are made on behalf of the enrollee for Medicare cost sharing or for shared services, such as home health. (See Chapter 5 on dual enrollees for further detail.) Medicare premiums paid by Medicaid on behalf of duals are not included in the MAX claims or person summary file.

Information in MAX about managed care is restricted to premium payments and some service-specific utilization information. It does not include service-specific expenditure information. Claims reflecting utilization of managed care services in MAX are called "encounter claims." Because encounter claims are thought to be incomplete in MAX, utilization of managed care services, by type, is not presented in this chartbook. However, managed care enrollment and premium payment information is summarized in Chapter 4 and in other locations in the chartbook.

People enrolled in comprehensive managed care plans, such as health maintenance associations (HMOs), typically have few fee-for-service (FFS) claims and are thus excluded from all tables and figures reflecting FFS service use by type. For this reason, FFS statistics from states with extensive managed care enrollment should be interpreted with caution.

Finally, as with all large data sets, MAX contains some anomalous and possibly incomplete or incorrect data elements. Users should consult MAX anomaly notes, available on the MAX website (see Resources for MAX below), for information that may explain unusual patterns in each state's data.

Source Data Used in This Chartbook

The source data used for the chartbook are limited to the MAX 2002 and earlier year person summary files, and in particular to summary tables created by CMS to validate the MAX data system each year. The source validation tables and variable construction documentation are available on the MAX website. Excel tables with more detailed enrollment, utilization, and expenditure information, by state, are available as an appendix to this chartbook.

Resources for MAX

The figures and tables in this chartbook illustrate a small set of analyses possible using MAX data. More detailed information about Medicaid prescription drug use and expenditures, for example, is available on the CMS website at the link below.

- *Medicaid Pharmacy Benefit Use and Reimbursement Statistical Compendium:* www.cms.hhs.gov/MedicaidDataSources GenInfo/08_MedicaidPharmacy.asp

At the time of this writing, MAX data were available for calendar years 1999 through 2002. MAX data are protected under the Privacy Act and require a data use agreement with CMS. Documentation for MAX and information about accessing MAX data for research purposes are available at the websites listed below.

- *MAX website:* www.cms.hhs.gov/MedicaidDataSources GenInfo/07_MAXGeneralInformation.asp
- *Research Data Assistance Center (ResDAC) (contains information about how to obtain CMS data):* www.resdac.umn.edu/Medicaid/
- *Information on CMS privacy protected data:* www.cms.hhs.gov/PrivProtectedData/02_Criteria.asp

2. A National Overview

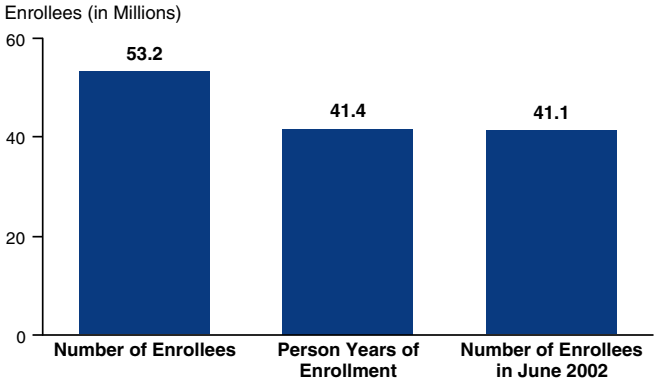
This chapter provides a national profile of Medicaid enrollees and their service utilization and expenditures in calendar year 2002. National Medicaid statistics represent the population for which federal Medicaid dollars were spent. The federal government financed well over half of the $248 billion in Medicaid outlays in 2002 (CMS 2006), reimbursing states between 50 and 76 percent for services used by Medicaid enrollees, and reimbursing at an even higher rate for children enrolled in M-SCHIP.

The summary measures presented in this chapter represent all Medicaid enrollees, but they also reflect eligibility and coverage choices made by states regarding persons and services covered by the program. States vary greatly in their Medicaid programs, and national measures can be skewed by large states such as California and New York; therefore, the national data presented in this chapter should be interpreted with caution. We provide summary information at the state level in Chapter 3.

Demographic Characteristics

Over 53 million people, or about 18.5 percent of the U.S. population, were enrolled in Medicaid in 2002. Because age, family status, and income change over time, Medicaid eligibility and thus enrollment can be transitory—only 55.3 percent of enrollees were enrolled for the entire year in 2002. After adjusting for the number of months enrolled in the program (which accounts for those individuals enrolled for less than a full year), we estimate 41.4 million person years of Medicaid enrollment, which corresponds closely with the 41.1 million persons who were enrolled in Medicaid in June of 2002 (Figure 2.1).

Figure 2.1
Total Medicaid Enrollment in 2002



Source: Medicaid Analytic Extract, 2002.

Children make up the largest age subgroup of the Medicaid population (Table 2.1). Almost 58 percent of enrollees were under age 21, including almost 4 percent who were infants (under one year of age). In comparison, working age adults—those ages 21 to 64—accounted for 32 percent of Medicaid enrollees. The elderly made up only 11 percent of all Medicaid enrollees.

Table 2.1
Characteristics of Medicaid Enrollees in 2002

	Number of Enrollees	Percentage of Enrollees
All Enrollees	53,249,159	100.0
Enrolled All Year	29,442,087	55.3
Age		
0 years	2,041,261	3.8
1-20 years	28,568,473	53.7
21-64 years	16,926,512	31.8
65 years and older	5,712,913	10.7
Race and Ethnicity		
Non-Hispanic white	23,245,519	43.7
African American	12,574,022	23.6
Hispanic or Latino	10,974,092	20.6
Asian	1,290,288	2.4
Native American	779,090	1.5
Pacific Islander	609,572	1.1
Other	3,776,576	7.1
Institutionalized[7]	1,728,226	3.2

Source: Medicaid Analytic Extract, 2002.

Non-Hispanic whites represented 43.7 percent of the Medicaid population and were the largest race or ethnic group enrolled in Medicaid in 2002. An additional 23.6 percent of enrollees were African American and 20.6 percent were Hispanic or Latino. Smaller percentages were Asian (2.4 percent), Native American or Alaska Native (1.5 percent), Pacific Islander or Native Hawaiian (1.1 percent), or other race or ethnicity (7.1 percent).

Although a large portion of Medicaid expenditures is devoted to long-term care services, only 3.2 percent of enrollees were institutionalized in 2002 (see Table 2.1). The number who were institutionalized corresponds to more than a fourth of elderly Medicaid enrollees, the primary users of long-term care.

[7] Institutionalized enrollees include those receiving Medicaid covered services in nursing homes, intermediate care facilities for the mentally retarded (ICF/MR), mental hospitals for the aged, or inpatient psychiatric facilities for individuals under age 21 anytime in 2002.

Eligibility Characteristics

Medicaid enrollees are classified by two eligibility groups: basis of eligibility (BOE) and maintenance assistance status (MAS). The BOE groups are important because not all low-income people qualify for Medicaid. Instead, Medicaid eligibility is available to four broad BOE groups:

- *Children:* persons under age 18 or up to age 21 in states electing to cover older children
- *Adults:* pregnant women and caretaker relatives in families with dependent (minor) children[8]
- *Aged:* people age 65 or older
- *Disabled:* persons of any age (including children) who are unable to engage in substantial gainful activity by reason of any medically determinable physical or mental impairment which can be expected to result in death or that has lasted or can be expected to last for a continuous period of not less than twelve months[9]

A subset of the population that is generally not covered by state Medicaid programs includes non-disabled working age adults without dependent children. Non-disabled childless adults only qualify for Medicaid in a few states with waivers—for example, Massachusetts, New York, and Wisconsin.

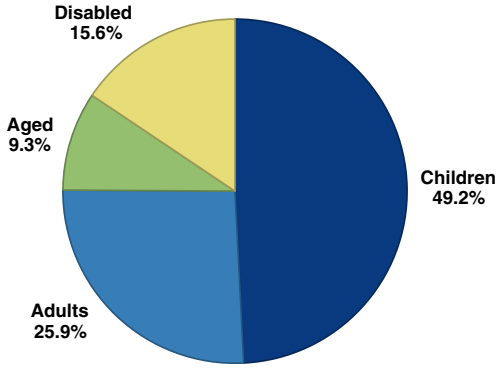
Figure 2.2 shows the composition of Medicaid enrollees by BOE in 2002. Consistent with the Medicaid population's age distribution, those in

[8] Most caretaker relatives of dependent children are parents, but this group can also include other family members serving as caretakers, such as aunts or grandparents. In a few states with waivers, the adult BOE group includes childless adults.

[9] This definition of disability is employed in Medicare and Medicaid and in the income security programs with which they are associated, including Supplemental Security Income (SSI) and Social Security Disability Insurance (SSDI).

the child BOE group made up almost half of all enrollees; eligible adults accounted for about a quarter of Medicaid enrollees; smaller shares were aged (9.3 percent) or disabled (15.6 percent).

Figure 2.2
Medicaid Enrollment by Basis of Eligibility in 2002

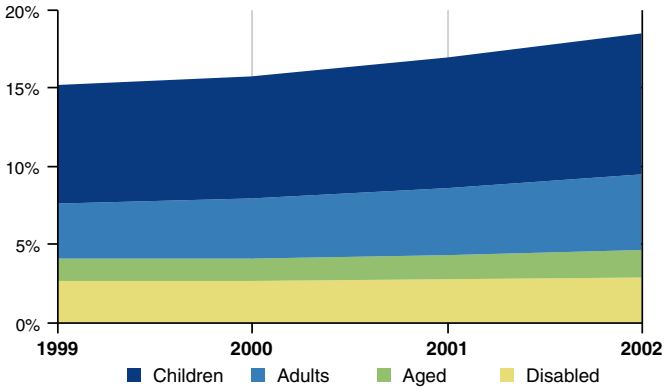


Source: Medicaid Analytic Extract, 2002.

Medicaid enrollment rose from 15.2 to 18.5 percent of the population between 1999 and 2002 (Figure 2.3). This trend was largely due to an increased enrollment of adults. Medicaid adult enrollment (as a percentage of the population) increased by 26 percent during this period, compared to 16.7 percent growth for children, 14.6 percent for aged, and 8.6 percent for disabled enrollees. However, much of this growth is accounted for by expansions in Medicaid family planning only programs, which by 2002 accounted for about 20 percent of adult enrollees.[10]

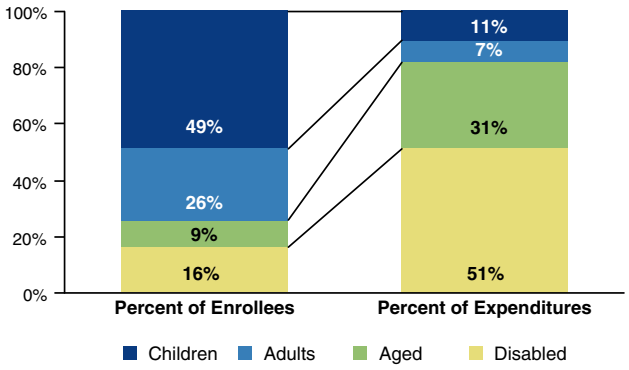
In 2002, aged and disabled enrollees reflected only a quarter of all Medicaid enrollees, but they accounted for the vast majority (82 percent) of Medicaid expenditures (see Figure 2.4). Over half of all expenditures paid on behalf of enrollees was for the disabled; another 31 percent was spent on the aged. In comparison, children accounted for 11 percent and adults accounted for 7 percent of all Medicaid expenditures in 2002.

Figure 2.3
Percentage of the Population Enrolled in Medicaid, 1999-2002



Source: Medicaid Analytic Extract, 1999-2002.

Figure 2.4
Medicaid Enrollment and Expenditure by Basis of Eligibility in 2002



Source: Medicaid Analytic Extract, 2002.

While BOE reflects the population subgroup by which a person becomes eligible for Medicaid, MAS reflects the primary financial eligibility criteria met by the enrollee. The five MAS categories include cash assistance-related, medically needy, poverty-related, 1115 waiver, and "other."

- *Cash assistance-related:* persons receiving SSI benefits and those who would have qualified under the pre-welfare reform Aid to Families with

[10] For example, California's family planning only program began in December of 1999 and by 2002 was expanded to include over 2.2 million enrollees. Family planning only enrollees receive only family planning assistance rather than comprehensive health benefits.

Dependent Children (AFDC) rules (hence the name "cash assistance").[11]

- *Medically needy:* persons qualifying through the medically needy provision (a state option) that allows for a higher income threshold than required by the AFDC cash assistance level; persons with income above the threshold can deduct incurred medical expenses from their income and/or assets—or "spend down" their income/assets—to determine financial eligibility.

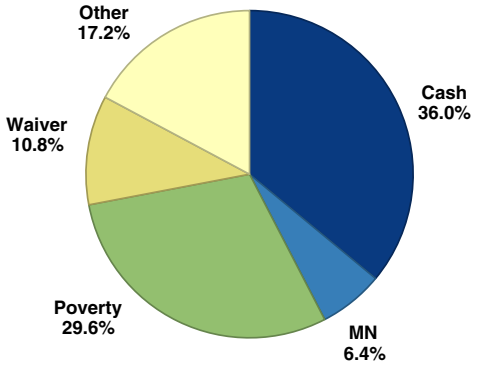
- *Poverty-related:* persons qualifying through any poverty-related Medicaid expansions enacted from 1988 on; in addition, this group includes QMB, SLMB, and QI dual groups described in Chapter 1 (see also Schneider et al. 2002 for details).

- *1115 waiver:* people only eligible via a state 1115 waiver program that extends benefits to certain otherwise ineligible persons.[12]

- *Other:* a mixture of mandatory and optional coverage groups not reported under the MAS groupings listed above, including but not limited to many institutionalized aged and disabled, those qualifying through hospice and home- and community-based care waivers, and immigrants who qualify for emergency Medicaid benefits only.

People qualifying under the cash assistance-related rules comprised the largest MAS subgroup (36.0 percent) in 2002 (Figure 2.5). Another 29.6 percent were eligible due to the poverty-related rules, 10.8 percent were eligible under a state waiver program, and 6.4 percent were medically needy.

Figure 2.5
Medicaid Enrollment by Maintenance Assistance Status in 2002



Source: Medicaid Analytic Extract, 2002.
MN = medically needy.

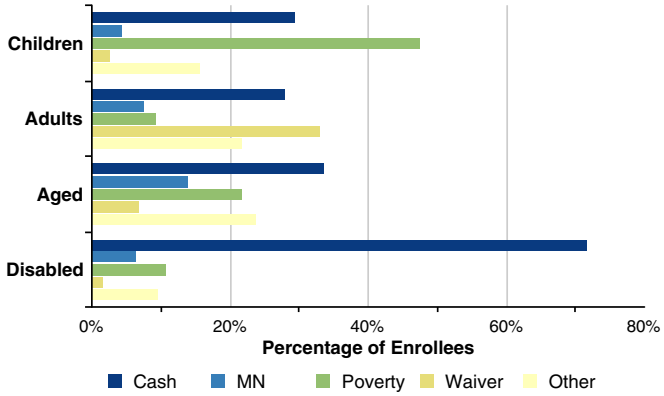
Maintenance assistance status varies greatly by basis of eligibility (Figure 2.6). Receipt of cash assistance remains the primary route to Medicaid eligibility for aged and disabled enrollees. Cash assistance is also the primary route to eligibility for most adults qualifying for full Medicaid benefits. The 1115 waiver provision also enables many adults to qualify for Medicaid, but many of these 1115 adults only qualify for family planning benefits. Almost half of all child enrollees qualify for Medicaid by poverty-related criteria.

[11] Although the 1996 welfare reform legislation replaced AFDC with Temporary Assistance to Needy Families (TANF), 1996 AFDC rules are still used to determine eligibility for Medicaid. Section 1931 refers to the section of the Social Security Act that specifies AFDC-related eligibility after welfare reform. States have some flexibility in changing income and asset limits for Section 1931 coverage.

[12] Some states provide only limited family planning benefits or other limited services to 1115 adults. However, a few states provide full Medicaid benefits to persons qualifying through 1115 provisions.

Figure 2.6

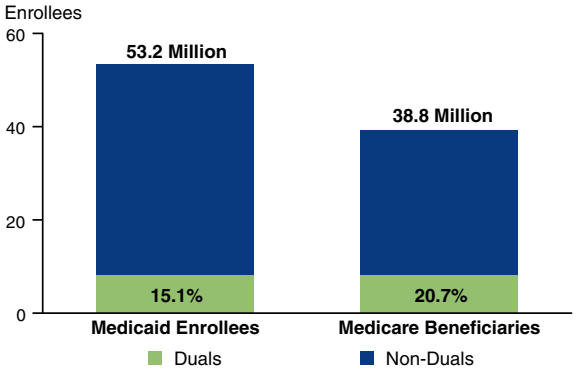
Maintenance Assistance Status by Basis of Eligibility in 2002



Source: Medicaid Analytic Extract, 2002.
MN = medically needy.

Figure 2.7

Ever Enrolled in Both Medicare and Medicaid in 2002



Sources: Medicaid Analytic Extract, 2002; 2002 Medicare and Medicaid Statistical Supplement.

Dual Enrollees

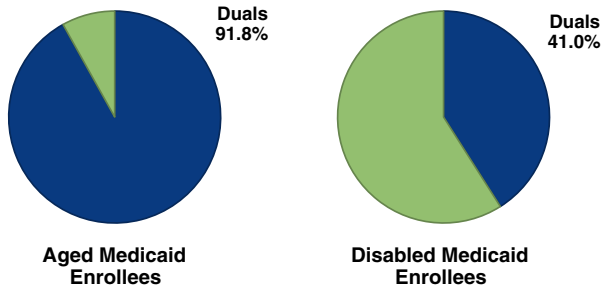
Most aged and many disabled Medicaid enrollees are dually eligible for both Medicare and Medicaid. We refer to such enrollees as "dual enrollees" or simply "duals." Medicare enrollment was identified in MAX by a match to the Medicare Enrollment Database (EDB). In this chartbook, dual enrollees are defined as those in the Medicaid data files with matching records in the EDB, indicating enrollment in both Medicare and Medicaid in at least one month in 2002.

In total, there were 8 million duals in 2002. These duals represented 15.1 percent of the 53.2 million Medicaid enrollees and 20.7 percent of all Medicare beneficiaries that year (Figure 2.7). Almost 92 percent of aged Medicaid enrollees and about 41 percent of disabled enrollees were duals in 2002 (Figure 2.8).

Because duals are among the most vulnerable and costly Medicaid enrollees, we examine their enrollment characteristics, service use, and expenditures separately in Chapter 5 of this chartbook. However, in reviewing information presented on duals in this and subsequent chapters, readers should keep in mind that because Medicare covers most acute care

Figure 2.8

Percentage Ever Dually Enrolled in Both Medicare and Medicaid in 2002



Source: Medicaid Analytic Extract, 2002.

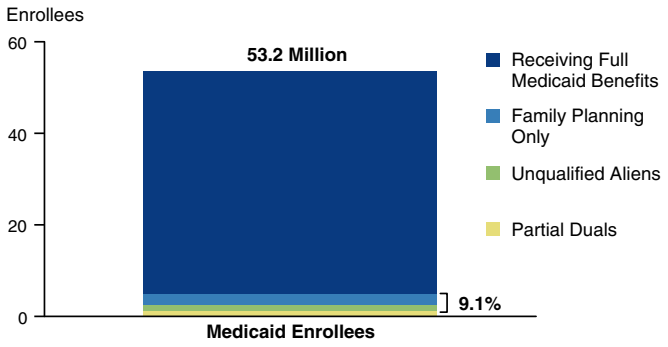
services for duals, Medicaid utilization and expenditures understate their overall use and cost of those services. Among duals, Medicaid utilization and expenditure statistics for Medicare-covered services only reflect payments for Medicare cost-sharing. Data on Medicaid utilization and expenditures for services with only limited Medicare coverage, such as long-term care, are much more complete.

Restricted-Benefit Enrollees

The majority of Medicaid enrollees, including duals, qualify for full Medicaid benefits provided in their state. However, a subset of enrollees receives only limited health coverage. Restricted-benefit enrollees

include (1) "unqualified" aliens eligible for only emergency hospital services, (2) duals receiving only coverage for Medicare premiums and cost sharing, and (3) people receiving only family planning services.[13] These three groups of restricted-benefit enrollees represented about 9 percent of Medicaid enrollees in 2002 (Figure 2.9). Corresponding to the limited set of services provided to these enrollees, this group accounted for only 1.3 percent of total Medicaid expenditures in 2002.

Figure 2.9
Medicaid Enrollees Receiving Only Restricted Medicaid Benefits in 2002



Source: Medicaid Analytic Extract, 2002.
Dual = ever enrolled in both Medicare and Medicaid in 2002.

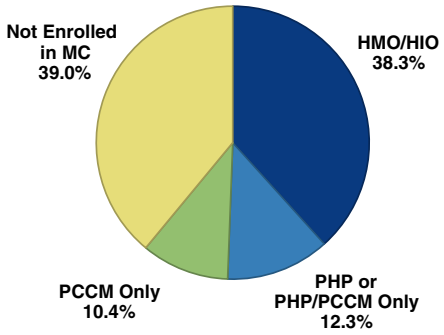
Managed Care

Medicaid managed care plans are prepaid plans for bundled health services. There are three general types of managed care referred to in the MAX data system: (1) health maintenance organizations (HMOs) or health insuring organizations (HIOs), (2) prepaid health plans (PHPs), and (3) primary care case management (PCCM) plans.

For the most part, HMOs and HIOs are comprehensive prepaid plans that cover most health services for their enrollees. PHPs are typically more limited in their scope of coverage and coverage varies greatly by plan. They may cover, for example, only dental care or behavioral health services. PCCMs are the least comprehensive managed care type identified in MAX. PCCMs involve the payment of a small premium (often 3 dollars per month) for case management services only. Even though care provided by PCCMs is managed care, most services are provided on a fee-for-service basis. In some states, PCCM premiums are not paid unless case management services are delivered.

Sixty-one percent of all Medicaid enrollees in 2002 were enrolled in some type of managed care: 38.3 percent were ever enrolled in HMOs/HIOs, 12.3 percent were enrolled only in PHPs or in a combination of PHPs and PCCMs, and 10.4 percent were in PCCMs only (Figure 2.10).

Figure 2.10
Managed Care (MC) Enrollment in 2002



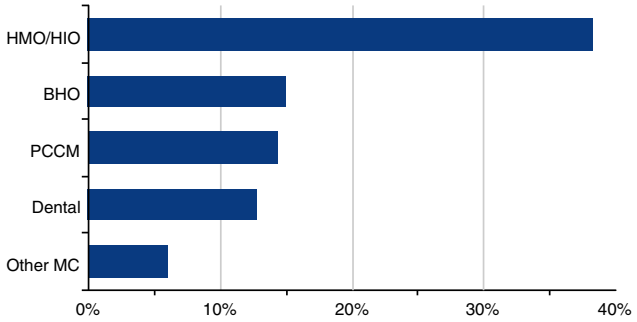
Source: Medicaid Analytic Extract, 2002.
HMO/HIO = health maintenance organization or health insuring organization.
PCCM = primary care case management.
PHP = prepaid health plan.

People may enroll in more than one Medicaid managed care plan. More than 15 percent were ever enrolled in behavioral health organizations in 2002, 14.4 percent were ever enrolled in PCCMs, almost 12.8 percent were in dental plans, and another 6.3 percent were enrolled in some other managed care plan (Figure 2.11). For information about managed care enrollment combinations in June of 2002, see Chapter 4.

[13] Unqualified aliens generally include illegal immigrants and immigrants entering the U.S. legally after 1996 for 5 years from their date of entry.

Figure 2.11

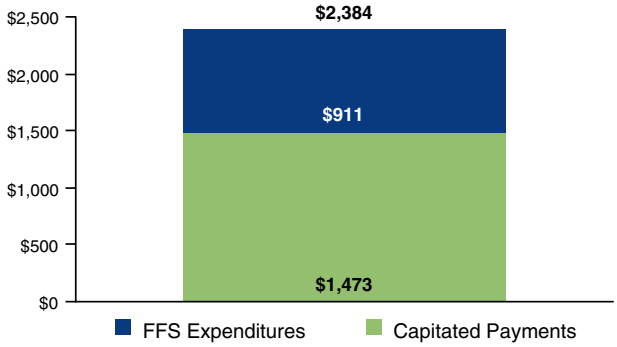
Percentage Ever Enrolled in Managed Care (MC) in 2002, by Type of Plan



Source: Medicaid Analytic Extract, 2002.
BHO = behavioral health organization.
HMO/HIO = health maintenance organization or health insuring organization.
PCCM = primary care case management.

Figure 2.12

Per-Enrollee Expenditures Among People Ever Enrolled in HMOs/HIOs in 2002



Source: Medicaid Analytic Extract, 2002.
FFS = fee-for-service.
HMO/HIO = health maintenance organization or health insuring organization.

As described in Chapter 1, MAX contains limited information on service utilization and costs incurred under managed care. MAX claims data contain premium payments and some encounter claims, but not expenditure data, for services received under prepaid plans. Because most services used by people in HMOs/HIOs are prepaid, such individuals are excluded from all analyses in this chartbook that are based on fee-for-service (FFS) claims records.

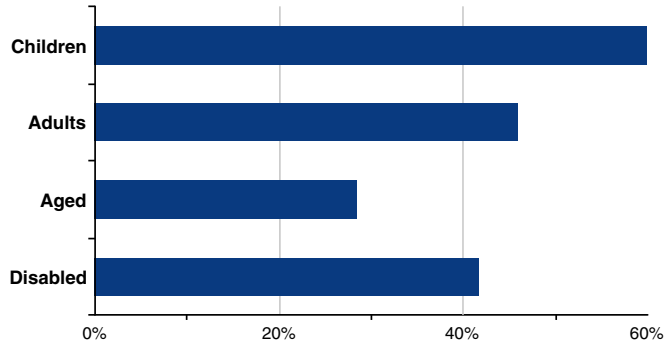
Note that capitated payments do not reflect all expenditures for people in managed care; people in managed care plans may have both capitated and FFS payments. For example, those in HMOs/HIOs at some point in 2002 may have been enrolled in FFS Medicaid during other months of the year. They may also have FFS claims for services that are "carved out" of their plan (for example, services for behavioral health.) Meanwhile, people enrolled in only PHP or PCCM managed care typically have most of their services covered by FFS payments.

Figure 2.12 shows per-enrollee expenditures for full-benefit HMO/HIO enrollees by type of payment. Most expenditures for HMO/HIO enrollees in 2002 were for capitated care, although a significant share—$911 of $2,384 (38 percent)—went to FFS payments. (For more detailed information about FFS utilization among HMO and HIO enrollees, see Chapter 4.)

It is important to keep in mind that managed care enrollees can differ greatly in their demographic and enrollment characteristics from people receiving FFS care. Figure 2.13 shows that children were the most likely, and aged were the least likely, to be enrolled in either an HMO/HIO or PHP during 2002.

Figure 2.13

Percentage of Medicaid Enrollees Ever Enrolled in HMOs/HIOs or PHPs in 2002, by Basis of Eligibility



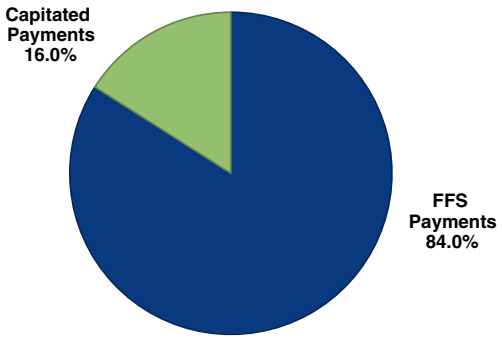
Source: Medicaid Analytic Extract, 2002.
HMO/HIO = health maintenance organization or health insuring organization.
PHP = prepaid health plan.

Total Medicaid Expenditures

Almost $211 billion was spent on Medicaid covered services in 2002: about $208 billion for full-benefit enrollees and about $2.6 billion for the growing number of enrollees with only restricted Medicaid benefits.

Among those with full benefits, FFS payments accounted for a large majority (84 percent) of all Medicaid expenditures in 2002 (Figure 2.14).

Figure 2.14
Fee-for-Service (FFS) and Capitated Payments Among Full-Benefit Medicaid Enrollees in 2002

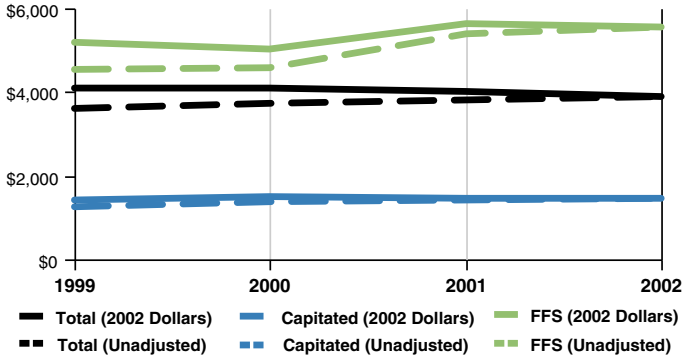


Source: Medicaid Analytic Extract, 2002.

We refer to full-benefit enrollees who never enrolled in HMOs/HIOs in 2002 as "FFS enrollees." For all full-benefit enrollees—including FFS enrollees and those enrolled in HMOs/HIOs—unadjusted average expenditures rose slightly between 1999 and 2002. However, when measured in 2002 dollars, they declined by almost 5 percent (Figure 2.15).[14]

[14] The following Current Price Index was used to adjust expenditures: U.S. City Average, All Urban Consumer, Medical Care Series Total (CUUR0000SAM). Some restricted-benefit enrollees may be included in the estimates for 1999 and 2000 in Figure 2.15. Because restricted-benefit enrollees have lower expenditures per enrollee, the presented figures may underestimate 1999 and 2000 costs.

Figure 2.15
Per-Enrollee Expenditure Trends Among Full-Benefit Enrollees (in Unadjusted and 2002 Dollars), 1999-2002



Source: Medicaid Analytic Extract, 1999-2002.
Note: Capitated dollars are per HMO/HIO enrollee; FFS dollars are per FFS enrollee.

Capitated payments per enrollee in an HMO/HIO rose by 4.5 percent between 1999 and 2002, while FFS expenditures per FFS enrollee increased by 7.7 percent (or 19.1 and 22.7 percent, respectively, in unadjusted dollars). Note that because children and adults are more likely to enroll in managed care than the aged and disabled, and typically have lower medical expenditures, average expenditures for FFS enrollees are not directly comparable to those of people enrolled in HMOs/HIOs.

Medicaid FFS Utilization and Expenditures

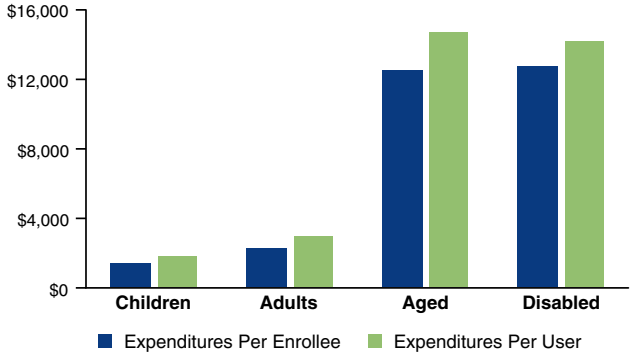
The MAX data system enables detailed analyses of patterns of service use and expenditures by type among FFS enrollees. MAX contains information about all Medicaid FFS claims paid in a given year. In this chartbook we restrict our analyses of service use and costs to only those FFS enrollees receiving full Medicaid benefits. Persons eligible for only limited services are not included because they can distort average per capita expenditure estimates.

The majority of FFS enrollees (82 percent) used at least one service in 2002; 89.7 percent of FFS disabled enrollees and 85.4 percent of FFS aged (statistics not shown) used at least one Medicaid

service. About 80 percent of FFS children and 76.2 percent of FFS adults used services in 2002.

Average FFS expenditures were substantially higher among aged or disabled enrollees compared to children and adults (Figure 2.16). FFS costs were $12,464 per aged and $12,678 per disabled FFS enrollee. In comparison, FFS costs among children and adults averaged $1,379 and $2,217, respectively. Average expenditures among those who used services were higher but followed a similar pattern by basis of eligibility.

Figure 2.16
Fee-for-Service (FFS) Expenditures Among FFS Enrollees in 2002, by Basis of Eligibility



Source: Medicaid Analytic Extract, 2002.
FFS enrollees = full-benefit enrollees not enrolled in HMOs/HIOs in 2002.

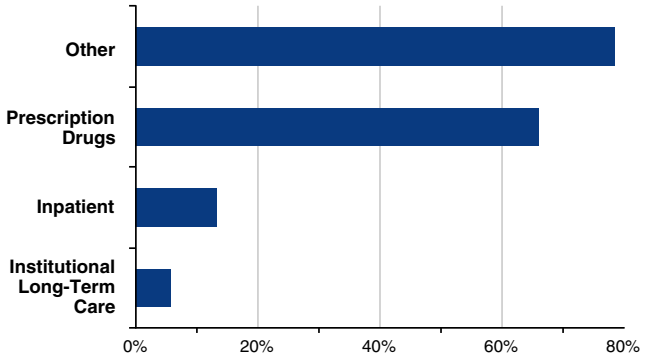
Services in MAX are categorized into one of 30 types of services in the person summary file. These service types can be grouped into four categories that generally correspond to four types of claim files available in MAX: inpatient (IP), institutional long-term care (LT), prescription drug (RX), and other (OT).[15] While IP and RX contain individual types of services, LT claims are composed of

- Nursing facility services
- Intermediate care facilities for the mentally retarded (ICF/MR)
- Mental hospital services for the aged
- Inpatient psychiatric facility services for people under age 21

OT claims consist of all claims not included in the other three groups. These include community long-term care services such as private duty nursing, residential care, and home health; physician and other ambulatory services; and lab, X-ray, supplies, and other wraparound services.

The most commonly used services by FFS enrollees were prescription drugs and the broad category of OT or other services (Figure 2.17). About 78 percent used an OT service and 66 percent had a prescription filled in 2002. In comparison, only 13.2 used inpatient and 5.8 percent used institutional long-term care services during the year.

Figure 2.17
Percentage of Fee-for-Service (FFS) Enrollees Using Services in 2002, by Type of Service

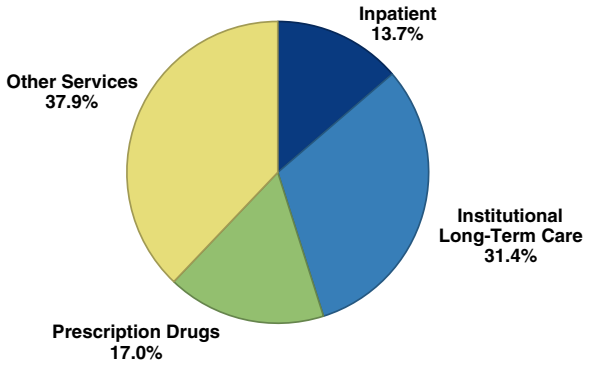


Source: Medicaid Analytic Extract, 2002.
FFS enrollees = full-benefit enrollees not enrolled in HMOs/HIOs in 2002.

High utilization of OT services corresponded with high overall OT expenditures. Of the four general categories of services, OT services accounted for the largest share (37.9 percent) of FFS expenditures (Figure 2.18). Because the OT category consists of a wide variety of service types, further investigation of OT service use is warranted. Chapter 6 provides additional utilization and expenditure information by detailed type of service.

[15] Certain types of service claims may be found in one of two or more claim file types. For example, while most durable medical equipment claims are in OT files, some may be placed in RX files. See MAX data documentation for details.

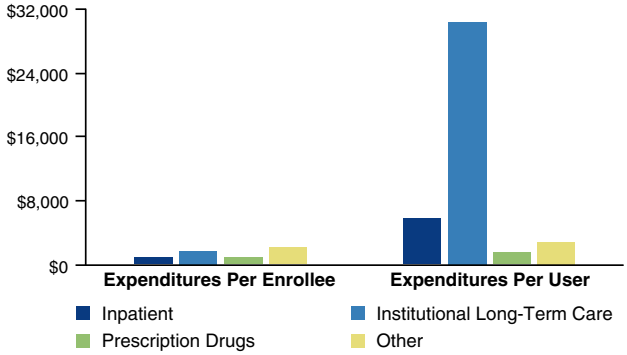
Figure 2.18
Composition of Medicaid Fee-for-Service (FFS) Expenditures Among FFS Enrollees in 2002, by Type of Service



Source: Medicaid Analytic Extract, 2002.

Institutional long-term care was the most expensive type of service among persons utilizing the service. Institutional care was used by only 5.8 percent of FFS enrollees but accounted for 31.4 percent of all FFS expenditures. The high unit cost of institutional care is illustrated in Figure 2.19. While average institutional long-term care costs among FFS enrollees were $1,752 in 2002, expenditures per enrollee using such services were $30,367.

Figure 2.19
Per-Enrollee Fee-for-Service (FFS) Expenditures Among FFS Enrollees in 2002, by Type of Service

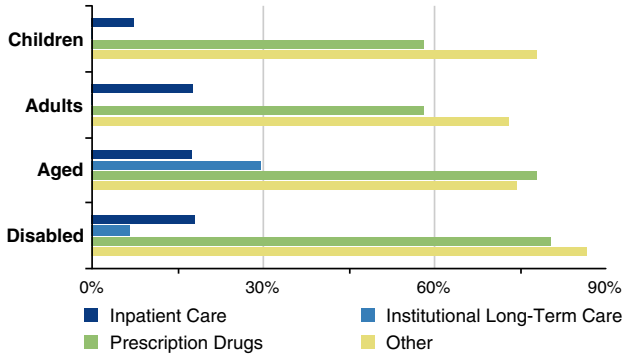


Source: Medicaid Analytic Extract, 2002.

Of the four service type categories, inpatient care represented the smallest share (13.7 percent) of FFS expenditures in the FFS subpopulation. This is due in part to the coverage of most inpatient services by Medicare among duals.

FFS utilization and expenditures vary greatly by basis of eligibility (Figure 2.20). The percent using inpatient services was between 17.5 and 18.2 percent among adults, aged, and disabled enrollees but only 7.5 percent among children. Almost 30 percent of aged enrollees used institutional long-term care services, compared to only 0.3 percent of children, 0.1 percent of adults, and 6.9 percent of disabled enrollees. The percent who filled at least one prescription varied from 58.1 percent among adults to 80.6 percent among the disabled. Meanwhile, OT services were used widely by all four BOE groups.

Figure 2.20
Percentage of Fee-for-Service (FFS) Enrollees Using Services in 2002, by Basis of Eligibility

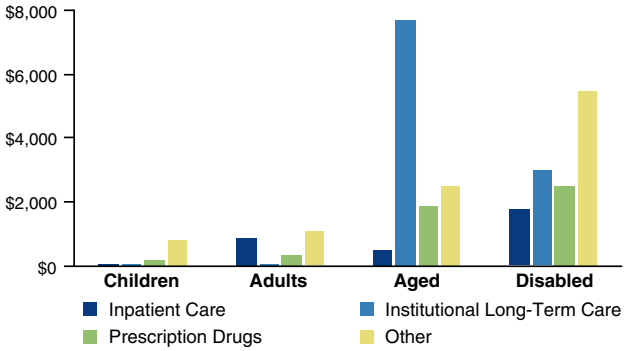


Source: Medicaid Analytic Extract, 2002.
FFS enrollees = full-benefit enrollees not enrolled in HMOs/HIOs in 2002.

The most costly services corresponded to the most utilized services in most BOE groups (Figure 2.21). OT services were the most costly type of service per enrollee among children, adults, and the disabled. Among aged enrollees, however, average institutional long-term care expenditures far exceeded average expenditures for all other services.

Figure 2.21

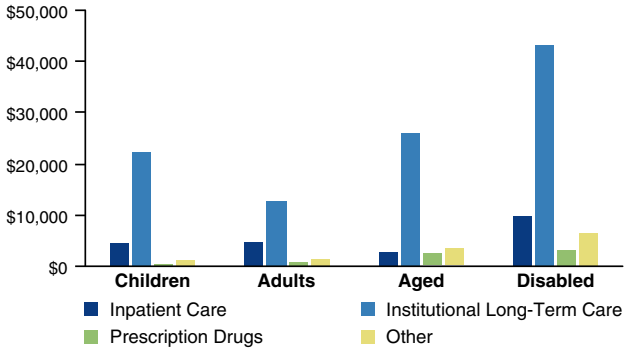
Per-Enrollee Fee-for-Service (FFS) Expenditures Among FFS Enrollees in 2002, by Basis of Eligibility



Source: Medicaid Analytic Extract, 2002.
FFS enrollees = full-benefit enrollees not enrolled in HMOs/HIOs in 2002.

Figure 2.22

Fee-for-Service (FFS) Expenditures per User Among FFS Enrollees in 2002, by Basis of Eligibility



Source: Medicaid Analytic Extract, 2002.
FFS enrollees = full-benefit enrollees not enrolled in HMOs/HIOs in 2002.

Average per-user expenditures were highest for institutional long-term care in each BOE group (Figure 2.22). For the subset of enrollees using such long-term care services, average expenditures were $22,170 among children, $12,663 among adults, $25,908 among aged, and $43,104 among the disabled.

The utilization and expenditures of other population subgroups and service types are topics for further research. For example, see Chapter 5 for a summary of FFS expenditures among dual enrollees. Chapter 6 presents detailed service type information for all FFS enrollees and for FFS duals. In the following chapter, we examine variation in Medicaid enrollment, utilization, and expenditures across states.

3. State-Level Detail

Beyond providing mandatorily covered services to mandatorily eligible persons, states have a great deal of flexibility in determining their Medicaid program's eligibility criteria and medical benefits (see Chapter 1 for details). In general, each state has a unique and distinct Medicaid program, and as a result there is large variation in the composition of Medicaid enrollees, Medicaid utilization, and Medicaid expenditures across states.

States also differ in their demographic characteristics and economic status. States with particularly large elderly and poor populations will have more Medicaid eligible residents as a share of their total population. In addition, the federal match rate (FMAP) varied between 50 and 76 percent in 2002, with higher matching allocated to states with lower per capita income. The variation in the FMAP results in variation in the cost of Medicaid to states, which can in turn affect the types of services and people that states choose to cover in their optional programs. States also differ in their reimbursement to medical facilities, physicians, and other practitioners for Medicaid-covered services. As a result, the cost of care and incentives to use certain services can vary throughout the United States.

Because so many factors affect state Medicaid programs, it is difficult to compare Medicaid enrollee characteristics, utilization, and costs between states. Nevertheless, common federal guidelines and a common data reporting system (MSIS) together make the examination of state-level summary statistics useful and feasible. The MAX data system, which is derived from MSIS, can be used to examine any state's Medicaid population in a national context.

In this chapter, we present summary information illustrating the variation in Medicaid enrollment, utilization, and expenditures across states. Although we discuss some of the characteristics that may explain observed differences between states, our examination is by no means comprehensive. The discussions in this chapter are intended only to suggest the complexity of factors that affect states' Medicaid enrollment, utilization, and costs.

When interpreting statistics presented in this chapter, we encourage readers to review the lists of MAX 2002 eligibility and claim anomalies available on the MAX website. In addition to listing anomalous data, the anomaly notes identify unusual aspects of state Medicaid programs that might affect data in MAX. This is particularly useful for interpreting summary measures at state-level detail.

Demographic Characteristics

More than 53 million people were enrolled in Medicaid in 2002, from 70 thousand in Wyoming to 9.5 million in California (Table 3.1). Enrollees in three states—California, New York, and Texas—

Table 3.1
Medicaid Enrollment in 2002

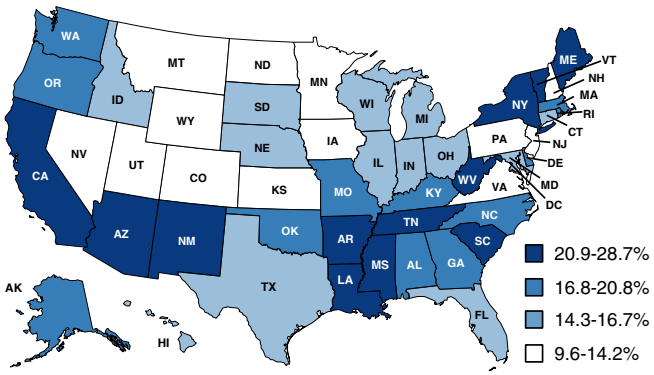
	Number of Enrollees	Percentage of Population	Percentage Enrolled All Year	Total Person-Years of Enrollment	Number of Enrollees in June 2002
United States	**53,249,159**	**18.5**	**55.3**	**41,437,049**	**41,118,773**
Alabama	859,136	19.2	61.6	707,655	703,583
Alaska	124,466	19.4	35.1	89,116	92,345
Arizona	1,139,436	21.0	42.7	816,656	804,129
Arkansas	644,566	23.8	59.7	510,137	492,147
California	9,539,318	27.3	54.5	7,495,989	7,474,761
Colorado	447,329	9.9	48.9	333,131	329,883
Connecticut	497,007	14.4	63.5	409,689	407,996
Delaware	150,189	18.6	53.4	116,657	115,312
District of Columbia	152,568	27.0	68.8	130,079	129,808
Florida	2,745,729	16.5	51.1	2,072,435	2,070,913
Georgia	1,583,105	18.4	45.0	1,132,073	1,090,633
Hawaii	206,604	16.7	58.3	163,175	158,636
Idaho	199,674	14.9	54.2	153,537	152,411
Illinois	2,104,850	16.7	55.5	1,628,175	1,646,486
Indiana	918,661	14.9	54.7	715,617	723,175
Iowa	363,218	12.4	51.9	274,263	271,034
Kansas	311,084	11.5	46.1	228,282	215,195
Kentucky	788,947	19.3	57.9	628,101	620,695
Louisiana	1,046,074	23.4	61.9	838,929	827,767
Maine	359,485	27.7	73.5	311,945	307,581
Maryland	789,260	14.5	61.9	636,641	625,666
Massachusetts	1,210,399	18.9	64.5	1,006,099	1,002,798
Michigan	1,548,615	15.4	58.2	1,230,909	1,226,868
Minnesota	694,738	13.8	54.0	526,305	520,288
Mississippi	716,727	25.0	62.1	589,863	582,224
Missouri	1,128,690	19.9	66.9	942,746	942,465
Montana	108,720	11.9	46.5	78,664	79,066
Nebraska	268,306	15.5	57.7	214,886	215,609
Nevada	219,336	10.1	38.8	148,157	144,286
New Hampshire	122,576	9.6	50.2	90,816	87,808
New Jersey	1,019,452	11.9	61.4	824,777	831,336
New Mexico	465,415	25.1	61.3	382,124	380,722
New York	4,527,583	23.6	53.9	3,423,283	3,364,341
North Carolina	1,425,322	17.1	56.4	1,114,667	1,107,957
North Dakota	73,623	11.6	50.2	54,645	54,149
Ohio	1,835,819	16.1	57.4	1,447,435	1,410,735
Oklahoma	718,198	20.6	40.7	494,117	495,688
Oregon	648,195	18.4	38.9	450,664	453,245
Pennsylvania	1,732,000	14.1	64.8	1,429,011	1,420,974
Rhode Island	206,557	19.3	67.2	173,598	172,422
South Carolina	932,954	22.7	72.3	805,881	798,351
South Dakota	117,356	15.4	54.2	90,923	90,428
Tennessee	1,660,072	28.7	68.0	1,435,695	1,447,879
Texas	3,358,234	15.5	44.6	2,403,352	2,383,807
Utah	250,703	10.7	33.7	157,655	153,529
Vermont	158,434	25.7	57.4	126,728	128,067
Virginia	739,755	10.2	51.9	554,260	546,327
Washington	1,130,908	18.6	55.4	896,710	887,809
West Virginia	377,326	20.9	49.5	280,689	277,117
Wisconsin	812,511	14.9	54.8	618,992	601,784
Wyoming	69,929	14.0	45.9	51,118	50,538

Source: Medicaid Analytic Extract, 2002.

alone made up a third of all Medicaid enrollees in 2002. National averages are often skewed by these states and thus can be poor indicators of the characteristics of Medicaid enrollees in any one individual state.

Medicaid enrollment ranged from 9.6 percent of the population in New Hampshire to 28.7 percent in Tennessee. Because Medicaid is a means-tested program, high Medicaid enrollment typically indicates a high poverty rate. In general, Medicaid enrollment is higher in southern states (Figure 3.1). Other factors, such as state eligibility criteria, will also influence Medicaid enrollment. Maine, for example, added a special prescription drug only benefit for low-income aged and disabled people under an 1115 demonstration in 2001. As a result, Maine had the second highest rate of Medicaid enrollment in 2002 (27.7 percent).

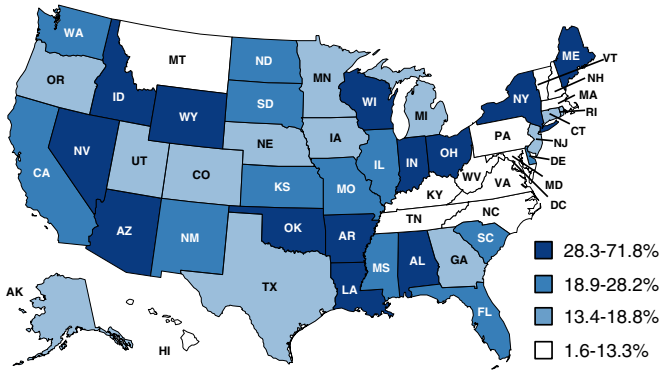
Figure 3.1
Percentage of the Population (in Quartiles) Enrolled in Medicaid in 2002



Source: Medicaid Analytic Extract, 2002.

Between 1999 and 2002, Medicaid enrollment grew 21.3 percent, increasing in all 50 states and the District of Columbia (Figure 3.2). The growth in enrollment over the three-year period ranged from 1.7 percent in Pennsylvania and Hawaii to 71.8 percent in Maine, and varied widely across the states.

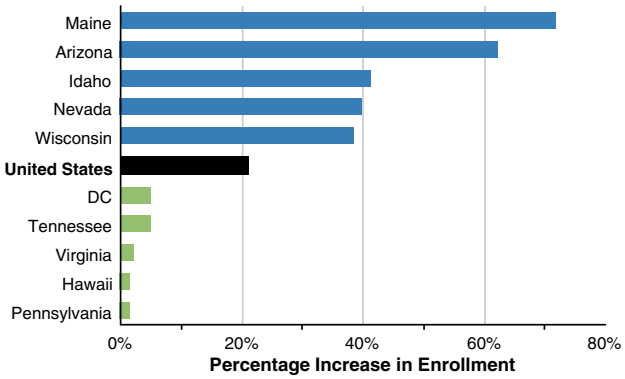
Figure 3.2
Growth in Medicaid Enrollment (in Quartiles), 1999-2002



Source: Medicaid Analytic Extract, 1999-2002.

The highest growth in enrollment occurred in Maine and Arizona (Figure 3.3). Maine's program increased substantially between 2000 and 2001, when enrollment grew from 16.7 percent to 25.4 percent of Maine's population to include many low-income aged and disabled. Arizona extended coverage to some childless adults as well as to some parents of SCHIP-eligible children.

Figure 3.3
Growth in Medicaid Enrollment, 1999-2002: Top and Bottom 5 States



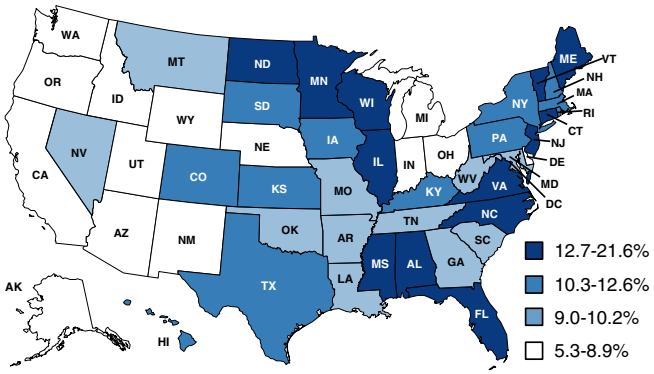
Source: Medicaid Analytic Extract, 1999-2002.

High enrollment growth does not necessarily indicate a high enrollment rate. The top 5 states in enrollment growth between 1999 and 2002 also included Idaho, Nevada, and Wisconsin. In each of these states, the enrollment rate was below the national average in 1999 and remained so in 2002.

Low-growth states included several with pre-1999 expansions. For example, Tennessee's TennCare and Hawaii's QUEST programs were implemented in 1994. By 1999, enrollment in both states had already exceeded the national average. (See Appendix Table A3.2 for details.)

There is a strong relationship between age and service utilization and expenditures among Medicaid enrollees. Children and non-disabled adults often use only limited services, whereas disabled adults and the elderly tend to use a variety of prescription drugs and expensive long-term care. Figure 3.4 shows the percentage of the Medicaid population in each state that was 65 or older in 2002, one indication of the density of higher-cost enrollees.

Figure 3.4
Percentage of Medicaid Enrollees (in Quartiles) Who Were 65 and Older in 2002

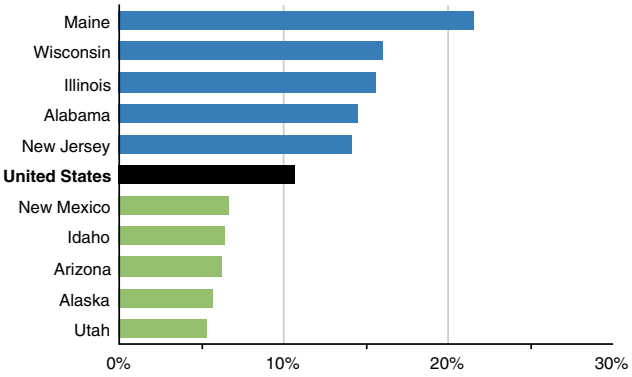


Source: Medicaid Analytic Extract, 2002.

States with larger numbers of elderly in their Medicaid populations tended to be those with larger numbers of elderly in their general populations. Of all states, Florida had the highest proportion of elderly in its general population in 2002 and was also in the top quartile of states in the percentage of enrollees who were 65 and older (13.0 percent compared with 10.7 percent nationally). Similarly, Maine and North Dakota had higher percentages of elderly in their general populations and higher than average percentages of elderly Medicaid enrollees.

Other factors that influence the age distribution of Medicaid enrollees in a state are expansions to cover children and 1115 adults. For example, while the percentage of Arizona's elderly population exceeded the national average, expansive state waiver programs for children and adults resulted in a relatively small proportion of elderly among Arizona's Medicaid enrollees in 2002 (Figure 3.5).

Figure 3.5
Percentage of Medicaid Enrollees Who Were 65 and Older in 2002: Top and Bottom 5 States



Source: Medicaid Analytic Extract, 2002.

Additional details about the demographic make-up of state Medicaid populations are available in the appendix tables: tables A3.3, A3.4, and A3.5 summarize the age distribution, racial composition, and institutional status of state Medicaid enrollees, respectively.

Enrollment Characteristics

As described in Chapter 2, Medicaid enrollees are categorized by their basis of eligibility as children, adults, aged, or disabled. These eligibility groups typically correspond to enrollee age groups, with the exception of the disabled, who can be of any age. Like the Medicaid population's age distribution, the make-up of enrollees by basis of eligibility depends

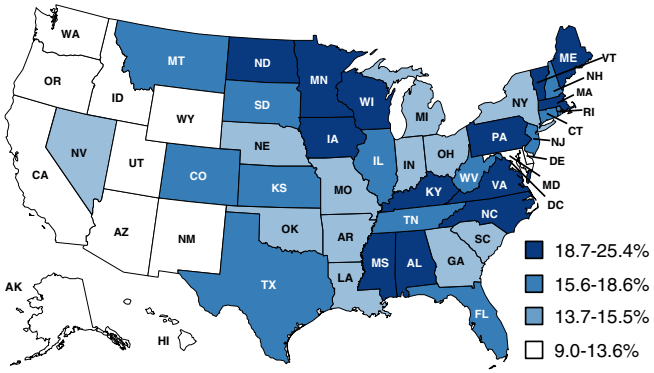
on a state's demographic composition, state eligibility rules, and a myriad of other factors.

Table 3.2 shows the variation in eligibility groups across states. Compared with the composition of enrollees in other states, Maine's Medicaid population was most equally distributed between the four eligibility groups, whereas Oklahoma's enrollees were most heavily weighted toward children. The percentage of enrollees who were children in 2002 ranged from 29.1 percent in Maine to 65.0 percent in Oklahoma. Table 3.2 also shows the percentage of enrollees that were in one of two typically costly eligibility groups—aged and disabled. Connecticut had the highest percentage of aged or disabled enrollees in 2002 (58.3 percent), followed by Ohio (54.6 percent), Maine (53.7 percent), and Minnesota (50.4 percent). (See appendix tables A3.6 to A3.8 for additional information about basis of eligibility and maintenance assistance status categories by state.)

Almost all aged and many disabled enrollees are eligible for both Medicare and Medicaid (see Chapter 5 for details). Figure 3.6 shows the variation in the percentage of enrollees who were duals in 2002, ranging from 9.1 in Arizona to 25.4 in Maine. High dual enrollment corresponded closely with the percentage who were 65 or older. States that did not follow this pattern typically had higher than average dual enrollment among aged enrollees. (See Appendix Table A3.9.)

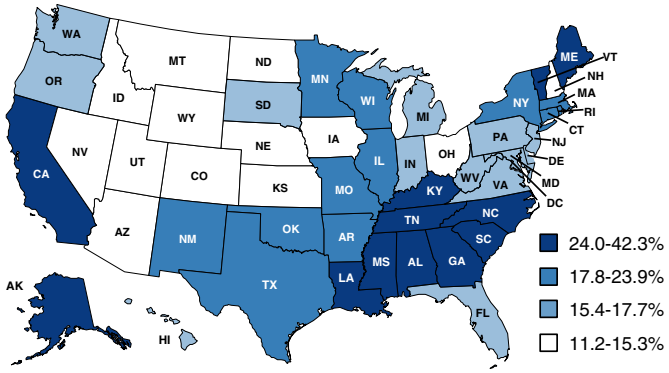
In contrast to the proportion of Medicaid enrollees who are duals, the percentage of *Medicare* enrollees who are duals reflects, within a state, the portion of the aged and disabled population with low income and few assets (Figure 3.7). A relatively high Medicaid eligibility income threshold in a state can also result in high dual enrollment among Medicare beneficiaries. For example, Maine had waivers in place in 2002 to provide pharmacy-only Medicaid coverage to most aged and disabled enrollees up to 300 percent of the federal poverty level.

Figure 3.6
Percentage of Medicaid Enrollees (in Quartiles) Who Were Duals in 2002



Source: Medicaid Analytic Extract, 2002.
Dual = ever enrolled in both Medicare and Medicaid in 2002.

Figure 3.7
Percentage of Medicare Beneficiaries (in Quartiles) Who Were Duals in 2002



Sources: Medicaid Analytic Extract, 2002; Medicare and Medicaid Statistical Supplement, 2002. Dual = ever enrolled in both Medicare and Medicaid in 2002.

The percentage of enrollees receiving only restricted Medicaid benefits (defined as family planning only enrollees, unqualified aliens, or restricted-benefit duals) ranged from 0.0 percent in Vermont to 32.9 percent in California (Figure 3.8).[16]

[16] Because the restricted-benefit dual population in Vermont also qualified for Pharmacy Plus prescription drug coverage, there were no restricted-benefit duals reported in the state in 2002. Other states with Pharmacy Plus programs in place in 2002 include Florida, Illinois, Maryland, and Wisconsin.

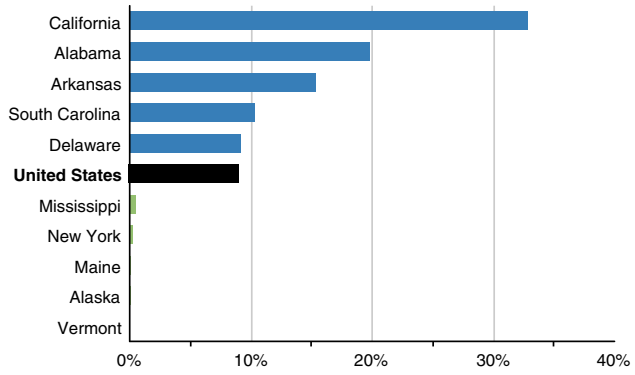
Table 3.2

Medicaid Enrollment by Basis of Eligibility (Percentage of Enrollees) in 2002

	Children	Adults	Aged	Disabled	Aged or Disabled
United States	**49.2**	**25.9**	**9.3**	**15.6**	**24.9**
Alabama	49.2	16.3	12.0	22.5	34.5
Alaska	63.6	20.8	5.4	10.2	15.5
Arizona	47.6	37.5	5.0	10.0	14.9
Arkansas	50.9	22.6	7.8	18.7	26.5
California	38.7	43.6	7.1	10.6	17.7
Colorado	54.2	20.2	10.8	14.9	25.6
Connecticut	53.5	21.4	12.7	12.4	25.1
Delaware	44.6	36.1	7.4	11.9	19.3
District of Columbia	50.6	23.4	6.9	19.1	26.0
Florida	51.0	19.9	9.5	19.7	29.2
Georgia	57.5	16.8	8.4	17.3	25.7
Hawaii	45.8	32.9	10.0	11.3	21.3
Idaho	64.6	15.3	6.4	13.7	20.1
Illinois	53.8	18.1	13.7	14.5	28.2
Indiana	59.9	17.5	8.7	13.9	22.6
Iowa	51.9	19.7	11.0	17.4	28.4
Kansas	56.5	15.9	10.7	17.0	27.7
Kentucky	48.7	14.4	9.4	27.6	36.9
Louisiana	61.6	10.8	10.2	17.4	27.6
Maine	29.1	19.0	20.6	31.4	52.0
Maryland	55.7	21.0	7.8	15.4	23.3
Massachusetts	40.1	29.6	9.5	20.8	30.3
Michigan	54.6	19.4	6.8	19.1	26.0
Minnesota	50.5	22.7	13.0	13.8	26.8
Mississippi	54.6	12.0	10.9	22.5	33.4
Missouri	53.5	23.4	9.1	14.1	23.1
Montana	53.0	20.8	9.3	16.9	26.2
Nebraska	60.7	19.2	8.8	11.3	20.1
Nevada	53.8	21.7	9.2	15.4	24.5
New Hampshire	61.4	14.1	11.2	13.2	24.4
New Jersey	49.5	20.9	11.3	18.4	29.6
New Mexico	62.7	20.3	5.1	11.9	17.0
New York	42.1	33.5	9.1	15.4	24.4
North Carolina	51.4	18.8	12.6	17.2	29.9
North Dakota	47.0	25.6	13.9	13.6	27.4
Ohio	53.7	21.6	8.0	16.7	24.6
Oklahoma	65.0	13.7	9.2	12.1	21.3
Oregon	40.9	40.9	7.4	10.9	18.2
Pennsylvania	48.2	16.6	12.4	22.7	35.1
Rhode Island	45.8	25.3	9.7	19.1	28.8
South Carolina	52.3	24.2	9.3	14.2	23.5
South Dakota	60.8	15.9	8.9	14.4	23.3
Tennessee	43.5	29.6	7.7	19.2	26.9
Texas	59.8	16.7	11.6	12.0	23.6
Utah	56.7	26.7	5.0	11.5	16.6
Vermont	43.8	31.4	12.5	12.3	24.7
Virginia	54.4	13.3	13.2	19.1	32.3
Washington	53.7	26.1	7.1	13.0	20.2
West Virginia	50.4	16.2	7.9	25.5	33.5
Wisconsin	44.8	24.0	13.8	17.4	31.2
Wyoming	61.8	18.0	7.6	12.6	20.2

Source: Medicaid Analytic Extract, 2002.

Figure 3.8
Percentage of Enrollees Receiving Only Restricted Medicaid Benefits in 2002: Top and Bottom 5 States



Source: Medicaid Analytic Extract, 2002.

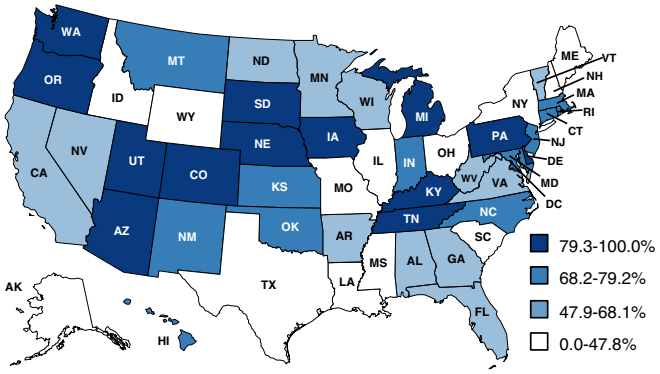
The high number of restricted-benefit enrollees in three states skewed the national average. California, Alabama, and Arkansas each had extensive family planning only programs: 23.5 percent of enrollees in California, 12.5 percent of enrollees in Arkansas, and 10.6 percent of enrollees in Alabama were enrolled in such programs. In addition, 9.4 percent of enrollees in California were unqualified aliens, and 9.1 percent of enrollees in Alabama were restricted-benefit duals. In contrast, there were a number of states—Vermont, Alaska, Maine, New York, and Mississippi—in which less than 1 percent of all Medicaid enrollees received only restricted Medicaid benefits in 2002. (See Appendix Table A3.10 for additional state-level details.)

Managed Care

As described in Chapter 2, managed care plans range from comprehensive HMOs and HIOs, which provide most care used by enrollees, to PCCM plans that provide only case management services. PHPs typically cover a selected set of services such as dental or behavioral health care.

Managed care enrollment varied widely across states in 2002. In some states (Michigan and South Dakota) all enrollees were in some type of managed care in 2002, whereas in others (Alaska and Wyoming) no one was enrolled in managed care plans during 2002 (Figure 3.9 and Appendix Table A3.11). Furthermore, the type of managed care enrollment often differs between states. In Michigan, almost 67 percent of enrollees were in comprehensive HMO/HIO plans. In South Dakota, the only other state in which all Medicaid enrollees were in some type of prepaid plan, managed care was limited to prepaid dental plans and PCCMs.

Figure 3.9
Percentage (in Quartiles) Ever Enrolled in Managed Care in 2002



Sources: Medicaid Analytic Extract, 2002.

Table 3.3 shows the top 10 states in the percentage ever enrolled in an HMO or HIO. Variation across states in enrollment in Medicaid HMO/HIO plans is of particular importance because it has implications for Medicaid utilization and expenditure analyses using MAX. Claims for capitated services, called encounter claims, are incomplete in the MSIS and MAX data systems. Because HMO/HIO enrollees typically have most of their medical care covered under a capitated payment, only limited service use information is available for these people. Tennessee, the top state in the percentage enrolled in HMOs or HIOs (93.4 percent), is an exception. As of July of 2002, Tennessee began making FFS payments to its managed care plans, and as a result, MAX FFS claims data for HMO/HIO enrollees are fairly extensive in Tennessee during the second half of the year.

Table 3.3
Percentage Enrolled in Medicaid Managed Care in 2002, by Type of Plan: Top 10 States

Ever Enrolled in HMO/HIO		Ever Enrolled in PHP Only or PHP and PCCM Only		Ever Enrolled in PCCM Only	
State	**Percentage**	**State**	**Percentage**	**State**	**Percentage**
Tennessee	93.4	South Dakota	100.0	Montana	70.8
Arizona	82.3	Kentucky	72.5	North Carolina	67.7
Delaware	79.7	Nebraska	63.5	Vermont	67.6
Hawaii	77.5	Alabama	61.8	North Dakota	63.9
Rhode Island	73.7	Iowa	58.2	Georgia	63.8
Maryland	73.6	Washington	45.0	Arkansas	54.0
Connecticut	70.5	Colorado	39.9	Idaho	47.1
Pennsylvania	69.5	Massachusetts	37.9	Mississippi	46.1
New Mexico	68.2	Utah	34.1	Kansas	39.7
District of Columbia	68.1	Michigan	33.4	Maine	39.3
United States	**38.3**	**United States**	**12.3**	**United States**	**10.4**

Source: Medicaid Analytic Extract, 2002.

Some states had few enrollees in HMOs/HIOs, but had high enrollment in PHP or PCCM plans. The five states with highest PHP-only or PHP-and-PCCM-only enrollment reflect the range of PHP plans available across states: South Dakota's PHP is a dental plan, Kentucky's PHP provides transportation benefits, Nebraska's and Iowa's PHPs are behavioral health plans, and Alabama's "PHP Network" provides only inpatient care for persons who do not have Medicare Part A coverage. Another example of a PHP type is Oklahoma's hybrid PHP/PCCM plans that cover only case management and some office procedures and lab work.

In six states, over half of enrollees were enrolled in only PCCM plans: Montana, North Carolina, Vermont, North Dakota, Georgia, and Arkansas. (See Appendix Table A3.14 and Chapter 4 for additional information about managed care enrollment by type of plan by state.)

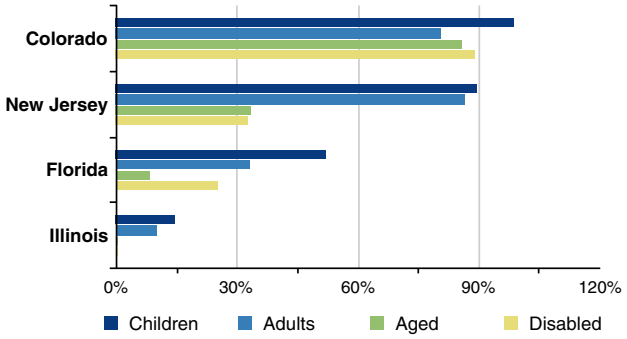
As discussed in Chapter 2, people may selectively enroll in managed care based on their demographic characteristics and health status. Also, states may enroll certain groups of enrollees into mandatory managed care under Section 1915(b) waivers. As a result, FFS utilization and expenditures examined in this chartbook reflect a selective portion of Medicaid enrollees in each state. About 60 percent of children, but only 46.1 of adults, 41.7 percent of disabled, and 28.5 percent of aged enrollees, were enrolled in either an HMO/HIO or PHP in 2002.

These national averages mask substantial variation in the composition of managed care enrollees between states. Figure 3.10 shows variation in HMO/HIO and PHP enrollment in four select states—Colorado, New Jersey, Florida, and Illinois—by basis of eligibility. While each state is unique in the demographics of its managed care enrollees, the figure illustrates a pattern evident in many states: HMO/HIO and PHP enrollment is typically highest among children and is often much lower among aged and disabled enrollees.[17] (See Appendix Table A3.13 for additional state-level detail.)

[17] Because covered services vary greatly between HMOs/HIOs and PHP plans, we would prefer to compute managed care enrollment by basis of eligibility separately for each plan type. While such analyses are possible using MAX data, they were not possible with the MAX validation tables used as our source summary data files (see Source Data Used in This Chartbook in Chapter 1).

Figure 3.10

Percentage Ever Enrolled in HMO/HIO or PHP in 2002 in Select States, by Basis of Eligibility

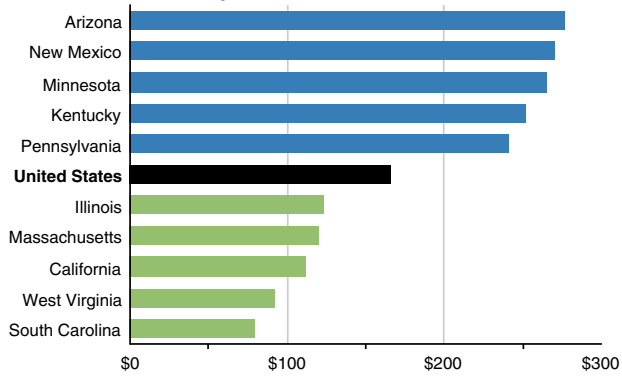


Source: Medicaid Analytic Extract, 2002.
HMO/HIO = health maintenance organization or health insuring organization.
PHP = prepaid health plan.

Capitated payments per person per month enrolled in HMO/HIO ranged from $80 in South Carolina to $277 in Arizona (Figure 3.11 and Chapter 4). States with the highest capitated payments, like Arizona, tended to have a higher percentage of duals enrolled in managed care and lower than average FFS spending among managed care enrollees.

Figure 3.11

Capitated Payments per Person per Month Enrolled in HMO/HIO in 2002: Top and Bottom 5 States

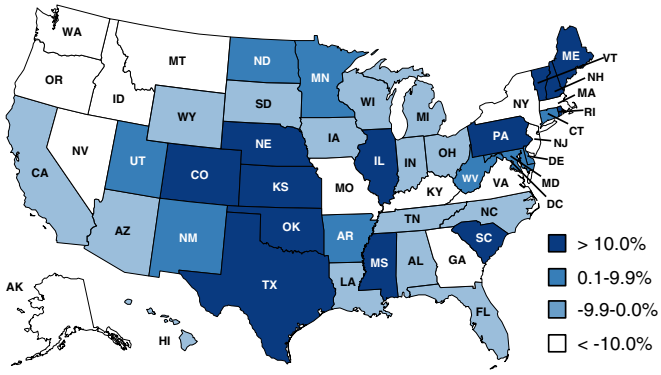


Source: Medicaid Analytic Extract, 2002.
HMO/HIO = health maintenance organization or health insuring organization.

Between 1999 and 2002, the rate of enrollment in HMOs/HIOs increased in about half the states and remained constant or declined in the others (Figure 3.12). Enrollment in HMOs/HIOs generally regressed to the mean such that on average, the national rate of enrollment remained the same.

Figure 3.12

Growth in HMO/HIO Enrollment, 1999-2002



Sources: Medicaid Analytic Extract, 1999-2002.
HMO/HIO = health maintenance organization or health insuring organization.

States with the highest increase in HMO/HIO enrollment typically had a lower than average percentage enrolled in managed care in 1999. In the four states with declines in HMO/HIO enrollment between 1999 and 2002 (New Mexico, Oregon, Vermont, and Washington), over half were enrolled in such plans in 1999. (See Appendix Table A3.12 for more state-level detail.)

Service Utilization and Expenditures Among Full-Benefit Enrollees

State-level summaries of Medicaid service utilization and expenditures highlight the variation in Medicaid coverage and the variation in the composition of Medicaid enrollees across states. Because restricted-benefit enrollees receive such limited Medicaid services and skew both utilization and cost estimates, we exclude them from these analyses to make states more comparable.

Expenditures for all full-benefit Medicaid enrollees exceeded $208 billion in 2002.[18] States with the highest total Medicaid expenditures corresponded directly with those that had the largest number of

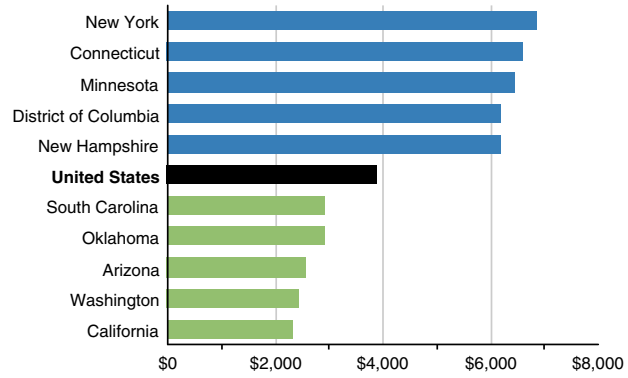
[18] Expenditures for restricted-benefit enrollees totaled 2.6 billion in 2002.

Medicaid enrollees—California, New York, and Texas alone accounted for 31.2 percent of all full-benefit enrollee Medicaid costs in 2002.

New York's expenditures exceeded those of all other states, overall ($31 billion) as well as per enrollee ($6,869) (Figure 3.13). As shown in Table 1.1 of Chapter 1, New York's Medicaid program covered several optional services that were not included in many state programs. Also among the top 5 in per-enrollee costs were Connecticut ($6,607), Minnesota ($6,455), and New Hampshire ($6,206), each of which had higher than average percentage of elderly in its Medicaid population, and the District of Columbia ($6,210), which had a higher than average percentage of disabled enrollees.

Figure 3.13

Per-Enrollee Medicaid Expenditures Among Full-Benefit Enrollees in 2002: Top and Bottom 5 States



Source: Medicaid Analytic Extract, 2002.

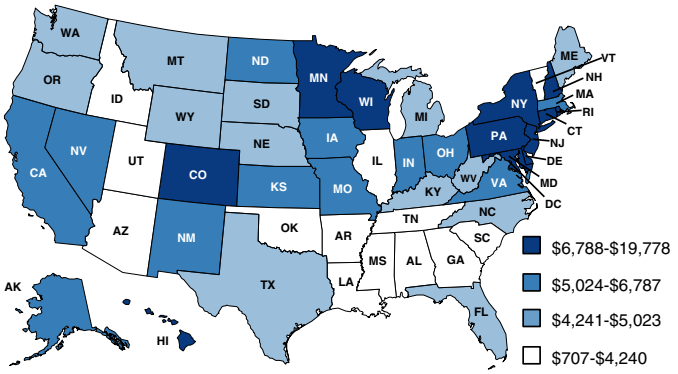
States with the lowest per-enrollee costs were California ($2,315), Washington ($2,448), Arizona ($2,598), Oklahoma ($2,919), and South Carolina ($2,920). Each of these states had higher percentages of typically less expensive child and adult enrollees. Lower costs were also associated with less expansive Medicaid programs. Oklahoma, for example, did not cover some optional home health services (audiology, occupational therapy, physical therapy, or speech and language therapy) that were covered in each of the five highest-cost states in 2002.

FFS expenditures represented about 84 percent of all full-benefit enrollee Medicaid costs in 2002 and a majority of expenditures in all states except Arizona. Only 15.0 percent of expenditures went to FFS payments in Arizona, compared with 53.5 percent in New Mexico, 56.2 percent in Pennsylvania, and 59.7 percent in Oregon, the next three lowest states (see Appendix Table A3.15).

On average, $5,570 was spent per FFS enrollee in 2002.[19] Expenditures for such enrollees ranged widely, from $708 in Tennessee to $19,778 in Connecticut (Figure 3.14). In both these states, a majority of enrollees were in HMOs/HIOs at some point in the year so that only a relatively small subset of enrollees is represented by the average FFS expenditure measures.

Figure 3.14

Per-Enrollee Fee-for-Service (FFS) Expenditures (in Quartiles) Among FFS Enrollees in 2002



Sources: Medicaid Analytic Extract, 2002.
FFS Enrollees = full-benefit enrollees not enrolled in HMOs/HIOs in 2002.

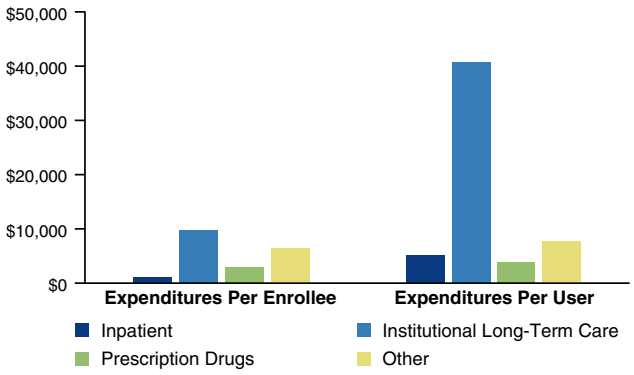
In Connecticut, for example, almost all children and adults were in HMOs/HIOs, so that most FFS care was for aged and disabled enrollees. The high average FFS costs in Connecticut were accounted for by

[19] FFS enrollees include only enrollees who received full benefits and who never enrolled in an HMO or HIO in 2002. See Chapter 2 for details.

particularly high FFS expenditures for institutional long-term care, prescription drugs, and "other" (OT) services.[20] Figure 3.15 shows average expenditures per enrollee and per user of service in Connecticut.

Figure 3.15

Per-Enrollee Fee-for-Service (FFS) Expenditures Among FFS Enrollees in Connecticut in 2002, by Type of Service



Source: Medicaid Analytic Extract, 2002.

[20] OT services include community long-term care services; physician and other ambulatory services; and lab, X-ray, supplies, and other wraparound services.

While expenditures per user of prescription drugs were higher in Connecticut ($3,602) than in any other state, FFS expenditures per user of institutional long-term care were higher than in Connecticut in five states—Alaska, New York, the District of Columbia, Delaware, and Rhode Island—and higher for OT services in Minnesota and Delaware (Table 3.4). In all these states but Alaska, over 25 percent of all enrollees were in HMOs or HIOs in 2002, so FFS expenditures per enrollee or per user reflected only a selected portion of each state's Medicaid population. In general, most states with high costs per user or per enrollee had extensive managed care plans, leading to selective FFS enrollee subgroups. In each of the 10 states with the highest prescription drug expenditures per user, over 50 percent of full-benefit enrollees were in HMOs/HIOs.

Table 3.4

Per-User FFS Expenditures Among FFS Enrollees, by Type of Service: Top 10 States

Inpatient		Institutional Long-Term Care		Prescription Drugs		Other Services	
State	**Dollars**	**State**	**Dollars**	**State**	**Dollars**	**State**	**Dollars**
DC**	15,843	Alaska	53,569	Connecticut**	3,602	Minnesota**	9,267
Maine	13,545	New York*	52,478	New Jersey**	3,182	Delaware**	7,860
New York*	11,057	DC**	47,711	Delaware**	3,067	Connecticut**	7,653
Alaska	10,075	Delaware**	46,006	Maryland**	2,888	DC	6,056
Washington**	9,935	Rhode Island**	42,543	Rhode Island**	2,781	New Jersey**	5,984
Maryland**	9,124	Connecticut**	40,718	DC**	2,622	Maryland**	5,453
Illinois	9,013	New Jersey**	38,247	Hawaii**	2,333	New York*	5,042
Nevada**	7,886	Maryland**	36,725	Minnesota**	2,282	Rhode Island**	4,945
California**	7,651	Ohio*	34,515	California**	2,060	Maine	4,697
Wisconsin**	7,637	Pennsylvania**	33,970	Pennsylvania**	2,000	New Hampshire	4,554
United States	**5,767**	**United States**	**30,367**	**United States**	**1,434**	**United States**	**2,689**

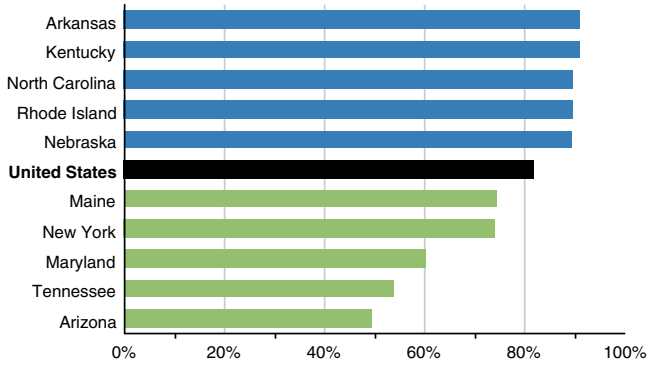
Source: Medicaid Analytic Extract, 2002.

**FFS enrollees represent less than 50 percent of all full-benefit enrollees in this state.

*FFS enrollees represent less than 75 percent of all full-benefit enrollees in this state.

Compared with expenditures per enrollee and per user, the percentage utilizing services varied less widely across states. Over 82 percent of all FFS enrollees used at least one Medicaid service in 1999. With the exceptions of Arizona, Tennessee, and Maryland—states in which over half of full-benefit enrollees were in managed care—the utilization rate ranged from 74.4 percent in New York to 91.3 percent in Arkansas (Figure 3.16).

Figure 3.16
Percentage of Fee-for-Service (FFS) Enrollees Using Services in 2002: Top and Bottom 5 States



Source: Medicaid Analytic Extract, 2002.
FFS Enrollees = full-benefit enrollees not enrolled in HMOs/HIOs in 2002.

Detailed information about FFS utilization and expenditures among FFS enrollees is available for each state in appendix tables A3.15 through A3.29 by basis of eligibility and type of service. As made clear in this chapter, both utilization and expenditures captured in FFS claims records are greatly influenced by the rate of capitated managed care enrollment in a state. In the appendix tables, states with high HMO/HIO enrollment are identified by asterisks, as in Table 3.4. Enrollee composition, managed care enrollment, and state variation in service coverage, as well as state anomalies, should be taken into account when interpreting the statistics reported in the appendix.

In addition to the appendix tables for this chapter, additional information about utilization and expenditures by state can be found for dual enrollees in Chapter 5 and by detailed type of service in Chapter 6.

4. Special Topic: Managed Care

In Chapters 2 and 3, we provided summary enrollment and expenditure information for managed care enrollees nationally and across states. MAX data can be used to examine patterns of managed care enrollment in much more detail than shown in Chapters 2 and 3. For example, MAX can be used to examine concurrent enrollment in multiple types of managed care plans, the duration of managed care enrollment, and enrollment differences by subgroup. In this chapter, we provide limited supplementary information about managed care enrollees that gives a taste of the types of analyses that are possible with MAX data.

Managed care plays an important role in Medicaid. As presented in Chapter 2, a majority (61 percent) of the Medicaid population enrolled in some type of prepaid plan in 2002, although this ranged widely across states, from no enrollees in Alaska and Wyoming to all enrollees in Michigan and South Dakota (see Chapter 3 and Appendix Table A3.11). Medicaid capitated payments for these plans totaled $33.2 billion in 2002, representing 15.8 percent of expenditures for all enrollees (16.0 percent of expenditures for full-benefit enrollees).

Managed care plans differ greatly in the breadth of services they cover. HMOs and HIOs typically provide relatively comprehensive care for their enrollees, whereas PHPs usually cover a limited set of services, such as behavioral health or dental care, and PCCMs provide only case management. As a result, information about the characteristics of utilized managed care plans is crucial for understanding the role of managed care within a population. For example, while both Michigan and South Dakota had high managed care enrollment in 2002, most Medicaid enrollees in Michigan (67 percent) were enrolled in comprehensive managed care plans (HMOs or HIOs), whereas in South Dakota all managed care enrollment was limited to prepaid dental and PCCM plans. (See appendix tables A3.11-A3.14 for details.)

Expenditures for capitated payments also vary greatly across states; they depend on the characteristics of utilized plans as well as the characteristics of people enrolled in such plans. As reported in Chapter 2, enrollment in managed care is highest among children and adults, who typically have lower health care expenditures than disabled or elderly Medicaid enrollees. Nationally, 60.0 percent of child enrollees and 46.1 percent of adult enrollees were enrolled in an HMO, HIO, or PHP in 2002, compared with 41.7 percent of disabled and only 28.5 percent of aged enrollees. As a result, capitated payments typically represent a disproportionately small share of total Medicaid expenditures.

In this chapter we present information about managed care plan enrollment combinations and total and average capitated payments by type of plan. We

also present a summary of FFS expenditures for people ever enrolled in HMOs/HIOs in 2002.

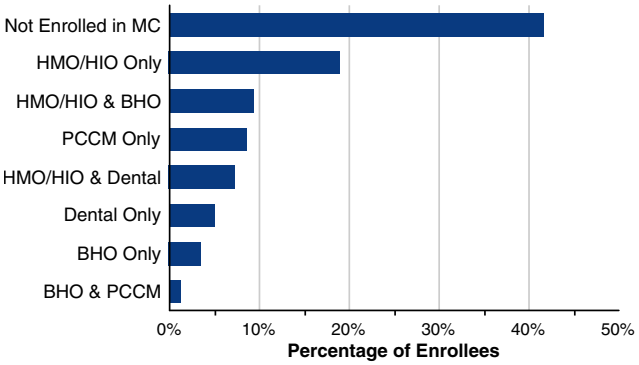
In reviewing summary managed care statistics, it is important to keep in mind that claim records for services used under managed care, called encounter records, are limited in their scope (they contain utilization but no expenditure information) and are not always complete. Therefore, in this chapter, managed care plan enrollment and payment information reflects data for capitated payments only. The supplementary FFS information for HMO/HIO enrollees reflects services received outside managed care.

Managed Care Enrollment Combinations in June 2002

People can enroll in more than one type of prepaid plan. When behavioral health services, for example, are "carved out" of traditional HMOs, a person can be enrolled in both an HMO and a behavioral health organization (BHO), which is a form of PHP. BHOs can also be stand-alone prepaid plans for people receiving primarily FFS care. Similarly, dental plans and other PHPs can be used alone or in combination with other types of managed care plans.

Figure 4.1 shows the eight most common combinations of prepaid plans in Medicaid in June of 2002. Nationally, 41.7 percent of enrollees were not enrolled in any type of managed care, 19.1 percent were enrolled in an HMO/HIO only, 9.4 percent were enrolled in an HMO/HIO and a BHO, and 8.7 percent were enrolled in PCCM plans only. Other common managed care combinations were HMO/HIO and dental PHP (7.3 percent), dental only (5.1 percent), BHO only (3.5 percent), and BHO and PCCM plans (1.4 percent).

Figure 4.1
Managed Care (MC) Enrollment Combinations in June 2002



Source: Medicaid Analytic Extract, 2002.
BHO = behavioral health organization; HMO/HIO = health maintenance organization or health insuring organization; PCCM = primary care case management.

Enrollment in plan combinations varied greatly across states. For example, all enrollees in Tennessee were enrolled in HMOs/HIOs and BHOs. This managed care combination was evident in only 10 other states: about half of all Medicaid enrollees in Pennsylvania (59.4 percent), Michigan (57.9 percent), Utah (56.1 percent), Washington (47.8 percent), and Colorado (44.6 percent) were enrolled in both an HMO/HIO and a BHO. A smaller portion of Medicaid enrollees were in this managed care combination in Iowa (21.3 percent), Nebraska (14.9 percent), Texas (4.4 percent), Hawaii (1.5 percent), and Oregon (1.2 percent).

Only five additional states had any other BHO plan enrollment. With the exception of Massachusetts, BHO enrollment in these states was very small (under 4 percent). In Massachusetts, 39.1 percent of all Medicaid enrollees were enrolled in both BHO and PCCM plans, and another 2.1 percent were in BHOs only.

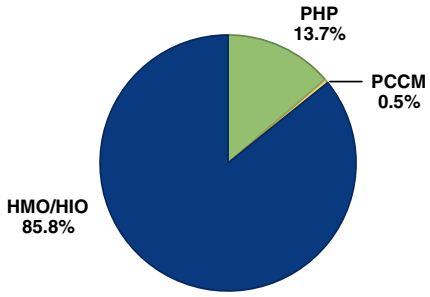
Dental plans were carved out of HMO/HIO plans or available as stand-alone dental plans for FFS enrollees in only four states in June of 2002—California, Michigan, Oregon, and South Dakota. In California, 39.8 percent of enrollees were enrolled in HMO/HIO

and dental plans, while 27.5 percent were enrolled in dental plans only. Because California's population is so large, it alone accounted for 99.4 percent of the 3 million enrollees in combination HMO/HIO and dental plans and 97.9 percent of the 2.1 million enrollees in stand-alone dental plans. For more detail about managed care enrollment combinations by state, see Appendix Table A4.1.

Capitated Payments by Type of Plan

Medicaid paid $33.2 billion in capitated payments to managed care organizations in 2002. Almost 86 percent of the $33.2 billion was for enrollment in HMOs/HIOs, 13.7 percent was for PHP plans, and 0.5 percent was spent on PCCM plans (Figure 4.2). The distribution of payments reflects the cost of services typically covered by each type of plan. Average monthly payments for persons enrolled in a plan were $166 for HMOs/HIOs, $33 for PHPs, and only $3 for PCCM plans (Table 4.1).

Figure 4.2
Composition of Medicaid Capitated Payments in 2002



Total Expenditures = $33.2 Billion

Source: Medicaid Analytic Extract, 2002.
HMO/HIO = health maintenance organization or health insuring organization.
PCCM = primary care case management.
PHP = prepaid health plan.

There was substantial variation in average premium payments across states. Payments for PHPs, in particular, differed greatly by state, reflecting considerable variation in the breadth and depth of services covered by PHPs. Expenditures for PHPs ranged from less than $5 per person per month in Delaware for a transportation benefit to $2,851 per person per month in New York. New York was one of two

Table 4.1
Capitated Payments Per Person Per Month in Managed Care in 2002, by Type of Plan: Top 10 States

Comprehensive Managed Care (HMO/HIO)		Prepaid Health Plan (PHP)		Primary Care Case Management (PCCM)	
State	**Dollars**	**State**	**Dollars**	**State**	**Dollars**
Arizona	277	New York	2,851	Arkansas	13
New Mexico	271	Wisconsin	2,404	Oregon	5
Minnesota	266	Arizona	449	Vermont	5
Kentucky	252	Hawaii	225	Kentucky	4
Pennsylvania	242	Illinois	143	Idaho	4
Virginia	220	Pennsylvania	102	Georgia	3
District of Columbia	203	South Carolina	72	North Carolina	3
Oregon	202	Alabama	61	Florida	3
Maryland	195	Massachusetts	58	Alabama	3
Colorado	186	Oregon	52	Mississippi	3
United States	**166**	**United States**	**33**	**United States**	**3**

Source: Medicaid Analytic Extract, 2002.

states in which a small number of people enrolled in expensive PHP plans such that the national average was skewed upward to $33. In New York, only 0.2 percent of enrollees were enrolled in PHPs, but these included behavioral health plans and Programs of All-Inclusive Care for the Elderly (PACE) at the cost of $2,851 per person per month; in Wisconsin, 2.1 percent of the state's Medicaid enrollees were enrolled in Milwaukee's "Independent Care Plan," at the cost of $2,404 per person per month.[21]

In comparison with PHPs, capitated payments per person per month in HMOs/HIOs averaged $166 nationally and ranged from $80 in South Carolina to $277 in Arizona. Payments for PCCM plans ranged from $1 to $5 in all states except Arkansas, whose average PCCM payments of $13 per month covered case management for children enrolled in ARKids.

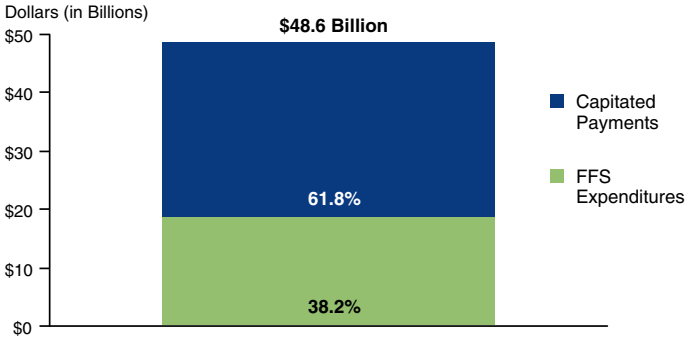
FFS Expenditures Among People Enrolled in HMOs/HIOs

People ever enrolled in comprehensive managed care plans (HMOs/HIOs) in 2002 incurred a total of $48.6 billion in Medicaid expenditures. While most of their costs were for managed care capitated payments, a significant portion, 38.2 percent, was paid by FFS (Figure 4.3). Because HMO/HIO enrollees are excluded from most FFS expenditure summary statistics presented in this chartbook, we provide some information about their FFS costs in this section.

[21] Milwaukee's plan provides medical and social services to people with physical, developmental, or emotional disabilities and is coded as an "other" type of PHP plan in the MAX person summary file. Plans coded as "other" are identified in MAX eligibility anomaly notes available on the MAX website (see end of Chapter 1 for web link).

Figure 4.3

Composition of Expenditures Among HMO/HIO Enrollees in 2002



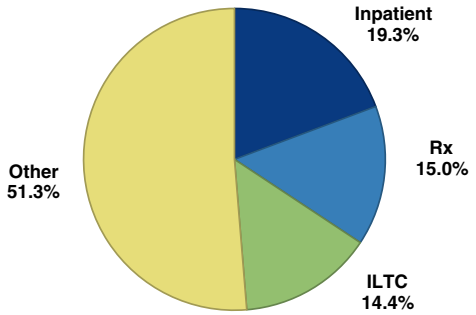
Source: Medicaid Analytic Extract, 2002.
FFS = fee-for-service.
HMO/HIO = health maintenance organization or health insuring organization.

As discussed in Chapter 2, there are two key reasons why people enrolled in HMOs or HIOs at some point in 2002 might have FFS expenditures. First, some Medicaid enrollees may be in managed care for a limited number of months during the year but use health care services covered by FFS during other months of the year. Second, HMOs and HIOs do not always cover all Medicaid services. For example, dental care, behavioral health care, long-term care, prescription drugs, and other services may not be included in the HMO or HIO capitated rate.

On average, about $911 was spent in FFS payments for each HMO/HIO enrollee in 2002. The FFS services used most by HMO/HIO enrollees were "other" (OT) services, including home- and community-based long-term care; physician and other ambulatory services; lab, X-ray, and other services. These services accounted for over half of all FFS expenditures among HMO/HIO enrollees (Figure 4.4). Another 19.3 percent of their FFS costs were for inpatient care, 15.0 percent were for prescription drugs, and 14.4 percent were for institutional long-term care.

Figure 4.4

Composition of Fee-for-Service Expenditures Among HMO/HIO Enrollees in 2002

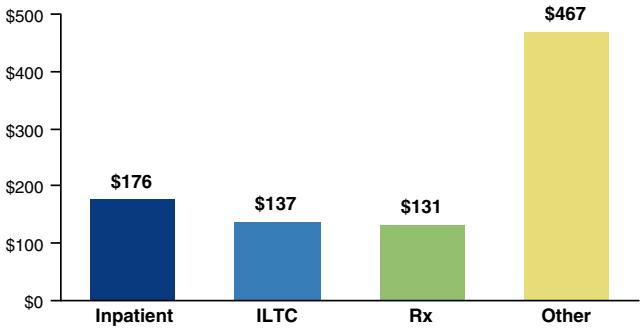


Source: Medicaid Analytic Extract, 2002.

HMO/HIO = health maintenance organization or health insuring organization; ILTC = institutional long-term care; Rx = prescription drugs.

Figure 4.5

Per-Enrollee Fee-for-Service Expenditures Among HMO/HIO Enrollees in 2002, by Type of Service



Source: Medicaid Analytic Extract, 2002.

HMO/HIO = health maintenance organization or health insuring organization; ILTC = institutional long-term care; Rx = prescription drugs.

FFS expenditures per enrollee in an HMO or HIO were correspondingly highest for OT services ($467), followed by inpatient ($176), institutional long-term care ($137), and prescription drugs ($131) (Figure 4.5). This pattern of expenditures by type of services was evident in most states with managed care enrollment, which suggests that some OT services were often not covered under HMO/HIO plans. Alternatively, people enrolled in HMOs/HIOs at some point in the year may have had months of non-managed care enrollment when these services were used.

Additional information about FFS payments by state for Medicaid enrollees in HMO/HIO plans is available in Appendix Table A4.3. Readers can find additional summary statistics in the Medicaid Managed Care Enrollment Report, which is published June 30 of each year and can be accessed at the following website: www.cms.hhs.gov/MedicaidDataSourcesGenInfo/04_MdManCrEnrllRep.asp.

5. Special Topic: Dual Enrollees

Dual enrollees are aged and disabled Medicaid enrollees who qualify for health insurance benefits through both Medicare and Medicaid. Duals are among the most vulnerable populations served by Medicare and Medicaid and among the costliest users of health care in the United States (MedPac 2004). Average health care costs for duals are double those of other Medicare beneficiaries and approximately eight times higher than those of low-income children covered by Medicaid (Kaiser Commission on Medicaid and the Uninsured 2004). The availability of monthly Medicare enrollment information in the MAX data system enables researchers to conduct in-depth analyses of Medicaid service use among this costly subgroup of enrollees.

In recent years, state Medicaid programs have become increasingly concerned about the growing cost of serving duals. Medicaid expenditures for duals have been rising partly due to the shift in medical use away from Medicare-covered hospitalizations to greater reliance on prescription drug therapies, which Medicaid covered for duals prior to 2006 (Ku 2003). This pattern may change now that the responsibility of providing drug coverage for duals has shifted in 2006 from Medicaid to Medicare under the Medicare Prescription Drug, Improvement, and Modernization Act (MMA) of 2003 (CMS 2004). Data presented in the chartbook are from 2002, when Medicaid still covered prescription drug services for duals.

Dual enrollees must satisfy the eligibility requirements of both the Medicare and the Medicaid programs. Generally, Medicare provides basic health insurance coverage for the vast majority of aged persons as well as for disabled persons under age 65 who have received Social Security or Railroad Retirement disability benefits for at least two years. Medicare benefits are provided to these two groups, regardless of their income or assets. However, there are substantial out-of-pocket costs for Medicare beneficiaries, including premiums and cost-sharing payments, plus some uncovered services. As a result, many low-income aged and disabled Medicare beneficiaries turn to the Medicaid program to help with these expenses. In contrast to Medicare, Medicaid is a means-tested program. Aged and disabled persons can only qualify for Medicaid benefits if they meet federal and state income and resource criteria. The intersection of aged and disabled individuals eligible for both Medicare and Medicaid are called "dual enrollees" or "duals."

The majority of duals qualify for full Medicaid benefits. For these enrollees, Medicare serves as the primary payer for services covered by both programs whereas Medicaid provides "wraparound" coverage for services not covered through Medicare (such as institutional long-term care, some home health services, home- and community-based waiver services, and, before 2006, prescription drugs). Services

covered by Medicare Part A include hospitalizations, hospice care, skilled nursing facility services, and some care by home health agencies. Medicare Part B enrollment is voluntary and requires a premium, which is covered by Medicaid. Among other things, Part B usually covers physician services, inpatient and outpatient medical services, laboratory services, and some medical equipment.

For services that are covered only by Medicaid, Medicaid claim records in MAX should reflect all services delivered, and Medicaid paid amounts can be interpreted like those for other beneficiaries. For services that are covered by both Medicaid and Medicare, Medicaid payment amounts in Medicaid claim records will reflect only coinsurance and deductible amounts paid by Medicaid up to Medicaid fee schedules after Medicare has made payments up to its own coverage limits.[22] For this reason, expenditures calculated for duals for Medicare-covered services will substantially understate the total cost of care for those services. They will, however, reflect the Medicaid payments made for such services.

A smaller population of "restricted-benefit" duals does not receive the full range of Medicaid benefits. Generally, duals who only qualify for restricted Medicaid benefits have higher income and/or assets than those duals who qualify for full Medicaid benefits. For some restricted-benefit duals, Medicaid pays Part B (and Part A if necessary) Medicare premiums as well as any coinsurance and deductibles for Medicare services. However, no wraparound services, such as institutional long-term care, are provided. For other restricted-benefit duals, only the Part B premiums are covered.

[22] If Medicare has already paid more than the coverage limit specified in Medicaid fee schedules, then Medicaid's contribution is zero.

The unique characteristics of dual enrollees and their MAX records should be kept in mind when interpreting the summary enrollment, Medicaid service utilization, and expenditure statistics that are presented in this chapter on dual enrollees. MAX data anomaly reports provide additional detail regarding the completeness and limitations of MAX data records for duals. The anomaly reports are available at the MAX website (see end of Chapter 1 for web link).

Enrollment Characteristics of Dual Enrollees

There were slightly more than 8 million dual enrollees (with either full or restricted benefits) in 2002, comprising approximately 15 percent of all Medicaid enrollees that year. As shown in Table 5.1, there was significant variability across states in the percentage of enrollees who were duals in 2002, ranging from 9.1 percent in Arizona to 25.4 percent in Maine.

A greater percentage of aged than disabled enrollees were duals in 2002. Nationally, 91.8 percent of aged and 41.0 percent of disabled enrollees were dually enrolled in both Medicare and Medicaid during the year. This pattern was evident in every state—most aged enrollees and approximately 30 to 60 percent of disabled enrollees in each state were duals.

Variation in dual enrollment by basis of eligibility was more evident among disabled than aged enrollees. In all but eight states, at least 90 percent of aged enrollees were dually enrolled in Medicare and Medicaid in 2002. The percent of aged who were duals was lowest in Maine (79.7 percent) (Figure 5.1).[23]

[23] Maine implemented an 1115 Pharmacy Plus program for low-income aged and disabled with income less than 300 percent of FPL; however, program participants were not identified as duals in MAX because missing Social Security numbers prevented linkages between Medicaid and Medicare records.

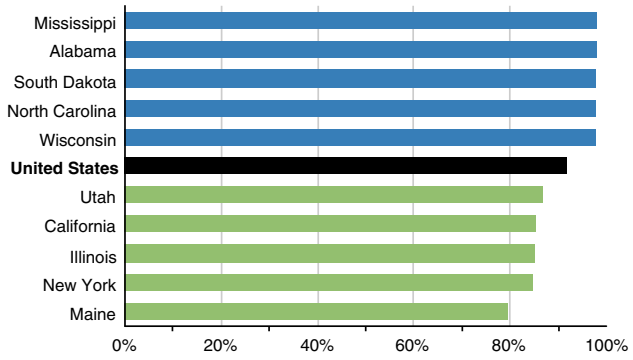
Table 5.1

Dual Enrollment in Medicare and Medicaid in 2002, by Basis of Eligibility

	Percentage of All Enrollees Who Were Duals			Number of Dual Enrollees			Percentage of Duals	
	Total	Aged	Disabled	Total	Aged	Disabled	Aged	Disabled
United States	**15.1**	**91.8**	**41.0**	**8,028,514**	**4,555,785**	**3,370,387**	**56.7**	**42.0**
Alabama	21.7	98.1	43.5	186,202	101,099	84,268	54.3	45.3
Alaska	9.3	91.0	42.3	11,564	6,091	5,356	52.7	46.3
Arizona	9.1	91.3	37.5	103,266	51,637	42,568	50.0	41.2
Arkansas	14.7	91.6	39.8	94,752	46,027	48,049	48.6	50.7
California	10.6	85.4	41.8	1,009,825	574,986	423,290	56.9	41.9
Colorado	16.1	90.9	41.8	71,944	43,767	27,804	60.8	38.6
Connecticut	18.6	92.7	51.9	92,449	58,520	31,920	63.3	34.5
Delaware	12.5	95.1	39.3	18,734	10,588	7,050	56.5	37.6
District of Columbia	12.3	88.6	30.8	18,827	9,375	8,974	49.8	47.7
Florida	17.8	90.8	46.1	487,635	236,689	248,885	48.5	51.0
Georgia	15.1	93.3	41.6	239,133	124,671	113,730	52.1	47.6
Hawaii	13.6	91.0	38.8	28,102	18,769	9,061	66.8	32.2
Idaho	11.5	97.9	37.7	22,964	12,525	10,334	54.5	45.0
Illinois	18.0	85.1	42.3	378,072	245,307	128,724	64.9	34.0
Indiana	14.7	96.0	44.5	134,833	77,138	56,616	57.2	42.0
Iowa	19.0	95.8	48.4	69,150	38,135	30,620	55.1	44.3
Kansas	17.9	96.5	44.4	55,795	32,114	23,448	57.6	42.0
Kentucky	19.5	95.8	37.7	153,609	70,799	82,059	46.1	53.4
Louisiana	15.2	95.7	30.9	158,771	102,100	56,414	64.3	35.5
Maine	25.4	79.7	26.8	91,296	58,991	30,222	64.6	33.1
Maryland	13.1	90.5	35.4	103,490	55,966	43,122	54.1	41.7
Massachusetts	18.7	90.7	47.2	226,168	104,147	118,788	46.0	52.5
Michigan	14.5	95.3	41.0	224,684	101,059	121,535	45.0	54.1
Minnesota	19.0	95.6	45.5	131,924	86,660	43,595	65.7	33.0
Mississippi	20.9	98.2	45.1	149,857	76,765	72,576	51.2	48.4
Missouri	15.0	93.9	44.5	169,094	95,953	70,543	56.7	41.7
Montana	16.9	97.3	40.9	18,333	9,854	7,512	53.8	41.0
Nebraska	14.3	94.7	51.5	38,242	22,464	15,614	58.7	40.8
Nevada	14.9	94.5	40.0	32,682	18,967	13,485	58.0	41.3
New Hampshire	18.6	93.6	55.9	22,774	12,891	9,035	56.6	39.7
New Jersey	18.4	88.4	45.1	187,354	101,621	84,529	54.2	45.1
New Mexico	9.6	95.2	39.2	44,589	22,465	21,706	50.4	48.7
New York	13.8	84.8	37.6	622,548	347,855	261,164	55.9	42.0
North Carolina	19.9	97.9	42.5	283,131	176,311	104,456	62.3	36.9
North Dakota	20.8	96.5	54.0	15,328	9,847	5,402	64.2	35.2
Ohio	13.7	92.5	36.4	250,596	135,614	111,355	54.1	44.4
Oklahoma	13.9	94.7	41.0	99,518	62,421	35,733	62.7	35.9
Oregon	12.8	97.7	47.9	82,672	46,743	33,719	56.5	40.8
Pennsylvania	18.8	93.4	31.1	325,144	201,042	122,367	61.8	37.6
Rhode Island	17.8	95.5	41.6	36,722	19,121	16,425	52.1	44.7
South Carolina	14.8	94.9	41.1	138,134	82,520	54,284	59.7	39.3
South Dakota	16.0	98.0	49.8	18,758	10,197	8,423	54.4	44.9
Tennessee	17.1	96.8	47.0	283,764	123,942	149,854	43.7	52.8
Texas	15.5	97.8	34.7	521,498	379,619	139,818	72.8	26.8
Utah	9.4	86.8	42.1	23,517	10,979	12,186	46.7	51.8
Vermont	19.3	97.4	56.2	30,585	19,236	10,917	62.9	35.7
Virginia	20.0	90.6	41.9	148,244	88,385	59,262	59.6	40.0
Washington	10.9	86.8	35.6	123,511	70,192	52,474	56.8	42.5
West Virginia	15.9	96.3	31.7	59,881	28,855	30,487	48.2	50.9
Wisconsin	22.1	97.9	47.1	179,708	109,584	66,734	61.0	37.1
Wyoming	13.1	97.9	44.2	9,141	5,182	3,895	56.7	42.6

Source: Medicaid Analytic Extract, 2002.

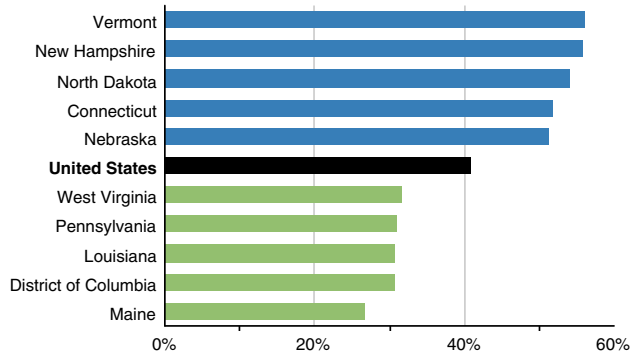
Figure 5.1
Percentage of Aged Enrollees Who Were Duals in 2002: Top and Bottom 5 States



Source: Medicaid Analytic Extract, 2002.
Dual = ever enrolled in both Medicare and Medicaid in 2002.

Among disabled enrollees, the percentage who were duals varied more widely; it ranged from 27 percent in Maine to 56 percent in Vermont and New Hampshire (Figure 5.2).

Figure 5.2
Percentage of Disabled Enrollees Who Were Duals in 2002: Top and Bottom 5 States



Source: Medicaid Analytic Extract, 2002.
Dual = ever enrolled in both Medicare and Medicaid in 2002.

Within the subgroup of duals, there were a greater number of enrollees who were aged (57 percent) than disabled (42 percent) (Table 5.2). At first glance, this difference in the make-up of duals may appear smaller than expected, since over 90 percent of aged were duals while just over 40 percent of disabled enrollees were duals in 2002. However, disabled enrollees represented a larger share of Medicaid enrollees (15.6 percent compared with 9.3 percent for the aged), which explains why the number of duals by basis of eligibility is only slightly weighted towards the aged.

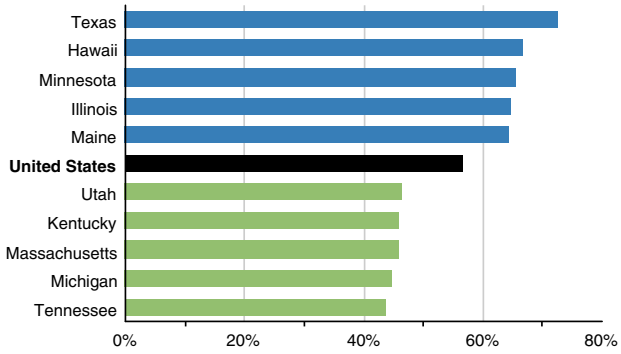
Table 5.2
Enrollment Characteristics of Individuals Ever Enrolled in Both Medicare and Medicaid in 2002

	Number	Percentage of All Duals
Total	8,028,514	100.0
Basis of Eligibility		
Aged	4,555,785	56.7
Disabled	3,370,387	42.0
Other [24]	102,342	1.3
Full Benefit Status		
Full benefits	7,100,140	88.4
Restricted benefits	928,374	11.6

Source: Medicaid Analytic Extract, 2002.

The composition of duals by basis of eligibility varied significantly across states (Figure 5.3 and Table 5.1). In Texas, aged duals outnumbered disabled duals by nearly threefold. In contrast, in the five states with the lowest percentage of aged

Figure 5.3
Percentage of Duals Who Were Aged in 2002: Top and Bottom 5 States



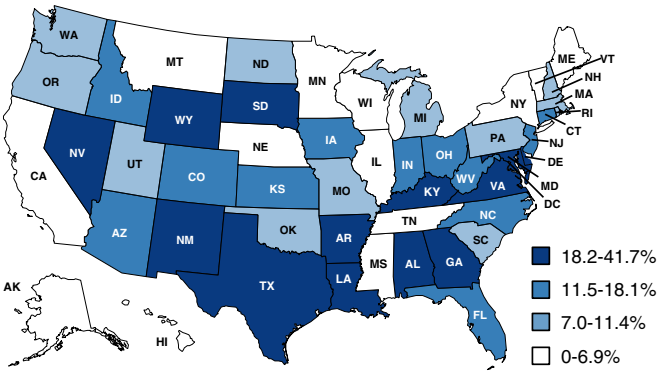
Source: Medicaid Analytic Extract, 2002.
Dual = ever enrolled in both Medicare and Medicaid in 2002.

[24] Enrollees with "other" as basis of eligibility are typically aged or disabled people that were classified as adults in Medicaid because they were caretaker relatives for dependent children.

duals—Utah, Kentucky, Massachusetts, Michigan, and Tennessee—disabled duals outnumbered aged duals. Three additional states—Arkansas, Florida, and West Virginia—also had a greater percentage of disabled than aged dual enrollees, but this difference was relatively small (2 to 3 percent).

Approximately 12 percent of all people dually enrolled in Medicare and Medicaid did not qualify for full Medicaid benefits anytime during 2002. The percentage that were restricted-benefit duals ranged from less than 7 percent in 13 states to nearly 42 percent in Alabama (Figure 5.4). In 11 states, more than a quarter of duals had restricted benefits. (See Appendix Table A5.1 for details.) Several factors could account for this variability across states. A low percentage of restricted-benefit duals may reflect a state's ability and willingness to provide full benefits to a greater percentage of its dual population. Alternatively, a high federal matching rate may enable states to cover a greater number of enrollees with full Medicaid benefits. Other political and economic factors may also limit the availability of full benefits to dual enrollees.

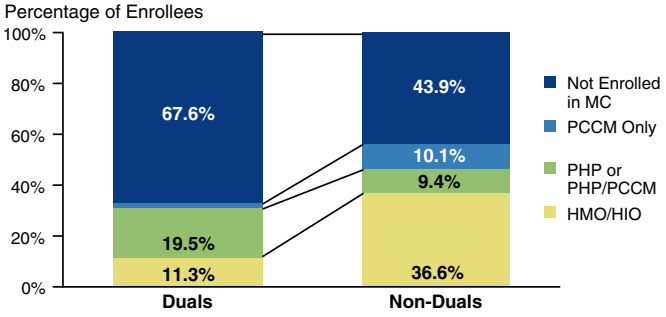
Figure 5.4
Percentage of Dual Enrollees (in Quartiles) With Restricted Medicaid Benefits in 2002



Source: Medicaid Analytic Extract, 2002.
Dual = ever enrolled in both Medicare and Medicaid in 2002.

Nationally, dual enrollees were less likely to be enrolled in Medicaid managed care than non-dual enrollees: only 32 percent of duals were enrolled in any type of Medicaid managed care compared with 61 percent of non-dual enrollees (Figure 5.5). Lower rates of managed care participation among duals relative to non-duals may reflect the difficulty of establishing risk-adjusted capitation rates for duals.

Figure 5.5
A Comparison of Managed Care (MC) Enrollment Between Dual and Non-Dual Medicaid Enrollees in 2002



Source: Medicaid Analytic Extract, 2002.
Dual = ever enrolled in both Medicare and Medicaid in 2002.
HMO/HIO = health maintenance organization or health insuring organization.
PCCM = primary care case management.
PHP = prepaid health plan.

There was wide variability across states in Medicaid managed care enrollment among duals. In some states, no duals were enrolled in managed care, while in a few states, nearly all duals were enrolled in some type of managed care (Table 5.3). In Tennessee, 94 percent of duals were enrolled in comprehensive managed care—health maintenance organizations or health insuring organizations (HMOs/HIOs). Other states with high HMO/HIO enrollment among duals included Arizona (57 percent), Utah (48 percent), and Pennsylvania (45 percent). Some states had few duals enrolled in HMO/HIO plans but had high enrollment in prepaid health plans (PHP) such as dental or behavioral health plans; these include South Dakota (100

Table 5.3
Percentage of Duals Enrolled in Medicaid Managed Care in 2002, by Type of Plan: Top 10 States

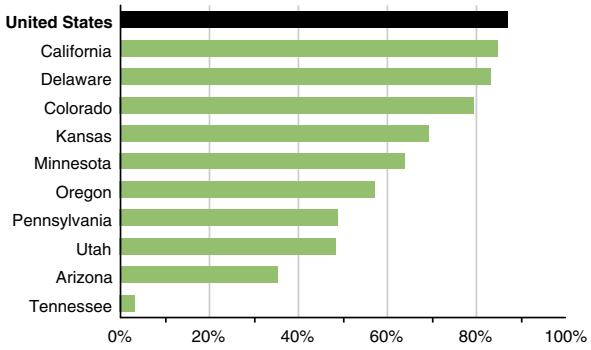
Ever Enrolled in HMO/HIO		Ever Enrolled in PHP Only or PHP/PCCM Only		Ever Enrolled in PCCM Only	
State	**Percentage**	**State**	**Percentage**	**State**	**Percentage**
Tennessee	94.2	South Dakota	100.0	Idaho	34.3
Arizona	56.7	Washington	99.4	Kansas	32.6
Utah	47.7	Michigan	93.2	North Carolina	17.2
Pennsylvania	45.2	California	83.8	Georgia	7.0
Oregon	38.0	Colorado	65.6	Vermont	6.4
Minnesota	33.3	Kentucky	62.0	Montana	4.0
Kansas [25]	27.0	Delaware	45.2	Florida	3.1
Colorado	16.8	Utah	39.9	West Virginia	2.9
California	15.0	Oregon	37.8	Arkansas	2.8
Delaware	10.2	Iowa	35.4	Louisiana	1.6
United States	**11.3**	**United States**	**19.5**	**United States**	**1.6**

Source: Medicaid Analytic Extract, 2002.

percent), Washington (99.4 percent), Michigan (93.2 percent), and California (83.8 percent). (See Appendix Table A5.5 for details.) Because most PHP plans only cover a limited set of services, dual enrollees in these states typically receive managed care benefits concurrently with fee-for-service benefits and are included in the subset of "fee-for-service duals" examined below. [26]

Among duals with full benefits, 87 percent were FFS duals and about 13 percent were in HMOs or HIOs. In more than half of all states, over 98 percent of full-benefit duals were in FFS. There were only 10 states with lower than average FFS enrollment among full duals, and in only 5 of these was the rate less than 50 percent (Figure 5.6).

Figure 5.6
Fee-for-Service Duals as a Percent of All Full-Benefit Duals in 2002: Bottom 10 States



Source: Medicaid Analytic Extract, 2002.
Dual = ever enrolled in both Medicare and Medicaid in 2002.

For states with the lowest FFS enrollment among full-benefit duals, particularly Tennessee and Arizona, expenditures by type of service should be interpreted with caution. Service cost information is only available in MAX for FFS enrollees. Because high-cost users may self-select themselves into either FFS or managed care, average FFS expenditures may greatly understate or overstate the true average cost of duals in these states. Meanwhile, total FFS expenditures in these states will severely understate the total cost of care for duals.

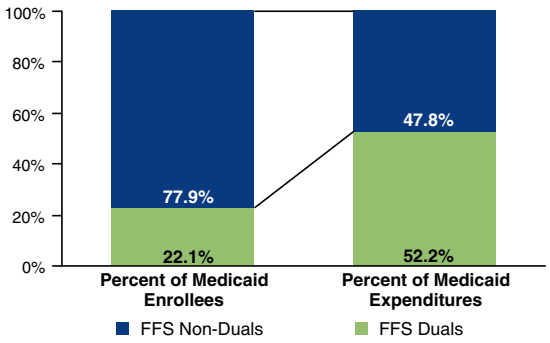
[25] In Kansas, the reported number of duals enrolled in Medicaid managed care was larger than expected. This and other unusual MAX data findings have been documented in the MAX anomaly reports (see end of Chapter 1 for web link).

[26] We define fee-for-service duals (FFS duals) as duals with full Medicaid benefits who were never enrolled in comprehensive managed care plans (HMOs/HIOs) in 2002.

Medicaid FFS Utilization and Expenditures Among FFS Duals

The total fee-for-service (FFS) expenditures for FFS duals in 2002 was approximately $81.5 billion. Duals represented 22 percent of all FFS Medicaid enrollees but accounted for nearly 52 percent of Medicaid FFS expenditures in 2002 (see Figure 5.7). This is consistent with research suggesting that duals require extensive and costly medical care.

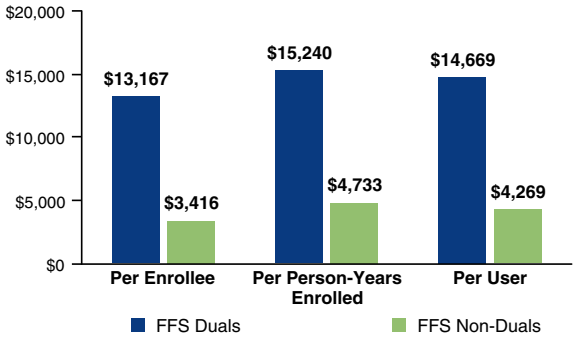
Figure 5.7
Medicaid Enrollment and Fee-for-Service (FFS) Expenditures Among Dual and Non-Dual FFS Enrollees in 2002



Source: Medicaid Analytic Extract, 2002.
FFS enrollees = full-benefit enrollees not enrolled in HMOs/HIOs in 2002.

A comparison of per-enrollee expenditures between dual and non-dual enrollees in Figure 5.8 indicates that the average cost for duals ($13,167) was more than three times higher than costs for non-duals ($3,416). This pattern is also evident when comparing average costs between duals and non-duals per person-years enrolled ($15,240 for duals compared to $4,733 for non-duals) and per user ($14,669 for duals and $4,269 for non-duals).

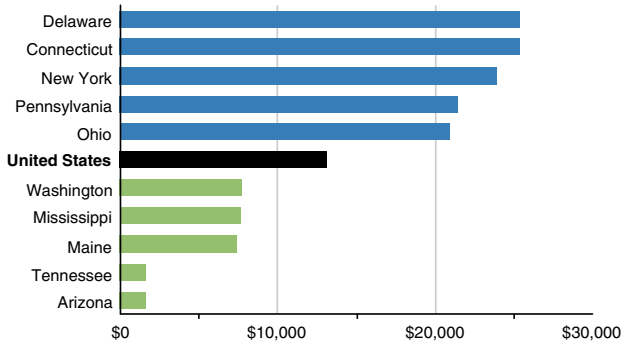
Figure 5.8
A Comparison of Medicaid Fee-for-Service (FFS) Expenditures Between FFS Duals and Non-Duals in 2002



Source: Medicaid Analytic Extract, 2002.
FFS enrollees = full-benefit enrollees not enrolled in HMOs/HIOs in 2002.

Average Medicaid expenditures per dual enrollee varied significantly across states (Figure 5.9). States with the highest average costs paid over $25,000 per dual, as observed in Delaware ($25,461) and Connecticut ($25,457). Arizona and Tennessee, two states with the highest managed care enrollment among duals, had the lowest per-enrollee FFS expenditures ($1,617 in Arizona and $1,704 in Tennessee); other low-expenditure states included Maine ($7,501), Mississippi ($7,668), and Washington ($7,741). (See Appendix Table A5.6 for details.)

Figure 5.9
Per-Enrollee Fee-for-Service (FFS) Expenditures Among FFS Duals in 2002: Top and Bottom 5 States



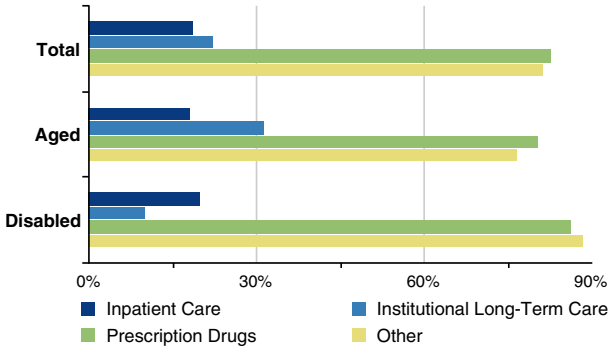
Source: Medicaid Analytic Extract, 2002.
FFS duals = full-benefit duals not enrolled in HMOs/HIOs in 2002.

Several factors may account for these differences in expenditures. High-expenditure states may have more generous benefits under Medicaid (as, for example, in Connecticut). Low-expenditure states may have less stringent enrollment criteria resulting in a higher number of less expensive enrollees (Maine and Mississippi) or have high enrollment in PHPs (Washington) whose premiums are not included among the FFS expenditures presented in Figure 5.9.

There was only a small difference in per-enrollee expenditures between FFS duals who were aged ($13,007) compared with those who were disabled ($13,566) in 2002 (Appendix Table A5.7). However, because there are more aged than disabled duals, aged duals accounted for a larger portion (56.3 percent) of all FFS dual expenditures than disabled duals (43.4 percent).

As in the overall Medicaid FFS population (see Figure 2.19), duals were more likely to have prescription drug or "other" (OT) service use than inpatient or institutional long-term care service use (Figure 5.10).[27] Because Medicare Part A covers inpatient care for duals, their Medicaid utilization and expenditures for inpatient care are low compared to utilization and costs for other services.

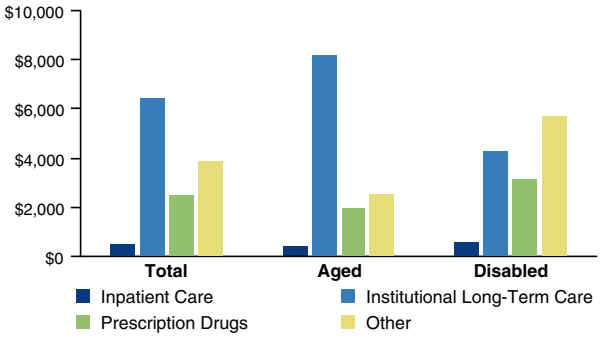
Figure 5.10
Percentage of Fee-for-Service (FFS) Duals Using Four Major Types of Service in 2002, by Basis of Eligibility



Source: Medicaid Analytic Extract, 2002.
FFS duals = full-benefit duals not enrolled in HMOs/HIOs in 2002.

Institutional long-term care was clearly the greatest expenditure among FFS dual enrollees, accounting for nearly half of their per-enrollee expenditures in 2002 (Figure 5.11). As might be expected, institutional long-term care expenditures were nearly twice as high among aged duals relative to their disabled counterparts. (See appendix tables A5.6 through A5.13 and tables A6.9 through A6.16 for state-level detail on dual service utilization and expenditures by basis of eligibility and by type of service.)

Figure 5.11
Per-Enrollee Fee-for-Service (FFS) Expenditures Among FFS Duals in 2002, by Basis of Eligibility



Source: Medicaid Analytic Extract, 2002.
FFS duals = full-benefit duals not enrolled in HMOs/HIOs in 2002.

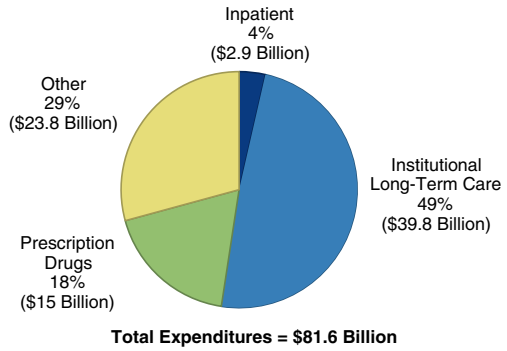
The highest expenditures for disabled duals were for OT services. The services that accounted for the highest percentage of OT expenditures among all duals included residential care, personal care services, and adult day care (see Chapter 6). Higher per-enrollee expenditures may reflect greater use of community-based long-term care services by duals who are disabled. This suggests that the difference in overall long-term care costs—including institutional and community based services–between aged and disabled duals may not be as substantial as the difference between their institutional long-term care

[27] Other services include community long-term care services; physician and other ambulatory services; and lab, X-ray, supplies, and other wraparound services. See Chapter 6 for details.

costs alone. Further examination of the differential patterns of service use by aged and disabled duals is possible with MAX data and is discussed in more depth in Chapter 6 (see also appendix tables A6.9 through A6.16).

Prescription drugs accounted for less than a fifth of FFS expenditures among FFS dual enrollees, but summed to over 15 billion dollars in 2002 (Figure 5.12). As described earlier in this chapter, coverage of prescription drugs for duals transferred from Medicaid to Medicare as of January 1, 2006. The 15 billion dollars spent on prescription drugs for these duals thus represent the expenditures that will largely be covered by Medicare for this subgroup in future years.[28] The MAX data system will allow researchers to explore patterns of Medicaid expenditures associated with this change in policy as duals enroll in Medicare Part D.

Figure 5.12
Medicaid Fee-For-Service (FFS) Expenditures Among FFS Duals in 2002, by Type of Service



Total Expenditures = $81.6 Billion

Source: Medicaid Analytic Extract, 2002.
FFS duals = full-benefit duals not enrolled in HMOs/HIOs in 2002.

[28] While coverage of prescription drugs for duals will shift from Medicaid to Medicare, state Medicaid programs will finance a significant share of this expense by paying Medicare through a "clawback" provision. Also, state Medicaid programs will continue to provide duals coverage for prescription drugs that are not coverable by Medicare plans as long as the drugs are covered in the state for other Medicaid populations.

6. Special Topic: Utilization and Expenditures by Detailed Type of Service

States cover a range of medical services in Medicaid. As discussed in Chapter 1, these include both mandatory services that state Medicaid programs are required to cover under federal law as well as optional services that vary significantly across states. Detailed analysis of Medicaid FFS service use and expenditures by type of service is possible using the MAX data system.[29] In this chapter, we summarize Medicaid service utilization and costs in 2002 by detailed type of service for all full-benefit FFS enrollees and for the subgroup of FFS duals.

In prior chapters, Medicaid services were categorized into inpatient care, institutional long-term care, prescription drugs, and other services generally following the four types of claim files available in MAX. These data can be used to identify services in much more detail using provider codes, service codes, and other fields available in claims records. Additionally, MAX claims contain a type-of-service (TOS) code for the 30 service categories shown in Table 6.1. Information about utilization and FFS expenditures incurred during the year for each of the 30 services is included for each enrollee in the MAX person summary file. In this chapter, we provide an overview of utilization and expenditures by these detailed type of service categories, focusing

[29] MAX contains extensive Medicaid FFS utilization and payment information and monthly premium but limited utilization information from Medicaid managed care plans. See Chapter 1 for more detail about the availability of managed care information in MAX.

Table 6.1
Type-of-Service (TOS) Codes in MAX 2002, by File Type

Type of Service	TOS Code
Inpatient (IP) File	
Inpatient hospital	01
Institutional Long-Term Care (LT) File	
Mental hospital services for the aged	02
Inpatient psychiatric facility services for individuals under age 21	04
Intermediate care facility services for the mentally retarded (ICF/MR)	05
Nursing facility services	07
Prescription Drug (RX) File	
Prescription drugs	16
Other (OT) File	
Physician services	08
Dental care	09
Other practitioner services	10
Outpatient hospital	11
Clinic	12
Home health	13
Lab and X-ray	15
Other services*	19
Sterilizations*	24
Abortions*	25
Transportation	26
Personal care services	30
Targeted case management	31
Rehabilitation	33
Physical therapy, occupational therapy, speech, or hearing services	34
Hospice benefits	35
Nurse midwife services	36
Nurse practitioner services	37
Private duty nursing	38
Religious non-medical health care institutions*	39
Durable medical equipment*	51
Residential care	52
Psychiatric services	53
Adult day care	54

*Claims of this service type may also appear in file types other than OT.

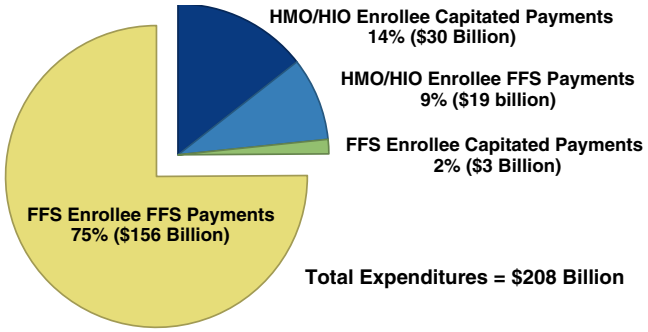
on services grouped within the long-term care and other services categories. (Inpatient and prescription drugs form their own service categories and were presented in chapters 2 and 3.)

It is important to note that type of service information presented in this chartbook reflects full-benefit FFS enrollees and their FFS utilization only. As discussed in Chapter 2, FFS enrollees exclude two important groups: enrollees receiving only restricted Medicaid benefits in 2002 and people ever enrolled in HMOs/HIOs in 2002. FFS expenditures exclude any capitated payments for PHP and PCCM plans in which FFS enrollees may be enrolled.

Figure 6.1 shows that the expenditures presented in this chapter reflect 75 percent ($156 billion) of all expenditures among full-benefit enrollees and almost all expenditures for FFS enrollees (the $3 billion in capitation payments for PHP and PCCM enrollment among FFS enrollees is excluded).

Figure 6.1

FFS Expenditures Among FFS Enrollees as a Percentage of All Full-Benefit Enrollee Expenditures in 2002



Source: Medicaid Analytic Extract, 2002.
HMO/HIO = health maintenance organization or health insuring organization.
FFS enrollees = full-benefit enrollees not enrolled in HMOs/HIOs in 2002.

Because there is significant variation across states in managed care enrollment, the statistics presented in this chapter represent a differential share of total expenditures in each state. In appendix tables for this chapter (tables A6.1 through A6.16), we identify states in which over 50 and 75 percent of the Medicaid population is enrolled in comprehensive managed care (HMO or HIO). Please refer to Chapters 3 and 4 for additional managed care enrollment detail by type of plan by state.

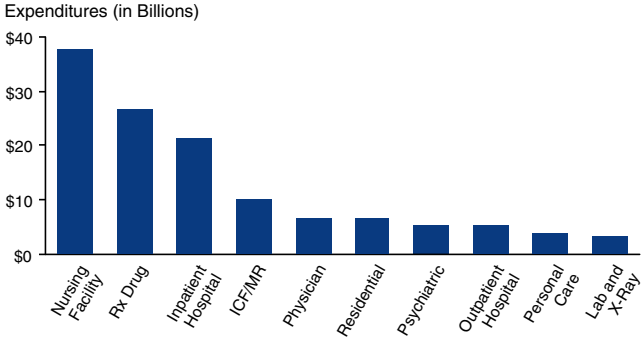
Observed differences in utilization and expenditures between states may also be due to differences in the structure of states' Medicaid programs and reimbursement rates, demographic composition, enrollment in PHPs, or other utilization or cost-driving factors. Such differences must be taken into account when interpreting the national and state-level utilization and expenditure measures presented in this and other chapters of the chartbook.

Most Expensive and Most Utilized Services Among Medicaid FFS Enrollees

Nationally, FFS expenditures for FFS enrollees cost over $156 billion in 2002. The top ten most costly services (of the 30 service types) accounted for more than 80 percent of these expenditures. Nursing facility services contributed most ($37.5 billion) to this population's FFS costs in 2002, followed by prescription drugs ($26.5 billion), inpatient hospital use ($21.4 billion), and ICFs/MR ($10.1 billion) (Figure 6.2).

Figure 6.2

Top 10 Most Expensive Medicaid Service Types Among All Fee-for-Service Enrollees in 2002

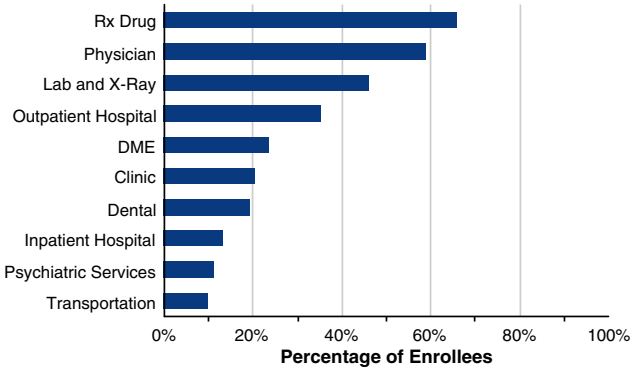


Source: Medicaid Analytic Extract, 2002.
ICF/MR = intermediate care facility for the mentally retarded.

High cost services may reflect frequently used services, high-cost services, or both. Prescription drugs and physician services—among the five most costly services for Medicaid—were used by a majority of FFS enrollees (66.0 and 59.0 percent, respectively) (Figure 6.3). On the other hand, two other expensive services—nursing facilities and ICF/MRs—were used by only a small percentage (5.1 and 0.4 percent, respectively) of Medicaid FFS enrollees.

Figure 6.3

Top 10 Most Utilized Services by All Fee-for-Service Enrollees in 2002



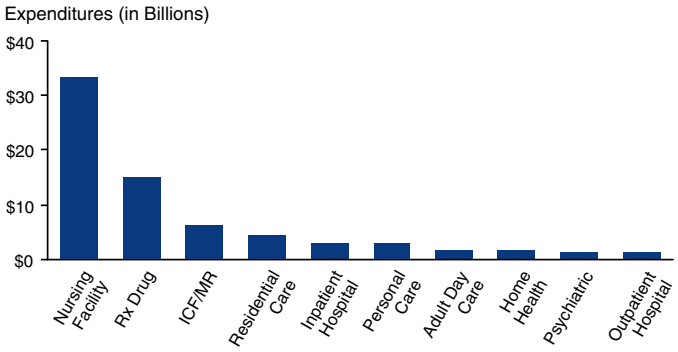
Source: Medicaid Analytic Extract, 2002.
DME = durable medical equipment.

The subset of FFS enrollees who were dually enrolled in Medicare and Medicaid incurred a total of $81.6 billion in FFS Medicaid expenditures and accounted for more than half of the FFS expenditures of all FFS enrollees. Over $33 billion was spent on nursing facility services for duals (Figure 6.4), accounting for 89 percent of all FFS nursing home expenditures in 2002. Other high cost services for duals included prescription drugs ($15.0 billion) and ICFs/MR ($6.2 billion).

Because duals are comprised of aged and disabled enrollees, they were more likely than other enrollees to use most Medicaid services. Twenty-one percent of FFS duals used nursing facility services in 2002 (Figure 6.5), compared with only 5.1 percent among all FFS enrollees. Only a handful of services—

Figure 6.4

Top 10 Most Expensive Medicaid Service Types Among Fee-for-Service Duals in 2002

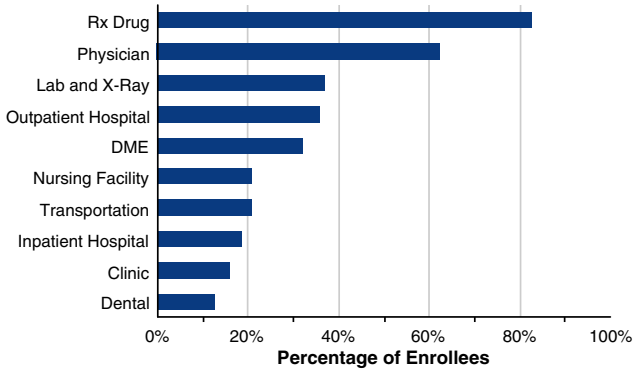


Source: Medicaid Analytic Extract, 2002.
ICF/MR = intermediate care facility for the mentally retarded.

typically those covered by Medicare for duals, such as inpatient and outpatient psychiatric, clinic, dental, and lab and X-ray—were used more often by non-duals than duals in 2002 (see appendix tables A6.1 through A6.16).

Figure 6.5

Top 10 Most Utilized Services by Fee-for-Service Duals in 2002



Source: Medicaid Analytic Extract, 2002.
DME = durable medical equipment.

Composition of FFS Expenditures

To examine the composition of FFS expenditures, we aggregate the 30 service types into six larger classes. Three of the classes generally correspond to three types of claims files:

- *Institutional long-term care (ILTC)*: all long-term care services in the LT claims files, including psychiatric services for individuals under age 21 and services provided in nursing facilities, intermediate care facilities for the mentally retarded, and mental hospitals for the aged. Institutional long-term care may include an array of bundled services such as physical therapy and oxygen.

- *Inpatient hospital*: inpatient hospital services; may include some bundled services such as lab tests or prescription drugs filled during a stay.

- *Prescription drugs*: all Medicaid prescriptions filled, except those bundled with inpatient, nursing home, or other services.

We classify all other services into three classes:

- *Community long-term care*: residential care, home health, personal care services, adult day care, and hospice care.[30]

- *Physician and other ambulatory services*: physician, outpatient hospital, clinic, dental, other practitioners, physical therapy or occupational therapy (PT/OT), rehabilitation, and psychiatric services.

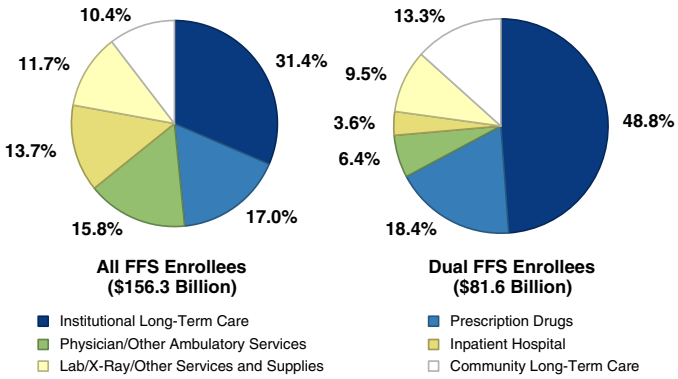
- *Lab, X-ray, supplies, and other wraparound services*: lab and X-ray, durable medical equipment (DME), transportation, targeted case management, and other services.

[30] Some community long-term care services may be not be included in the community long-term care service class: psychiatric residential care may be classified with psychiatric services under physician and other professional services; community long-term care provided under 1915(c) or 1915(d) waivers may be unclassified and grouped with "other services"; and transportation, targeted case management, and durable medical equipment—sometimes used for long-term care—are not included.

Of these six service classes, institutional long-term care contributed the most to FFS Medicaid expenditures among all FFS enrollees (31.4 percent) and among FFS enrollees who were dually enrolled in both Medicare and Medicaid at some point during 2002 (48.8 percent) (Figure 6.6).

Figure 6.6

Composition of Fee-for-Service (FFS) Expenditures Among FFS Enrollees in 2002



Source: Medicaid Analytic Extract, 2002.

Institutional long-term care expenditures were substantially greater than community-based long-term care expenditures. Among all FFS enrollees, community long-term care services accounted for 10.4 percent ($16.3 billion) of FFS costs, compared with 31.4 percent ($49.1 billion) for institutional long-term care. However, unlike nursing facility services, most community long-term care services are covered at state option.[31]

Among the subgroup of FFS duals, almost 49 percent of FFS expenditures ($39.8 billion) were for institutional long-term care, compared with 13.3 percent ($10.9 billion) for community-based services. Because Medicare covers many acute care

[31] Because some community long-term care services are excluded from the community long-term care class, estimated expenditure measures may significantly understate total Medicaid community long-term care costs.

services for duals, it is expected that long-term care and other non-acute care costs would account for a larger portion of expenditures than inpatient care among FFS duals.

Of importance, long-term care service costs for duals were large in both percentage and absolute value. FFS duals' use of institutional and community long-term care accounted for more than 77.6 percent of all FFS long-term care costs incurred by Medicaid FFS enrollees.

The combined totals for institutional and community-based long-term care services accounted for 41.8 percent of all FFS enrollee costs and 62.2 percent of such costs among the subgroup of duals. Because the combined long-term care services represented a substantial portion of Medicaid FFS expenditures for this population, they are explored in more detail below.

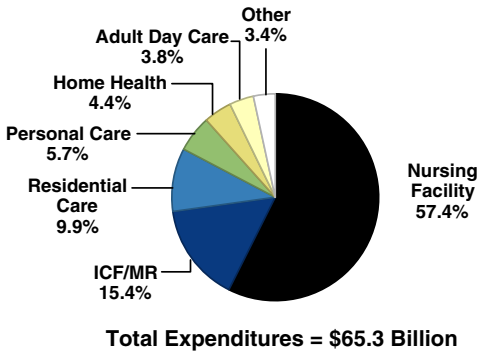
Prescription drugs, inpatient hospital, and outpatient services were also large cost drivers among Medicaid FFS enrollees in 2002. Because Medicare is first payer for outpatient and inpatient hospital services, these services made up a smaller percentage of overall expenditure among dual FFS enrollees.

Below, we present long-term care utilization and expenditure information by type of service for all FFS enrollees and only supplementary information for FFS duals. See Chapter 5 and appendix tables A6.9 through A6.12 for more detail about FFS long-term care utilization and costs among FFS duals.

Institutional and Community Long-Term Care Services by Type of Service

Nursing facilities were the biggest driver of long-term care costs and accounted for 57.4 percent ($37.5 of $65.4 billion dollars) of all FFS long-term care expenditures for FFS enrollees in 2002 (Figure 6.7). Among duals, nursing facility services accounted for 65.7 percent ($33.3 of $50.7 billion dollars) of FFS long-term care expenditures (data not shown). Other services that represented a high percentage of long-term care costs for all FFS enrollees were ICFs/MR (15.4 percent), residential care (9.9 percent), and personal care services (5.7 percent).

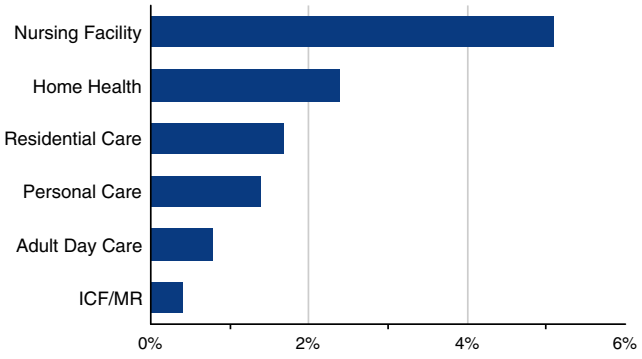
Figure 6.7
Composition of Institutional and Community-Based FFS Long-Term Care Expenditures Among FFS Enrollees in 2002



Source: Medicaid Analytic Extract, 2002.
ICF/MR = intermediate care facility for the mentally retarded.

Long-term care services were used by only a small percentage of Medicaid FFS enrollees. Nursing facility services were the most utilized long-term care service (5.1 percent), followed by home health (2.4 percent), residential care (1.7 percent), and personal care (1.4 percent) (Figure 6.8). Among FFS duals,

Figure 6.8
Percentage of Fee-for-Service Enrollees Who Used Select Long-Term Care Services in 2002

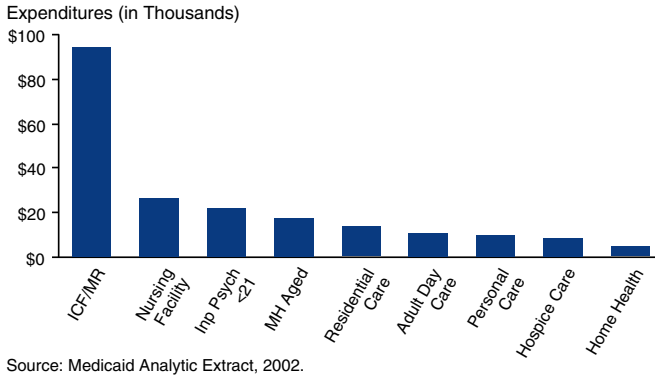


Source: Medicaid Analytic Extract, 2002.
ICF/MR = intermediate care facilty for the mentally retarded.

utilization of long-term care services was more common: 21.0 percent used nursing facilities; the percentages using personal care, residential care, and home health were 4.8, 4.7 and 4.7, respectively (data not shown).

ICF/MR was by far the highest cost service per user; average Medicaid expenditures were $93,967 per enrollee who received services in an ICF/MR in 2002 (Figure 6.9). Other services with high annual per-user costs included nursing facility services ($26,002), inpatient psychiatric care for those under age 21 ($21,518), and mental hospitals for the aged ($17,086).

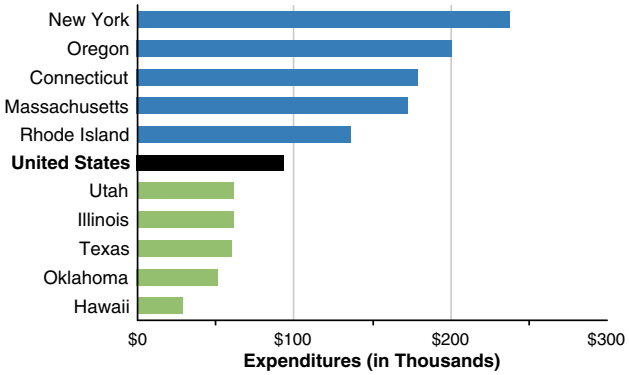
Figure 6.9
Per-User Expenditures for Long-Term Care Services Among Fee-for-Service Enrollees in 2002



Source: Medicaid Analytic Extract, 2002.
ICF/MR = intermediate care facility for the mentally retarded.

Among states with any ICF/MR utilization, average expenditures per user varied greatly, ranging from $29,537 in Hawaii to $238,553 in New York (Figure 6.10). States with higher expenditures for ICFs/MR tended to have less frequent use of the service among enrollees. Four of the top five states in per-user ICF/MR costs had a lower than average percent of enrollees using ICFs/MR, whereas all of the bottom five states had above-average utilization of this service.

Figure 6.10
Per-User ICF/MR Expenditures in 2002: Top and Bottom 5 States



Source: Medicaid Analytic Extract, 2002.
ICF/MR = intermediate care facility for the mentally retarded.

Because FFS duals make up a majority of long-term care users, the composition of their long-term care costs and per-user expenditures was similar to those of all FFS enrollees.

Physician and Other Ambulatory Services

Physician and other ambulatory services accounted for 15.8 percent of FFS expenditures among FFS enrollees and were the third most costly category of service after long-term care and prescription drugs.[32]

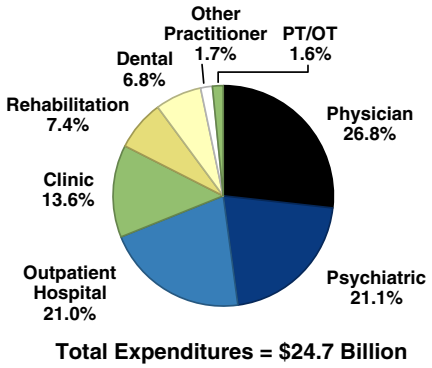
Physician services were both the largest contributor to physician and other ambulatory service expenditures ($6.6 billion) and the most utilized such service by Medicaid FFS enrollees (59 percent) (figures 6.11 and 6.12). Other key cost drivers were psychiatric services ($5.2 billion), outpatient hospital services ($5.2 billion), clinic services ($3.3 billion), and rehabilitation services ($1.8 billion).

In comparison to other ambulatory services, costs per user were highest for rehabilitation services. Rehabilitation services were used by only 2.1 percent of Medicaid FFS enrollees but represented

[32] Claims for physician services include separately billed physician services provided in inpatient settings.

Figure 6.11

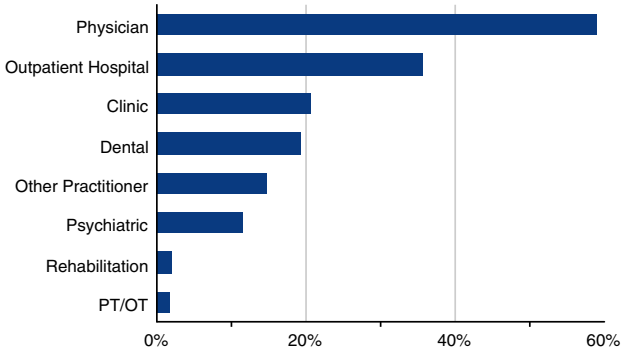
Composition of Physician and Other Ambulatory Service Expenditures Among Fee-for-Service Enrollees in 2002



Source: Medicaid Analytic Extract, 2002.
PT = physical therapy; OT = occupational therapy.

Figure 6.12

Percentage of Fee-for-Service Enrollees Who Used Physician or Other Ambulatory Services in 2002

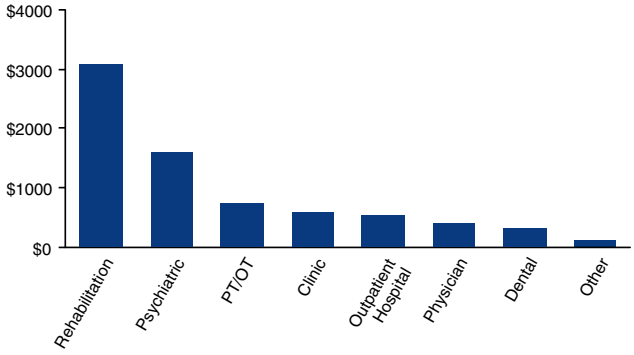


Source: Medicaid Analytic Extract, 2002.
PT = physical therapy; OT = occupational therapy.

7.4 percent of their physician and other ambulatory service expenditures. Figure 6.13 shows that expenditures for rehabilitation services were $3,089 per user in 2002, compared to $1,594 and $725 for psychiatric and PT/OT services, respectively.

Figure 6.13

Per-User Expenditures for Physician and Other Ambulatory Services Among Fee-for-Service Enrollees in 2002



Source: Medicaid Analytic Extract, 2002.
PT = physical therapy; OT = occupational therapy.

Additional summary information about FFS ambulatory and professional service use and expenditures in 2002 can be found in appendix tables A6.5 and A6.6 for all FFS enrollees and in tables A6.13 and A6.14 for FFS duals.

The results presented in this chapter and associated appendix tables represent only a small sample of the types of possible analyses that could be conducted with the MAX type-of-service data. MAX data can be used to investigate program cost-drivers in greater depth. They can also be used to examine how changing patterns of utilization and expenditures are influenced by changing population demographics, state policies, and/or Medicaid coverage rules.

Glossary of Terms

1115 Waiver (MAS Group) = a maintenance assistance status (MAS) group that consists of people eligible for Medicaid via a state 1115 waiver program that extends benefits to certain otherwise ineligible persons.[33] Some states provide only limited family planning benefits or other limited services to 1115 adults, although a few states provide full Medicaid benefits to persons qualifying through 1115 provisions.

Adults = a basis of eligibility (BOE) group that includes pregnant women and caretaker relatives in families with dependent (minor) children; most caretaker relatives of dependent children are parents, but this group can also include other family members serving as caretakers such as aunts or grandparents. In a few states with waivers, the adult BOE group includes childless adults.

Aged = a basis of eligibility (BOE) group that includes people age 65 or older.

Alien = a person who is not a permanent resident or citizen of the United States. In Medicaid, "unqualified" aliens include illegal immigrants and immigrants entering the U.S. legally after 1996 for 5 years from their date of entry; unqualified aliens are eligible only for emergency hospital services.

Basis of Eligibility (BOE) = eligibility grouping that traditionally has been used by CMS to classify enrollees; BOE categories include children, adults, aged, and disabled (see other entries for descriptions of these categories).

Capitation or Capitated Payment = a method of payment for health services in which a health plan, practitioner, or hospital is paid in advance a fixed amount to cover specified health services for an individual for a specific period of time, regardless of the amount or type of services provided. In contrast with fee-for-service (see entry below), capitation shifts the financial risk of caring for patients from the payer to the provider.

Cash Assistance-Related = a maintenance assistance status (MAS) group that consists of persons receiving SSI benefits and those who would have qualified under the pre-welfare reform Aid to Families with Dependent Children (AFDC) rules.

Children = a basis of eligibility (BOE) group that includes persons under age 18 or up to 21 in states electing to cover older children.

Community-Based Long-Term Care = long-term support services for people who are not institutionalized but who do require nursing or other support services typically provided in nursing homes or other institutions. In this chartbook, we include five MAX service types in community-based long-term care: adult day care, home health, hospice care, personal care services, and residential care.

Disabled = a basis of eligibility (BOE) group that includes persons of any age (including children) who are unable to engage in substantial gainful activity by reason of any medically determinable physical or mental impairment that can be expected to result in death or that has lasted or can be expected to last for a continuous period of not less than 12 months.

[33] Many 1115 waivers also have other provisions such as mandatory managed care coverage. However, the MAS 1115 waiver group only relates to the 1115 eligibility extensions.

Disproportionate Share Hospital (DSH) = a hospital that serves a disproportionate share of low-income patients. DSH facilities receive supplemental Medicaid payments in addition to reimbursements for the Medicaid enrollees they serve.

Duals = persons dually enrolled in Medicare and Medicaid (sometimes referred to as dual eligibles). In this chartbook, duals are defined as people in the Medicaid data files with matching records in the EDB indicating enrollment in both Medicare and Medicaid in at least one month in 2002.

Durable Medical Equipment (DME) = medical equipment (wheelchairs, beds); supplies (adult diapers, dialysis equipment); home improvements (ramps); emergency response systems; and repairs, replacements, or renting of these items.

Encounter Claims = claims for services utilized under managed care. Encounter claims do not include payment information for services used; MAX encounter claims are believed to be incomplete.

Enrollee = for the purposes of this chartbook, people enrolled in Medicaid for at least one day in 2002 (sometimes referred to as beneficiaries or eligibles).

(Medicare) Enrollee Database (EDB) = the authoritative data source for all Medicare entitlement information; contains information on all Medicare beneficiaries, including demographic information, enrollment dates, and Medicare managed care enrollment.

Family Planning = services and supplies that enable individuals and couples to anticipate and have the desired number of children and to space and time their births. There is no regulatory definition for the services and supplies covered by Medicaid, but CMS has provided guidance that states may cover counseling services, examination and treatment by medical professionals, pharmaceutical devices to prevent conception, and infertility services.

Federal Fiscal Year (FFY) = the federal fiscal year begins on October 1 and ends on September 30 of the following year; FY 2002 runs from October 1, 2001, through September 30, 2002.

Federal Medical Assistance Percentage (FMAP) = the federal matching rate for states for service costs incurred by the Medicaid program. The FMAP is calculated by taking into account the average per capita income in a given state in relation to the national average; the FMAP ranged from 50 to 76 percent in 2002, with higher matching allocated to states with lower per capita income.

Fee-for-Service (FFS) = a payment mechanism in which payment is made for each service used.

Health Maintenance Organization/Health Insuring Organization (HMO/HIO) = health care plans that provide comprehensive medical services to people in return for a prepaid fee.

Inpatient Care = health care received when an individual is admitted to a hospital.

Institutional Long-Term Care (ILTC) = Medicaid covered institutional or inpatient long-term care services. ILTC includes the following four service types: nursing facility services, intermediate

care facility services for the mentally retarded (ICF/MR), mental hospital services for the aged, and inpatient psychiatric facility services for those under age 21.

Institutional Long-Term Care File (LT) = MAX institutional long-term care claims file (community long-term care services are categorized as "other" and can be found in the MAX OT file).

Maintenance Assistance Status (MAS) = eligibility grouping traditionally used by CMS to classify enrollees by the financial-related criteria by which they are eligible for Medicaid. MAS groups include cash assistance-related, medically needy, poverty-related, 1115 waiver, and other (see other entries for descriptions of these categories).

Managed Care (MC) = systems and payment mechanisms used to manage or control the use of health care services, which may include incentives to use certain providers and case management. A managed care plan usually involves a system of providers with a contractual arrangement with the plan; health maintenance organizations (HMOs), primary care case management (PCCM) plans, and prepaid health plans (PHPs) are examples of managed care plans.

Medicaid Statistical Information System (MSIS) = the CMS data system containing complete eligibility and claims data from each state Medicaid program. Electronic submission of data by states to MSIS became mandatory in 1999, in accordance with the Balanced Budget Act of 1997.

Medically Needy (MN) = a maintenance assistance status (MAS) group that includes persons qualifying for Medicaid through the medically needy provision (a state option) that allows for a higher income threshold than required by the AFDC cash assistance level. Persons with income above the medically needy threshold can deduct incurred medical expenses from their income and/or assets—or "spend down" their income/assets—to determine financial eligibility.

Medicare Prescription Drug, Improvement, and Modernization Act (MMA) of 2003 = amendment to Title XVIII of the Social Security Act that added Part D—the Medicare prescription drug benefit—to cover the costs of outpatient prescription drugs through prescription drug plans beginning in 2006.

Other = a maintenance assistance status (MAS) group that consists of a mixture of mandatory and optional coverage groups not reported under the other MAS categories, including many institutionalized aged and disabled, those qualifying through hospice and home- and community-based care waivers, and immigrants who qualify for emergency Medicaid benefits only.

Person-Years Enrollment (PYE) = a measure of the actual amount of time that Medicaid enrollees were enrolled in Medicaid. In contrast with the number of enrollees, this assigns a lower count for those enrollees who are not enrolled for a full year (for example, a person who is enrolled in Medicaid for six months of the year will contribute 0.5 person-years enrollment).

Poverty-Related = a maintenance assistance status (MAS) group that consists of persons qualifying through any poverty-related Medicaid expansions enacted from 1988 on; in addition, this group includes QMB, SLMB, and QI dual groups.

Prepaid Health Plan (PHP) = a type of managed care plan that provides less than comprehensive services on an at-risk basis; these may include dental care, behavioral health services, long-term care, or other service types.

Primary Care Case Management (PCCM) = a type of managed care plan that involves the payment of a small premium (often three dollars per person per month) for case management services only; in some states, PCCM premiums are not paid unless case management services are delivered.

Program of All-Inclusive Care for the Elderly (PACE) = a program that states may offer to older Medicaid enrollees (55 or older) who are in need of nursing facility care. PACE providers are paid on a capitated basis and enrollees receive all the services covered by Medicare and Medicaid through their PACE provider.

Qualified Disabled and Working Individuals (QDWIs) = disabled and working Medicare beneficiaries with income between 175 and 200 percent of the federal poverty level (FPL) and eligible for Medicare Part A. States have the option to cover Medicare Part A premiums for QDWIs.

Qualified Individuals 1 (QI1s) = Medicare beneficiaries with income between 120 percent and 135 percent of the FPL; Medicaid pays all or some of Medicare Part B premiums for QI1s.

Qualified Individuals 2 (QI2s) = Medicare beneficiaries with income between 135 and 175 percent of the FPL. States have the option to cover a portion of Medicare Part B premiums for QI2s.

Qualified Medicare Beneficiary (QMB) = a Medicare beneficiary with income below 100 percent of FPL and assets under 200 percent of SSI asset limit. QMBs receive Medicare premiums and cost-sharing payments, and a vast majority of QMBs qualify for full Medicaid benefits.

Recipient = Medicaid enrollees with any service use are called Medicaid recipients, sometimes referred to as "persons served." Medicaid recipients sometimes include people enrolled in comprehensive managed care.

Restricted-Benefit Enrollees = Medicaid enrollees who receive only limited health coverage. In this chartbook, restricted-benefit enrollees include "unqualified" aliens eligible for only emergency hospital services, duals receiving only coverage for Medicare premiums and cost-sharing, and people receiving only family planning services.

Section 209(b) States = states that have elected to use more restrictive eligibility requirements than those of the Supplemental Security Income (SSI) program. These requirements cannot be more restrictive than those in place in the state's Medicaid plan as of January 1, 1972. Section 209(b) states include Connecticut, Illinois, Minnesota, New Hampshire, Ohio, Virginia, Hawaii, Indiana, Missouri, North Dakota, and Oklahoma.

Specified Low-Income Medicare Beneficiary (SLMB) = a Medicare beneficiary with income between 100 percent and 120 percent of the FPL who is eligible for Medicaid payment of Part B Medicare premiums; some SLMBs also qualify for full Medicaid benefits.

State Children's Health Insurance Program (SCHIP) = authorized in 1997, this program provides enhanced federal matching funds to help states expand health care coverage to the nation's uninsured children. SCHIP is jointly financed by federal and state governments and adminis-

tered by states. States may administer SCHIP through their Medicaid program (referred to as M-SCHIP) or as a separate program (referred to as S-SCHIP); M-SCHIP children are included in the MAX data and reported under the poverty-related maintenance assistance status (MAS).

Supplemental Security Income (SSI) = a federal entitlement program providing cash assistance to low-income aged, blind, and disabled individuals; people receiving SSI are eligible for Medicaid in all but Section 209(b) states, where more restrictive criteria may be used to determine Medicaid eligibility.

Temporary Assistance for Needy Families (TANF) = a block grant program that provides states with federal matching funds for cash and other assistance to low-income families with children. Established through the 1996 welfare law that repealed the Aid to Families with Dependent Children (AFDC) program, TANF eligibility has no direct bearing on Medicaid eligibility (as was the case with AFDC); however, 1996 AFDC rules are still used to determine eligibility for Medicaid. AFDC groups are commonly referred to as the Section 1931 groups (after the section of the Social Security Act that specifies AFDC-related eligibility after welfare reform).

Upper Payment Limit (UPL) = limit on payments made by states to facilities and providers for which the federal government will provide matching funds. UPL programs are funding mechanisms in which states supplement reimbursable service costs at specific facilities; payments may exceed the costs of services provided to Medicare beneficiaries in those facilities as long as they are not higher than the aggregate UPL for that class of facilities.

User = enrollees with a claim for a specific service are called "users" of that service; enrollees typically use multiple services.

Waivers = statutory authorities that allow states to receive federal matching funds for Medicaid expenditures even if the state is not in compliance with requirements of the federal Medicaid statute; for example, 1115 waivers allow states to cover categories of people that are not generally covered under Medicaid.

Acronyms and Abbreviations

AFDC = Aid to Families with Dependent Children

BHO = behavioral health organization

BOE = basis of eligibility

DME = durable medical equipment

DSH = disproportionate share hospital

EDB = (Medicare) Enrollee DataBase

ESRD = end-stage renal disease

FFS = fee-for-service

FFY = federal fiscal year

FMAP = federal medical assistance percentage

FPL = federal poverty level

HH = home health

HMO/HIO = health maintenance organization/health insuring organization

ICF/MR = intermediate care facility for the mentally retarded

ILTC = institutional long-term care

IP = inpatient; MAX inpatient claims file

LT = MAX long-term care claims file

MAS = maintenance assistance status

MAX = Medicaid Analytic Extract

MC = managed care

MMA = Medicare Prescription Drug, Improvement, and Modernization Act (MMA) of 2003

MN = medically needy

MSIS = Medicaid Statistical Information System

NF = nursing facility

OT = occupational therapy in the context of specific services; "other" services in the context of summary type of service; MAX other types of claims file

PACE = Program of All-Inclusive Care for the Elderly

PCCM = primary care case management

PHP = prepaid health plan

PS = MAX person summary file

PT = physical therapy

PYE = person-years enrollment

QDWI = Qualified Disabled and Working Individual

QI = Qualified Individual

QMB = Qualified Medicare Beneficiary

RX = prescription drugs; MAX prescription drug claims file

SCHIP = State Children's Health Insurance Program

SLMB = Specified Low-Income Medicare Beneficiary

SSI = Supplemental Security Income

TANF = Temporary Assistance for Needy Families

UPL = upper payment limit

References

Centers for Medicare & Medicaid Services. "CMS Legislative Summary, April 2004: Summary of H.R. 1 Medicare Prescription Drug, Improvement, and Modernization Act of 2003, Public Law 108-173." Washington, DC: U.S. Department of Health and Human Services, CMS, April 2004. Accessed November 4, 2006, at [www.cms.hhs.gov/MMAUpdate/downloads/PL108-173summary.pdf].

Centers for Medicare & Medicaid Services. "National Health Expenditures by Type of Service and Source of Funds, CY 1960-2004." Washington, DC: U.S. Department of Health and Human Services, CMS, Office of the Actuary, National Health Statistics Group. Accessed August 2006, at [www.cms.hhs.gov/NationalHealthExpendData/downloads/tables.pdf].

Centers for Medicare & Medicaid Services. "Medicaid-at-a-Glance 2002: A Medicaid Information Source." Washington, DC: U.S. Department of Health and Human Services, CMS, Center for Medicaid and State Operations, Publication No. CMS-11024-02. Accessed June 2006, at [www.hhs.gov/od/documents/MA2002.pdf].

Holahan, John, and Arunabh Ghosh. "Understanding the Recent Growth in Medicaid Spending, 2000-2003." Health Affairs Web Exclusive, January 26, 2005, pp. w5-52–w5-61. Accessed July 2006, at [content.healthaffairs.org/cgi/reprint/hlthaff.w5.52v1].

Kaiser Commission on Medicaid and the Uninsured. "Dual Eligibles: Medicaid's Role in Filling Medicare's Gaps." Washington, DC: Henry J. Kaiser Foundation, March 2004. Accessed November 21, 2006, at [www.kff.org/medicaid/upload/Dual-Eligibles-Medicaid-s-Role-in-Filling-Medicare-s-Gaps.pdf].

Ku, Leighton. "Shifts in Cost from Medicare to Medicaid Is a Principal Reason for Rising State Medicaid Expenditures." Washington, DC: Center on Budget and Policy Priorities, March 2003. Accessed November 23, 2006, at [www.cbpp.org/3-3-03health.htm].

Medicare Payment Advisory Commission (MedPac). "Report to Congress: New Approaches to Medicare." Washington, DC: MedPac, June 2004. Accessed November 21, 2006, at [www.medpac.gov/publications/congressional _reports/June04_Entire_Report.pdf].

Schneider, Andy, Risa Elias, Rachel Garfield, David Rousseau, and Victoria Wachino. *The Medicaid Resource Book*. Washington, DC: Kaiser Commission on Medicaid and the Uninsured, July 2002.