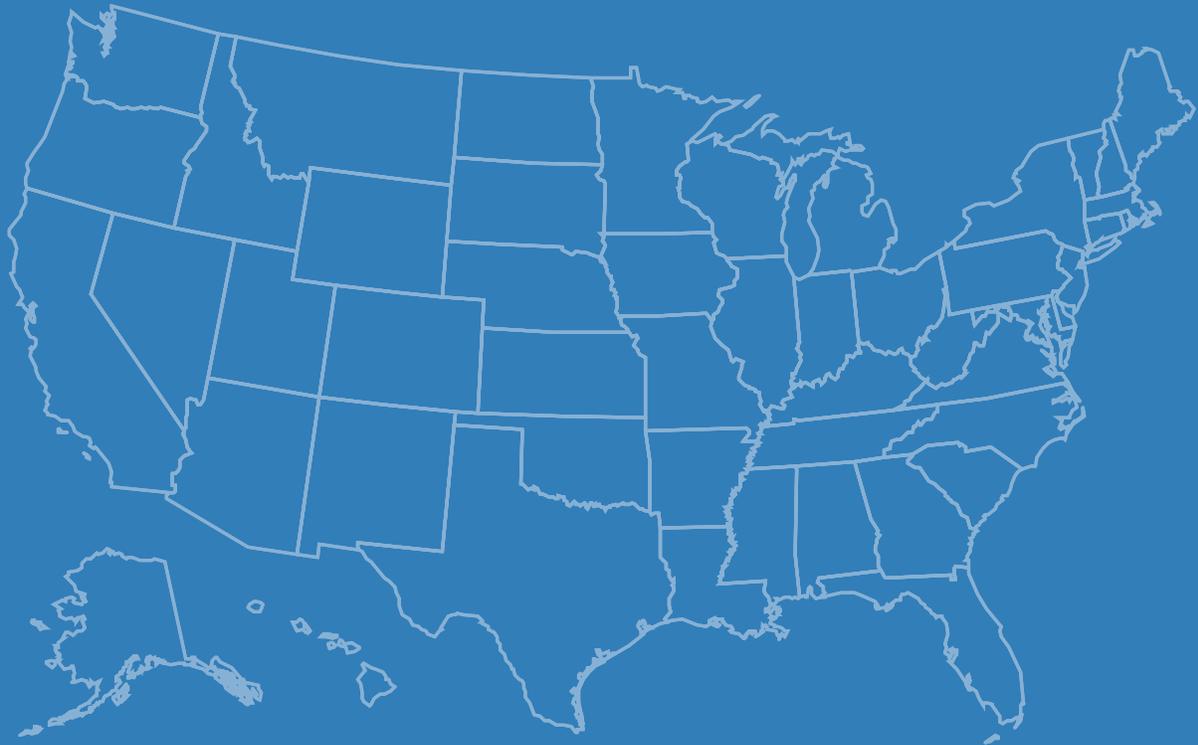




# The Medicaid Analytic eXtract 2008 Chartbook





CMS, an agency within the Department of Health and Human Services, administers the largest federal health care program—Medicare—and, in partnership with states, administers Medicaid and the State Children’s Health Insurance Program. With a combined budget of nearly \$700 billion in fiscal year 2009, CMS serves over 90 million beneficiaries and has become one of the largest purchasers of health care in the United States.

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# Medicaid Analytic eXtract 2008 Chartbook

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# 1. Introduction

The Medicaid Analytic eXtract (MAX) is a data system derived from the Medicaid Statistical Information System (MSIS), which contains extensive information about Medicaid enrollees and the Medicaid-financed health services they use during a calendar year. MAX was developed and is produced by the Centers for Medicare & Medicaid Services (CMS). This chartbook is based primarily on 2008 MAX data and presents an overview of enrollee demographic and enrollment characteristics, service utilization, and expenditures at the national and state levels in 2008. This chartbook builds on its predecessors, which used MAX 2002 and MAX 2004 data (Wenzlow et al. 2007; Perez et al. 2008). This chartbook updates information in the previous chartbooks and also provides new information based on changes in the availability of information in MAX and data changes reported by states. In addition, notable changes have been made to the Medicaid program since the last chartbook, including the implementation of the Medicare Modernization Act of 2003 and the Deficit Reduction Act of 2005.

This introduction provides an overview of the Medicaid program and the MAX data system. The remaining chapters present figures and tables that characterize the Medicaid population in 2008: Chapter 2 provides a national profile of Medicaid enrollees and their Medicaid service utilization and expenditures; Chapter 3 presents state-level statistics; and chapters 4 through 7 supply detailed

information on key Medicaid topics, including managed care (Chapter 4), dual Medicare and Medicaid enrollees (Chapter 5), service use and expenditure information by detailed service type (Chapter 6), and waiver enrollment and utilization (Chapter 7). A separate appendix contains tables that provide more detailed, state-level information for the statistics presented in chapters 3 through 7.

## The Medicaid Program in 2008

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 or disabled poor. The program was enacted in 1965 by Title XIX of the Social Security Act. Medicaid has grown to become the third-largest source of health care spending in the United States, after Medicare and employer-provided health insurance. In MAX, states reported expenditures of over \$293 billion on Medicaid services for enrollees in 2008. Since the 1990s, Medicaid has served more people annually than Medicare. In 2008, Medicaid covered almost 62 million people, covering just over 20 percent of the U.S. population at some point during the year and accounting for about 14 percent of total U.S. health expenditures. Medicaid is also the largest insurer for nursing home care in the nation, covering almost 44 percent of nursing home costs in 2008 (CMS 2009).

States administer Medicaid under guidelines established by the federal government, and the program is financed jointly by federal and state funds. The federal government financed nearly 60 percent of Medicaid outlays in 2008 (CMS 2009), reimbursing states between 50 and 76 percent for services used by Medicaid enrollees and reimbursing at an even higher rate for children enrolled in Medicaid via the Children's Health Insurance Program (CHIP). The federal match rate for Medicaid expenditures, called the Federal Medical Assistance Percentage (FMAP), differs in each state and is calculated based on the average per capita income in a given state in relation to the national average. In fiscal year 2008, the FMAP ranged from 50 percent in 13 higher-income states to more than 70 percent in 6 lower-income states (Table 1.1).

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

- *Low-income children:* children under age 6 with family income at or below 133 percent of the federal poverty level and who satisfy certain asset requirements are eligible for Medicaid. Children between ages 6 and 19 in families at or below 100 percent of the poverty level (satisfying similar asset requirements) are also eligible.
- *Pregnant women:* pregnant women with family income at or below 133 percent of the poverty level who 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 1 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:* as described in Section 1931 of the Social Security Act, individuals who meet the state's Aid to Families with Dependent Children (AFDC) requirements effective on July 16, 1996, are eligible for Medicaid.<sup>1</sup>
- *Supplemental Security Income (SSI) recipients:* with the exception of some individuals living in 11 so-called Section 209(b) states, all receiving SSI are eligible for Medicaid.<sup>2</sup>
- *Low-income Medicare beneficiaries:* most low-income Medicare beneficiaries are eligible for Medicaid. Those with income below 100 percent of the federal poverty level (FPL) 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 payments. (Many states also choose to extend full Medicaid benefits to QMBs and some SLMBs.)

<sup>1</sup> Medicaid has historically been linked to welfare receipt. Although the tie between welfare and Medicaid for children and their parents was severed in 1996 by the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA), some of the mandatory eligibility groups still reflect this history. Although PRWORA replaced Aid to Families with Dependent Children (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.

<sup>2</sup> Section 209(b) of the Social Security Amendments of 1972 permits states to use more restrictive eligibility requirements than those of the SSI program. These requirements cannot be more restrictive than those in place in the state's Medicaid plan as of January 1, 1972. At present there are 11 Section 209(b) states: Connecticut, Hawaii, Illinois, Indiana, Minnesota, Missouri, North Dakota, New Hampshire, Ohio, Oklahoma, and Virginia.

**Table 1.1**  
**State Medicaid Program Characteristics in 2008**

	CHIP		Medicaid Eligibility For SSI Recipients					Full Benefit Poverty-Related Expansion for Aged and Disabled (FPL %) <sup>e</sup>	Special Income Level for Institutionalized <sup>f</sup>
	FY 2008 FMAP <sup>a</sup>	Medicaid Expansion CHIP <sup>b</sup>	Separate CHIP <sup>b</sup>	Automatic Eligibility <sup>c</sup>	SSI Criteria <sup>c</sup>	Section 209(b) <sup>c</sup>	Medically Needy Eligibility <sup>d</sup>		
Alabama	67.62		♦	♦				♦	
Alaska	52.48	♦			♦			♦	
Arizona	66.20		♦	♦			100		
Arkansas	72.94	♦	♦	♦			80	♦	
California	50.00	♦	♦	♦			100		
Colorado	50.00		♦	♦				♦	
Connecticut	50.00		♦			♦		♦	
Delaware	50.00	♦	♦	♦				♦	
Dist. of Columbia	70.00	♦		♦			100		
Florida	56.83	♦	♦	♦			88	♦	
Georgia	63.10		♦	♦				♦	
Hawaii	56.50	♦				♦	100		
Idaho	69.87	♦	♦		♦			♦	
Illinois	50.00	♦	♦	♦		♦	100		
Indiana	62.69	♦	♦			♦			
Iowa	61.73	♦	♦	♦				♦	
Kansas	59.43		♦		♦			♦	
Kentucky	69.78	♦	♦	♦				♦	
Louisiana	72.47	♦	♦	♦				♦	
Maine	63.31	♦	♦	♦			100	♦	
Maryland	50.00	♦	♦	♦				♦	
Massachusetts	50.00	♦	♦	♦			100		
Michigan	58.10	♦	♦	♦			100	♦	
Minnesota	50.00	♦	♦			♦	95		
Mississippi	76.29		♦	♦				♦	
Missouri	62.42	♦	♦			♦			
Montana	68.53		♦	♦				♦	
Nebraska	58.02	♦			♦		100	♦	
Nevada	52.64		♦		♦			♦	
New Hampshire	50.00	♦	♦			♦		♦	
New Jersey	50.00	♦	♦	♦			100	♦	
New Mexico	71.04	♦		♦				♦	
New York	50.00		♦	♦				♦	
North Carolina	64.05	♦	♦	♦			100		
North Dakota	63.75	♦	♦			♦		♦	
Ohio	60.79	♦				♦		♦	
Oklahoma	67.10	♦	♦			♦	100	♦	
Oregon	60.86		♦		♦			♦	
Pennsylvania	54.08		♦	♦			100	♦	
Rhode Island	52.51	♦	♦	♦			100	♦	
South Carolina	69.79	♦	♦	♦			100	♦	
South Dakota	60.03	♦	♦	♦				♦	
Tennessee	63.71	♦	♦	♦				♦	
Texas	60.53		♦	♦				♦	
Utah	71.63		♦		♦		100		
Vermont	59.03		♦	♦				♦	
Virginia	50.00	♦	♦			♦	80	♦	
Washington	51.52		♦	♦				♦	
West Virginia	74.25		♦	♦				♦	
Wisconsin	57.62	♦	♦	♦				♦	
Wyoming	50.00		♦	♦				♦	

Source: Medicaid Analytic Extract Eligibility Anomalies 2008, unless otherwise noted below.

<sup>a</sup> FY 2008 FMAP available in Federal Register Vol. 71, No. 230, 2006 pp. 69209-69211.

<sup>b</sup> All states receive enhanced federal matching funds to extend health care coverage to uninsured low-income children under the Children's Health Insurance Program (CHIP). Some states have also opted to cover adults under their CHIP programs in 2008. States can use CHIP funding to expand Medicaid coverage (M-CHIP), to set up separate CHIP (S-CHIP) programs, or to provide both. S-CHIP children and adults, although sometimes reported in MSIS and MAX, are not Medicaid enrollees and are not included in the MAX 2008 chartbook.

<sup>c</sup> States have three options with regard to Medicaid eligibility for SSI recipients. In most states, SSI recipients are automatically enrolled in Medicaid without a separate Medicaid application. In SSI criteria states, SSI recipients are eligible for Medicaid but have to apply separately for the program. Section 209(b) states require a separate Medicaid application for SSI recipients and use more restrictive Medicaid eligibility requirements for SSI recipients than those of the SSI program.

<sup>d</sup> States have the option to implement medically needy programs, which extend Medicaid eligibility to additional qualified individuals who have too much income to qualify under the mandatory or optional categorically needy groups. This option allows these individuals to "spend down" to Medicaid eligibility by incurring medical and/or remedial care expenses to offset their excess income.

<sup>e</sup> States have the option to extend full Medicaid benefits to aged and disabled persons whose income does not exceed the FPL. If a state has implemented an expansion for the aged and disabled, the % FPL used for the expansion is noted. Individuals using this eligibility pathway are reported as Poverty-Related eligibles.

<sup>f</sup> States have the option to set a special income standard at up to 300 percent of the SSI level (\$1,911 per month in 2008) for individuals in nursing facilities and other institutions. Individuals using this eligibility pathway are reported as Other enrollees.

- *Other*: several other, generally small, specified populations are mandatorily eligible for Medicaid benefits, including certain working individuals with disabilities, recipients of adoption assistance and foster care, and special protected groups who can keep Medicaid for a period of time, including families who receive 6 to 12 months of Medicaid coverage following loss of eligibility under Section 1931 due to earnings, among others.<sup>3</sup>

In summary, state Medicaid programs are mandated to cover those who have low incomes and few resources and are aged people, disabled people, 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 for those 21 or older.

States have the option to cover certain people 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 CHIP children*. States can cover children at a higher income threshold than set for mandatory coverage.

<sup>3</sup> For more detail, see “Medicaid Eligibility: Mandatory Eligibility Groups” at [www.cms.hhs.gov](http://www.cms.hhs.gov).

The enactment of the CHIP in 1997 provided enhanced funding for states to expand Medicaid coverage for children up to 250 percent of poverty (or higher in some circumstances).<sup>4</sup>

- *Institutionalized aged and disabled*. States can cover the aged and people with disabilities 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.<sup>5</sup>

Table 1.1 shows key program characteristics for state Medicaid programs in 2008.

States may also choose to cover certain services that are not required by federal mandate, such as dental care or prescription drugs. As a result, the Medicaid program varies greatly between states. In 2008, all states covered several key optional services, such as prescription drugs and intermediate care facilities for the mentally retarded (ICF/MR), but states varied in coverage of some optional services, such as home health, personal care, private-duty nursing, and diagnostic screening (Kaiser Family Foundation 2009).

State variation in Medicaid coverage, with regard both to eligibility groups and to the services that are covered, can result in differences in enrollment rates and expenditures among states. Other factors—including the age distribution, the rate of poverty, the

<sup>4</sup> States also have the option to establish separate CHIP programs for children.

<sup>5</sup> Section 1115 waivers are also used to waive certain statutory and regulatory Medicaid provisions for research purposes and Medicaid demonstration projects.

use of managed care, and the rate of Medicaid reimbursement to providers within a state—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.

Readers should note that this chartbook reflects the Medicaid program as it existed in 2008. In particular, it reflects a baseline of Medicaid enrollment and utilization *before* the implementation of the Children’s Health Insurance Program Reauthorization Act (CHIPRA) of 2009 and the Affordable Care Act of 2010. Both these laws authorize states to expand Medicaid coverage in ways that may result in substantial shifts in states’ Medicaid populations as compared to enrollment in 2008. Authorized changes include large enrollment shifts such as the Affordable Care Act’s requirement that state Medicaid programs cover all individuals up to 133 percent of the FPL by 2014, including non-disabled adults without dependents as well as smaller changes, such as CHIPRA’s authorization for states to cover pregnant women through CHIP and the option to cover lawfully residing immigrant children and pregnant women in Medicaid and CHIP without a five-year waiting period. CHIPRA also offers financial incentives to state Medicaid programs that adopt policies that are expected to increase enrollment and retention for children.

## The Medicaid Analytic Extract

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 on age, race and ethnicity, monthly enrollment status, eligibility group, managed care and waiver enrollment, and use and costs of services during the year. MAX also includes

claims-level records that can be used for detailed analysis of patterns of service utilization, diagnoses, and cost of care among Medicaid enrollees.

Annual MAX data include eligibility and claims data for all Medicaid enrollees in 50 states and the District of Columbia. The data do not include information about Medicaid enrollees in Puerto Rico or other U.S. territories. All Medicaid CHIP expansion enrollees are included in MAX, but MAX contains only limited information for enrollees of separate CHIP programs. Medicaid-expansion CHIP enrollees, but not separate CHIP 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 CMS has collected from states since 1999, contain enrollee eligibility information and Medicaid claims paid in each quarter of the federal fiscal year (FFY).<sup>6</sup> In MSIS, claims are typically paid several months after service use, thus services do not always occur in the same period as the MSIS file. The MAX data system was developed to provide calendar-year utilization and expenditure information. MAX serves 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 the CMS Form-64, MAX enables the examination of Medicaid utilization and service expenditures at the enrollee level.

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

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

- 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 records in MAX.
- Changes in eligibility that are reported retroactively in MSIS are incorporated into MAX.
- 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 2008 MAX data system consists of a person summary (PS) file and four claims files for 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 or ILTC), prescription drug (Rx), and other service (OT)—contain claim-level detail regarding date of service, expenditures for utilized 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 information contained in the MAX files. Because it contains only

Medicaid-paid services, MAX does not capture service use or expenditures during periods of non-enrollment, services paid by other payers (including Medicare), 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, Medicaid payments to CMS for prescription drug coverage for dual enrollees, and payments to states to cover administrative costs. DSH payments, for example, accounted for about \$11.3 billion, or 5.2 percent, of total Medicaid expenditures in FFY 2009 (National Health Policy Forum 2009).

In particular, service utilization information in MAX may be missing or incomplete for certain groups, particularly (1) enrollees in both Medicaid and Medicare (dual enrollees), and (2) enrollees 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 captures 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.)

For enrollees in managed care plans, information in MAX is restricted to enrollment data, 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 believed 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 elsewhere in the chartbook.

People enrolled in comprehensive managed care plans, such as health maintenance organizations (HMOs), health insuring organizations (HIOs) and Programs of All-Inclusive Care for the Elderly (PACE), typically have few fee-for-service (FFS) claims and are thus excluded from all tables and figures describing FFS use by type of service. For this reason, FFS statistics from states with extensive comprehensive 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 tables, available on the MAX website (see Resources for MAX below), for information that may explain unusual patterns in each state's data. Maine was unable to accurately report its MSIS IP, LT, and OT claims, as it did not have a fully functional data system, so the MAX 2008 files contain only the PS and Rx information for Maine. Maine PS and Rx data are reported throughout the chartbook, but Maine is excluded from calculations of total and average expenditures that use IP, LT, or OT claims.

### Source Data Used in This Chartbook

The source data used for the chartbook are the MAX 2008 and earlier year PS files. Most of the statistics presented in the chartbook can be found in the summary tables CMS creates to validate the MAX data

system each year. The 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 in 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 following link:

- Medicaid Pharmacy Benefit Use and Reimbursement Statistical Compendium: [www.cms.hhs.gov/MedicaidDataSourcesGenInfo/08\\_MedicaidPharmacy.asp](http://www.cms.hhs.gov/MedicaidDataSourcesGenInfo/08_MedicaidPharmacy.asp)

At the time of this writing, MAX data were available for calendar years 1999 through 2008. 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 these websites:

- MAX website: [www.cms.hhs.gov/MedicaidDataSourcesGenInfo/07\\_MAXGeneralInformation.asp](http://www.cms.hhs.gov/MedicaidDataSourcesGenInfo/07_MAXGeneralInformation.asp)
- Research Data Assistance Center (ResDAC) (contains information about how to obtain CMS data): [www.resdac.umn.edu/Medicaid](http://www.resdac.umn.edu/Medicaid)
- Information on CMS privacy-protected data: [www.cms.gov/PrivProtectedData](http://www.cms.gov/PrivProtectedData)

## 2. National Overview

This chapter provides a national profile of Medicaid enrollees and their service utilization and expenditures in calendar year 2008.

The summary measures presented in this chapter reflect eligibility and coverage rules established by states regarding persons and services covered by the program. Because state Medicaid programs vary greatly, national measures can be disproportionately affected by large states like California, New York, and Texas. State-to-state differences can be substantial, so some national measures should be interpreted with caution. Chapter 3 presents Medicaid enrollment and utilization summary information at the state level.

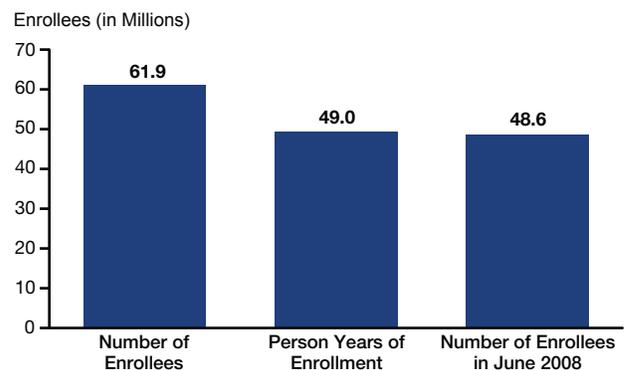
### Demographic Characteristics of All Medicaid Enrollees

Almost 62 million people—just over 20 percent of the U.S. population—were enrolled in Medicaid at some point in 2008. Because pathways to Medicaid eligibility, such as age, family status, and income, can change over time, Medicaid eligibility can be transitory. Only 57 percent of Medicaid enrollees in 2008 were enrolled for the entire year, accounting for 49 million person-years of Medicaid enrollment.<sup>7</sup>

<sup>7</sup> Unless otherwise noted, all national estimates presented in the chartbook are based on total national enrollment counts and expenditures for the United States rather than on averages of state-level estimates.

There were 48.6 million enrollees in Medicaid in June 2008 (Figure 2.1).

**Figure 2.1**  
Total Medicaid Enrollment in 2008

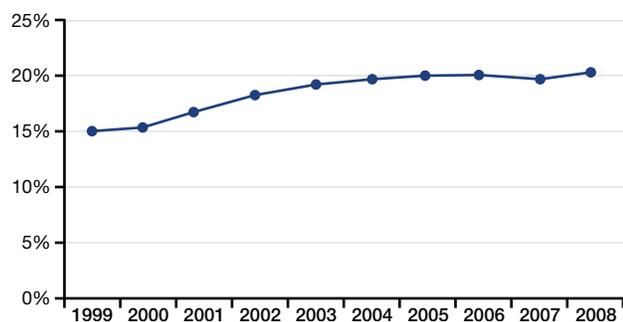


Source: Medicaid Analytic Extract, 2008.

Medicaid enrollment increased slowly between 2004 and 2008, rising from 19.8 to 20.3 percent of the U.S. population, an annualized rate of increase of less than 1 percent (Figure 2.2). By comparison, Medicaid enrollment increased more substantially between 1999 and 2004, with a 5.3 percent annual rate of increase. The rate of increase between 2002 and 2008 was lowest for aged enrollees (6 percent growth) and 9 to 10 percent for disabled, children, and adult enrollees (data not shown).

In 2008, just over half of Medicaid enrollees were children (Table 2.1): almost 54 percent of Medicaid enrollees were under age 21, including about 4 percent who were infants (under 1 year). In comparison,

**Figure 2.2**  
**Percentage of the Population Enrolled**  
**in Medicaid 1999-2008**



Source: Medicaid Analytic Extract, 1999-2008

working-age adults (21 to 64) accounted for 36 percent of Medicaid enrollees. The elderly made up only about 10 percent of all Medicaid enrollees.

Whites comprised 44 percent of the Medicaid population and were the largest racial/ethnic group enrolled in Medicaid in 2008. An additional 23 percent of enrollees were African American. Smaller percentages were Asian (3 percent), Native American (2 percent), or Pacific Islander (1 percent). Twenty-five percent of enrollees were Hispanic or Latino. Increasingly, states identify enrollees as “unknown race” in MSIS and MAX, with about 28 percent of enrollees thus identified in 2008, compared to less than 10 percent in 2004. Among reasons for the increase in unknown race status are that states have increasingly eliminated the requirement for in-person applications for Medicaid and that fewer states require applicants to self-report race in their Medicaid applications.

Almost 60 percent of Medicaid enrollees in 2008 were female. The gender disparity was driven largely by the number of women who qualified for Medicaid when they were pregnant and later, to some extent, because they were primary caretakers for children enrolled in Medicaid (Kaiser Family Foundation 2004). Moreover, some states maintained large

**Table 2.1**  
**Characteristics of Medicaid Enrollees in 2008**

	Number of Enrollees	Percentage of Enrollees
<b>All Enrollees</b>	61,913,681	100.0
<b>Person-Years of Enrollment</b>	48,976,718	
<b>Enrolled All Year</b>	35,290,798	57.0
Aged	4,010,025	73.6
Disabled	7,746,144	80.2
Children	17,276,270	56.6
Adults	6,229,012	38.4
<b>Age</b>		
0 years	2,433,066	3.9
1-20 years	30,764,414	49.7
21-64 years	22,530,748	36.4
65 years and older	6,083,932	9.8
<b>Gender</b>		
Male	25,322,696	40.9
Female	36,529,072	59.0
<b>Race</b>		
White	27,253,475	44.0
African American	14,143,556	22.8
Asian	1,905,102	3.1
Native American	951,334	1.5
Pacific Islander	690,279	1.1
Unknown	17,265,935	27.9
<b>Ethnicity</b>		
Hispanic or Latino	15,251,180	24.6

Source: Medicaid Analytic Extract, 2008.

family-planning programs that targeted women of childbearing age.

### **Eligibility Characteristics**

Each Medicaid enrollee is classified by two eligibility groups, a Basis of Eligibility (BOE) group *and* a Maintenance Assistance Status (MAS) group. The four BOE groups are:

1. *Children*: persons under age 18, or up to age 21 in states electing to cover older children
2. *Adults*: pregnant women and caretaker relatives in families with dependent (minor) children<sup>8</sup>

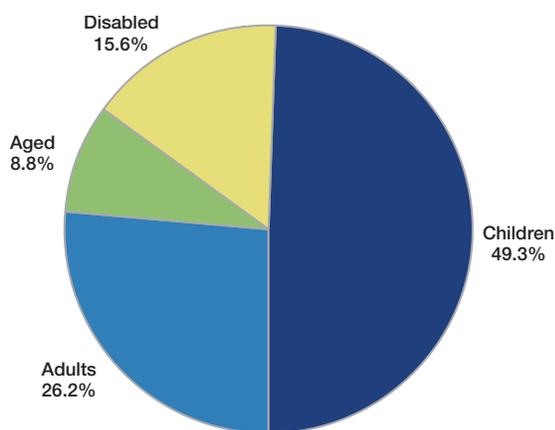
<sup>8</sup> Most caretaker relatives of dependent children are parents, but that group can also include other family members serving as caretakers, such as aunts or grandparents.

3. *Aged*: people aged 65 or older
4. *Disabled*: persons (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 has lasted or can be expected to last for a continuous period of not less than 12 months.<sup>9</sup>

Working-age adults who are not disabled and have no dependent children typically do not qualify for Medicaid. The exceptions are states that have obtained Section 1115 Medicaid waivers to cover this group (see Chapter 7 on Waiver Enrollment and Utilization for more detail on these programs).

Figure 2.3 shows the composition of Medicaid enrollees by BOE in 2008. Those in the child category made up about half of all enrollees; eligible adults accounted for just over a quarter of Medicaid enrollees; smaller shares were aged (9 percent) and disabled (16 percent). The BOE groups generally correspond to age, but there are some differences.

**Figure 2.3**  
**Medicaid Enrollment by Basis of Eligibility in 2008**



Source: Medicaid Analytic Extract, 2008

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

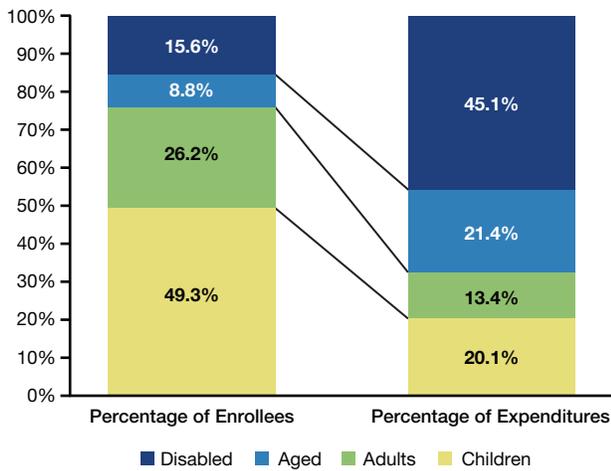
Children and adults under 65 who are eligible for Medicaid because of disabilities are reported to the disabled eligibility group. People over 65 with disabilities are usually reported in the aged category, but some states report them as disabled.

Although Medicaid enrollees who were aged or eligible on the basis of disability were the smallest eligibility groups in 2008, these enrollees tended to have longer enrollment periods than children and adults. Length of Medicaid enrollment in 2008 varied substantially by eligibility group, with more of the aged and those eligible on the basis of disability enrolled for the full year (74 and 80 percent, respectively) than children and adults (57 and 38 percent, respectively) (Table 2.1). One explanation for this trend is that once aged and disabled enrollees are eligible, the factors related to Medicaid qualification are unlikely to change. Children and non-disabled adults, however, may be more likely to experience changes in family status and income. In addition, children may age out of eligibility.

Enrollees who were aged or disabled constituted only a quarter of all Medicaid enrollees in 2008, but they accounted for 66 percent of Medicaid expenditures (Figure 2.4). This was a smaller proportion of expenditures than in previous years; in 2002 and 2004, enrollees who were aged or eligible on the basis of disability accounted for over 80 percent of Medicaid expenditures (Wenzlow et al. 2007; Perez et al. 2008). In 2008, close to half of all expenditures (45 percent) paid on behalf of enrollees were for people with disabilities; another 21 percent were spent on the aged. In comparison, children accounted for 20 percent and adults accounted for 13 percent of all Medicaid expenditures in 2008.

While BOE represents the population subgroup through which a person becomes eligible for Medicaid, MAS reflects the primary financial eligibility criteria met by the enrollee. The five MAS groups include:

**Figure 2.4**  
**Medicaid Enrollment and Expenditure by Basis of Eligibility in 2008**



Source: Medicaid Analytic Extract, 2008

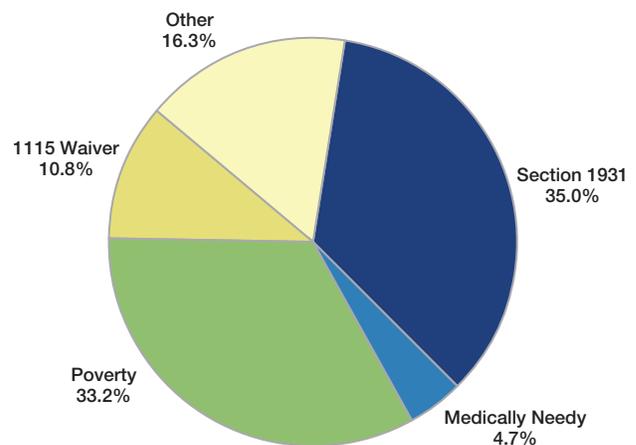
1. *Section 1931/Cash Assistance.* People receiving SSI benefits and those covered under Section 1931 of the Social Security Act. Section 1931 requires that states cover children in households with income below the state’s 1996 cash assistance eligibility thresholds. These income eligibility levels are below 100 percent of the FPL in all states and well below that level in many states.
2. *Medically needy.* People qualifying through the medically needy provision (a state option) that allows a higher income threshold than required by the cash assistance level; people 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.
3. *Poverty-related.* People qualifying through any poverty-related Medicaid expansions that the state enacted from 1988 on; this includes Medicare cost-sharing dual enrollees as well as children and adults who are covered at levels above the state’s Section 1931 and cash assistance levels.

4. *Section 1115 waiver.* People eligible only through a state 1115 waiver program that extends benefits to certain otherwise-ineligible groups.
5. *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 services (HCBS) care waivers, and immigrants who qualify for emergency Medicaid benefits only.

People qualifying under Section 1931 rules comprised the largest MAS subgroup (35 percent) in 2008 (Figure 2.5). Almost as many (33 percent) were eligible through poverty-related rules. Nearly 11 percent were eligible under a state 1115 waiver program, and almost 5 percent were medically needy. Sixteen percent qualified under other eligibility criteria.

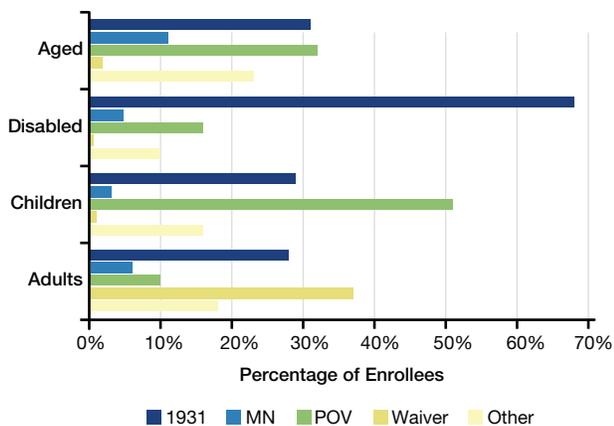
Rates of enrollment in MAS categories varied markedly by eligibility group (Figure 2.6). Qualification under Section 1931 rules remained the primary route to Medicaid eligibility among enrollees eligible on

**Figure 2.5**  
**Medicaid Enrollment by Maintenance Assistance Status in 2008**



Source: Medicaid Analytic Extract, 2008  
 Note: 1115 Waiver category includes individuals who are covered under 1115 demonstration expansion programs.

**Figure 2.6**  
Maintenance Assistance Status by Basis of Eligibility in 2008



Source: Medicaid Analytic Extract, 2008  
1931 = Section 1931; MN = medically needy; Pov = Poverty-related eligible; Waiver = 1115 Waiver

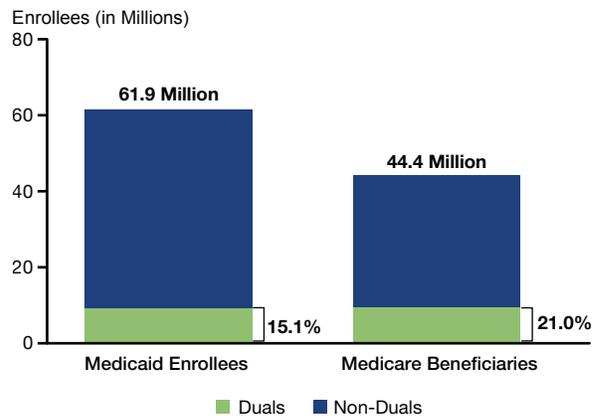
the basis of disability. By comparison, aged enrollees qualified almost equally through Section 1931 and poverty-related rules. Section 1115 waiver programs were the most common route to Medicaid eligibility for adults. Just over half of all child enrollees qualified for Medicaid through poverty criteria.

### Dual Enrollees

Most Medicaid enrollees who are aged or eligible on the basis of disability are also enrolled in Medicare. These enrollees are commonly referred to as “dual enrollees” or simply “duals.” Medicare enrollment is identified in MAX by a match to the Medicare EDB. In this chartbook, dual enrollees are defined as those in the Medicaid data files with matching records in the EDB, indicating dual enrollment in Medicare and Medicaid for at least one month in 2008.

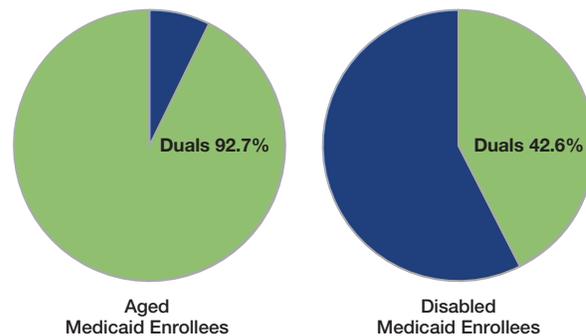
In total, there were about 9.3 million duals in 2008. They represented 15 percent of the 61.9 million Medicaid enrollees and 21 percent of all Medicare beneficiaries that year (Figure 2.7). Nationally, almost 93 percent of aged enrollees and 43 percent of enrollees eligible on the basis of disability were duals in 2008 (Figure 2.8).

**Figure 2.7**  
Ever Enrolled in Both Medicare and Medicaid in 2008



Source: Medicaid Analytic Extract 2008; 2009 Medicare and Medicaid Statistical Supplement

**Figure 2.8**  
Percentage Ever Dually Enrolled in Both Medicare and Medicaid in 2008



Source: Medicaid Analytic Extract, 2008

Because duals are among the most vulnerable and costly Medicaid enrollees, we examine their enrollment characteristics, service use, and expenditures separately in Chapter 5. In reviewing information presented on duals in this and subsequent chapters, readers should bear in mind that Medicare covers most acute-care services for duals. Medicaid utilization and expenditures therefore understate their overall use and cost of those services. Among duals, Medicaid utilization and expenditure statistics for Medicare-covered services represent payments for Medicare cost-sharing only. For other services, such

as long-term care, Medicare provides only limited coverage. Therefore, Medicaid utilization and expenditure measures provide a fairly complete picture of overall use of these services by dual enrollees.

### Restricted-Benefit Enrollees

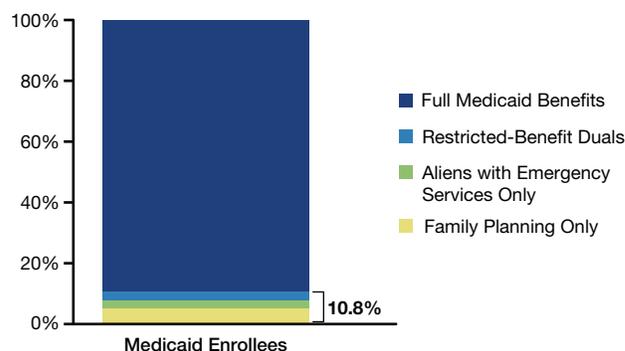
Most Medicaid enrollees, including duals, qualify for the full range of Medicaid benefits provided in their state. However, a subset of enrollees receives only very limited health coverage; they are referred to as “restricted-benefit” enrollees. These include (1) aliens eligible for emergency services only, (2) duals receiving coverage for Medicare premiums and cost sharing only, and (3) people receiving only family planning services. These three groups of restricted-benefit enrollees accounted for about 11 percent of Medicaid enrollees in 2008 (Figure 2.9). As Figure 2.10 shows, service utilization and expenditures for these enrollees differ notably from those of full-benefit enrollees.

In this chartbook, we restrict analyses of service use and costs to enrollees receiving full Medicaid benefits. Persons eligible only for limited services are not included, because they can distort average per capita expenditure estimates, particularly in states with relatively large restricted-benefit populations. Some states also offered somewhat reduced benefits to some Section 1115 waiver enrollees, but these benefits are generally more extensive than the benefits offered to the restricted-benefit enrollees, and these enrollees are included in counts of full-benefit enrollees.

### Managed Care Enrollment Among Full-Benefit Enrollees

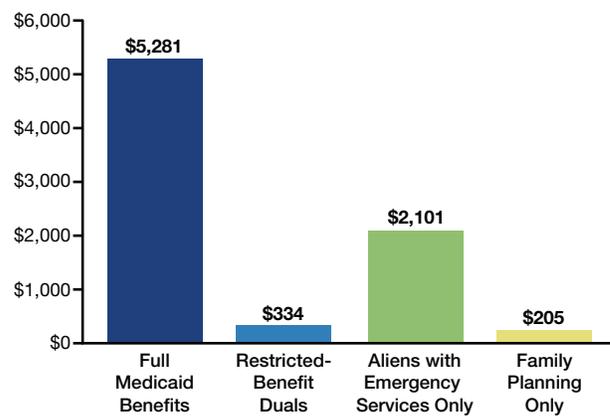
Medicaid managed care plans provide a defined bundle of health services in return for a fixed monthly fee from the state Medicaid program.

**Figure 2.9**  
Medicaid Enrollees Receiving Only Restricted Medicaid Benefits in 2008



Source: Medicaid Analytic Extract, 2008  
Dual = Ever enrolled in both Medicare and Medicaid in 2008

**Figure 2.10**  
Average Medicaid Expenditures Per Enrollee by Type of Benefits in 2008



Source: Medicaid Analytic Extract 2008.  
Maine was unable to accurately report its inpatient, long-term care, and other services claims as it did not have a fully functional MMIS. Maine is excluded from national averages and other estimates that include these claims.

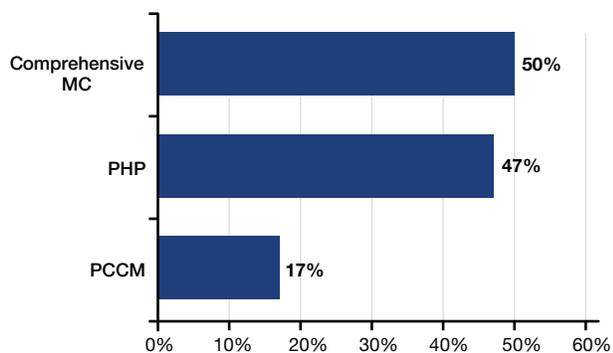
The MAX data system shows enrollment in three general types of managed care: (1) comprehensive managed care, including HMOs, HIOs and PACE; (2) prepaid health plans (PHPs); and (3) primary care case management (PCCM) plans.

For the most part, comprehensive managed care plans are prepaid plans that cover most health services for their enrollees. PHPs typically provide more limited services, and coverage varies greatly by plan. They may, for example, cover only dental

care or behavioral health services or non-emergency transportation services. PCCMs are the least comprehensive managed care type identified in MAX. PCCMs involve the payment of a small premium (often a few dollars per month) for case management services only. Even though care provided by PCCMs is reported as managed care in MAX, most of the services provided to these enrollees are on an FFS basis. In some states, PCCM premiums are not paid unless case management services are delivered.

In 2008, almost 83 percent of all full-benefit Medicaid enrollees were enrolled in some type of managed care plan, and some were enrolled in multiple types of managed care plans. Half of all full-benefit Medicaid enrollees (50 percent) were in comprehensive managed care at some point in 2008. Almost the same proportion (47 percent) were enrolled in PHPs, and 17 percent were in PCCMs (Figure 2.11). Enrollees can be enrolled in multiple types of managed care in a given month. For example, enrollees in comprehensive managed care can also be enrolled in a PHP that provides specialty services, such as

**Figure 2.11**  
**Percentage Ever Enrolled in Managed Care (MC) in 2008, by Type of Plan**

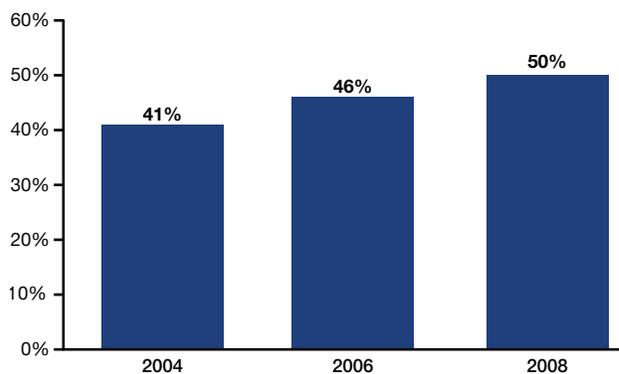


Source: Medicaid Analytic Extract, 2008  
 Comprehensive MC = HMO/HIO or PACE; PHP = prepaid health plan; PCCM = Primary Care Case Management.  
 Enrollment counts include all individuals ever enrolled in managed care plan type during 2008. Individuals may be enrolled in multiple managed care plan types during the year.

behavioral health care, dental care, or transportation. Enrollees may also switch to different types of managed care enrollment during the year.

Medicaid managed care enrollment has increased notably since 2004. In particular, enrollment in comprehensive managed care increased 22 percent between 2004 and 2008, from 41 to 50 percent of all Medicaid enrollees (Figure 2.12). For information about managed care enrollment combinations and patterns, see Chapter 4.

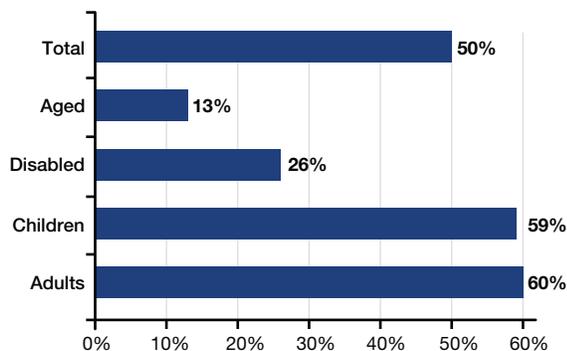
**Figure 2.12**  
**Percentage of All Medicaid Enrollees Enrolled in Comprehensive Managed Care, 2004–2008**



Source: Medicaid Analytic Extract, 2004–2008.  
 Comprehensive managed care = HMO/HIO or PACE.

Children and adults were more likely than the aged or disabled to be enrolled in comprehensive managed care: almost 60 percent of children and adults were enrolled in such care at some point in 2008 (Figure 2.13), compared with only 26 percent of disabled enrollees and 13 percent of aged enrollees. States are generally less likely to enroll dual enrollees in comprehensive managed care, and the high rates of dual enrollment among the aged may help to explain their traditionally low managed care rates. Although rates of comprehensive managed care enrollment remained low among aged enrollees and enrollees eligible on the basis of disability in 2008, they have increased since 2004, when such rates

**Figure 2.13**  
**Percentage of Medicaid Enrollees Ever Enrolled in Comprehensive Managed Care in 2008, by Basis of Eligibility**



Source: Medicaid Analytic Extract, 2008  
 Comprehensive Managed Care = HMO/HIO or PACE enrollment.

among these populations were 9 and 18 percent, respectively (Perez et al. 2008).

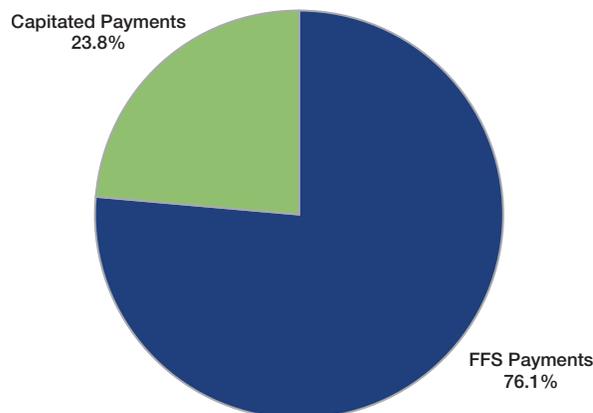
### Total Medicaid Expenditures for Full-Benefit Enrollees

Medicaid spent over \$288 billion on services for full-benefit enrollees in 2008, or about \$5,300 per enrollee (data not shown).<sup>10</sup> Among those with full benefits, FFS payments accounted for most (76 percent) of the Medicaid expenditures in 2008 (Figure 2.14). This rate, while high, represents a decline from 2004, when FFS payments accounted for about 83 percent of Medicaid expenditures on full-benefit enrollees (Perez et al. 2008) About a quarter of Medicaid expenditures (24 percent) for full-benefit enrollees were premiums (capitation payments) to managed care organizations.

Because a person can be enrolled in Medicaid managed care and FFS at different points in a year, Medicaid may make both capitation and FFS payments for managed care enrollees during the year. In addition, some managed care plans “carve out”

<sup>10</sup> Medicaid spent over \$293 billion on services for all enrollees in 2008.

**Figure 2.14**  
**Fee-for-Service (FFS) and Capitated Payments Among Full-Benefit Medicaid Enrollees in 2008**



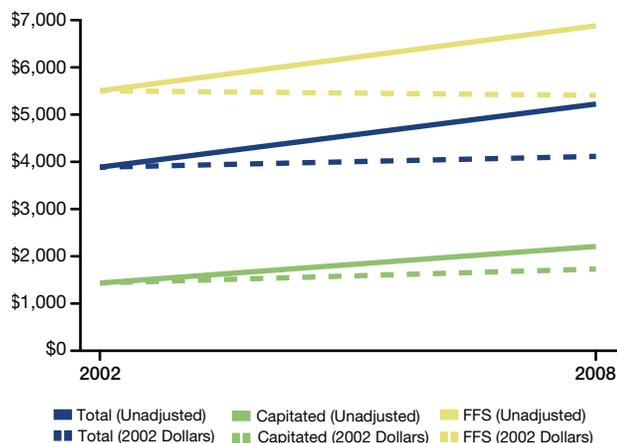
Source: Medicaid Analytic Extract, 2008  
 Maine was unable to accurately report its inpatient, long-term care, and other services claims as it did not have a fully functional MMIS. Maine is excluded from national averages and other estimates that include these claims.

certain services (for example, behavioral health care) from the plan. These services may be paid for on an FFS basis. In 2008, total Medicaid expenditures for the average comprehensive managed care enrollee included about \$1,100 in FFS expenditures in addition to about \$2,200 in capitation payments. Finally, most services used by people enrolled in PHP or PCCM plans are paid under FFS arrangements.

As noted in Chapter 1, MAX contains information on Medicaid monthly premium payments on behalf of managed care enrollees and limited encounter claims. Therefore, it is not possible to measure the service utilization of comprehensive managed care enrollees at this time. For this reason, analyses in this chartbook based on expenditures separate full-benefit Medicaid enrollees into two groups: (1) persons enrolled in comprehensive managed care at some point during the year; and (2) full-benefit enrollees with no comprehensive managed care enrollment, called FFS enrollees.

Average expenditures per full-benefit enrollee—including FFS enrollees and those in comprehensive

**Figure 2.15**  
**Per-Enrollee Expenditure Trends Among Full-Benefit Enrollees (in Unadjusted and 2002 Dollars), 2002-2008**



Source: Medicaid Analytic Extract, 2002-2008  
 Note: Capitated dollars are per comprehensive managed care enrollee; FFS dollars are per FFS enrollee.  
 Maine was unable to accurately report its inpatient, long-term care, and other services claims in 2008 as it did not have a fully functional MMIS. Maine is excluded from national averages and other estimates that include these claims.

managed care—rose by almost 33 percent between 2002 and 2008. In 2002 dollars, the increase over the seven-year period was 4 percent (Figure 2.15).<sup>11</sup> This increase stands in contrast to the 5 percent decline in adjusted expenditures per enrollee between 1999 and 2002 (Wenzlow et al. 2007).

Figure 2.15 also shows trends in capitated expenditures for comprehensive managed care enrollees and FFS expenditures for FFS enrollees. When measured in 2002 dollars, average capitated payments per enrollee in comprehensive managed care rose by 17 percent between 2002 and 2008, while FFS expenditures per FFS enrollee declined by about 2 percent. 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 and shorter periods of enrollment, average expenditures

<sup>11</sup> The following Current Price Index was used to adjust expenditures: U.S. City Average, All Urban Consumer, Medical Care Series Total (CUUR0000SAM) (U.S. Department of Labor, Bureau of Labor Statistics).

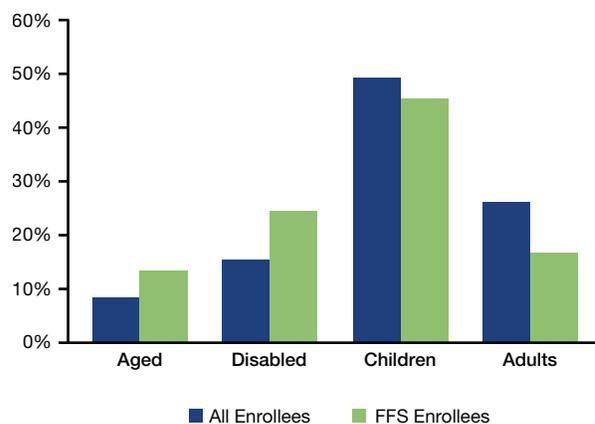
for FFS enrollees are not directly comparable to those of enrollees in comprehensive managed care.

## Medicaid FFS Utilization and Expenditures Among FFS Enrollees

MAX data for a given year contain Medicaid FFS claims with the date of service in that year, which permits analyses of patterns of service use and expenditures by type among full-benefit FFS enrollees. In 2008, there were about 27.5 million FFS enrollees nationally. Children and, particularly, adults comprise a smaller percentage of FFS enrollees than of all Medicaid enrollees (Figure 2.16). This pattern is caused by relatively high rates of comprehensive managed care enrollment among children and adults and by large groups of adults with restricted benefits in some states. Of the FFS enrollees, about 45 percent were children, 24 percent were eligible due to disability, 17 percent were adults, and 13 percent were aged.

FFS expenditures reported in MAX include all FFS payments made by Medicaid, but they may not be

**Figure 2.16**  
**Percentage of Enrollees by Basis of Eligibility in 2008, by Benefit Status**

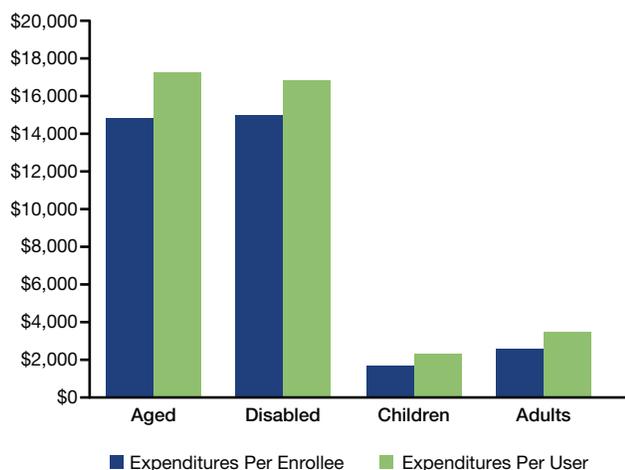


Source: Medicaid Analytic Extract 2008.  
 FFS Enrollees = full-benefit enrollees not enrolled in comprehensive managed care (HMO/HIO/PACE) enrollment in 2008.

representative of the costs of covering all Medicaid enrollees. First, FFS expenditures exclude capitation payments made to managed care organizations. Moreover, because most services are covered under capitation for those enrolled in comprehensive managed care, these people are excluded from analyses of FFS expenditures. In states with high comprehensive managed care penetration, the people who remain in FFS coverage may not be comparable to other Medicaid enrollees in the state. Readers should also keep in mind that national rates of FFS expenditures and utilization are based on varied subpopulations of enrollees across states.

Average FFS expenditures were much higher for the aged and those eligible on the basis of disability than for children and adults (Figure 2.17). FFS costs were close to \$15,000 per FFS enrollee in the aged or disabled groups. In comparison, FFS costs among children and adults averaged about \$1,800 and \$2,700, respectively. As noted previously, these differences

**Figure 2.17**  
**FFS Expenditures Among FFS Enrollees in 2008, by Basis of Eligibility**



Source: Medicaid Analytic Extract, 2008  
 FFS enrollees = full benefit enrollees not enrolled in comprehensive managed care (HMO/HIO or PACE) in 2008  
 Maine was unable to accurately report its inpatient, long-term care, and other services claims as it did not have a fully functional MMIS. Maine is excluded from national averages and other estimates that include these claims.

can be attributed to differences in service use among these different populations. Enrollees who were aged or eligible on the basis of disability also generally had longer periods of enrollment than children and adults, which may have contributed to their higher expenditures per enrollee in 2008.

Most FFS enrollees (83 percent) used at least one service in 2008 (data not shown). Mirroring expenditure patterns, the highest rates of service use were among enrollees who were aged or eligible on the basis of disability, 89 percent and 86 percent respectively, using at least one Medicaid service in 2008. About 81 percent of FFS children and 75 percent of FFS adults used services in 2008.

Medicaid services are categorized into 30 types of services in MAX. These service types can be grouped into four general categories that correspond to the four types of claim files available in MAX: inpatient, institutional long-term care (ILTC), prescription drug (Rx), and “other.” While inpatient and Rx files contain individual types of services, ILTC claims are composed of several services, including:

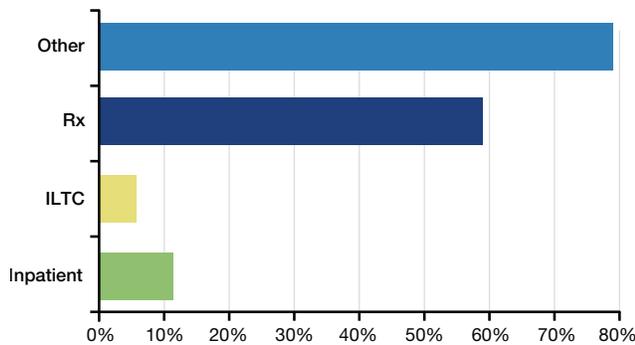
- Nursing facility services
- Intermediate care facilities for the mentally retarded (ICF/MR)
- Mental hospital services for the aged
- Inpatient psychiatric facility services for people under age 21

Other service claims consist of all claims, primarily claims for ambulatory care, not included in the other three groups. These include HCBS 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 the broad category of “other” services

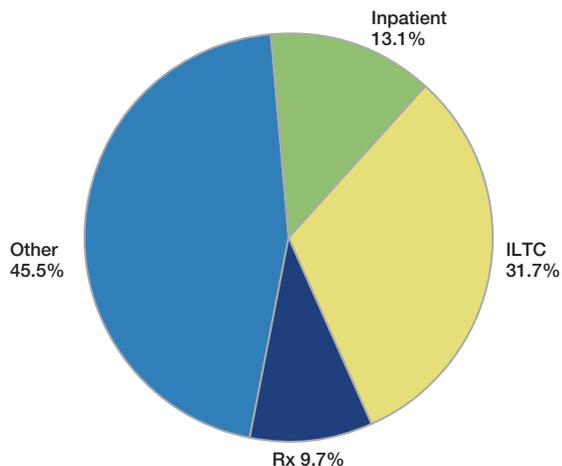
(Figure 2.18).<sup>12</sup> Seventy-nine percent of FFS enrollees used an “other” service in 2008. Other services also accounted for the largest share (almost 46 percent) of FFS expenditures (Figure 2.19).

**Figure 2.18**  
**Percentage of FFS Enrollees Using Services in 2008, by Type of Service**



Source: Medicaid Analytic Extract, 2008.  
 FFS enrollees = full-benefit enrollees not enrolled in comprehensive managed care (HMO/HIO or PACE) in 2008.  
 Maine was unable to accurately report its inpatient, long-term care, and other services claims as it did not have a fully functional MMIS. Maine is excluded from national averages and other estimates that include these claims.

**Figure 2.19**  
**Composition of Medicaid FFS Expenditures Among FFS Enrollees in 2008, by Type of Service**



Source: Medicaid Analytic Extract, 2008.  
 FFS enrollees = full-benefit enrollees not enrolled in comprehensive managed care (HMO/HIO or PACE) in 2008.  
 Maine was unable to accurately report its inpatient, long-term care, and other services claims as it did not have a fully functional MMIS. Maine is excluded from national averages and other estimates that include these claims.

<sup>12</sup> 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.

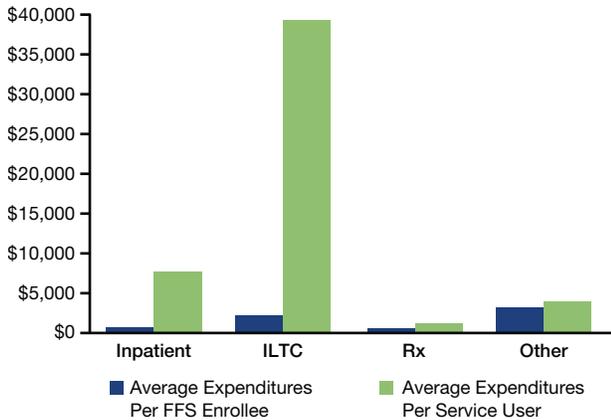
Prescription drug services were used by 59 percent of FFS enrollees and were the most utilized service after “other.” This represented a decline from almost 70 percent of FFS enrollees in 2004 (Perez et al. 2008). Moreover, although utilization rates for prescription drugs were relatively high in 2008, expenditures for these services represented the smallest share of expenditures, at about 10 percent of all FFS expenditures in 2008. This decline in prescription drug utilization and expenditures reflects the implementation of Medicare Part D in 2006, which shifted prescription drug costs for dual eligibles to Medicare.

Inpatient services were used by 11 percent of FFS enrollees in 2008 and accounted for about 13 percent of FFS expenditures in the FFS subpopulation. Of note, Medicare also covers most inpatient services for duals, so Medicaid expenditures for inpatient services do not represent total expenditures for these services.

ILTC had the lowest rate of utilization in 2008, with less than 6 percent of FFS enrollees using it during the year. Despite low utilization rates, ILTC services accounted for almost 32 percent of all FFS expenditures, the second-largest share of FFS expenditures. These services had the highest costs per user, about \$39,300 in 2008 (Figure 2.20).

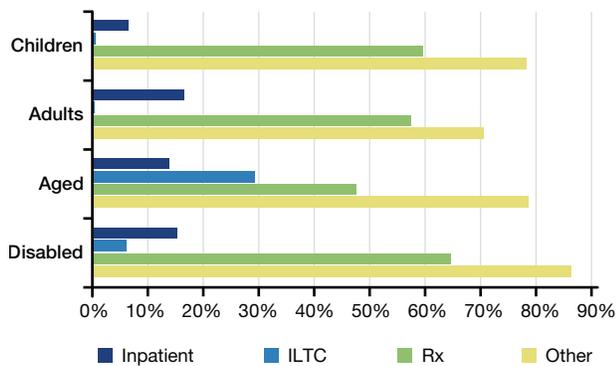
FFS utilization and expenditures vary somewhat by basis of eligibility (Figure 2.21). All eligibility groups used “other” and prescription drug services at a relatively high rate in 2008. About 7 percent of children had claims for inpatient services, a somewhat lower rate than the rates for adults, aged, and enrollees with disabilities (between 14 and 16 percent in each group). The greatest variation by eligibility group was in ILTC use. About 29 percent of aged enrollees and 6 percent of enrollees eligible on the basis of disability used ILTC services, compared to only 0.3 percent of children and 0.1 percent of adults.

**Figure 2.20**  
Average FFS Expenditures Among FFS Enrollees in 2008, by Type of Service



Source: Medicaid Analytic Extract 2008.  
FFS enrollees = full-benefit enrollees not enrolled in comprehensive managed care (HMO/HIO or PACE) in 2008.  
Maine was unable to accurately report its inpatient, long-term care, and other services claims as it did not have a fully functional MMIS. Maine is excluded from national averages and other estimates that include these claims.

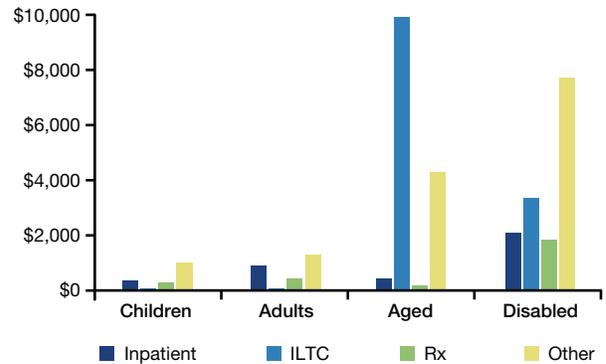
**Figure 2.21**  
Percentage of FFS Enrollees Using Services in 2008, by Basis of Eligibility



Source: Medicaid Analytic Extract, 2008.  
FFS enrollees = full-benefit enrollees not enrolled in comprehensive managed care (HMO/HIO or PACE) in 2008.  
Maine was unable to accurately report its inpatient, long-term care, and other services claims as it did not have a fully functional MMIS. Maine is excluded from national averages and other estimates that include these claims.

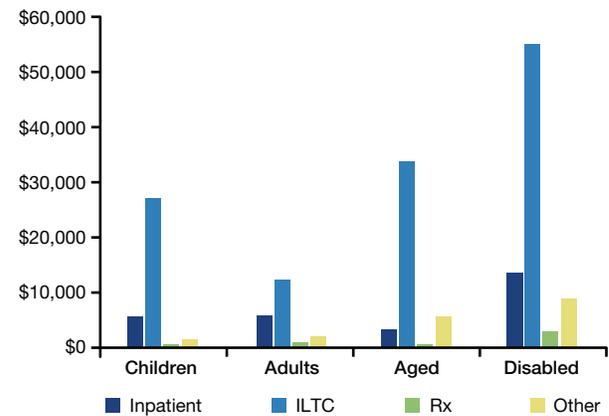
For each type of service, the difference between expenditures per enrollee and per user were striking (Figure 2.20). For all but aged enrollees, expenditures per enrollee were highest for “other” services (Figure 2.22). While less than 30 percent of aged and less than 10 percent of disabled enrollees used ILTC

**Figure 2.22**  
Per-Enrollee FFS Expenditures Among FFS Enrollees in 2008, by Basis of Eligibility



Source: Medicaid Analytic Extract, 2008.  
FFS enrollees = full-benefit enrollees not enrolled in comprehensive managed care (HMO/HIO or PACE) in 2008.  
Maine was unable to accurately report its inpatient, long-term care, and other services claims as it did not have a fully functional MMIS. Maine is excluded from national averages and other estimates that include these claims.

**Figure 2.23**  
FFS Expenditures per User Among FFS Enrollees in 2008, by Basis of Eligibility



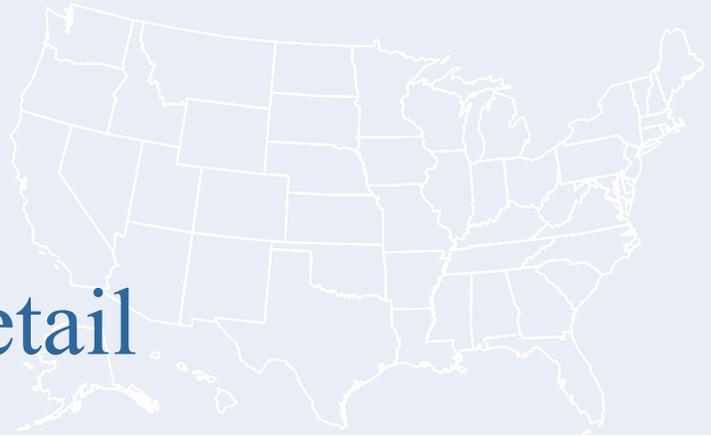
Source: Medicaid Analytic Extract, 2008.  
FFS enrollees = full-benefit enrollees not enrolled in comprehensive managed care (HMO/HIO or PACE) in 2008.  
Maine was unable to accurately report its inpatient, long-term care, and other services claims as it did not have a fully functional MMIS. Maine is excluded from national averages and other estimates that include these claims.

services in 2008, expenditures per enrollee were substantial for both. On a per-user basis, however, expenditures for ILTC services surpassed those for any other service for all eligibility groups (Figure 2.23), ranging from about \$12,250 per adult user to \$55,200 per disabled user.

The utilization and expenditure measures presented in this chapter are examples of analyses that are possible using the MAX data system. The utilization and expenditures of other population subgroups and service types are also worthy of investigation. Chapter 5 describes FFS expenditures for dual

enrollees. Chapter 6 presents detailed service-type utilization and expenditure information among all FFS enrollees as well as separately for FFS duals. In the following chapter, we examine variation in Medicaid enrollment, utilization, and expenditures across states.

## 3. State-Level Detail



The Social Security Act mandates that state Medicaid programs cover both a minimum set of services and a minimum defined population of eligible persons. Beyond this mandate, states have a great deal of flexibility in determining their Medicaid program's eligibility criteria and benefits (see Chapter 1 for details). Because each state has a distinct Medicaid program, there is significant variation in the composition of Medicaid enrollees, Medicaid utilization, and Medicaid expenditures across states.

The source of state-level variation is multidimensional. States differ in their demographic characteristics and economic status. States with particularly large elderly, disabled, and poor populations generally have more Medicaid-eligible residents as a share of their total population. When considering expenditures, additional factors affect state-level variation. As noted in Chapter 1, the FMAP varied between 50 and 76 percent in 2008, with higher matching allocated to states with lower per capita income. The variation in the FMAP produces variation in the net cost of Medicaid-covered services 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 rates to medical facilities, physicians, and other practitioners for Medicaid-covered services. Thus, the cost of care and incentives to use certain services varies throughout the United States.

Despite the numerous factors that affect state Medicaid programs, common federal guidelines and a common data-reporting system (MSIS) 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 expand on the summary national Medicaid enrollment, utilization, and expenditures presented in Chapter 2 to examine variation on these measures across states. Although we discuss some of the characteristics that may explain observed differences between states, this 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 MAX 2008 anomaly tables available on the MAX website. In addition to identifying anomalous data, the anomaly tables document unusual aspects of state Medicaid programs that might affect data in MAX. This information is particularly useful for interpreting summary measures at the state level.

## Demographic Characteristics

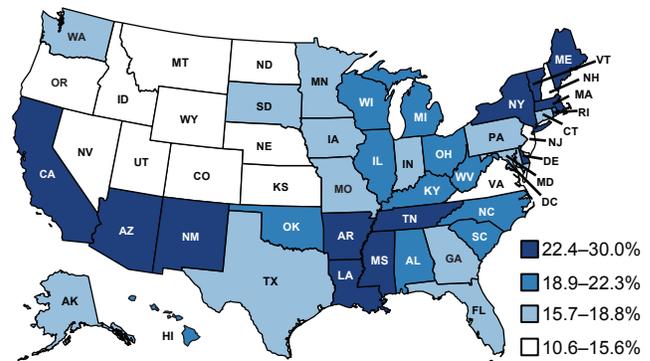
Almost 62 million people were enrolled in Medicaid in 2008, from nearly 75,000 in North Dakota to almost 11 million in California (Table 3.1). Enrollees in the three most populated states in the United States—California, New York, and Texas—made up one-third of all Medicaid enrollees in 2008.<sup>13</sup> National averages can be strongly affected by these states and can thus be poor indicators of the characteristics of Medicaid enrollees in any individual state.

Medicaid enrollment ranged from about 11 percent of the population of four states—Montana, Nevada, New Hampshire, and Utah—to almost 30 percent in the District of Columbia and California (Table 3.1 and Appendix Table A3.1). Medicaid is a means-tested program, and high Medicaid enrollment often indicates a high poverty rate. For example, Medicaid enrollment rates are high in southern states with high poverty levels (Figure 3.1).<sup>14</sup> Other factors, such as the generosity of state eligibility criteria, also influence Medicaid enrollment. California, for example, has the Family Planning, Access, Care and Treatment Program, which has received funding through an 1115 waiver since 1999. This program had about 2.5 million enrollees in 2008 and caused California to have the highest rate of Medicaid enrollment in the nation (29.7 percent) in 2008. Similarly, Massachusetts, Vermont, and Wisconsin, which had high rates of Medicaid enrollment in 2008 despite relatively low poverty rates, had large 1115 waivers that expanded Medicaid eligibility to relatively higher-income children and adults.

<sup>13</sup> State population estimates were taken from U.S. Census reports at: [www.census.gov/geo/www/guidestloc/guide\\_main.html](http://www.census.gov/geo/www/guidestloc/guide_main.html).

<sup>14</sup> Estimates of the percentage of the population below the FPL are drawn from the U.S. Census Bureau, American Community Survey, 2008, available at: [www.census.gov/prod/2010pubs/acsbr09-1.pdf](http://www.census.gov/prod/2010pubs/acsbr09-1.pdf).

**Figure 3.1**  
Percentage of the Population (in Quartiles) Enrolled in Medicaid in 2008



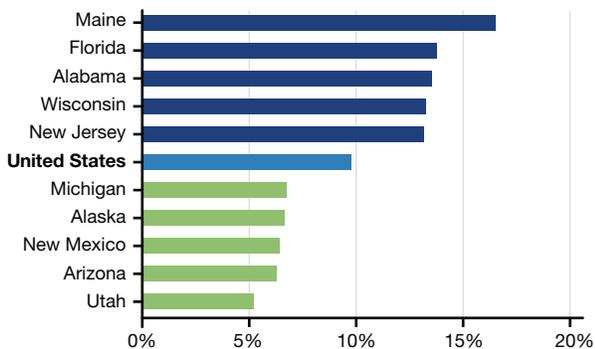
**Table 3.1**  
**Medicaid Enrollment in 2008**

	Number of Enrollees	Percentage of State Population	Percentage of Enrollees Enrolled All Year	Total Person-Years of Enrollment	Numbers of Enrollees in June 2008
<b>United States</b>	<b>61,913,681</b>	<b>20.3</b>	<b>57.0</b>	<b>48,976,718</b>	<b>48,593,228</b>
Alabama	916,430	19.6	62.1	762,354	755,672
Alaska	127,790	18.6	48.3	96,316	97,003
Arizona	1,604,077	24.7	46.3	1,182,049	1,169,007
Arkansas	766,658	26.7	57.2	623,541	617,739
California	10,865,324	29.7	50.8	8,289,552	8,268,683
Colorado	581,888	11.8	46.6	428,818	424,873
Connecticut	562,169	16.0	67.7	474,931	473,188
Delaware	197,291	22.5	52.3	154,974	153,064
District of Columbia	172,321	29.2	69.2	146,337	144,242
Florida	3,096,697	16.8	50.0	2,306,362	2,200,737
Georgia	1,732,419	17.9	47.9	1,288,319	1,253,461
Hawaii	243,986	19.0	64.6	202,322	197,551
Idaho	229,408	15.0	51.8	176,744	178,303
Illinois	2,650,265	20.6	73.1	2,281,538	2,274,754
Indiana	1,137,841	17.8	57.1	900,200	890,640
Iowa	496,433	16.6	56.9	392,692	386,727
Kansas	358,828	12.8	50.2	270,274	268,866
Kentucky	897,940	20.9	59.3	725,660	720,900
Louisiana	1,203,515	27.0	73.9	1,051,365	1,048,669
Maine	356,546	27.0	69.4	304,794	303,500
Maryland	898,938	15.9	61.6	726,494	714,603
Massachusetts	1,570,304	24.0	63.0	1,297,205	1,299,704
Michigan	2,026,820	20.3	61.6	1,655,817	1,652,209
Minnesota	825,263	15.8	53.2	625,970	623,881
Mississippi	740,200	25.2	62.4	609,855	608,226
Missouri	1,073,088	18.0	59.6	859,047	856,627
Montana	110,489	11.4	48.6	81,578	81,475
Nebraska	264,933	14.9	57.6	208,888	207,959
Nevada	277,596	10.6	39.7	191,689	189,626
New Hampshire	150,501	11.4	56.1	117,683	117,316
New Jersey	1,150,972	13.3	65.0	949,903	948,111
New Mexico	561,762	28.3	63.0	468,639	470,124
New York	5,093,922	26.2	61.6	4,155,116	4,087,504
North Carolina	1,781,048	19.3	57.2	1,406,161	1,398,105
North Dakota	74,633	11.6	49.2	54,997	53,784
Ohio	2,199,104	19.1	62.8	1,816,317	1,813,799
Oklahoma	809,349	22.2	52.7	620,099	612,410
Oregon	533,443	14.1	48.8	397,265	396,487
Pennsylvania	2,224,698	17.7	63.5	1,823,915	1,815,749
Rhode Island	213,478	20.3	60.3	177,709	180,090
South Carolina	915,681	20.3	59.2	746,086	741,007
South Dakota	134,253	16.7	55.4	105,138	104,613
Tennessee	1,512,449	24.2	69.3	1,278,941	1,276,994
Texas	4,375,057	18.0	47.3	3,232,587	3,223,784
Utah	297,858	10.9	39.4	202,281	199,036
Vermont	171,664	27.6	55.0	137,366	137,308
Virginia	947,906	12.2	59.6	760,382	752,124
Washington	1,193,923	18.2	56.9	950,649	946,009
West Virginia	403,443	22.2	58.1	325,880	325,036
Wisconsin	1,104,941	19.6	56.4	875,503	874,772
Wyoming	78,139	14.7	49.4	58,418	57,177

Source: Medicaid Analytic Extract, 2008



**Figure 3.5**  
**Percentage of Medicaid Enrollees Who Were 65 and Older in 2008: Top and Bottom 5 States**



Source: Medicaid Analytic Extract, 2008

Additional details about the demographic makeup of state Medicaid populations can be found in the appendix tables. Appendix tables A3.3, A3.4, and A3.5 summarize the age distribution, racial and gender composition, and institutional status of state Medicaid enrollees, respectively.

As described in Chapter 2, Medicaid enrollees are categorized by their basis of eligibility: children, adults, aged, or disabled. These eligibility groups typically correspond to age, except disability, which can apply to an enrollee of any age. Like the Medicaid population’s age distribution, the makeup of enrollees by basis of eligibility depends on a state’s demographic composition, eligibility rules, and many other factors.

Table 3.2 shows the variation across states in the distribution of enrollees among eligibility groups. In nearly every state, the largest proportion of enrollees was children and the smallest was aged. Only in California and Massachusetts, which had large 1115 waivers for adults, did adults account for a larger percentage of enrollees than children.

The percentage of enrollees who were children in 2008 ranged from less than 40 percent in Maine,

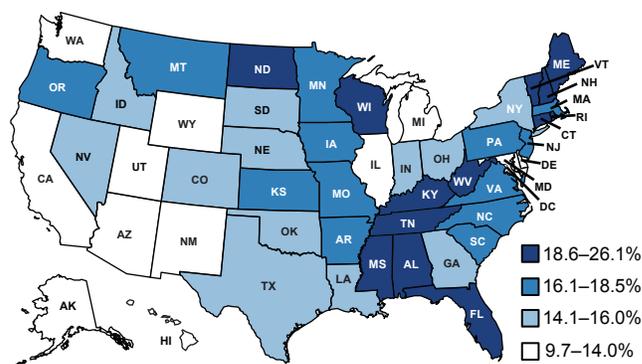
Massachusetts, New York, and Vermont to 65 percent in Wyoming. In six states (Alabama, Kentucky, Maine, Mississippi, Pennsylvania, and West Virginia) at least a third of enrollees were aged or eligible on the basis of disability in 2008. (See appendix tables A3.6 to A3.8 for additional information about basis of eligibility and maintenance assistance status categories by state.)

### Dual Enrollees

Almost all aged and many Medicaid enrollees eligible on the basis of disability are also eligible for Medicare (see Chapter 5 for details). The percentage of enrollees dually enrolled in Medicare and Medicaid in 2008 ranged from about 10 percent in Arizona and New Mexico to about 26 percent in Maine (Figure 3.6). The percentage of Medicaid enrollees dually eligible corresponded closely with the percentage 65 or older (Appendix Table A3.9).

In contrast to the proportion of Medicaid enrollees who are duals, the percentage of *Medicare* enrollees who are duals within a state reflects the portion of Medicare beneficiaries with low income and

**Figure 3.6**  
**Percentage of Medicaid Enrollees (in Quartiles) Who Were Duals in 2008**



Source: Medicaid Analytic Extract, 2008.  
 Dual = ever enrolled in both Medicaid and Medicare in 2008.

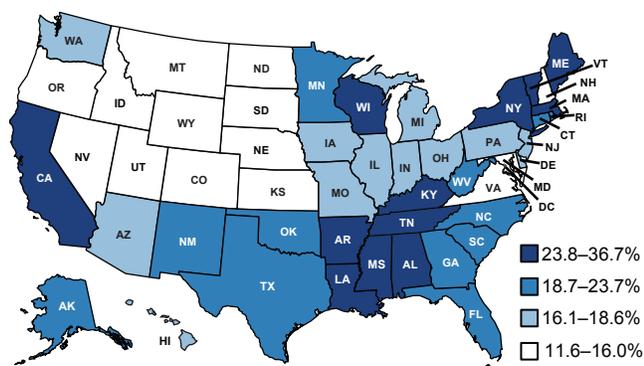
**Table 3.2**  
**Medicaid Enrollment by Basis of Eligibility (Percentage of Enrollees) in 2008**

	Children	Adults	Aged	Disabled	Aged or Disabled
<b>United States</b>	<b>49.3</b>	<b>26.2</b>	<b>8.8</b>	<b>15.6</b>	<b>24.5</b>
Alabama	49.5	15.0	11.1	24.3	35.5
Alaska	60.0	21.3	5.7	12.9	18.7
Arizona	45.2	40.0	5.5	9.2	14.8
Arkansas	57.3	16.1	9.1	17.5	26.6
California	40.0	41.8	7.4	10.8	18.2
Colorado	58.4	16.8	9.4	15.3	24.7
Connecticut	51.9	23.9	11.9	12.3	24.2
Delaware	42.7	38.5	7.0	11.8	18.8
District of Columbia	47.3	23.3	6.7	22.7	29.4
Florida	50.3	19.3	12.3	18.1	30.3
Georgia	57.4	16.6	8.1	17.9	26.0
Hawaii	46.3	33.6	9.4	10.7	20.1
Idaho	63.4	12.6	7.3	16.7	24.0
Illinois	55.9	25.1	5.6	13.4	19.0
Indiana	58.0	20.6	7.5	14.0	21.4
Iowa	48.4	28.1	8.5	15.0	23.5
Kansas	55.8	14.6	10.0	19.6	29.7
Kentucky	49.1	15.3	10.6	25.1	35.7
Louisiana	58.2	15.8	9.1	16.9	26.0
Maine	37.1	29.5	16.2	17.2	33.4
Maryland	56.2	21.0	6.6	16.2	22.8
Massachusetts	33.0	40.3	10.5	16.2	26.6
Michigan	53.8	23.8	6.7	15.6	22.4
Minnesota	48.4	25.5	11.5	14.7	26.1
Mississippi	49.6	16.7	10.3	23.4	33.7
Missouri	55.7	17.2	8.9	18.2	27.1
Montana	54.4	18.5	8.7	18.4	27.1
Nebraska	61.2	16.1	8.9	13.7	22.7
Nevada	56.1	19.9	8.9	15.0	23.9
New Hampshire	59.7	13.6	10.0	16.7	26.7
New Jersey	51.4	20.5	11.1	16.9	28.1
New Mexico	57.5	25.5	4.7	12.3	17.0
New York	38.9	36.8	9.3	15.0	24.3
North Carolina	53.2	19.3	10.2	17.2	27.5
North Dakota	51.4	21.2	12.4	15.0	27.4
Ohio	53.1	21.5	8.1	17.3	25.3
Oklahoma	60.7	16.7	8.1	14.5	22.6
Oregon	50.1	23.5	9.9	16.5	26.4
Pennsylvania	45.1	19.8	10.6	24.5	35.1
Rhode Island	45.1	24.6	9.5	20.9	30.3
South Carolina	52.2	21.9	8.5	17.4	25.8
South Dakota	62.2	15.4	7.9	14.5	22.5
Tennessee	49.7	20.2	6.9	23.2	30.1
Texas	62.2	14.1	10.1	13.6	23.7
Utah	55.2	26.8	4.8	13.2	18.0
Vermont	38.2	37.1	10.7	14.0	24.7
Virginia	56.1	15.4	10.5	18.0	28.5
Washington	54.9	21.9	7.6	15.7	23.3
West Virginia	47.4	14.6	9.3	28.7	38.0
Wisconsin	43.9	29.4	12.2	14.5	26.7
Wyoming	65.3	14.3	7.1	13.3	20.4

Source: Medicaid Analytic Extract, 2008

few assets (Figure 3.7). However, a relatively high Medicaid eligibility income threshold in a state can also result in high dual enrollment among Medicare beneficiaries. For example, Wisconsin has a low poverty rate but a high rate of dual eligibility among Medicare beneficiaries, which can be attributed in part to its 1115 waiver that provided pharmacy-only benefits to higher-income aged individuals in 2008.

**Figure 3.7**  
**Percentage of Medicare Enrollees (in Quartiles) Who Were Duals in 2008**

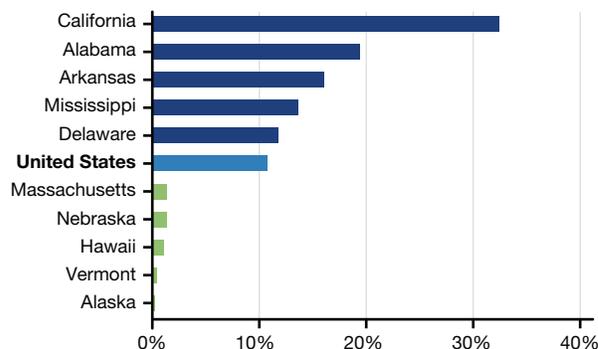


Medicaid Analytic Extract, 2008; Medicare and Medicaid Statistical Supplement, 2008.  
 Dual = ever enrolled in both Medicare and Medicaid in 2008.

### Restricted-Benefit Enrollees

As mentioned in Chapter 2, some Medicaid enrollees are eligible for only a restricted set of benefits, such as family planning services. The proportion of enrollees who received only restricted Medicaid benefits in 2008 ranged from less than 1 percent in Alaska and Vermont to almost one-third in California (Figure 3.8). Of the states with the largest percentages of enrollees with restricted benefits in 2008, California, Arkansas, and Alabama each had extensive family-planning-only programs: 23 percent of all enrollees in California, 10 percent in Arkansas, and 8 percent in Alabama were enrolled in such programs. In addition, 9 percent of enrollees in California were aliens eligible only for emergency services, and 11 percent in Alabama were restricted-

**Figure 3.8**  
**Percentage of Enrollees Receiving Only Restricted Benefits in 2008: Top and Bottom 5 States**



Source: Medicaid Analytic Extract, 2008.

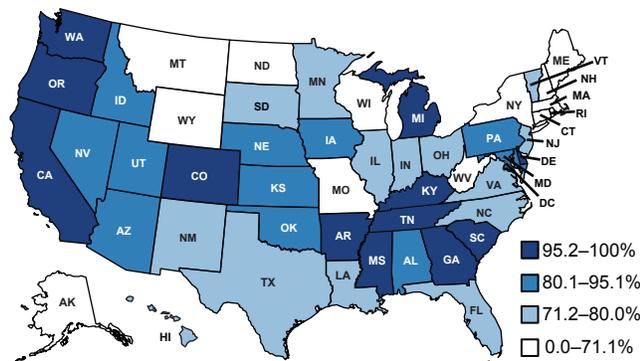
benefit duals, for whom Medicaid covers only Medicare cost-sharing expenses. By comparison, in almost half of states (24), fewer than 5 percent of enrollees received only restricted benefits (including family-planning-only enrollees, aliens eligible for emergency services only, or restricted-benefit duals) (data not shown). (See Appendix Table A3.10 for additional state-level details.)

### Managed Care Among Full-Benefit Enrollees

As described in Chapter 2, managed care plans range from comprehensive managed care (including HMOs, HIOs, and PACE plans), which provide most care used by enrollees, to PCCM plans that provide only case management services. PHP coverage varies, but these plans typically cover a selected set of services, such as dental, behavioral health care, or transportation services. Because restricted-benefit enrollees receive such limited Medicaid services and are typically not eligible to join Medicaid managed care plans, they are not included in the analyses of managed care below.

Managed care enrollment varied widely across states in 2008. In 13 states, at least 95 percent of full-benefit enrollees were in some type of managed care in 2008,

**Figure 3.9**  
**Percentage (in Quartiles) Ever Enrolled**  
**in Managed Care in 2008**



Source: Medicaid Analytic Extract, 2008.

whereas 3 (Alaska, New Hampshire, and Wyoming) reported no managed care enrollment during the year (Figure 3.9 and Appendix Table A3.11).<sup>16</sup> In the states that reported almost 100 percent enrollment in managed care, the type of managed care varied among comprehensive, PHP, and PCCM plans. For example, in South Carolina and Tennessee, almost all enrollees were in PHPs. In Arkansas, most enrollees

<sup>16</sup> In 2008, New Hampshire maintained a disease management PHP that was not reported in MSIS.

were in a transportation PHP and/or PCCM plan. Table 3.3 shows separately the top 10 states in terms of the percentage ever enrolled in comprehensive managed care, PHP, and PCCM plans in 2008.

Variation across states in enrollment in comprehensive managed care is of particular importance because it has implications for Medicaid utilization and expenditure analyses using MAX. Claims for capitated services, called encounter claims, may be incomplete in MAX data. Because most care for people enrolled in comprehensive managed care is typically covered under a capitated payment, only limited information about their service use is available for these enrollees in MAX.

Some states had few enrollees in comprehensive managed care but had high enrollment in PHP or PCCM plans. A range of PHPs were available across states. For example, Washington’s PHP was a mental health PHP. PHPs in South Carolina, Delaware, Georgia, and Mississippi provided transportation benefits. Tennessee’s PHPs offered dental and pharmacy benefits.

**Table 3.3**  
**Percentage Enrolled in Managed Care (MC) in 2008 Top 10 States, by Type of Plan**

Ever Enrolled in Comprehensive MC		Ever Enrolled in PHP		Ever Enrolled in PCCM	
State	Percentage	State	Percentage	State	Percentage
Arizona	88.0	Washington	100.0	Idaho	85.7
Maryland	83.8	South Carolina	99.9	Arkansas	78.3
Delaware	83.4	Delaware	99.9	South Dakota	77.7
Hawaii	79.6	Mississippi	99.9	Louisiana	75.8
Oregon	79.5	Georgia	99.9	North Carolina	74.3
Ohio	78.4	Tennessee	99.7	Alabama	73.4
New Mexico	76.2	Colorado	97.9	Vermont	72.5
New Jersey	75.9	Kentucky	97.8	North Dakota	68.7
Indiana	74.2	Oregon	97.0	Illinois	66.4
Georgia	72.4	California	95.7	Maine	64.1
<b>United States</b>	<b>50.0</b>	<b>United States</b>	<b>46.8</b>	<b>United States</b>	<b>17.2</b>

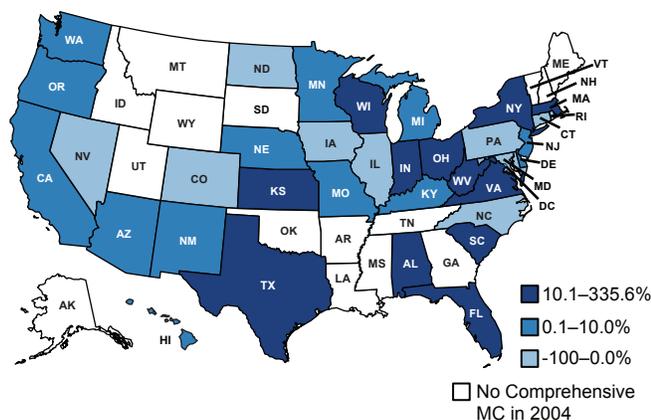
Source: Medicaid Analytic Extract, 2008.  
 Comprehensive managed care = HMO/HIO or PACE.  
 Individuals may be enrolled in multiple managed care plan types.

In four states (Louisiana, Maine, Montana, and Vermont), managed care enrollment was limited to PCCM plans. States generally pay small per capita fees to PCCM plans to provide case management services for enrollees. All other services for these enrollees are provided FFS. (Appendix Table A3.11 and Chapter 4 contain additional information about managed care enrollment by type of plan and by state.)

For the United States as a whole, the percentage of full-benefit enrollees in comprehensive managed care increased by 21 percent between 2004 and 2008, this overall expansion of comprehensive managed care masks substantial state variation (Figure 3.10). During this period, the rate of enrollment in comprehensive managed care more than doubled in Alabama and South Carolina and fell to zero in North Carolina and North Dakota (Appendix Table A3.12).<sup>17</sup> Medicaid managed care is discussed in more detail in Chapter 4.

<sup>17</sup> In both these states, dropping to zero enrollment in comprehensive managed care plans was not a dramatic development, because less than 2 percent of full-benefit Medicaid enrollees were in such care in 2004.

**Figure 3.10**  
Growth in Comprehensive Managed Care (MC) Enrollment, 2004-2008



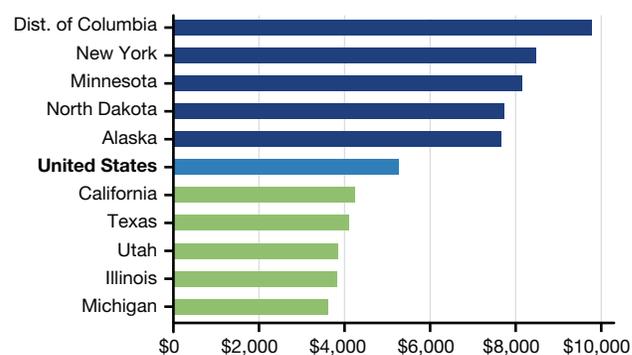
Source: Medicaid Analytic Extract, 2004-2008  
Growth rate is not calculated for states that had no comprehensive MC in 2004. Only Georgia and Tennessee added comprehensive MC during this period. Comprehensive managed care = HMO/HIO or PACE.

## Service Utilization and Expenditures Among Full-Benefit Enrollees

State-level summaries of Medicaid service utilization and expenditures highlight the variation both in Medicaid coverage and in the composition of Medicaid enrollees across states. As noted in Chapter 2, total Medicaid expenditures for all full-benefit enrollees exceeded \$288 billion in 2008. That figure includes FFS expenditures as well as all capitation payments to managed care plans.

States with the highest total Medicaid expenditures also had the most Medicaid enrollees—New York, California and Texas alone accounted for almost a third of Medicaid expenditures in 2008 for all full-benefit enrollees. New York's total Medicaid expenditures exceeded those of all other states (\$41.7 billion, data not shown), but the District of Columbia had the highest Medicaid expenditures per full-benefit enrollee (\$9,785) (Figure 3.11). New York ranked second (\$8,481), followed by Minnesota (\$8,170), North Dakota (\$7,736), and Alaska (\$7,666). New York, Minnesota, and North Dakota had relatively large aged populations (Figure 3.4). The District of Columbia had a relatively large population

**Figure 3.11**  
Per-Enrollee Medicaid Expenditures Among Full-Benefit Enrollees in 2008: Top and Bottom 5 States



Source: Medicaid Analytic Extract 2008.  
Maine was unable to accurately report its inpatient, long-term care, and other services claims as it did not have a fully functional MMIS. Maine is excluded from national averages and other estimates that include these claims.

eligible on the basis of disability (data not shown). Alaska had relatively high costs per user for institutional long-term care services (data not shown).

States with the lowest per-enrollee costs were Michigan (\$3,612), Illinois (\$3,832), Utah (\$3,857), and Texas (\$4,111), all of which had higher percentages of child and adult enrollees, who are typically less expensive. Lower costs were also associated with less expansive coverage for some enrollees. Utah, for example, provides only primary care benefit packages to some Section 1115 waiver enrollees. (See Appendix Table A3.14 for more details.)

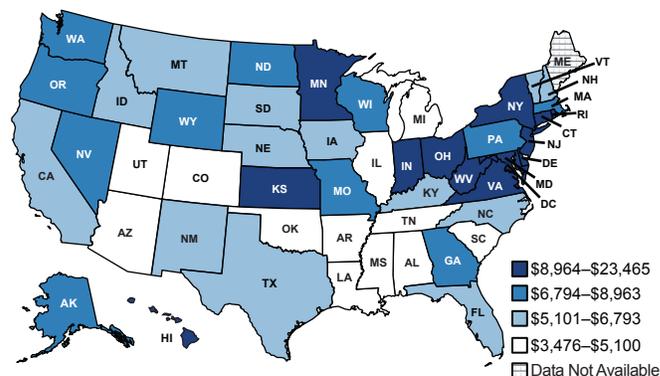
### FFS Expenditures

Breaking down the expenditures presented in the previous section, MAX data show that FFS expenditures represented about 76 percent of all full-benefit enrollee Medicaid costs in 2008 and a majority of expenditures in all states except Arizona, Michigan, New Mexico, and Pennsylvania (data not shown). Conversely, only about 10 percent of expenditures went to FFS payments in Arizona, compared with 42 percent in New Mexico, 45 percent in Pennsylvania, and 49 percent in Michigan, the next three lowest states (see Appendix Table A3.14). All these states enrolled most full-benefit enrollees in comprehensive managed care plans as well as PHPs.

In this analysis, FFS expenditures do not include any capitated payments made to managed care plans, including payments to comprehensive managed care, PHPs, or PCCM plans. By definition, total FFS expenditures per enrollee are lower than total Medicaid expenditures, because they exclude all payments to capitated plans. Despite these exclusions, FFS expenditures warrant examination.

Focusing on FFS enrollees (those who were full-benefit enrollees and never enrolled in compre-

**Figure 3.12**  
Per-Enrollee FFS Expenditures (in Quartiles)  
Among FFS Enrollees in 2008



**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	FFS \$	State	FFS \$	State	FFS \$	State	FFS \$
Dist. of Columbia**	25,007	New York**	67,549	Dist. of Columbia**	3,385	Dist. of Columbia**	15,455
Maryland**	13,765	Alaska	62,739	West Virginia**	2,188	Minnesota**	14,837
Washington**	13,490	Dist. of Columbia**	59,040	Indiana**	2,123	New York**	11,601
New York**	12,975	New Jersey**	57,676	Georgia**	1,945	Maryland**	10,498
Illinois	12,057	Delaware**	56,183	Minnesota**	1,879	Delaware**	8,148
Oregon**	11,146	Connecticut*	53,364	New York**	1,870	Ohio**	7,953
Kentucky	10,537	Rhode Island**	53,087	Kansas**	1,760	Arizona**	7,607
Hawaii**	10,412	Maryland**	50,328	Maryland**	1,749	New Jersey**	7,402
Georgia**	10,341	Hawaii**	50,004	New Jersey**	1,674	Rhode Island**	7,367
Ohio**	10,261	North Dakota	45,396	Missouri	1,667	Indiana**	7,021
<b>United States</b>	<b>7,964</b>	<b>United States</b>	<b>39,309</b>	<b>United States</b>	<b>1,121</b>	<b>United States</b>	<b>4,003</b>

Source: Medicaid Analytic Extract, 2008

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

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

FFS Enrollees = full-benefit enrollees not enrolled in comprehensive managed care (HMOs/HIOs or PACE) in 2008.

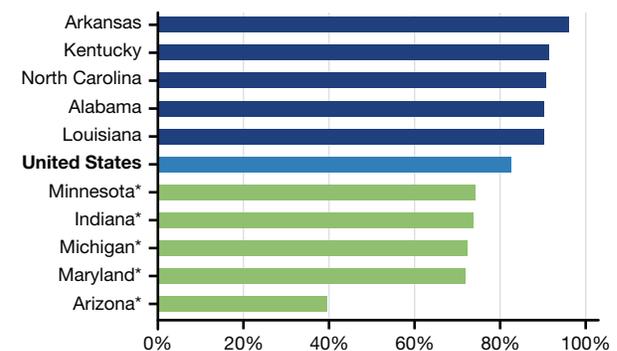
Maine was unable to accurately report its inpatient, long-term care, and other services claims as it did not have a fully functional MMIS. Maine is excluded from national averages and other estimates that include these claims.

for institutional long-term care (\$67,549). In states with large percentages of Medicaid enrollees in comprehensive managed care, FFS expenditures are not representative of expenditures for all Medicaid enrollees in the state. As noted previously, FFS populations tend to include higher percentages of aged enrollees and those eligible on the basis of disability than in the overall state Medicaid population.

### Service Use Among FFS Enrollees

The percentage of FFS enrollees utilizing services varied less across states than expenditures per FFS enrollee. As noted in Chapter 2, nationally about 83 percent of FFS enrollees used at least one Medicaid service in 2008. Except in Arizona, the utilization rate ranged from 72 percent in Maryland to 96 percent in Arkansas (Figure 3.13). Nine of the 10 states with the lowest utilization rates per enrollee enrolled at least 50 percent of enrollees in managed care. The high rate of comprehensive managed care enrollment affects any interpretation of utilization rates in these states.

**Figure 3.13**  
**Percentage of FFS Enrollees Using Services in 2008: Top and Bottom 5 States**



Source: Medicaid Analytic Extract, 2008

FFS Enrollees = full-benefit enrollees not enrolled in comprehensive managed care (HMOs/HIOs or PACE) in 2008.

\* FFS enrollees represent less than 50 percent of all enrollees in this state. Maine was unable to accurately report its inpatient, long-term care, and other services claims as it did not have a fully functional MMIS. Maine is excluded from national averages and other estimates that include these claims.

Detailed information about FFS utilization and expenditures among FFS enrollees is available for each state in appendix tables A3.16 through A3.30 by basis of eligibility and type of service. As shown in this chapter, the rate of capitated managed care

enrollment in a state affects the makeup of FFS enrollees and the interpretation of their expenditures and utilization patterns. In the appendix tables, as in Table 3.4 and Figure 3.13, notes identify states with low rates of FFS enrollment, the result of high comprehensive managed care enrollment in the state. 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, 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. Managed Care

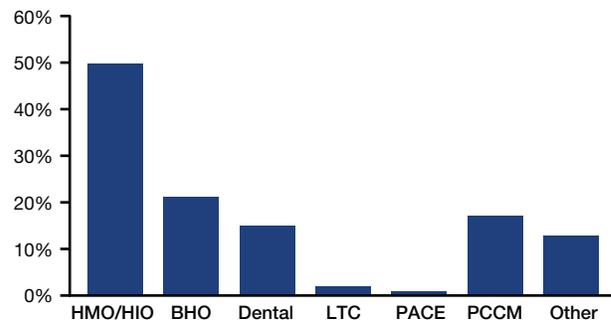
Chapters 2 and 3 presented enrollment information for managed care enrollees nationally and across states. However, MAX data can be used to examine patterns of managed care enrollment and expenditures in much more detail than shown in these chapters. For example, MAX can be used to examine concurrent enrollment in multiple types of managed care plans, enrollment differences by subgroup, and capitation payment data.

This chapter presents information about managed care plan enrollment combinations, the availability of capitated payment and encounter data, and capitated payments by type of plan for full-benefit enrollees. It also provides a summary of FFS expenditures for people ever enrolled in comprehensive managed care in 2008, to capture services received outside managed care.

## Managed Care Enrollment Among Full-Benefit Enrollees

Managed care plans differ greatly in the breadth of services they cover. HMOs, HIOs, and PACE plans provide comprehensive managed care for their enrollees. PHPs usually cover a limited set of services, such as behavioral health, dental care, or long-term care. PCCMs provide case management only. In 2008, half of full-benefit enrollees were enrolled in comprehensive managed care (Figure

**Figure 4.1**  
Percentage of Full-Benefit Enrollees in Managed Care (MC) in 2008, by Plan Type



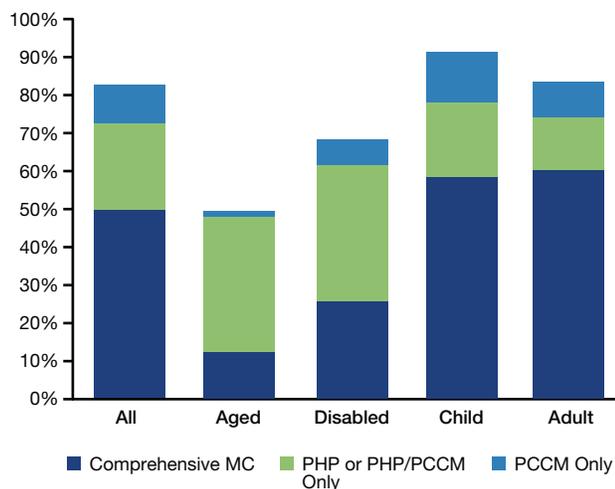
Source: Medicaid Analytic Extract, 2008  
Comprehensive = HMO/HIO or PACE; BHO = behavioral health organization; LTC = long-term care; PCCM = primary care case management. PACE = Program of All-Inclusive Care for the Elderly; Other = prepaid health plans identified as 'other' managed care by the State. Individuals may be enrolled in more than one plan type at a time.

4.1).<sup>18</sup> The types of PHPs with the most enrollees were behavioral health organizations (BHOs) (22 percent of full-benefit enrollees) and dental plans (15 percent) (see Appendix Table A4.1). Nearly 13 percent of full-benefit enrollees participated in a PHP designated as “other” by the state, such as a transportation plan. Seventeen percent of full-benefit enrollees participated in a PCCM.

Nationally, almost 83 percent of full-benefit Medicaid enrollees were enrolled in some type of managed care plan at some point during 2008 (Figure 4.2). Enrollment

<sup>18</sup> Full-benefit enrollees do not include enrollees with restricted-benefits (aliens eligible for emergency services only, duals receiving coverage for Medicare premiums and cost sharing only, and people receiving only family planning services).

**Figure 4.2**  
**Type of Managed Care (MC) Enrollment**  
**Among Full-Benefit Enrollees in 2008**



Source: Medicaid Analytic Extract, 2008  
 Comprehensive = ever-enrolled in HMO/HIO or PACE in 2008; PHP = Prepaid Health Plan; PCCM = Primary Care Case Management  
 All enrollees are assigned to one type of managed care enrollment.

varied widely across states. Alaska, New Hampshire, and Wyoming had no Medicaid managed care enrollment of any kind in MAX 2008.<sup>19</sup> In Delaware, Georgia, Mississippi, South Carolina, Tennessee, and Washington, 100 percent of the enrollees were in some type of managed care, and almost everyone in these six states was in a PHP (see Appendix Table A3.11).

Assessing the role of Medicaid managed care in any state requires an understanding of the composition of plans in that state. For example, although about 84 percent of full-benefit enrollees in both Iowa and Maryland were enrolled in managed care, the nature of Medicaid managed care was quite different in the two states. All the managed care enrollees in Maryland were members of comprehensive plans, but in Iowa, they were all in a prepaid behavioral health plan, with only 2 percent in a comprehensive plan and 46 percent in a PCCM. (See appendix tables A3.11, A4.1 for details.)

<sup>19</sup> In 2008, New Hampshire had a PHP disease management plan that was not reported in MSIS/MAX.

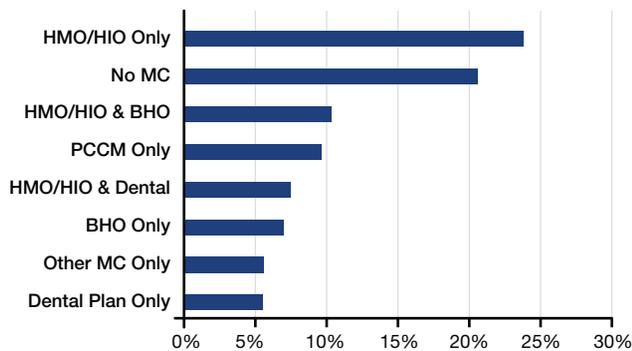
Expenditures for capitated payments also varied greatly across states; they depend on the characteristics of utilized plans as well as the characteristics of managed care enrollees. As reported in Chapter 2, enrollment in managed care is generally highest among children and adults, who typically have lower health care expenditures than Medicaid enrollees who are aged or have disabilities. Nationally, 59 percent of child enrollees and 60 percent of adult enrollees eligible for full Medicaid benefits were in comprehensive managed care plans in 2008, compared with 26 percent of enrollees with disabilities and only 13 percent of aged enrollees (Figure 4.2, Appendix Table A4.3). As a result, capitated payments typically represent a disproportionately small share of total Medicaid expenditures.

### Managed Care Enrollment Combinations in June 2008

People can enroll in more than one type of prepaid plan. For example, when behavioral health services are “carved out” of traditional HMOs, a person can be enrolled in both an HMO and a BHO. 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 4.3 shows the eight most common combinations of prepaid plans in Medicaid in June of 2008. Overall, participation in managed care increased substantially between 2004 and 2008. In June 2004, the most common option for managed care was no participation (35 percent), but in 2008, the percentage of full-benefit enrollees in HMOs or HIOs only (24 percent) surpassed the percentage of full-benefit enrollees not enrolled in managed care (21 percent). Other common managed care combinations in 2008 were HMO/HIO and BHO (10 percent), PCCM plan

**Figure 4.3**  
**Managed Care (MC) Enrollment—8 Most Common Combinations in June 2008 Among Full-Benefit Enrollees**



Source: Medicaid Analytic Extract, 2008  
 HMO/HIO = Health Maintenance Organization/Health Insuring Organization; BHO = Behavioral Health Organization; PCCM = Primary Care Case Management; Other MC = plans designated as other types of prepaid health plans by the State  
 All enrollees are assigned to one managed care enrollment combination.

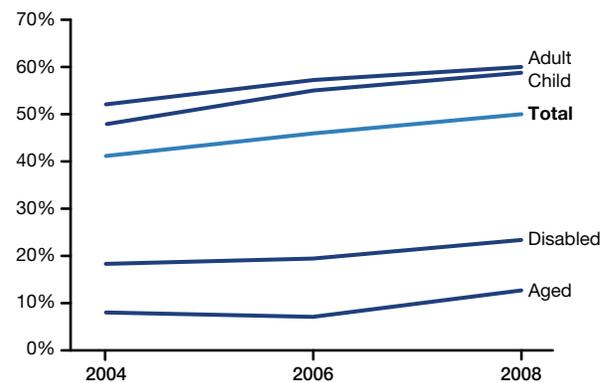
only (10 percent), HMO/HIO and dental (8 percent), BHO only (7 percent), state-identified PHP “Other MC” only (6 percent), and dental only (6 percent). Between 2004 and 2008, participation in a BHO became much more common, with the percentage of enrollees in a BHO only nearly doubling (4 percent in 2004 to 7 percent in 2008) and those in HMO/HIO and BHO increasing as well (6 percent in 2004 to 10 percent in 2008) (Perez et al. 2008). Finally, 16 states, compared to 9 in June 2004, had more than 50 percent of enrollees in a combination of two or more plan types.

Enrollment in plan combinations varied greatly across states in June 2008. Enrollment in HMOs/HIOs exceeded 70 percent of full-benefit Medicaid enrollees in only eight states: Arizona, Delaware, Hawaii, Maryland, New Jersey, New Mexico, Ohio, and Oregon. For more detail about managed care enrollment combinations by state, see Appendix Table A4.2.

## Trends in Managed Care Enrollment

Figure 4.4 shows the increases in comprehensive managed care enrollment among full-benefit enrollees by eligibility group between 2004 and 2008. While enrollment in such care has increased among all groups, the sharpest increases (41 percent) occurred among full-benefit aged enrollees and enrollees with disabilities. Therefore, the increases in total expenditures among comprehensive managed care enrollees is due in part to an increase in the total number of comprehensive managed care enrollees and an increase in the percentage of such enrollees who are in the higher-cost eligibility groups (aged and individuals with disabilities). The increase in average expenditures per enrollee may be due to actual increases in costs or to the changing composition of the comprehensive managed care population.

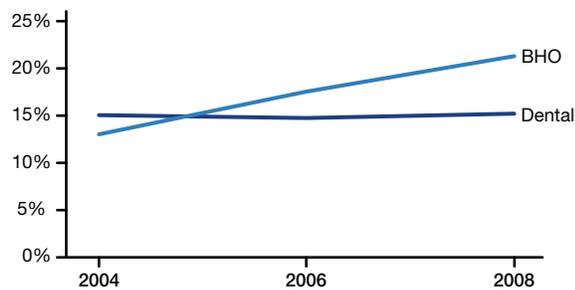
**Figure 4.4**  
**Percentage of Full-Benefit Enrollees in Comprehensive Managed Care from 2004 to 2008, by Basis of Eligibility**



Source: Medicaid Analytic Extract, 2004-2008  
 Comprehensive Managed care = HMO/HIO or PACE

Figure 4.5 shows enrollment trends among the most commonly occurring PHPs. While enrollment in dental PHPs remained fairly constant in the United States between 2004 and 2008, there was a marked increase in the percentage of full-benefit enrollees in a BHO. Most states with a BHO cover more than

**Figure 4.5**  
**Percentage of Full-Benefit Enrollees in Dental or Behavioral Health PHPs from 2004 to 2008**



Source: Medicaid Analytic Extract, 2004-2008  
 BHO = Behavioral Health Organization

80 percent of their full-benefit enrollees with the plan. The increase in BHO participation was evident in the managed care enrollment combinations, where the combination of HMO and BHO participation moved from being the fifth-most-common combination in 2004 to the third-most-common in 2008. As comprehensive managed care and PHP participation increases, the need for high-quality encounter data to capture service utilization among these enrollees will also increase.

### Availability of Capitated Payment and Encounter Data by Type of Plan

As noted earlier, capitated payments reflect the set fee that the state pays to a managed care organization to cover an enrollee, regardless of service use. Because PCCMs provide case management only, service use for PCCM enrollees is captured through FFS claims

data; for comprehensive managed care enrollees and PHP enrollees, service use is captured through encounter data, claim records that contain utilization but not expenditure information. The availability of capitation payment data and encounter data in MAX varies by state and by type of managed care.

Table 4.1 shows the availability of capitation data in MAX 2008. For most states, if the state reported capitation payments in MSIS, this information is available for nearly all the enrollees. In 2008, 37 of the 43 states with comprehensive managed care submitted capitation data for over 90 percent of the comprehensive managed care enrollees, while 5 states did not submit any capitation data for them. Although states report less capitation data for enrollees in PHP and PCCM plans, more than half the states with such plans submitted capitation data for over 90 percent of their enrollees.

States reported encounter data for fewer managed care enrollees than capitation data (Table 4.2). Encounter data are a potential source of information about service utilization among comprehensive managed care and PHP enrollees, particularly as states continue to improve the availability and quality of encounter data. About half the states with comprehensive managed care (21 of 43) submitted encounter data for more than 75 percent of the managed care enrollees in 2008. However, 14 of the 43 states with comprehensive managed care submitted no encounter data.

**Table 4.1**  
**Status of Capitation Payment Reporting in 2008, by Plan Type**

	Comprehensive MC	PHP	PCCM
Number of States with Managed Care Plan Type <sup>a</sup>	43	34	30
Number of States with Capitation Payments for more than 90% of enrollees	37	22	18
Number of States with Capitation Payments for 0% of enrollees	5	6	5

Source: Medicaid Analytic Extract, 2008  
 Comprehensive = HMO/HIO or PACE; PHP = Prepaid Health Plan; PCCM = Primary Care Case Management  
 Maine was unable to accurately report its inpatient, long-term care, and other services claims as it did not have a fully functional MMIS. Maine is excluded from national averages and other estimates that include these claims.

<sup>a</sup> State was considered to have a managed care plan if at least one person was reported as enrolled.

**Table 4.2**  
**Availability of Encounter Data in 2008, by Plan Type**

	Comprehensive MC	PHP Only or PHP and PCCM Only
Number of States with Managed Care Plan Type <sup>a</sup>	43	33
Number of States with Encounter Data for more than 75% of enrollees	21	3
Number of States with Encounter Data for 0% of enrollees	14	9

Source: Medicaid Analytic Extract, 2008  
 Comprehensive = HMO/HIO or PACE; PHP = Prepaid Health Plan; PCCM = Primary Care Case Management  
 Maine was unable to accurately report its inpatient, long-term care, and other services claims as it did not have a fully functional MMIS. Maine is excluded from national averages and other estimates that include these claims.  
<sup>a</sup> State was considered to have a managed care plan if at least one person was reported as enrolled.

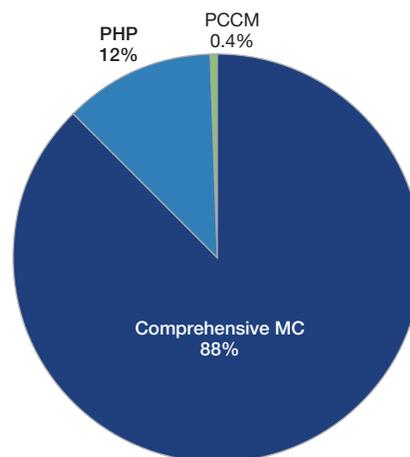
Fewer states submitted encounter data for enrollees in PHP-only or PHP-and-PCCM-only plans. Only three states with PHP-only or PHP-and-PCCM-only enrollees submitted encounter data for more than 75 percent of enrollees (Appendix Table A4.4).

**Capitated Payments by Type of Plan**

Medicaid paid \$68.7 billion in capitated payments to managed care organizations in 2008, 67 percent more than in 2004. Although the total amount of capitated payments in 2008 was a substantial increase from 2004, the distribution of payments across plans was similar; nearly 88 percent of the \$68.7 billion was payments to comprehensive managed care plans, 12 percent was for PHP plans, and less than 1 percent was spent on premiums for PCCM case management (Figure 4.6). The distribution of payments reflects the cost and services typically covered by each type of plan. Average monthly payments per plan enrollee in 2008 were \$252 for comprehensive managed care, \$34 for PHPs, and \$3 for PCCM plans (Table 4.3). (See Appendix Table A4.5 for state-level details.)

There was substantial variation in average premium payments across states. Payments to PHPs, in particular, differed greatly by state, reflecting variation in the breadth and depth of services covered by PHPs. Expenditures for PHPs ranged from less than

**Figure 4.6**  
**Composition of Medicaid Capitated Payments in 2008 Among Full-Benefit Enrollees**



Source: Medicaid Analytic Extract, 2008  
 Comprehensive = HMO/HIO or PACE; PHP = Prepaid Health Plan; PCCM = Primary Care Case Management  
 Maine was unable to accurately report its inpatient, long-term care, and other services claims as it did not have a fully functional MMIS. Maine is excluded from national averages and other estimates that include these claims.

\$2 per person per month in Arkansas to \$1,124 per person per month in Wisconsin, a far higher average payment than in any other state. Most of the PHP capitation payments that Wisconsin reported were for enrollees in a long-term care PHP, a traditionally costly category of services.

In comparison with PHPs, average monthly capitated payments for comprehensive managed care were larger, averaging \$252 nationally and ranging from \$13 a month in Alabama to \$3,375 a month in

**Table 4.3**  
**Capitated Payments Per Person Per Month in Managed Care in 2008, by Type of Plan: Top 10 States**

Comprehensive Managed Care		PHP		PCCM	
State	Dollars	State	Dollars	State	Dollars
Louisiana*	3,375	Wisconsin	1,124	Georgia	22
North Carolina*	3,289	Hawaii	212	Indiana	13
Arizona	483	North Carolina	134	South Carolina	9
Massachusetts	424	Pennsylvania	122	North Carolina	6
Minnesota	415	Illinois	103	Vermont	5
Colorado	397	Massachusetts	93	Pennsylvania	5
Pennsylvania	383	Arizona	85	Oregon	4
Kentucky	383	Alabama	80	Idaho	4
New Mexico	359	New Mexico	67	Florida	4
Delaware	357	Oregon	64	Kentucky	4
<b>United States</b>	<b>252</b>	<b>United States</b>	<b>34</b>	<b>United States</b>	<b>3</b>

Source: Medicaid Analytic Extract, 2008  
 Comprehensive = HMO/HIO or PACE; PHP = Prepaid Health Plan; PCCM = Primary Care Case Management  
 \*Only comprehensive managed care in State is PACE  
 Maine was unable to accurately report its inpatient, long-term care, and other services claims as it did not have a fully functional MMIS. Maine is excluded from national averages and other estimates that include these claims.

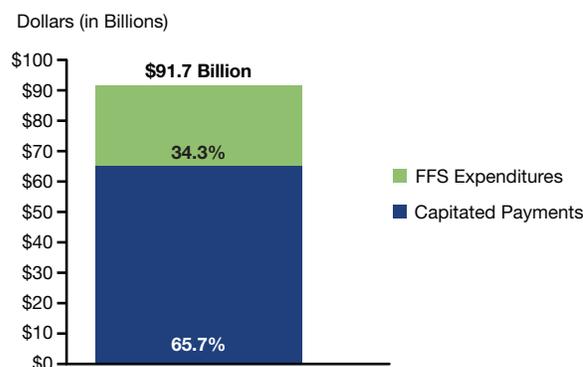
Louisiana.<sup>20</sup> Payments for PCCM plans ranged from \$1 to \$5 in all but four states with PCCM plans.

### FFS Expenditures Among People Enrolled in Comprehensive Managed Care

People ever enrolled in comprehensive managed care plans in 2008 incurred a total of \$91.7 billion in Medicaid expenditures, 67 percent more than in 2004. Although most of their costs were for managed care capitated payments, \$31 billion was paid on an FFS basis (Figure 4.7). Because comprehensive managed care enrollees are excluded from most FFS expenditure summary statistics in this chartbook, we provide some information about their FFS costs in this section.

As noted in Chapter 2, there are two key reasons why people enrolled in comprehensive managed care

**Figure 4.7**  
**Composition of Expenditures for Comprehensive Managed Care Enrollees in 2008**



Source: Medicaid Analytic Extract, 2008  
 Comprehensive Managed Care = HMO/HIO or PACE.

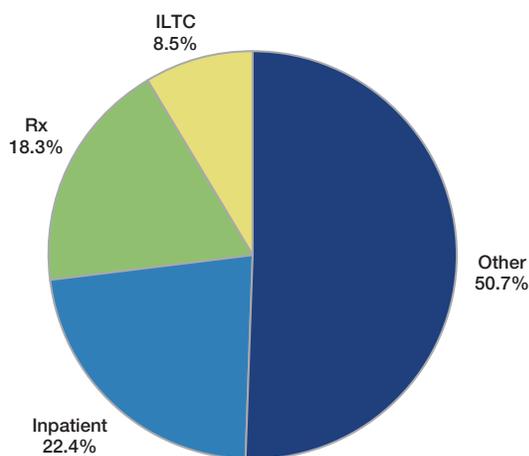
at some point in 2008 might have FFS expenditures. First, some Medicaid enrollees may be in managed care for a limited number of months during the year but use health care services covered by FFS during other months. Second, comprehensive managed care plans do not always cover all Medicaid services. For example, in some states, dental care, behavioral

<sup>20</sup> Arkansas, Louisiana, North Carolina, North Dakota, Oklahoma, and Vermont reported PACE but no HMO/HIO plans in 2008. Montana reported fewer than five enrollees in HMO/HIO/PACE in 2008.

health care, long-term care, and other services may not be included in the comprehensive plan’s capitated rate and may be covered on an FFS basis.

On average, \$1,145 was spent in FFS payments for each comprehensive managed care enrollee in 2008. The FFS services used most by comprehensive managed care enrollees included HCBS, ambulatory and physician services, lab, X-ray, and other types of ambulatory services. These services accounted for just over half of all FFS expenditures among comprehensive managed care enrollees (Figure 4.8). Another 22 percent of their FFS costs were for inpatient care, 18 percent were for prescription drugs, and 9 percent were for ILTC.

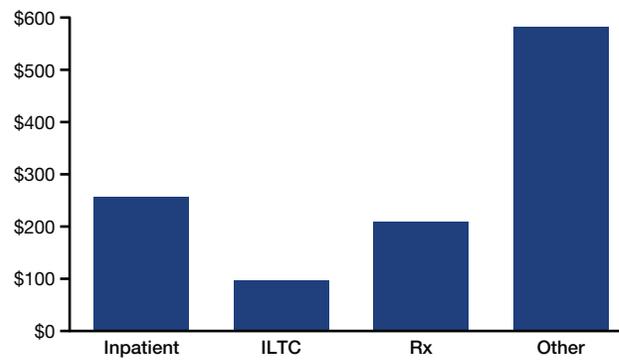
**Figure 4.8**  
**Composition of FFS Expenditures Among Comprehensive Managed Care Enrollees in 2008**



Source: Medicaid Analytic Extract, 2008  
 Comprehensive Managed Care = HMO/HIO or PACE.

FFS expenditures per enrollee in comprehensive managed care were highest for “other” services (\$581), followed by inpatient (\$257), prescription drugs (\$210), and ILTC (\$98) (Figure 4.9). This pattern of expenditures by type of service was evident in most states with managed care enrollment, which suggests that some types of ambulatory services were often

**Figure 4.9**  
**Per-Enrollee FFS Expenditures Among Comprehensive Managed Care Enrollees in 2008, by Type of Service**



Source: Medicaid Analytic Extract, 2008  
 Comprehensive Managed Care = HMO/HIO or PACE.

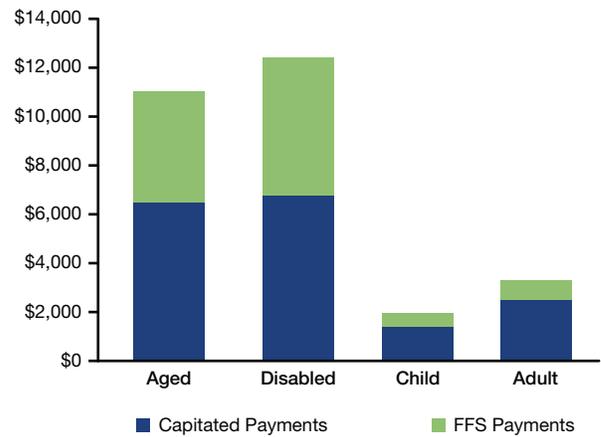
not covered under comprehensive managed care plans. Alternatively, people enrolled in such care at some point in the year may have had months of non-managed care enrollment when these services were used.

Average FFS expenditures per enrollee in comprehensive managed care varied by eligibility group as well. While fewer full-benefit aged and people with disabilities were enrolled in comprehensive managed care than children or adults, the cost per enrollee was substantially higher for both capitated payments and FFS expenditures (Figure 4.10). In 2008, the average capitated payments per enrollee and the average FFS expenditures per capitated managed care enrollee were highest for enrollees with disabilities, followed by the aged, adult enrollees, and children. The substantially greater FFS costs among the aged and people with disabilities are likely due to the fact that most states do not include long-term care in the set of services covered by Medicaid capitation payments and prefer to use other arrangements for payment.

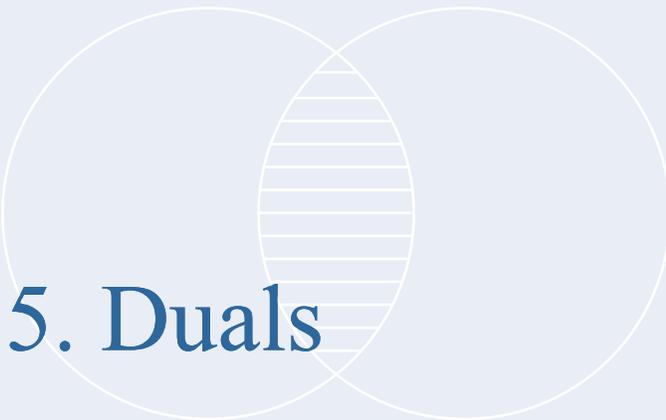
Further information about FFS payments by state for Medicaid enrollees in comprehensive managed care

plans is in appendix tables A4.6 and A4.7. Additional managed care summary statistics are in the Medicaid Managed Care Enrollment Report, which is published annually on June 30 and can be accessed at: [www.cms.hhs.gov/MedicaidDataSourcesGenInfo/04\\_MdManCrEnrllRep.asp](http://www.cms.hhs.gov/MedicaidDataSourcesGenInfo/04_MdManCrEnrllRep.asp).

**Figure 4.10**  
**Average FFS Expenditures and Capitated Payments Among Full-Benefit Enrollees in Comprehensive Managed Care in 2008, by Basis of Eligibility**



Source: Medicaid Analytic Extract, 2008  
Comprehensive Managed care = HMO/HIO or PACE



## 5. Duals

Dual enrollees (“duals”) include the aged and the individuals with disabilities who qualify for both Medicare and Medicaid coverage. Duals are among the most vulnerable people served by Medicare and Medicaid and among the costliest users of health care in the United States (MedPAC 2011). Average health care costs for duals are more than double those of other Medicare beneficiaries (Jacobson et al. 2011) and almost eight times higher than those of low-income children covered by Medicaid. The availability of monthly Medicare enrollment information in the MAX data system enables researchers to conduct in-depth analyses of Medicaid enrollment rates and service use among this costly subgroup of enrollees.

Duals must meet the eligibility requirements of both Medicare and Medicaid. Generally, Medicare provides basic health insurance coverage for most aged persons as well as people with disabilities under age 65 who have received Social Security or Railroad Retirement disability benefits for at least two years. Medicare benefits are provided to these groups regardless of their income or assets. There are, however, substantial out-of-pocket costs for Medicare beneficiaries, including premiums and cost-sharing payments, and some uncovered services, most notably for long-term care. As a result, many low-income Medicare beneficiaries who are aged or have disabilities get help with these expenses when they enroll in the Medicaid program. In contrast to Medicare, Medicaid is a means-tested program. The aged

and people with disabilities can qualify for Medicaid benefits only if they meet federal and state income and resource criteria.

Most duals qualify for full Medicaid benefits. For these enrollees, Medicare is the primary payer for services covered by both programs, and Medicaid provides “wraparound” coverage for services not covered by Medicare (such as ILTC, some home health services, and HCBS). Services covered by Medicare Part A include inpatient hospital stays, hospice care, skilled nursing facilities, and some care by home health agencies. Medicare Part B enrollment is voluntary and requires a premium, which Medicaid covers for duals. Among other things, Part B covers physician services, inpatient and outpatient medical services, laboratory services, and some medical equipment. Since 2006, Medicare Part D covers prescription drugs for duals.<sup>21</sup>

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 MAX

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<sup>21</sup> Medicare Part D is optional for most Medicare enrollees, but full-benefit dual enrollees must either enroll in a Part D plan or be automatically enrolled into one. Medicare covers Part D premiums and deductibles for duals. One exception is that Medicaid may pay for a prescription if the drug is not covered by Medicare Part D but is covered by the state Medicaid program.

claim records reflect only the coinsurance and deductible amounts that Medicaid paid after Medicare made payments up to its coverage limits.<sup>22</sup> For this reason, expenditures in MAX for Medicare-covered services provided to duals will substantially understate the total cost of care for those services. They will, however, reflect the Medicaid payments made for the service.

A smaller population of restricted-benefit duals includes Medicare enrollees who do not receive the full range of Medicaid benefits. Generally, duals who qualify only for restricted Medicaid benefits have higher income and/or assets than duals who qualify for full Medicaid benefits. Services such as ILTC, which are covered only by Medicaid, are not covered for restricted-benefit duals. For some such duals, such as the Qualified Medicare Beneficiary-only (QMB-only) duals, Medicaid pays Medicare premiums as well as any coinsurance and deductibles for Medicare services. For certain other restricted-benefit duals, Medicaid covers only Medicare premiums, including Part A premiums for Qualified Working Disabled Individuals (QDWI) and Part B premiums for specified low-income-only (SLMB-only) and qualified individual (QI) duals.

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 presented in this chapter. The MAX 2008 anomaly tables provide additional detail regarding the completeness and limitations of MAX data for duals (see Chapter 1 for web link).

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

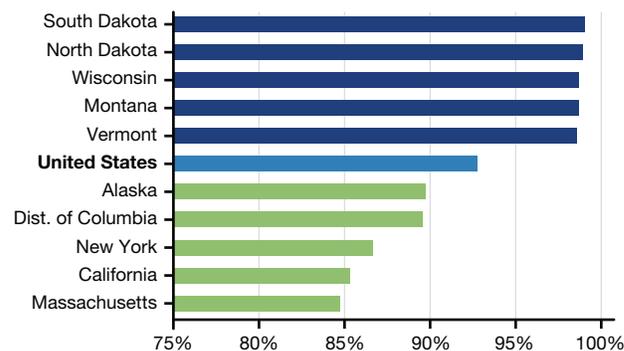
## Enrollment Characteristics of Dual Enrollees

There were more than 9.3 million duals in 2008—about 15 percent of all Medicaid enrollees. There was significant variability across states in the percentage of enrollees who were duals in 2008, which ranged from 10 percent in Arizona to 26 percent in Maine (Table 5.1).

Medicaid enrollees who were aged were more likely than enrollees with disabilities to be duals in 2008.<sup>23</sup> Nationally, about 93 percent of aged and 43 percent of Medicaid enrollees eligible on the basis of disability were dually enrolled in Medicare during the year. There was more variation in dual enrollment among enrollees with disabilities than among aged enrollees. In 5 states at least 90 percent of aged enrollees were dually enrolled in Medicare and Medicaid in 2008. The percentage of aged who were duals was lowest in Massachusetts and California: about 85 percent in both states (Figure 5.1). Overall, Medicare eligibility is very high among aged individuals. In general, aged people who worked (or had a spouse who worked) and paid Medicare taxes for at least 10 years are eligible for Medicare.

<sup>23</sup> Nationally, 140,000 dual eligibles were eligible for Medicaid on the basis of being a child or an adult rather than on the basis of a disability.

**Figure 5.1**  
Percentage of Aged Enrollees Who Were Duals in 2008: Top and Bottom 5 States



Source: Medicaid Analytic Extract, 2008.  
Dual = ever enrolled in both Medicare and Medicaid in 2008

**Table 5.1**  
**Dual Enrollment in Medicare and Medicaid in 2008, 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
<b>United States</b>	<b>15.1</b>	<b>92.7</b>	<b>42.6</b>	<b>9,319,019</b>	<b>5,055,647</b>	<b>4,123,344</b>	<b>54.3</b>	<b>44.2</b>
Alabama	22.5	98.3	47.0	205,966	100,404	104,809	48.7	50.9
Alaska	11.0	89.8	44.6	14,080	6,562	7,372	46.6	52.4
Arizona	9.7	92.5	42.5	156,167	82,233	62,928	52.7	40.3
Arkansas	16.1	96.3	41.2	123,806	67,439	55,339	54.5	44.7
California	11.1	85.2	43.2	1,209,317	681,691	509,088	56.4	42.1
Colorado	14.5	90.6	38.8	84,588	49,565	34,579	58.6	40.9
Connecticut	18.7	93.9	54.8	104,935	62,901	38,000	59.9	36.2
Delaware	12.5	95.3	45.3	24,689	13,093	10,564	53.0	42.8
District of Columbia	13.1	89.7	29.4	22,597	10,392	11,502	46.0	50.9
Florida	19.4	93.8	43.1	600,313	356,420	241,225	59.4	40.2
Georgia	15.7	96.2	44.0	272,019	134,965	136,028	49.6	50.0
Hawaii	13.6	96.0	40.7	33,119	22,069	10,597	66.6	32.0
Idaho	14.3	97.7	42.4	32,786	16,371	16,274	49.9	49.6
Illinois	12.4	90.4	50.1	327,622	133,980	177,919	40.9	54.3
Indiana	14.4	96.5	50.5	163,894	81,915	80,258	50.0	49.0
Iowa	16.4	97.6	51.8	81,339	41,295	38,586	50.8	47.4
Kansas	18.4	94.8	44.7	65,952	34,100	31,464	51.7	47.7
Kentucky	19.4	97.0	35.9	173,947	92,516	80,711	53.2	46.4
Louisiana	14.9	96.8	35.9	179,611	105,921	73,007	59.0	40.6
Maine	26.1	96.3	53.1	92,950	55,793	32,574	60.0	35.0
Maryland	12.5	91.6	38.2	112,198	54,270	55,572	48.4	49.5
Massachusetts	16.6	84.7	45.9	260,338	139,087	116,521	53.4	44.8
Michigan	13.4	95.9	41.8	270,695	131,033	132,234	48.4	48.8
Minnesota	18.3	94.8	48.2	151,048	89,566	58,381	59.3	38.7
Mississippi	20.7	98.6	45.0	153,508	74,990	77,933	48.9	50.8
Missouri	16.7	95.2	44.9	179,113	90,553	87,628	50.6	48.9
Montana	16.8	98.7	38.4	18,579	9,465	7,794	50.9	42.0
Nebraska	15.9	94.5	54.1	42,225	22,337	19,698	52.9	46.7
Nevada	15.0	97.5	41.2	41,565	24,004	17,184	57.8	41.3
New Hampshire	19.6	92.8	57.9	29,525	13,995	14,507	47.4	49.1
New Jersey	18.0	90.8	45.8	206,930	116,286	89,201	56.2	43.1
New Mexico	10.0	97.6	42.7	56,451	25,769	29,489	45.6	52.2
New York	14.8	86.7	42.6	754,597	411,595	325,677	54.5	43.2
North Carolina	17.8	97.7	44.1	316,331	178,271	135,306	56.4	42.8
North Dakota	20.8	98.9	56.4	15,520	9,129	6,314	58.8	40.7
Ohio	14.2	91.6	38.1	311,679	162,849	144,799	52.2	46.5
Oklahoma	14.1	96.6	43.0	114,365	63,005	50,607	55.1	44.3
Oregon	17.5	97.8	46.2	93,337	51,593	40,789	55.3	43.7
Pennsylvania	17.6	93.1	31.2	391,552	218,794	170,111	55.9	43.4
Rhode Island	18.9	95.4	43.4	40,375	19,279	19,345	47.7	47.9
South Carolina	16.3	97.7	44.5	149,016	75,880	70,772	50.9	47.5
South Dakota	15.5	99.0	52.2	20,851	10,531	10,188	50.5	48.9
Tennessee	19.0	98.1	51.4	286,785	102,401	180,281	35.7	62.9
Texas	14.5	96.4	34.9	634,830	424,852	208,273	66.9	32.8
Utah	10.7	96.7	45.2	31,973	13,821	17,763	43.2	55.6
Vermont	19.0	98.6	58.1	32,624	18,066	13,981	55.4	42.9
Virginia	18.3	95.2	45.3	173,035	95,001	77,279	54.9	44.7
Washington	13.1	92.7	38.2	156,507	83,632	71,709	53.4	45.8
West Virginia	19.8	98.5	36.4	79,691	37,070	42,096	46.5	52.8
Wisconsin	19.4	98.7	46.5	213,815	133,468	74,321	62.4	34.8
Wyoming	13.1	98.5	45.9	10,264	5,430	4,767	52.9	46.4

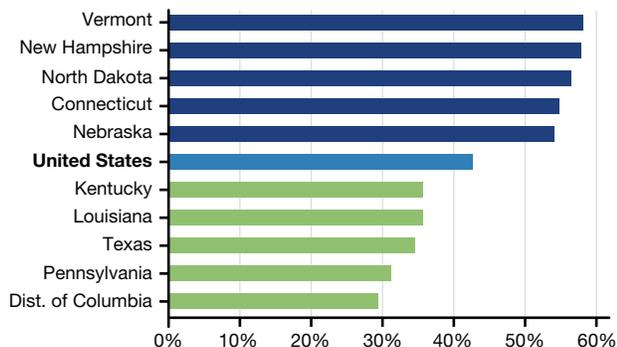
Source: Medicaid Analytic Extract, 2008

Dual = enrolled in both Medicare and Medicaid in at least one month in 2008.

NOTE: Nationally, about 140,000 children and adults are reported as dual eligibles. This enrollment is very low across States and is not reported at the State-level.

The percentage of enrollees eligible on the basis of disability who were dually enrolled in Medicare and Medicaid varied more, ranging from 29 percent in the District of Columbia to 58 percent in New Hampshire and Vermont (Figure 5.2). Variation in rates of dual enrollment can be attributed to differences in state eligibility criteria. For example, Vermont's high rate of dual enrollment can be attributed partially to an 1115 waiver program that extends Medicaid coverage to Medicare enrollees with household income up to 200 percent of the FPL. In other states, these Medicare enrollees are not eligible for Medicaid benefits.

**Figure 5.2**  
**Percentage of Disabled Enrollees Who Were Duals in 2008: Top and Bottom 5 States**



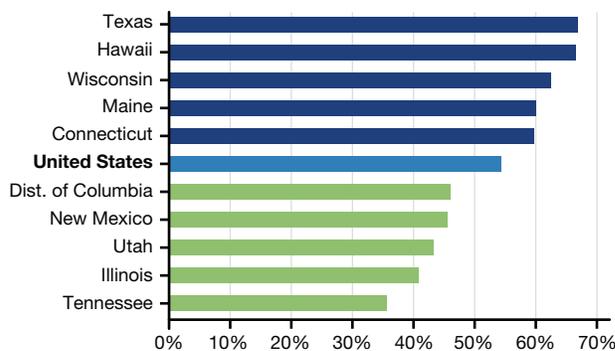
Source: Medicaid Analytic Extract, 2008.  
 Dual = ever enrolled in both Medicare and Medicaid in 2008

Of all duals, about 54 percent were classified as aged, while 44 percent had disabilities. This composition of duals may at first seem unexpected, since 93 percent of aged Medicaid enrollees were duals, compared to about 43 percent of enrollees with disabilities. However, enrollees eligible on the basis of disability represented a larger share of Medicaid enrollees in 2008 (16 percent compared with 9 percent for the aged), so the composition of duals is weighted only slightly toward the aged.

The percentage of duals who were aged or had disabilities varied significantly across states (Figure 5.3

and Table 5.1). In Texas, about 67 percent of duals were aged in 2008. In Tennessee, Illinois, and Utah, however, less than 45 percent were aged. Because the criteria for Medicare enrollment are the same in all states, these differences in the makeup of the dual population by state can be attributed to differences in the composition of state populations and state Medicaid eligibility policy.

**Figure 5.3**  
**Percentage of Duals Who Were Aged in 2008: Top and Bottom 5 States**



Source: Medicaid Analytic Extract, 2008  
 Dual = ever enrolled in both Medicare and Medicaid in 2008

## Restricted-Benefit Duals

As discussed in Chapter 1, duals may be eligible for full or restricted Medicaid benefits. A person's dual eligibility status can change, primarily as a result of changes in income. In MAX 2008, duals were assigned an annual code based on their status during their last month of eligibility in 2008, so that each dual was assigned to only one dual eligibility group. About 22 percent of all duals qualified for only restricted Medicaid benefits during their last month of dual eligibility in 2008. Some of these enrollees may have been eligible for full benefits at some point during the year. When this group is restricted to those who qualified for only restricted benefits in 2008, their Medicaid expenditures are generally quite low, because these enrollees receive only premium and cost-sharing

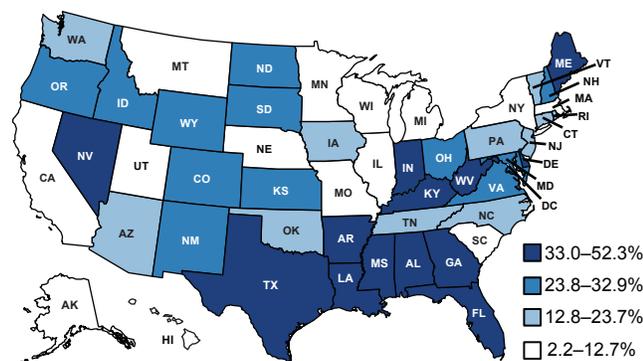
assistance. In 2008, average Medicaid expenditures for restricted-benefit duals were \$663 per person, much lower than the average Medicaid expenditures of \$14,233 per dual who received full benefits at some point during the year (data not shown).

The percentage of duals that had restricted benefits in 2008 ranged from 2 percent in Alaska and California to 52 percent in Alabama (Figure 5.4).<sup>24</sup> In 23 states, more than a quarter of duals had restricted benefits (Appendix Table A5.1). 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 low-income aged enrollees and those with disabilities. For example, states with poverty-related coverage expansions for people who are aged or have disabilities and have incomes up to 100 percent of the FPL generally had fewer restricted-benefit duals in 2008.<sup>25</sup>

<sup>24</sup> Restricted-benefit duals are identified based on the annual dual code in MAX 2008.

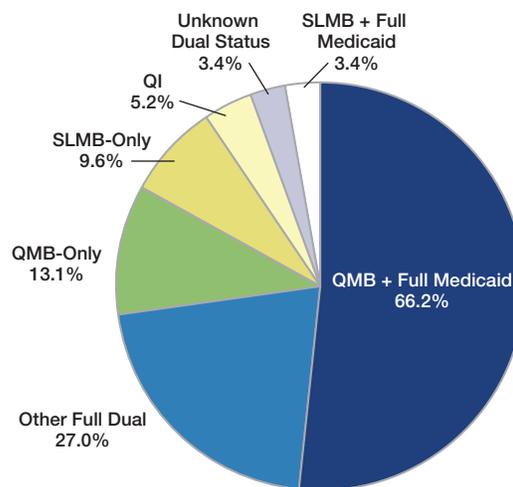
<sup>25</sup> A list of states with poverty-related expansions for the aged and people with disabilities is in Chapter 1, Table 1.1.

**Figure 5.4**  
**Percentage of Dual Enrollees (in Quartiles) with Restricted Medicaid Benefits in 2008**



Source: Medicaid Analytic Extract, 2008  
 Dual Status based on last month of dual eligibility for enrollee. Dual = ever enrolled in both Medicare and Medicaid in at least one month in 2008.  
 Restricted benefit = duals with benefits limited to Medicare cost-sharing.

**Figure 5.5**  
**Dual Eligible Enrollment by Type of Dual Status in 2008**



Source: Medicaid Analytic Extract 2008  
 Note: Dual Status based on last month of dual eligibility for enrollee. QI = Qualified Individual, QMB = Qualified Medicare Beneficiary, SLMB = Specified Low-Income Medicare Beneficiary, QDWI = Qualified Disabled Working Individual.

As described above, there are four primary categories of duals: QMB, SLMB, QI, and QDWI (see Chapter 1). In general, these categories are distinguished by income, with QMBs having the lowest incomes and QIs and QDWIs the highest. Because state income eligibility criteria for aged enrollees and those eligible on the basis of disability vary, a dual in each of these categories could qualify for cost-sharing only (restricted-benefits dual) or for cost-sharing plus full Medicaid eligibility (full-benefit dual) depending on state of residence. Nationally, 79 percent of all duals were QMB duals, most of whom were eligible for full Medicaid benefits (Figure 5.5). The next largest group, about 27 percent of duals, was “other” full-benefit duals, a designation that indicates that a dual receives full benefits but that the state cannot identify the dual category (QMB or SLMB). A smaller percentage were SLMBs (13 percent) and QIs (5 percent), most of whom received only restricted benefits. Nationally, states reported a combined total of fewer than 100 QDWIs in 2008. The relatively large percentage

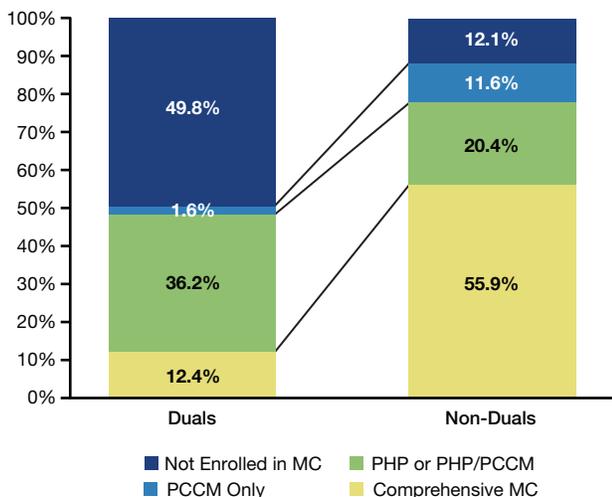
of duals with “other” status calls for caution when disaggregating the duals into the different types for analysis, because the exact status of many duals (more than a quarter) is unknown. (See Appendix Table A5.2 for state-level enrollment by dual type.)

### Managed Care Enrollment Among Full-Benefit Duals

Nationally, duals were less likely than non-duals to be enrolled in Medicaid managed care in 2008. About 50 percent of full-benefit duals were enrolled in managed care of some kind in 2008, compared to about 88 percent of full-benefit non-duals (Figure 5.6).<sup>26</sup> Lower rates of managed care participation among duals relative to non-duals could reflect the difficulty either of establishing risk-adjusted capitation rates for duals or of coordinating care with Medicare coverage.

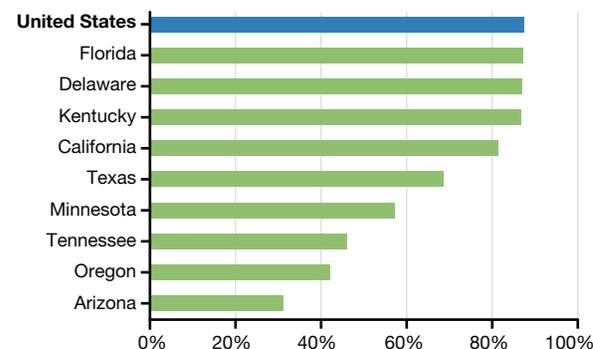
<sup>26</sup> Restricted-benefit duals are not included in analysis of managed care enrollment, because they receive such limited benefits that they are generally ineligible for managed care coverage.

**Figure 5.6**  
A Comparison of Managed Care (MC) Enrollment Between Full-Benefit Dual and Non-Dual Medicaid Enrollees in 2008



Source: Medicaid Analytic Extract, 2008  
 Dual = Ever enrolled in both Medicare and Medicaid in 2008.  
 PCCM = primary care case management  
 PHP = prepaid health plan  
 Comprehensive MC = HMO/HIO or PACE  
 Each dual enrollee is reported in only 1 category.

**Figure 5.7**  
FFS Duals as a Percentage of All Full-Benefit Duals in 2008: 9 States with Rates Lower than U.S. Average



Source: Medicaid Analytic Extract, 2008.  
 Dual = ever enrolled in both Medicare and Medicaid in 2008  
 Fee-for-Service dual = Full-benefit dual who was not enrolled in comprehensive managed care (HMO, HIO, or PACE) in 2008

Nationally, comprehensive managed care enrollment (HMO, HIO, or PACE) was particularly low among duals, with only 12 percent of full-benefit duals enrolled in these plans compared to 56 percent of full-benefit non-duals. In 32 states, at least 95 percent of full-benefit duals were FFS, meaning that they were never enrolled in comprehensive managed in 2008. Relatively high rates of comprehensive managed care enrollment among full-benefit duals in a small number of large states drove the national FFS enrollment rate to 88 percent. Only 9 states had FFS enrollment rates below the national rate of 88 percent (Figure 5.7). In particular, less than 50 percent of duals were FFS in Arizona (31 percent), Oregon (42 percent), and Tennessee (46 percent) in 2008.

Although rates of managed care enrollment among duals were generally low, most states (48) enrolled at least some full-benefit duals in some form of managed care in 2008, most commonly PHPs and PCCMs. In a few states, nearly all duals were enrolled in PHPs (Table 5.2). For example, Mississippi, Georgia, South Carolina, Arkansas, and Nevada enrolled almost all full-benefit duals in

**Table 5.2****Percentage of Full-Benefit Duals Enrolled in Medicaid Managed Care in 2008, by Type of Plan, Top 10 States**

Ever Enrolled in Comprehensive Managed Care		Enrolled in PHP Only or PHP/PCCM Only		Enrolled in PCCM Only	
State	Percentage	State	Percentage	State	Percentage
Arizona	69.0	Mississippi	100.0	Idaho	69.4
Oregon	57.8	Georgia	98.8	North Carolina	20.5
Tennessee	53.8	South Carolina	98.6	Vermont	8.4
Minnesota	42.7	Washington	97.8	Louisiana	5.3
Texas	31.3	Arkansas	95.2	Illinois	4.7
California	18.4	Nevada	95.1	Indiana	4.2
Kentucky	13.2	Utah	94.6	Montana	3.7
Delaware	13.0	District of Columbia	94.1	South Dakota	2.9
Florida	12.7	Oklahoma	94.1	Massachusetts	2.6
<b>United States</b>	<b>12.4</b>	Michigan	87.7	Maine	2.3
New Jersey	12.0	<b>United States</b>	<b>36.2</b>	<b>United States</b>	<b>1.6</b>

Source: Medicaid Analytic Extract, 2008

Duals with managed care enrollment are assigned to only one of the three managed care groups.

Comprehensive managed care = (HMO/HIO or PACE)

non-emergency transportation plans. Washington enrolled most full-benefit duals in behavioral health plans. Because most PHP plans cover only a limited set of services, dual enrollees in these states typically received managed care benefits concurrently with FFS benefits and are included in the subset of “FFS duals” examined below. Appendix Table A5.3 shows state-level managed care enrollment by plan type.

### Medicaid FFS Utilization and Expenditures Among FFS Duals

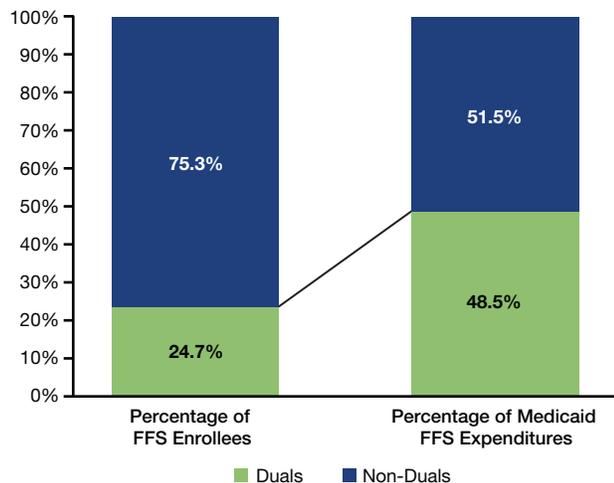
The FFS duals included in the following expenditure analysis are the full-benefit duals who were never enrolled in comprehensive managed care during 2008. For states with high rates of comprehensive managed care among full-benefit duals, particularly Arizona, Oregon, and Tennessee, FFS expenditures by type of service should be interpreted with particular caution. Cost information is available in MAX only for services paid for on an FFS basis. Because high-cost users may

self-select themselves into either FFS or managed care, average FFS expenditures in states with high rates of enrollment in comprehensive managed care plans may greatly understate or overstate their true average cost of duals. More important, total FFS expenditures in these states understate the total cost of care for duals.

Total FFS expenditures for FFS duals in 2008 were \$91.1 billion. Duals represented one-fourth (25 percent) of all FFS Medicaid enrollees but accounted for almost half (49 percent) of Medicaid FFS expenditures in 2008 (Figure 5.8). This is consistent with research suggesting that duals require extensive and costly medical care.

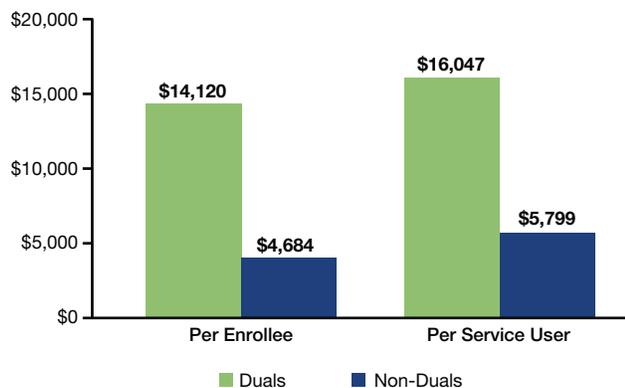
A comparison of per-enrollee expenditures between dual and non-dual FFS enrollees indicates that the average FFS costs for duals (\$14,120) were about three times higher than costs for non-duals (\$4,684). This differential is also evident when comparing average costs per service user (\$16,047 for duals and \$5,799 for non-duals) (Figure 5.9).

**Figure 5.8**  
**Medicaid Enrollment and FFS Expenditures**  
**Among Dual and Non-Dual FFS Enrollees in 2008**



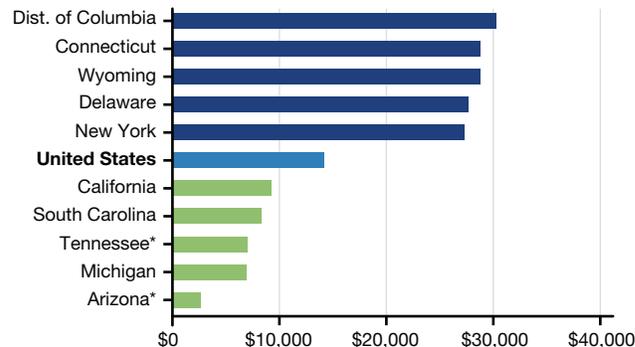
Source: Medicaid Analytic Extract, 2008.  
 FFS enrollees = full-benefit enrollees not enrolled in comprehensive managed care (HMO, HIO, or PACE) in 2008  
 Dual = ever enrolled in both Medicare and Medicaid in 2008.  
 Maine was unable to accurately report its inpatient, long-term care, and other services claims as it did not have a fully functional MMIS. Maine is excluded from national averages and other estimates that include these claims.

**Figure 5.9**  
**A Comparison of Medicaid FFS Expenditures**  
**Between FFS Duals and Non-Duals in 2008**



Source: Medicaid Analytic Extract, 2008.  
 FFS enrollees = full-benefit enrollees not enrolled in comprehensive managed care (HMO, HIO, or PACE) in 2008  
 Dual = ever enrolled in both Medicare and Medicaid in 2008.  
 Maine was unable to accurately report its inpatient, long-term care, and other services claims as it did not have a fully functional MMIS. Maine is excluded from national averages and other estimates that include these claims.

**Figure 5.10**  
**Per-Enrollee FFS Expenditures Among FFS Duals**  
**in 2008: Top and Bottom 5 States**

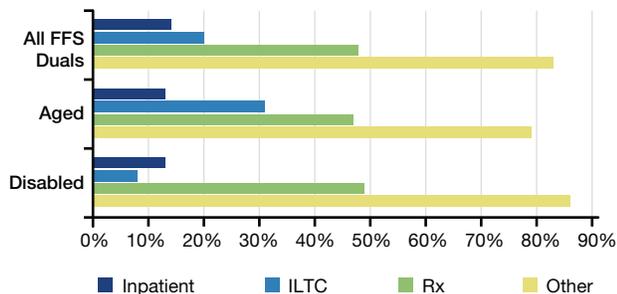


Source: Medicaid Analytic Extract, 2008  
 FFS duals = full-benefit duals not enrolled in comprehensive managed care (HMO, HIO, or PACE) in 2008  
 Dual = ever enrolled in both Medicare and Medicaid in 2008.  
 \*FFS duals represented less than 50 percent of duals in Arizona and Tennessee  
 Maine was unable to accurately report its inpatient, long-term care, and other services claims as it did not have a fully functional MMIS. Maine is excluded from national averages and other estimates that include these claims.

Medicaid FFS expenditures per dual varied significantly across states (Figure 5.10). States with the highest average costs paid close to \$30,000 per FFS dual, as observed in the District of Columbia (\$30,032), Connecticut (\$28,827), and Wyoming (\$28,032). Arizona, the state with the highest managed care enrollment among duals, had the lowest per-enrollee FFS expenditures (\$2,553) (Appendix Table A5.4). Several factors may account for these differences in expenditures. High-expenditure states may have more generous Medicaid benefits. Low-expenditure states may have less-stringent enrollment criteria, resulting in a higher number of less-expensive enrollees, or may not extend Medicaid coverage to costly services that some Medicaid programs cover for duals, such as personal care through the state plan.

Per-enrollee expenditures for FFS duals who were aged (\$15,180) were about 15 percent higher than expenditures for those eligible on the basis of disability (\$13,159) in 2008 (Appendix Table A5.4).

**Figure 5.11**  
**Percentage of FFS Duals Using Four Major Types of Service in 2008, by Basis of Eligibility**



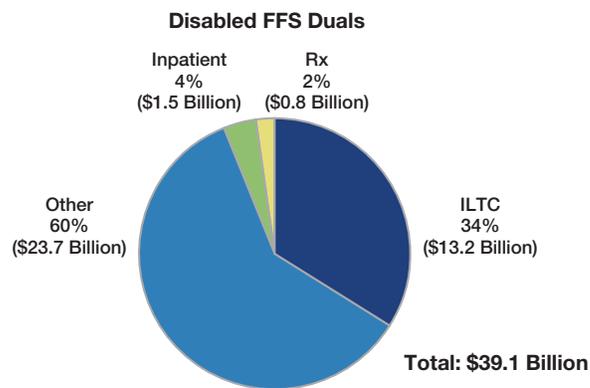
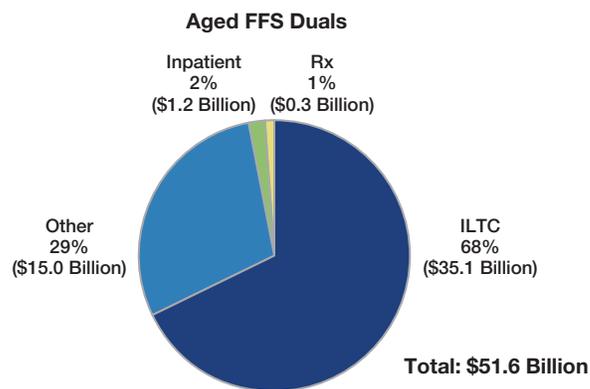
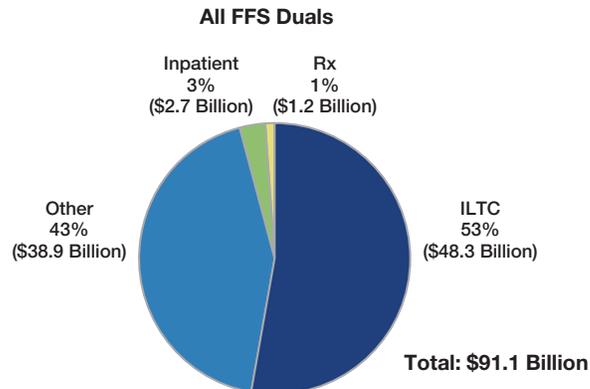
Source: Medicaid Analytic Extract, 2008.  
 Dual = ever enrolled in both Medicare and Medicaid in 2008.  
 FFS duals = full-benefit duals not enrolled in comprehensive managed care (HMO, HIO, or PACE) in 2008  
 Maine was unable to accurately report its inpatient, long-term care, and other services claims as it did not have a fully functional MMIS. Maine is excluded from national averages and other estimates that include these claims.

This difference can be attributed to higher rates of ILTC use among aged duals (Figure 5.11). ILTC was the costliest service among FFS dual enrollees, accounting for about half their expenditures (53 percent) in 2008 (Figure 5.12). As might be expected, total ILTC expenditures were much higher among aged duals (\$35.1 billion) relative to those for their counterparts with disabilities (\$13.2 billion) (Figure 5.12). (Appendix tables A5.5 through A5.10 and A6.9 through A6.16 present state-level detail on dual service utilization and expenditures by basis of eligibility and by type of service.)

As in the overall Medicaid FFS population (Figure 2.18), duals used “other” services at a higher rate than any other service (Figure 5.11).<sup>27</sup> The highest shares of “other” FFS expenditure among duals were for HCBS, including personal care services, residential care, home health, and adult day care (data not shown).

<sup>27</sup> Other services include HCBS, physician and other ambulatory services; and lab, X-ray, supplies, and other wraparound services. See Chapter 6 for details on type of service categories.

**Figure 5.12**  
**Medicaid FFS Expenditures Among FFS Duals in 2008, by Type of Service**

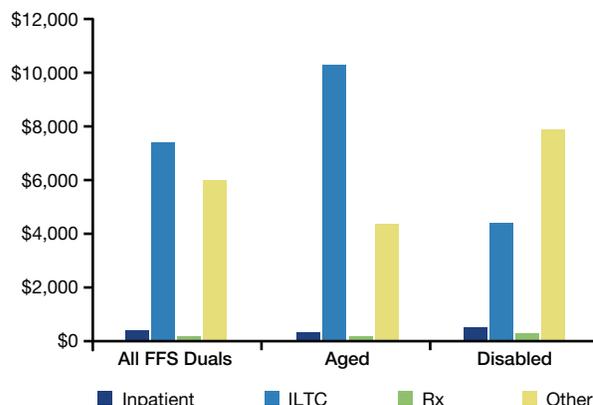


Source: Medicaid Analytic Extract, 2008.  
 Dual = ever enrolled in both Medicare and Medicaid in 2008.  
 FFS duals = full-benefit duals not enrolled in comprehensive managed care (HMO, HIO, or PACE) in 2008  
 Maine was unable to accurately report its inpatient, long-term care, and other services claims as it did not have a fully functional MMIS. Maine is excluded from national averages and other estimates that include these claims.

FFS duals used inpatient services at a lower rate than other services in 2008 (14 percent of FFS duals used inpatient services), similar to the rate in the overall Medicaid FFS population (about 11 percent). Because Medicare Part A covers inpatient care for duals, per-enrollee FFS expenditures for these services (\$425) (Figure 5.13) were low compared to per-enrollee inpatient expenditures in the overall Medicaid population (\$909).

Medicaid FFS expenditures on prescription drugs for duals have dropped substantially since the implementation of Medicare Part D in 2006. Prescription drug expenditures for FFS duals were \$1.2 billion in 2008, and accounted for only 1 percent of FFS expenditures among FFS duals (Figure 5.12). In 2004, prior to Medicare Part D implementation, FFS expenditures for prescription drugs were about \$21 billion, accounting for about 22 percent of FFS expenditures for duals (about \$21 billion) (Perez et al. 2008). Although Medicare is now the primary payer for prescription drugs, state Medicaid programs continue to finance a significant share of prescription expenses for duals. States continue to cover prescription drugs that are not covered by Medicare plans if the drugs are covered in the state for other Medicaid populations. Also, states pay Medicare a portion of the prescription drug costs for duals in the state through a “clawback” provision; this payment is not included in MAX data.

**Figure 5.13**  
Per-Enrollee FFS Expenditures Among FFS Duals in 2008, by Basis of Eligibility



Source: Medicaid Analytic Extract, 2008  
 Dual = ever enrolled in both Medicare and Medicaid in 2008.  
 FFS duals = full-benefit duals not enrolled in comprehensive managed care (HMO, HIO, or PACE) in 2008  
 Maine was unable to accurately report its inpatient, long-term care, and other services claims as it did not have a fully functional MMIS. Maine is excluded from national averages and other estimates that include these claims.

# 6. Utilization and Expenditures by Detailed Type of Service Among FFS Enrollees

States cover a range of medical services in Medicaid. As discussed in Chapter 1, these include both mandatory services that state Medicaid programs must 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 with the MAX data system.<sup>28</sup> In this chapter, we summarize Medicaid service utilization and costs in 2008 for all full-benefit FFS enrollees and for the subgroup of FFS duals by disaggregating by the type of service.

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

<sup>28</sup> MAX contains extensive Medicaid FFS utilization and payment information and monthly premiums but limited utilization information from Medicaid managed care plans. See Chapter 4 for more detail about the availability of managed care information in MAX.

**Table 6.1**  
**Type-of-Service (TOS) Codes in MAX 2008, by File Type**

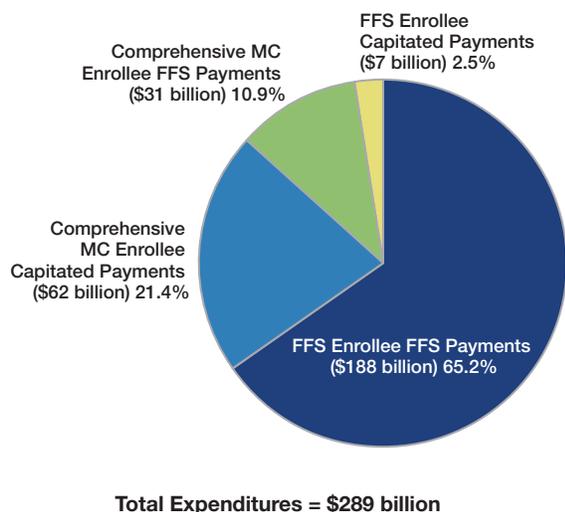
Type of Service	TOS Code
<b>Inpatient (IP) File</b>	
Inpatient hospital	01
<b>Institutional Long-Term Care (LT) File</b>	
Mental hospital services for the aged	02
Inpatient psychiatric facility services for individuals under age 21	04
Intermediate care facility services for the mentally retarded (ICF/MR)	05
Nursing facility services	07
<b>Prescription Drug (Rx) File</b>	
Prescription drugs	16
<b>Other (OT) File</b>	
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

Note that type of service information presented in this chartbook reflects full-benefit FFS enrollees and their FFS utilization only. As discussed previously, FFS enrollees exclude two important groups: (1) enrollees receiving only restricted Medicaid benefits in 2008, and (2) people ever enrolled in comprehensive managed care (HMOs, HIOs, or PACE) in 2008. FFS expenditures also exclude capitated payments for PHP and PCCM plans in which FFS enrollees may be enrolled.

In 2008, total FFS expenditures for FFS enrollees were \$188 billion and represented 65 percent of expenditures for full-benefit enrollees (Figure 6.1). The proportion of all expenditures accounted for by FFS expenditures is lower than in 2004, when FFS expenditures for FFS enrollees accounted for about 76 percent of all expenditures. This decline can be attributed to the growth of managed care enrollment in Medicaid.

**Figure 6.1**  
**FFS Expenditures Among FFS Enrollees**  
**as a Percentage of All Full-Benefit Enrollee**  
**Expenditures in 2008**



Source: Medicaid Analytic Extract, 2008.  
 Comprehensive MC Enrollee = full-benefit enrollee with any comprehensive managed care enrollment (HMO, HIO, or PACE) during 2008.  
 FFS Enrollee = full-benefit enrollee with no comprehensive managed care enrollment during 2008.  
 Maine was unable to accurately report its inpatient, long-term care, and other services claims as it did not have a fully functional MMIS. Maine is excluded from national averages and other estimates that include these claims.

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 (A6.1 through A6.16), we identify states in which under 50 and 75 percent of the Medicaid population is covered FFS. In other words, in these states at least 25 or 50 percent of enrollees are in comprehensive managed care and are excluded from FFS estimates. Chapters 3 and 4 have 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 and PCCM plans, or other utilization factors. Such differences must be considered when interpreting the national- and state-level utilization and expenditure measures presented in this and other chapters.

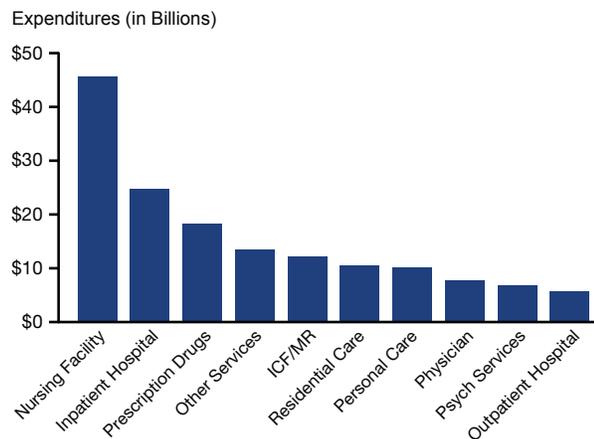
### Most Expensive and Most Utilized Services Among Medicaid FFS Enrollees

The 10 most costly services (of the 30 service categories) accounted for about 82 percent of the \$188 billion in FFS expenditures for FFS enrollees in 2008. Nursing facility services contributed most (\$45.6 billion) to this population's FFS costs in 2008 (Figure 6.2). Inpatient hospital services, the next-highest cost service in 2008, were about \$24.7 billion, or just over half the cost of nursing home services. These services were followed by prescription drugs (\$18.2 billion), other services (\$13.5 billion), and ICF/MR (\$12.1 billion).

High-cost service categories can reflect frequently used services, services with high per-unit costs, or both. Prescription drugs—among the five most costly services—were used by a majority of FFS enrollees (59 percent) (Figure 6.3). On the other

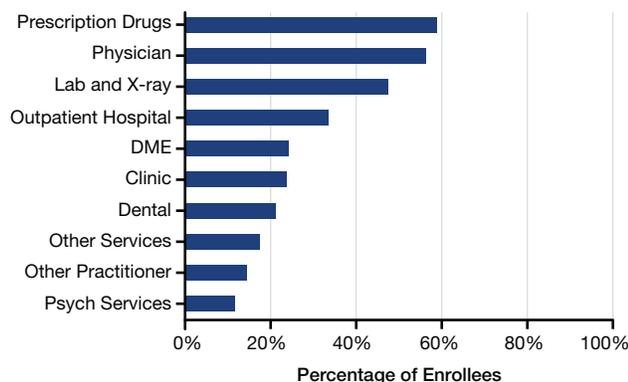
hand, two other expensive services—nursing facilities and ICF/MRs—were used by only small percentages (5 and 0.3 percent, respectively) of Medicaid FFS enrollees.

**Figure 6.2**  
**Top 10 Most Expensive Medicaid Service Types Among All FFS Enrollees in 2008**



Source: Medicaid Analytic Extract, 2008  
ICF/MR = intermediate care facility for the mentally retarded  
FFS Enrollee = full-benefit enrollee with no comprehensive managed care enrollment (HMO, HIO, or PACE) during 2008.  
Some services are covered by Medicare for duals. Expenditures in Figure 6.2 show only Medicaid expenditures.  
Maine was unable to accurately report its inpatient, long-term care, and other services claims as it did not have a fully functional MMIS. Maine is excluded from national averages and other estimates that include these claims.

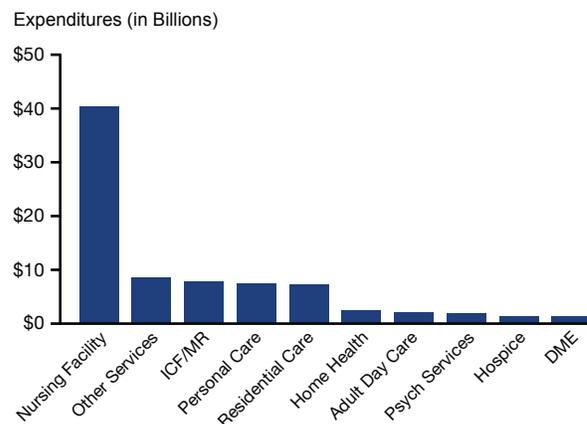
**Figure 6.3**  
**Top 10 Most Utilized Services by All FFS Enrollees in 2008**



Source: Medicaid Analytic Extract, 2008.  
FFS Enrollee = full-benefit enrollee with no comprehensive managed care enrollment (HMO, HIO, or PACE) during 2008.  
DME = durable medical equipment.  
Maine was unable to accurately report its inpatient, long-term care, and other services claims as it did not have a fully functional MMIS. Maine is excluded from national averages and other estimates that include these claims.

The subset of FFS enrollees who were dually enrolled in Medicare and Medicaid incurred a total of \$91.1 billion in FFS Medicaid expenditures, accounting for almost half (48 percent) of FFS expenditures for all FFS enrollees (Appendix Table A5.4). Duals accounted for the majority of FFS expenditures on several high-cost services in 2008. Notably, about \$40 billion was spent on nursing facility services for duals (Figure 6.4), accounting for 88 percent of all FFS nursing facility expenditures in 2008. Duals also accounted for the bulk of ICF/MR expenditures (\$8.0 of \$12.1 billion), personal care services (\$7.5 of \$10.1 billion), and residential care services (\$7.5 of \$10.6 billion). Conversely, prescription drug expenditures, previously a cost driver among duals, dropped to about \$1.2 billion in 2008 after the implementation of Medicare Part D. In 2004, prior to Medicare Part D, prescription drug expenditures for duals were about \$20.9 billion, or about half the \$37.3 billion in prescription drug expenditures that year.

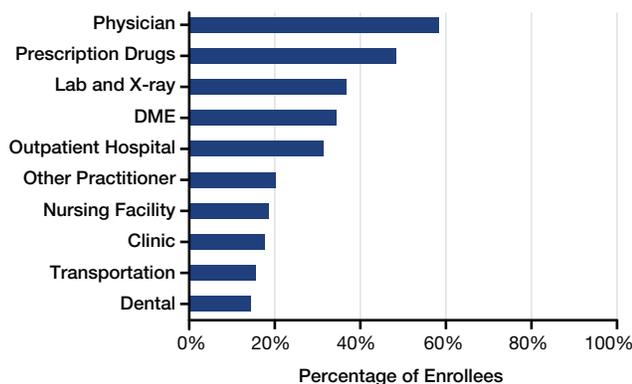
**Figure 6.4**  
**Top 10 Most Expensive Medicaid Service Types Among FFS Duals in 2008**



Source: Medicaid Analytic Extract 2008.  
FFS duals = full-benefit dual enrollees with no comprehensive managed care enrollment (HMO/HIO, or PACE) in 2008.  
ICF/MR = intermediate care facility for the mentally retarded, DME= durable medical equipment.  
Some services are covered by Medicare for duals. Expenditures in Figure 6.4 show only Medicaid expenditures.  
Maine was unable to accurately report its inpatient, long-term care, and other services claims as it did not have a fully functional MMIS. Maine is excluded from national averages and other estimates that include these claims.

Because duals are aged or have disabilities, they were more likely than other enrollees to use most Medicaid services, particularly long-term care services. Almost 19 percent of FFS duals used nursing facility services in 2008 (Figure 6.5), compared with only 5 percent among all FFS enrollees. Only a handful of services—typically those covered by Medicare for duals, such as clinic, inpatient, and lab and X-ray services—were used more often by non-duals than duals in 2008 (see appendix tables A6.1 through A6.16).

**Figure 6.5**  
**Top 10 Most Utilized Services by FFS Duals in 2008**



Source: Medicaid Analytic Extract, 2008.  
 FFS duals = full-benefit dual enrollees with no comprehensive managed care enrollment (HMO/HIO, or PACE) in 2008.  
 Maine was unable to accurately report its inpatient, long-term care, and other services claims as it did not have a fully functional MMIS. Maine is excluded from national averages and other estimates that include these claims.

### FFS Expenditures by Service Class

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

1. *ILTC*: all long-term care services in the claims files, including inpatient psychiatric services for people under 21 and services provided in nursing facilities, ICF/MR, and mental hospitals for the aged. ILTC claims can include an array of bundled services such as physical therapy and oxygen.

2. *Inpatient*: inpatient hospital services, which may include some bundled services such as lab tests or prescription drugs filled during an inpatient stay.
3. *Prescription drugs (Rx)*: all Medicaid prescriptions filled, except those bundled with inpatient, nursing home, or other services.

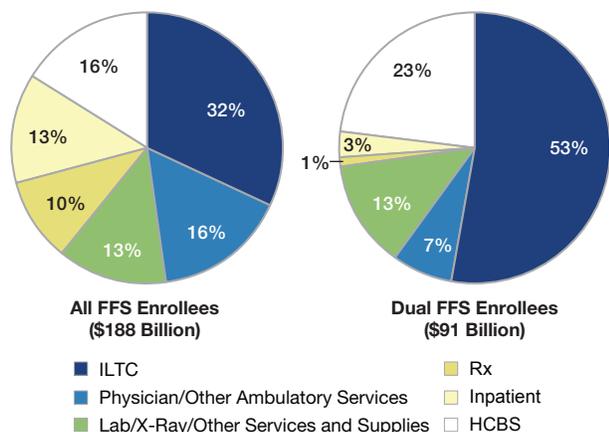
We further divide “other” claims into three classes:

1. *HCBS*: residential care, home health, personal care services, adult day care, private-duty nursing, and hospice care.<sup>29</sup> This class includes HCBS that were provided under a Section 1915(c) (HCBS) waiver or through the state plan.
2. *Physician and other ambulatory services*: physician, outpatient hospital, clinic, dental, nurse practitioners, other practitioners, physical therapy or occupational therapy (PT/OT), rehabilitation, and psychiatric services.
3. *Lab, X-ray, supplies, and other wraparound services*: lab and X-ray, durable medical equipment (DME), transportation, targeted case management, and other services.

Of these six service classes, ILTC contributed the most to FFS expenditures among all FFS enrollees (32 percent) and among FFS duals (53 percent) (Figure 6.6). Prescription drugs dropped from about 20 percent of FFS expenditures for all FFS enrollees in 2004 to about 10 percent in 2008, a result of the implementation of Medicare Part D in 2006. This decline was offset by an increase in HCBS expenditures, which grew from 10 percent of expenditures in 2004 to 16 percent in 2008. Expenditures for other service

<sup>29</sup> Some HCBS may not be included in the HCBS class: psychiatric residential care may be classified with psychiatric services under physician and other professional services; some HCBS provided under HCBS 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.

**Figure 6.6**  
**Composition of FFS Expenditures Among FFS Enrollees in 2008**



Source: Medicaid Analytic Extract, 2008.  
 FFS enrollees = full-benefit enrollees not enrolled in comprehensive managed care (HMO/HIO or PACE) in 2008; FFS duals = FFS enrollees with dual eligible status during the year.  
 Some services are covered by Medicare for duals. Expenditures in Figure 6.6 show only Medicaid expenditures.  
 Maine was unable to accurately report its inpatient, long-term care, and other services claims as it did not have a fully functional MMIS. Maine is excluded from national averages and other estimates that include these claims.

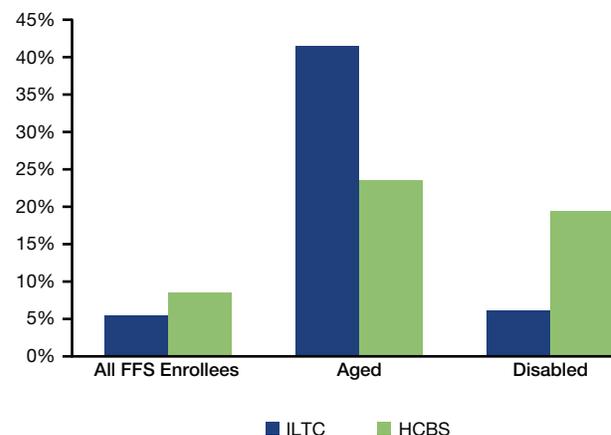
classes, including physician, lab and X-ray, and inpatient services, remained stable between 2004 and 2008.

### Long-Term Care Utilization and Expenditures

In 2008, ILTC services and HCBS combined accounted for almost half (48 percent) of all FFS enrollee costs and three-quarters (76 percent) of FFS costs among the subgroup of duals. Because long-term care services represented such a substantial portion of Medicaid FFS expenditures, they are explored in more detail below.

Although long-term care services accounted for almost half of FFS expenditures, they were used by only a small percentage of FFS enrollees. Overall, more FFS enrollees used HCBS (9 percent) than ILTC services (6 percent) in 2008. Aged enrollees and those eligible on the basis of disability were the primary users of long-term care services (data not shown). Aged enrollees, in particular, were the primary users of ILTC (Figure 6.7).

**Figure 6.7**  
**Percentage of FFS Enrollees Using HCBS and ILTC Services in 2008**



Source: Medicaid Analytic Extract, 2008.  
 FFS enrollees = full-benefit enrollees not enrolled in comprehensive managed care (HMO/HIO or PACE) in 2008.  
 Maine was unable to accurately report its inpatient, long-term care, and other services claims as it did not have a fully functional MMIS. Maine is excluded from national averages and other estimates that include these claims.

Long-term care service costs for duals were large in both percentage and absolute value. Because Medicare covers many acute care 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 or physician services among this group. FFS duals' use of ILTC and HCBS accounted for 76 percent of the FFS long-term care costs incurred by all FFS enrollees (appendix tables A6.2, A6.4, A6.10, and A6.12). 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, unless otherwise noted below.

Within long-term care, institutional care expenditures were about twice as large as HCBS expenditures in 2008. Among all FFS enrollees, ILTC services accounted for 32 percent (\$59.6 billion) of FFS costs, compared with 16 percent (\$30.4 billion) for HCBS. Most ILTC services are mandatory covered services,

but HCBS are generally covered at state option, and there is greater variation across states in the type and extent of this coverage.<sup>30</sup> (See Chapter 7 for details about HCBS covered by waivers.)

Expenditures for HCBS have grown at a faster rate than those for ILTC since 2002, the year of the first MAX chartbook. In 2002, ILTC expenditures were about triple the costs of HCBS (Figure 6.8). From 2002 to 2008, HCBS costs grew from \$16.3 billion to \$30.4 billion, an annualized rate of about 10.4 percent per year.<sup>31</sup> During the same period, ILTC expenditures grew at an annualized rate of 3.2 percent, resulting in expenditures that were only about twice as large as those for HCBS in 2008.<sup>32</sup>

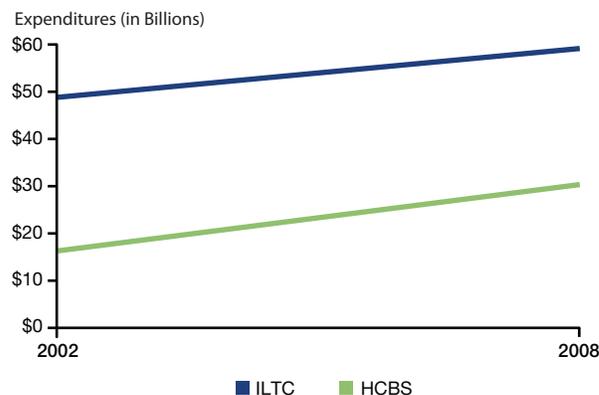
Nursing facilities were the biggest driver of long-term care costs and accounted for over half (51 percent) of all FFS long-term care expenditures for FFS enrollees in 2008 (Figure 6.9). Moreover, nursing facility services accounted for about one-fourth (24 percent) of all FFS expenditures for FFS enrollees. Other services accounting for large percentages of long-term care costs for FFS enrollees were ICFs/MR (13 percent), residential care (12 percent), and personal care services (11 percent). Since 2002, residential care and personal care services (10 and 6 percent of long-term care services in 2002) have grown to represent greater proportions of long-term care services, and are driving the overall increase in HCBS service use and expenditures.

<sup>30</sup> Because some HCBS are excluded from the HCBS category, the estimated expenditure measure may understate total Medicaid HCBS costs.

<sup>31</sup> Expenditures for private-duty nursing (\$780.5 million in 2008) were not included in HCBS expenditures in 2002. When expenditures for these services are not included in 2008 HCBS totals, the growth rate from 2002 to 2008 drops to 10.0 percent per year.

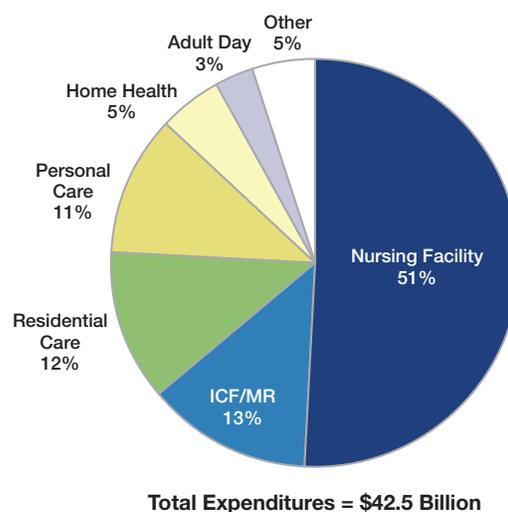
<sup>32</sup> In addition to the expansion of HCBS, another possible contributor to this growth is improved identification in MAX of HCBS covered under 1915(c) waivers.

**Figure 6.8**  
Total FFS Long-Term Care Expenditures Among FFS Enrollees, 2002 to 2008



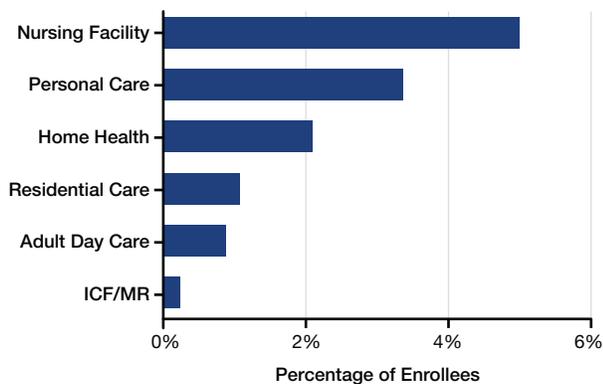
Source: Medicaid Analytic Extract, 2008.  
FFS Enrollees = full-benefit enrollees with no comprehensive managed care enrollment (HMO, HIO, or PACE) in 2008  
Maine was unable to accurately report its inpatient, long-term care, and other services claims as it did not have a fully functional MMIS. Maine is excluded from national averages and other estimates that include these claims.

**Figure 6.9**  
Composition of FFS HCBS and ILTC Expenditures Among FFS Enrollees in 2008



Source: Medicaid Analytic Extract, 2008  
FFS Enrollees = full-benefit enrollees with no comprehensive managed care enrollment (HMO, HIO, or PACE) in 2008; ICF/MR= intermediate care facility for the mentally retarded  
Other = MH (mental health) Aged, Inpatient psychiatric facility for individuals under age 21, hospice, and private duty nursing. Each of these represented 2 percent or less of total long-term care expenditures.  
Maine was unable to accurately report its inpatient, long-term care, and other services claims as it did not have a fully functional MMIS. Maine is excluded from national averages and other estimates that include these claims.

**Figure 6.10**  
**Percentage of FFS Enrollees Who Used Selected Long-Term Care Services in 2008**

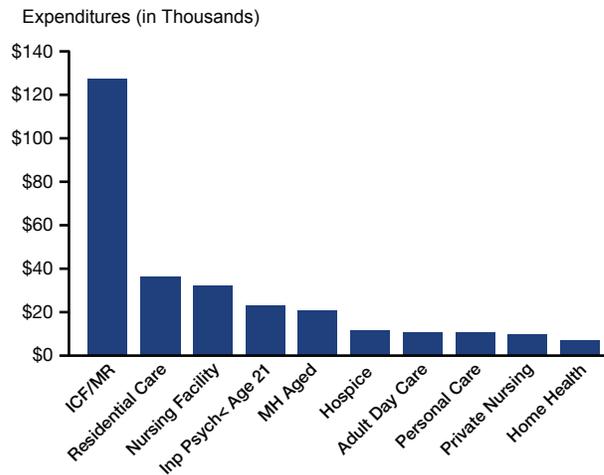


Source: Medicaid Analytic Extract, 2008  
 FFS Enrollees = full-benefit enrollees with no comprehensive managed care enrollment (HMO, HIO, or PACE) in 2008; ICF/MR= intermediate care facility for the mentally retarded  
 Maine was unable to accurately report its inpatient, long-term care, and other services claims as it did not have a fully functional MMIS. Maine is excluded from national averages and other estimates that include these claims.

In addition to being the largest expenditure, nursing facility services were also the most utilized long-term care service, with about 5 percent of FFS enrollees using them in 2008. The next-most-utilized long-term care services include personal care (3 percent), home health (2 percent), residential care (1 percent), and adult day care (1 percent) (Figure 6.10). FFS duals had higher rates of long-term care utilization: 19 percent used nursing facilities, followed by personal care (11 percent), home health (5 percent), and residential care (3 percent) (data not shown).

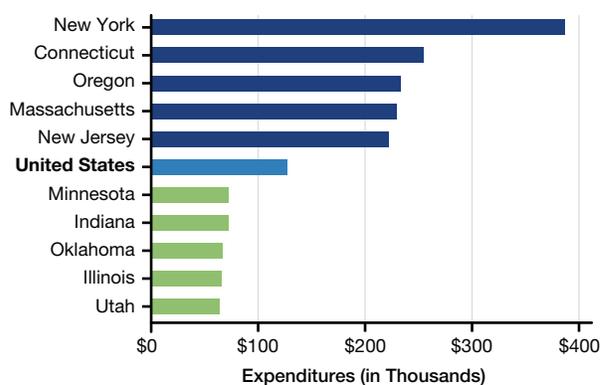
ICF/MR services were the most costly long-term care service on a per-user basis; average expenditures were \$127,700 per enrollee served in an ICF/MR in 2008 (Figure 6.11). Average expenditures per user of these services were high in all states but varied greatly, ranging from \$64,087 in Utah to \$388,211 in New York (Figure 6.12). Other long-term care services with high annual per-user costs included residential care, (\$36,486), nursing facility (\$33,823), inpatient psychiatric care for those under 21 (\$24,158), and mental hospitals for the aged (\$20,245).

**Figure 6.11**  
**Per-User Expenditures on Long-Term Care Services Among FFS Enrollees in 2008**



Source: Medicaid Analytic Extract, 2008  
 FFS Enrollees = full-benefit enrollees with no comprehensive managed care enrollment (HMO, HIO, or PACE) in 2008; ICF/MR= intermediate care facility for the mentally retarded  
 MH Aged = Mental Health Aged  
 Maine was unable to accurately report its inpatient, long-term care, and other services claims as it did not have a fully functional MMIS. Maine is excluded from national averages and other estimates that include these claims.

**Figure 6.12**  
**Per-User ICF/MR Expenditures in 2008: Top and Bottom 5 States**



Source: Medicaid Analytic Extract, 2008  
 FFS Enrollees = full-benefit enrollees with no comprehensive managed care enrollment (HMO, HIO, or PACE) in 2008; ICF/MR= intermediate care facility for the mentally retarded  
 Arizona reported no ICF/MR utilization in 2008.  
 Maine was unable to accurately report its inpatient, long-term care, and other services claims as it did not have a fully functional MMIS. Maine is excluded from national averages and other estimates that include these claims.

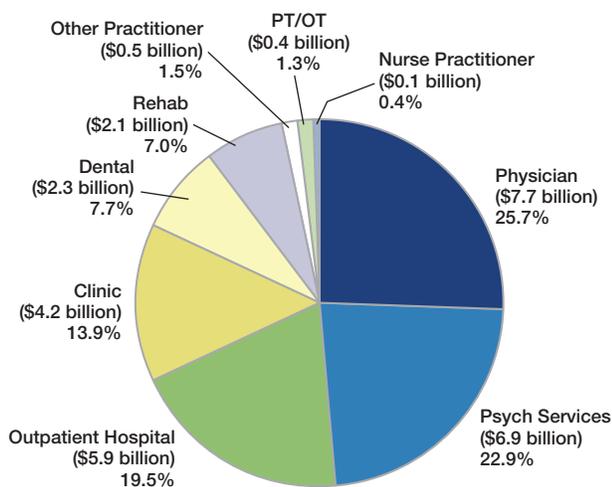
### Physician and Other Ambulatory Services

Physician and other ambulatory services accounted for 16 percent of FFS expenditures among FFS enrollees and were the category of service with the second-largest total expenditures among FFS enrollees, after long-term care.<sup>33</sup>

Physician services were both the largest contributor to physician and other ambulatory service expenditures (\$7.7 billion) and the most utilized such service by Medicaid FFS enrollees (57 percent) (Figures 6.13 and 6.14). Other key cost-driving services were psychiatric (\$6.9 billion), outpatient hospital (\$5.9 billion), clinic (\$4.2 billion), dental (\$2.3 billion), and rehabilitation (\$2.1 billion).

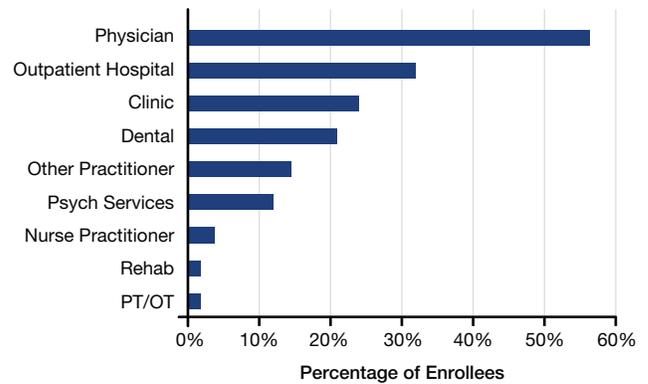
<sup>33</sup> Claims for physician services include separately billed physician services provided in inpatient settings.

**Figure 6.13**  
Composition of FFS Physician and Other Ambulatory Service Expenditures Among FFS Enrollees in 2008



Source: Medicaid Analytic Extract, 2008.  
FFS Enrollees = full-benefit enrollees with no comprehensive managed care enrollment (HMO, HIO, or PACE) in 2008; PT/OT = physical therapy/occupational therapy  
Maine was unable to accurately report its inpatient, long-term care, and other services claims as it did not have a fully functional MMIS. Maine is excluded from national averages and other estimates that include these claims.

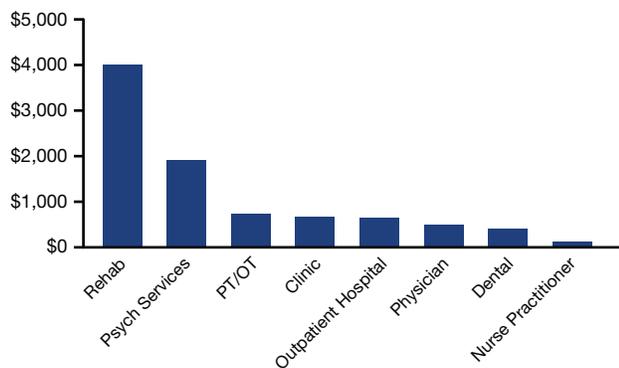
**Figure 6.14**  
Percentage of FFS Enrollees Who Used Physician or Other Ambulatory Services in 2008



Source: Medicaid Analytic Extract, 2008.  
FFS Enrollees = full-benefit enrollees with no comprehensive managed care enrollment (HMO, HIO, or PACE) in 2008; PT/OT = physical therapy/occupational therapy  
Maine was unable to accurately report its inpatient, long-term care, and other services claims as it did not have a fully functional MMIS. Maine is excluded from national averages and other estimates that include these claims.

In comparison to other ambulatory services, costs per user were highest for rehabilitation services, which were used by only 2 percent of Medicaid FFS enrollees but represented 7 percent of their physician and other ambulatory service expenditures. Figure 6.15 shows that within physician and other ambulatory services, the 2008 expenditures for rehabilitation services (\$4,019 per user) were markedly higher than the next-most-expensive ambulatory services, psychiatric (\$1,985) and PT/OT (\$777).

**Figure 6.15**  
**Per-User Expenditures for Physician and**  
**Other Ambulatory Services Among FFS Enrollees**  
**in 2008**



Source: Medicaid Analytic Extract, 2008.  
 FFS Enrollees = full-benefit enrollees with no comprehensive managed care enrollment (HMO, HIO, or PACE) in 2008; PT/OT = physical therapy/occupational therapy  
 Maine was unable to accurately report its inpatient, long-term care, and other services claims as it did not have a fully functional MMIS. Maine is excluded from national averages and other estimates that include these claims.

Additional summary information about FFS ambulatory and professional service use and expenditures in 2008 is 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, and also to examine how changing patterns of utilization and expenditures are influenced by changing population demographics, state policies, and Medicaid coverage rules.

# 7. Waiver Enrollment and Utilization

State Medicaid programs must adhere to the provisions of Title XIX of the Social Security Act to receive federal matching funds. As discussed in Chapter 1, these provisions require that states cover certain populations and services. The Act includes additional stipulations related to service delivery and benefit packages, including:

- *Freedom of choice.* Enrollees must be allowed to choose any authorized provider of services.
- *Statewideness.* Eligibility rules, benefit packages, and reimbursement rates must be the same throughout the state.
- *Comparability.* Benefits offered to one categorically eligible group must be comparable in amount, duration, and scope to those offered to other categorical eligibility groups.

If states want to expand eligibility or services beyond what is allowed by Title XIX or provide them in a way that differs from what the provisions allow, they must obtain a “waiver” from CMS. Under the Social Security Act, states can apply for four different types of Medicaid waivers:

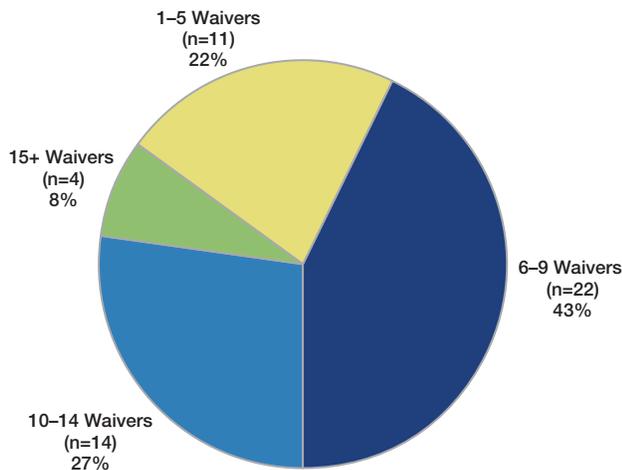
1. *Section 1115 waivers.* These waivers allow states to implement demonstration projects that test policy innovations likely to further the objectives of the Medicaid program. States use these waivers for a variety of purposes, most commonly to expand Medicaid coverage to

otherwise-ineligible groups or to implement a delivery system change, such as managed care.

2. *Section 1915(b).* States can use these waivers to implement mandatory managed care delivery systems, or otherwise limit individuals’ choice of provider under Medicaid.
3. *Section 1915(c) HCBS.* These waivers allow states to extend their benefit plans to long-term care services beyond the scope of the allowed Medicaid benefit package and serve individuals in community settings. These services offer an alternative for people who would otherwise need institutional care. States can target these waivers to specific geographic areas within the state and to specific subpopulations of enrollees.
4. *Section 1915(b)(c).* These waivers implement both 1915(b) and 1915(c) program authorities to provide long-term care services, including HCBS, through managed care or other provider choice restrictions. These waivers must meet all federal requirements for both waiver types.

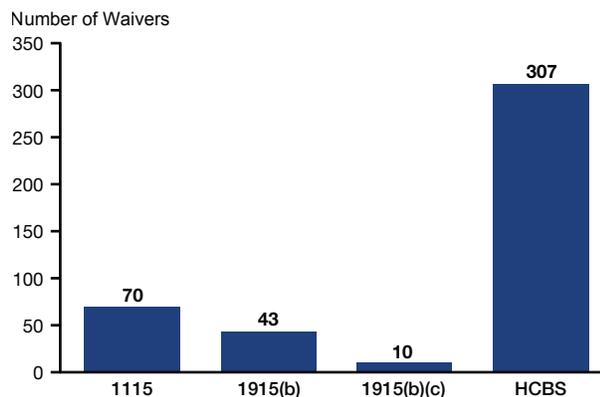
In 2008, every state had at least one Medicaid waiver. Most states maintained multiple waivers of different types, with 40 states operating 6 or more active waivers in 2008 (Figure 7.1). Florida had the most waivers in 2008, including more than 10 HCBS waivers and four 1115 waivers. Nationally, HCBS waivers were the most utilized type of waiver, with more than 300 active waivers of this type in 2008

**Figure 7.1**  
**Number of Medicaid Waivers Per State in 2008**



Source: Medicaid Analytic Extract Waiver Crosswalk, 2008.  
 Note: Waiver count includes all CMS-approved Medicaid waivers that were active at any time during 2008

**Figure 7.2**  
**Number of Waivers by Type in 2008**

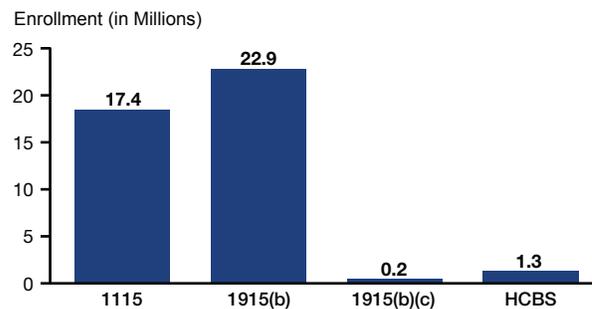


Source: Medicaid Analytic Extract Waiver Crosswalk, 2008.  
 Note: Waiver count includes all CMS-approved Medicaid waivers that were active at any time during 2008

(Figure 7.2). There were 70 Section 1115 waivers, the next-most-common type.

Despite their large number, HCBS waivers covered disproportionately fewer Medicaid enrollees than 1915(b) or 1115 waivers in 2008 (Figure 7.3). HCBS waivers typically target specific, relatively small populations, whereas 1915(b) and 1115 waivers in many states enrolled large majorities of the state Medicaid population. For example, New York's

**Figure 7.3**  
**Medicaid Enrollment by Type of Waiver in 2008**



Source: Medicaid Analytic Extract Waiver Crosswalk, 2008.  
 Note: Waiver count includes all CMS-approved Medicaid waivers that were active at any time during 2008

Partnership 1115 waiver, the Medicaid waiver with the most enrollees in 2008, had about 2.5 million enrollees a month. The smallest HCBS waivers enrolled fewer than 20 people a month. In 2008, about 1.3 million Medicaid enrollees were enrolled in HCBS waivers. By comparison, almost 23 million Medicaid enrollees were placed in 1915(b) waivers. About 17.4 million Medicaid enrollees were enrolled in Section 1115 waivers in 2008; of these, 6.7 million were expansion enrollees who would have otherwise been ineligible for Medicaid. (For more detail, see appendix tables A7.1, A7.3, and A7.4.)<sup>34</sup>

States reported limited information about waiver enrollment and expenditures in MSIS until FFY 2005. At that time, Medicaid waiver data in MSIS improved notably when states began reporting HCBS waiver enrollment. States are also continually working to improve reporting for Section 1115 and 1915(b) waivers; researchers should consult the 2008 MAX anomaly tables for more information about waiver-reporting anomalies. The MAX 2008 waiver crosswalk also includes detailed information

<sup>34</sup> Appendix Table A7.3 shows combined enrollment in 1915(b) and 1915(b)(c) waivers, nationally and by state. Figure 7.3 separates this enrollment into enrollment in 1915(b) waivers and enrollment in 1915(b)(c) waivers.

about each state's Medicaid waivers.<sup>35</sup> This chapter provides an overview of some of the analyses of waiver enrollment and expenditure data that are possible with MAX data, focusing on the three primary types of Medicaid waivers: Section 1115, Section 1915(b), and HCBS.<sup>36</sup>

## Section 1115 Research and Demonstration Project Waivers

Section 1115 waivers enable states to test new and innovative approaches for providing Medicaid services. Section 1115 of the Social Security Act includes broad authority for the Secretary of the U.S. Department of Health and Human Services (HHS) to authorize experimental, pilot, or demonstration projects likely to assist in promoting the objectives of the Medicaid statute. To receive approval, states must demonstrate that an 1115 waiver program will be budget neutral for the federal government, and the waiver must include an evaluation component.

In 2008, 39 states maintained 1115 waivers, which they used for diverse purposes. Table 7.1 shows the populations that were covered under Section 1115 waivers in each state in 2008. (State-level enrollment in 1115 waivers is in Appendix Table A7.1.) State experiments operated under 1115 waivers in 2008 included:

- *Delivery system changes*, such as mandatory enrollment in managed care. Delivery system changes can apply to specific eligibility groups (such as all children in the state) or to geographic regions (such as major cities or statewide). For example, Kentucky's

Health Care Partnership 1115 waiver implemented mandatory comprehensive managed care enrollment for almost all non-institutionalized Medicaid beneficiaries in one region of the state.

- *Coverage expansions with targeted benefits for specific populations*, such as a Medicaid-expansion program with benefits tailored to uninsured individuals with HIV/AIDS in Maine and a prescription drug coverage program for aged enrollees in Wisconsin.
- *Coverage expansions with basic benefit packages for broader uninsured populations*, such as Maryland's Primary Adult Care 1115 waiver program and a childless-adult expansion in Michigan. Both of these waivers provided basic primary care benefits to enrollees who would have otherwise not been covered in Medicaid.
- *Combinations of coverage expansions and delivery system changes*, such as Vermont's Global Commitment to Healthcare 1115 waiver. Through this waiver, Vermont operated a publicly sponsored managed care organization with mandatory enrollment for many children and adult Medicaid enrollees, which also expanded coverage to otherwise-ineligible aged, individuals with disabilities, children, pregnant women, parents, and childless adults, and also provided premium assistance to eligible individuals with access to employer-sponsored insurance. The state also used this waiver to expand its HCBS availability. Like Vermont, many states combined the implementation of managed care or other cost-savings approaches with expansion programs to ensure that the waiver remained budget neutral.

In 2008, 35 of the 39 states with 1115 waivers used them to cover people who were otherwise ineligible for Medicaid.<sup>37</sup> Adults made up the largest group receiving

<sup>35</sup> MAX 2008 anomaly tables and waiver crosswalk are available at: [www.cms.gov/medicaiddatasourcesgeninfo/07\\_maxgeneralinformation.asp](http://www.cms.gov/medicaiddatasourcesgeninfo/07_maxgeneralinformation.asp). To access the crosswalk, download the "MAX Data 2005 and later" file, and open "2008Files.zip".

<sup>36</sup> Section 1915(b)(c) waivers are presented with Section 1915(b) waivers because these waivers offer more extensive services than those offered in HCBS waivers.

<sup>37</sup> Alaska, Idaho, Kentucky, and Montana used 1115 waivers to implement only delivery system changes, not to expand Medicaid coverage. As appendix table A7.1 shows, these states have no 1115 waiver expansion enrollment.

**Table 7.1**  
**Section 1115 Waivers in MAX 2008**

State	No Section 1115 Waiver	Section 1115 Waiver with Non-Expansion Components	1115 Waiver Expands Medicaid Eligibility and/or Extends Targeted Coverage to a Special Population								
			Aged Expansion	Disabled Expansion	Children Expansion	Pregnant Women Expansion	Parents/ Caretakers Expansion	Childless Adult Expansion	Family Planning Only <sup>a</sup>	HIV Positive Individuals	Prescription Drug Only <sup>a</sup>
<b>Total Number of States</b>	<b>12</b>	<b>24</b>	<b>4</b>	<b>9</b>	<b>12</b>	<b>9</b>	<b>19</b>	<b>18</b>	<b>26</b>	<b>3</b>	<b>2</b>
Alabama									♦		
Alaska		♦									
Arizona		♦					NR	♦	♦		
Arkansas		♦		♦	♦		NR	NR	♦		
California		♦							♦		
Colorado	♦										
Connecticut	♦										
Delaware		♦					♦	♦	♦		
District of Columbia								♦		♦	
Florida		♦	♦	♦					♦		
Georgia	♦										
Hawaii		♦		♦	♦	♦	♦	♦			
Idaho		♦									
Illinois									♦		
Indiana		♦					♦	♦			
Iowa		♦			♦	♦	♦	♦	♦		
Kansas	♦										
Kentucky		♦									
Louisiana									♦		
Maine								♦		♦	
Maryland		♦		♦			♦	♦	♦		♦
Massachusetts		♦		♦	♦	♦	♦	♦			♦
Michigan								♦	♦		
Minnesota		♦			♦	♦	♦		♦		
Mississippi			♦	♦					♦		
Missouri									♦		
Montana		♦									
Nebraska	♦										
Nevada	♦										
New Hampshire	♦										
New Jersey		♦				♦	♦				
New Mexico		♦			♦		♦	♦	♦		
New York		♦					♦	♦	♦		
North Carolina									♦		
North Dakota	♦										
Ohio	♦										
Oklahoma		♦		♦			♦	♦	♦		
Oregon		♦			♦	♦	♦	♦	NR		
Pennsylvania									♦		
Rhode Island		♦			♦	♦	♦		♦		
South Carolina									♦		
South Dakota	♦										
Tennessee		♦	♦	♦	♦		♦	♦			
Texas									NR		
Utah						♦	♦	♦			
Vermont		♦	♦	♦	♦	♦	♦	♦			♦
Virginia									♦		
Washington									♦		
West Virginia	♦										
Wisconsin		♦			♦		♦		♦		♦
Wyoming	♦										

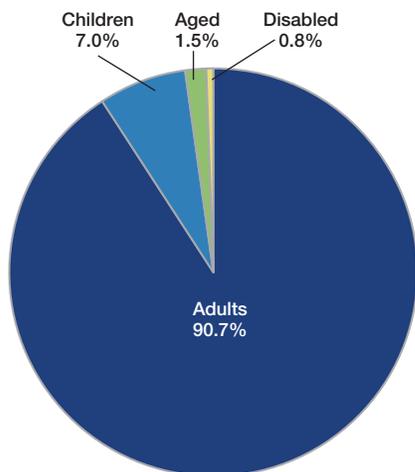
Source: Medicaid Analytic Extract, 2008.

Notes: Some States have multiple Section 1115 waivers. These waivers have been combined to show total Section 1115 waiver coverage in a single row per state. See the MAX 2008 waiver crosswalk for additional details of state waiver reporting in MAX and information about individual Section 1115 waivers. Many Section 1115 Waivers include coverage expansions as well as other components that do not expand Medicaid coverage.

NR = not reported in MAX 2008 data. 1115 waivers in Alaska, Idaho, Kentucky, and Montana did not include any expansions. These waivers only made non-expansion program changes.

<sup>a</sup> Prescription Drug Only and Family Planning Only waivers extend coverage for these services only to individuals who are otherwise not eligible for Medicaid.

**Figure 7.4**  
**Percentage of 1115 Waiver Expansion Enrollees**  
**by Basis of Eligibility in 2008**



Source: Medicaid Analytic Extract, 2008

Medicaid coverage through a 1115 expansion in 2008, accounting for almost 91 percent of all 1115 expansion enrollees (Figure 7.4). Overall, about 37 percent of all Medicaid-covered adults in 2008 were covered through 1115 waiver expansions, compared to less than 2 percent of all children and aged enrollees and less than 1 percent of enrollees eligible on the basis of disability (data not shown). States had limited options outside 1115 waivers for covering adults in Medicaid State plans in 2008; the 18 states that covered childless adults in 2008 were able to do so *only* through 1115 waivers. Other common 1115 expansions for adults in 2008 included those to higher-income pregnant women, parents or caretaker relatives of children enrolled in Medicaid or CHIP, and more targeted expansions that included family planning services only. Some states also used 1115 waivers to expand coverage to children, the aged, and people with disabilities, but these programs were generally smaller and more targeted and occurred in combination with expansions for adults.

States that expand Medicaid coverage through 1115 waivers can provide more limited benefit packages to those enrollees than to mandatory

coverage groups. In particular, one type of 1115 waiver, the Health Insurance Flexibility and Accountability (HIFA) waiver, was created in 2001 to extend basic health coverage to low-income uninsured adults. In 2008, eight states (Arizona, Arkansas, Idaho, Maine, Michigan, New Mexico, New Jersey, and Oklahoma) used HIFA waivers to extend limited Medicaid coverage to adults.<sup>38</sup> Medicaid benefits provided via HIFA waivers may be limited to premium assistance payments toward the purchase of employer-sponsored insurance or enrollment in state employee insurance. People enrolled in Medicaid through these waivers receive only primary care benefits.<sup>39</sup>

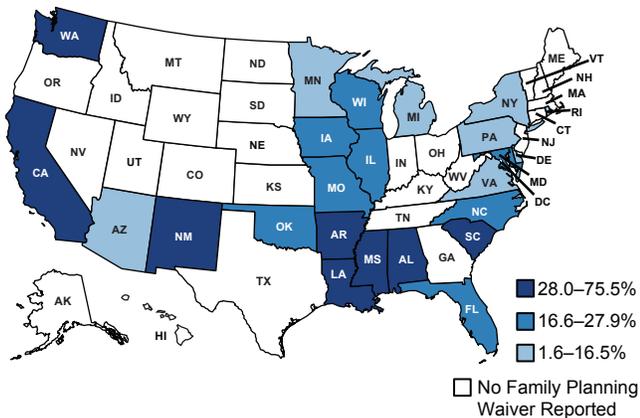
In 2008, 26 states had family planning waivers, a type of 1115 waiver that covers only family planning benefits for individuals, typically women of childbearing age, who are not otherwise eligible for Medicaid (Table 7.1). These waivers, first offered in 1993, provide only limited services, including contraceptive coverage, testing for sexually transmitted diseases, limited counseling, and assistance with access to primary care services. In 2008, Medicaid expenditures for family planning enrollees averaged only about \$205 per enrollee, compared to \$3,139 per full-benefit adult enrollee (data not shown).<sup>40</sup> (State-level family planning enrollment and expenditures are shown by state in Appendix Table A7.2.)

<sup>38</sup> California and Illinois used HIFA waivers to expand coverage for children, parents, and caretakers under separate CHIP programs in 2008.

<sup>39</sup> Because some HIFA waiver enrollees receive only premium assistance, and because of the limited and unique scope of these benefits, these enrollees may be undercounted in state MMIS data. When states are able to identify these enrollees, they are reported in MSIS as 1115 waiver enrollees. For more information on reporting anomalies for specific waivers, see the MAX 2008 anomaly tables at: [www.cms.gov/medicaiddatasourcesgeninfo/07\\_maxgeneralinformation.asp](http://www.cms.gov/medicaiddatasourcesgeninfo/07_maxgeneralinformation.asp).

<sup>40</sup> States receive a federal match rate of 90 percent for family planning waiver expenditures, compared to a match rate of 50 to 76 percent for other Medicaid services.

**Figure 7.5**  
**Percentage of All Adult Medicaid Enrollees**  
**(in Thirds) Enrolled In Family Planning Waiver**  
**During 2008**



Source: Medicaid Analytic Extract 2008

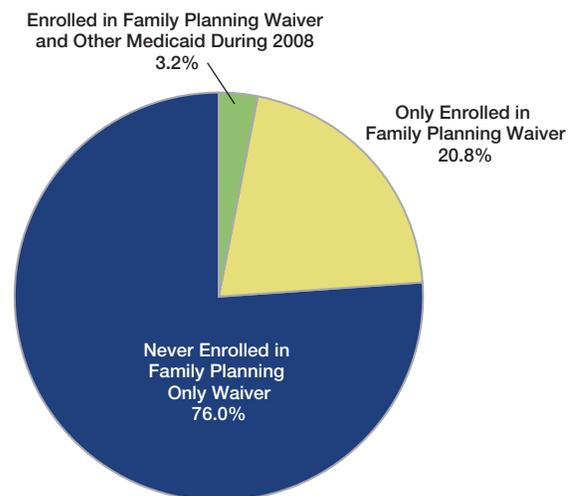
Nationally, about 24 percent of all adult Medicaid enrollees were enrolled in family planning waivers at some point during 2008. Further, about 21 percent of adults received only family planning services during the year. California’s large family planning waiver, with 2.5 million enrollees, accounted for almost three-quarters of the 3.4 million Medicaid enrollees who only received family planning services in 2008. In several additional states, however, family planning enrollees accounted for sizable portions of the adult enrollee population. Among states with family planning waivers, the percentage of adult Medicaid enrollees that were family planning enrollees ranged from a low of 2 percent of adult enrollees in Arizona to 76 percent in Alabama (Figure 7.5). In addition to differences in program size, the percentage of enrollees that are family planning is affected by the size of the full-benefit adult population in the state, which varies with the state’s income eligibility standards and the percentage of eligible adults who enroll in Medicaid. Because family planning enrollees receive very limited benefits, expenditure and service utilization analyses that include these people may cause these states to

differ considerably from states that do not have family planning waiver programs.<sup>41</sup>

A small percentage of adult Medicaid enrollees (3 percent) transitioned between family planning waivers and other Medicaid benefits during 2008 (Figure 7.6). These enrollees represent about 13 percent of all family planning enrollees. This pattern varied considerably across states that maintained these programs. None of the family planning enrollees in California received any other Medicaid coverage during the year. In other states, enrollees moved more regularly between this coverage and full Medicaid benefits. In Illinois, almost 75 percent of family planning enrollees received additional Medicaid benefits at some point during 2008. Illinois’s family planning waiver specifically targeted postpartum women leaving Medicaid coverage, whereas other states targeted all eligible women who were otherwise ineligible for

<sup>41</sup> As discussed in Chapter 2, people who received only family planning benefits in 2008 were identified as restricted-benefit enrollees in this analysis and were excluded from the population of full-benefit enrollees in this chartbook.

**Figure 7.6**  
**Percentage of All Adult Medicaid Enrollees**  
**Participating in Family Planning Waivers in 2008**



Source: Medicaid Analytic Extract, 2008  
 Note: Family planning enrollees receive only the benefits specified in the waiver while enrolled in the waiver.

Medicaid. In 2010, the Affordable Care Act authorized states to provide family planning and related services to otherwise-ineligible people under the state plan, which may result in changes in future years in the number of states offering this coverage and the populations receiving it.

## Section 1915(b) Managed Care/Freedom of Choice Waivers

The Omnibus Budget Reconciliation Act of 1981 established Section 1915(b) waivers, which allow states to waive statewideness, comparability of services, and/or freedom of choice and require individuals to enroll in managed care plans for some or all of their Medicaid benefits. Mandatory managed care plan benefit packages must provide, at a minimum, the benefit package covered under the regular Medicaid state plan, but states can use cost savings from the use of managed care to add to the services covered under managed care contracts.

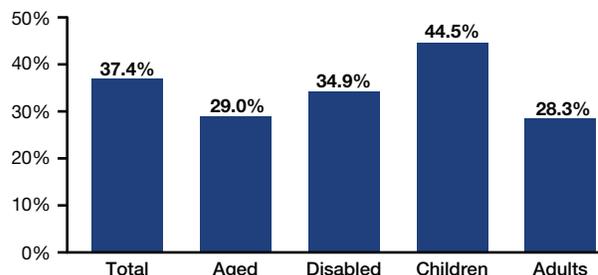
In 2008, 29 states used Section 1915(b) or 1915(b)(c) waivers to place some or all of their Medicaid population into managed care of some kind.<sup>42</sup> (State-level enrollment in Section 1915(b) and 1915(b)(c) waivers is shown in Appendix Table A7.3.) Managed care programs operated via 1915(b) waivers include the full range of Medicaid managed care types such as relatively limited programs, from non-emergency transportation or disease management programs operated by PHPs to comprehensive managed care plans offered through HMOs, HIOs, or PACE plans. In 2008, states frequently used 1915(b) waivers to implement managed care programs that carved out specialty services, most commonly including mental health services and dental services. In Nebraska, 1915(b) waiver use

<sup>42</sup> Kansas, New Hampshire, and Virginia had active Section 1915(b) waivers, but enrollment in these waivers was not reported in MAX 2008. These states are included in the count of 29 states with 1915(b) or 1915(b)(c) waivers.

is limited to enrolling individuals into PCCMs. States may also use multiple 1915(b) waivers to place different populations into different kinds of managed care. For example, Indiana's Care Select 1915(b) program placed aged and blind enrollees and those with disabilities into FFS PCCM programs. Indiana's Hoosier Healthwise 1915(b) program enrolled Medicaid-expansion CHIP children into HMOs that provided comprehensive Medicaid benefits.

Nationally, about 23 million enrollees, or just over one-third of all Medicaid enrollees, were placed into some form of managed care by Section 1915(b) or 1915(b)(c) waivers (Figure 7.7). Large programs in some states accounted for much of this enrollment. California used 1915(b) waivers to place about 8.3 million enrollees into comprehensive managed care plans and dental PHPs. Florida placed about 2.8 million enrollees in non-emergency transportation, mental health, and disease management PHPs.

**Figure 7.7**  
Percentage of All Medicaid Enrollees in Section 1915(b) or 1915(b)(c) Waivers



Source: Medicaid Analytic Extract, 2008

Eight states (Florida, Michigan, Minnesota, New Mexico, North Carolina, Pennsylvania, Texas, and Wisconsin) used combination Section 1915(b)(c) waivers to implement mandatory managed care programs that included HCBS.<sup>43</sup> Managed care

<sup>43</sup> Of these states, Wisconsin was the only one that did not also operate a separate Section 1915(b) waiver.

programs implemented under these waivers included comprehensive managed care as well as plans that carved out coverage for behavioral or other specialty managed care. These programs ranged from FFS adult day care and Alzheimer's programs in Florida to comprehensive managed care in Minnesota, New Mexico, and Texas. Because these programs included HCBS, they generally targeted aged or disabled enrollees. For example, the Texas STAR+PLUS program, the first 1915(b)(c) program, served enrollees who were aged or had disabilities, including many dual eligibles, in Harris County (Houston). Enrollees in this program received integrated acute and long-term care services via HMOs and a PCCM plan. Although STAR+PLUS enrollment was not mandatory for Medicare enrollees, duals who enrolled in the same HMO for their Medicare and Medicaid services received an enhanced drug benefit. In Minnesota, aged enrollees could elect to enroll in the state's integrated Medicare managed care program, or they were enrolled in the state's 1915(b) Senior Care managed care and HCBS combination program.

In 2008, states had multiple options for placing Medicaid enrollees in managed care beyond 1915(b) waivers, including 1115 waivers and state plan options. For this reason, managed care programs offered under 1915(b) waivers represent only a fraction of Medicaid managed care in 2008. For more detail on all Medicaid managed care in 2008, see chapters 3 and 4.

### **Section 1915(c) Home- and Community-Based Services Waivers**

Since 1982, Section 1915(c) of the Social Security Act authorizes the HHS Secretary to waive Medicaid provisions to allow long-term care services to be delivered in home and community settings to people who would otherwise require care in an institution.

Section 1915(c) waivers (called HCBS waivers) give the aged and enrollees eligible on the basis of disability more options for long-term care services. HCBS waivers also help states respond to the requirement that people with disabilities be served in the most integrated setting possible.<sup>44</sup> To serve an individual in an HCBS waiver, the state must use a standard evaluation process to determine that the individual requires an institutional level of care.

Medicaid services covered under HCBS waivers can include medical services, such as skilled nursing and dental services, as well as non-medical services, such as case management, personal care, homemaker services, adult day care, respite care, and transportation. These waivers are also used for environmental adaptations, habilitation, pre-vocational training, and supported employment. The services offered in an HCBS waiver cannot duplicate services that are provided under a Medicaid State Plan, but states can use these waivers to augment services in the Medicaid State Plan by raising the amount, duration, or frequency of covered services for waiver participants. States can also use these waivers to waive certain income and resource rules and cover services in the community that would otherwise be available only in an institutional setting.

Every state except Arizona and Vermont maintained at least one HCBS waiver in 2008 (data not shown).<sup>45</sup> Both these states had programs similar to HCBS waiver programs, but they operated them through 1115 waivers. Since 1999, states have reported services provided through HCBS waivers in their MSIS data. In FFY 2005, the information in

<sup>44</sup> This requirement was established in 1999 in the U.S. Supreme Court's *Olmstead v. L.C.* decision.

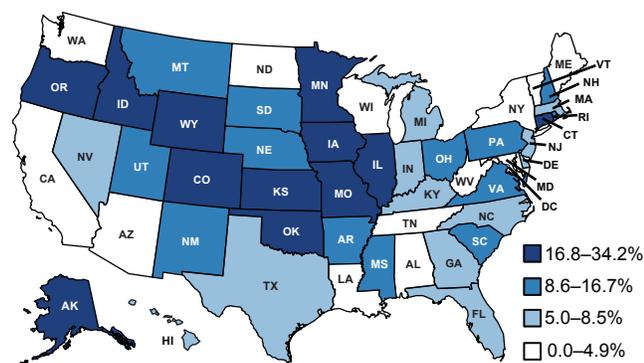
<sup>45</sup> Washington maintained 1915(c) waivers, but because of data system limitations, this enrollment was not reported in Washington's MSIS data in 2008. For more information about these and other waiver reporting anomalies, see the MAX 2008 data anomalies.

MSIS about HCBS waivers became more complete when states started reporting monthly HCBS waiver enrollment. At that time, CMS also began reporting more detailed information in MAX about the population that each HCBS waiver targets.

Because of the eligibility requirements for HCBS waivers, these waivers target almost exclusively enrollees who are aged or have disabilities. Nationally, about 8 percent of all Medicaid enrollees who were aged or disabled were enrolled in HCBS waivers in 2008. Rates of HCBS waiver enrollment among enrollees who were aged or disabled varied considerably across states in 2008, from less than 2 percent of aged enrollees in California and Maine to 34 percent in Oregon (Figure 7.8), and from about 1 percent of enrollees with disabilities in Michigan to 29 percent in Kansas and Wyoming (Figure 7.9). States in the Midwest and West generally had high rates of HCBS waiver enrollment. State-level HCBS waiver enrollment is reported in Appendix Table A7.4.

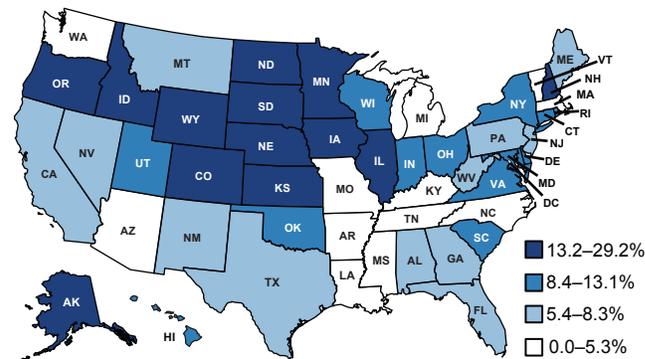
Most states maintained multiple HCBS waivers and targeted specific services to defined populations, such as elderly people or those under 65 with physical disabilities. States may also target services on the

**Figure 7.8**  
Percentage of Aged Medicaid Enrollees (in Quartiles) in HCBS Waivers in 2008



Source: Medicaid Analytic Extract 2008  
Note: Arizona, Washington, and Vermont did not report any HCBS enrollment in MAX 2008.

**Figure 7.9**  
Percentage of Disabled Medicaid Enrollees (in Quartiles) in HCBS Waivers in 2008



Source: Medicaid Analytic Extract 2008  
Note: Arizona, Washington, and Vermont did not report any HCBS enrollment in MAX 2008.

basis of disease or condition, such as brain injuries or autism. In 2008, states targeted HCBS waivers to a variety of populations, including:

- Aged and disabled people
- Aged people
- Physically disabled people
- People with brain injuries
- People with HIV/AIDS
- People with mental retardation or developmental disabilities (MR/DD)
- People with mental illness/severe emotional disturbance (MI/SED)
- Technology-dependent/medically fragile people
- People with autism

Waivers for people with MR/DD were the most common type of HCBS waiver in 2008; these waivers operated in 48 states, with an enrollment of over 500,000 (Table 7.2). In comparison, fewer than 10 states maintained HCBS waivers for people with MI/SED or people with autism, and such waivers tended to have low enrollment. State-level expenditure and enrollment data for HCBS waiver types are reported in Appendix Table A7.5.

**Table 7.2**  
**Enrollment and Expenditures by HCBS Waiver Type in 2008**

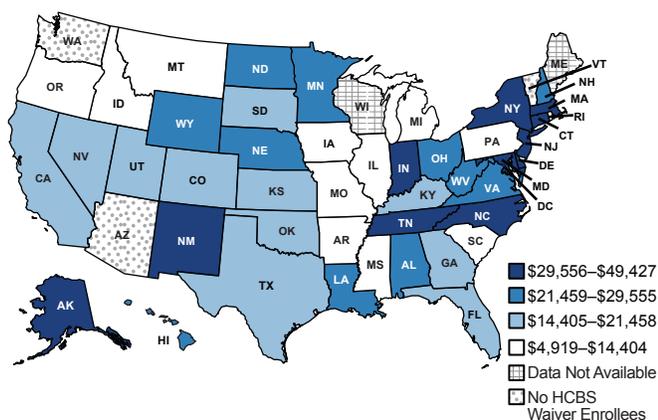
HCBS Waiver Type	Number of States with HCBS Waiver Type	National Enrollment	Average HCBS Waiver Expenditures (\$)
Aged	14	153,728	4,715
Aged and Disabled	41	427,467	9,359
Autism	6	2,900	14,124
Brain Injuries	22	17,275	27,180
HIV/AIDS	14	8,902	5,184
Mentally Ill/Severely Emotionally Disturbed	8	10,007	5,119
MR/DD	48	516,980	37,619
Physically Disabled	26	106,378	12,476
Technology-Dependent/Medically Fragile	19	8,874	19,607

Source: Medicaid Analytic Extract, 2008.  
 Maine was unable to accurately report its inpatient, long-term care, and other services claims as it did not have a fully functional MMIS. Maine is excluded from national averages and other estimates that include these claims.

Nationally, expenditures for HCBS provided through waivers were about \$21,000 per waiver enrollee. Average expenditures for HCBS ranged from a low of \$4,900 per enrollee in Rhode Island to a high of \$49,400 in New York (Figure 7.10). Low average waiver expenditures for HCBS enrollees could be driven by lower service costs in these states or by limited service offerings in these waivers.

Average HCBS waiver expenditures also varied considerably by waiver type, from a low of \$4,700 nationally for enrollees in aged waivers to a high of \$37,600 for those in MR/DD waivers (Table 7.2). This variation stems from the range of service offerings in these waivers and the diverse needs of the populations covered.

**Figure 7.10**  
**Average Waiver Expenditures for Enrollees in HCBS Waivers (in Quartiles)**



Source: Medicaid Analytic Extract 2008  
 Note: Arizona and Vermont did not have active HCBS waivers in 2008. Washington had HCBS waivers but did not report this enrollment in MSIS. Maine was unable to accurately report its inpatient, long-term care, and other services claims as it did not have a fully functional MMIS. Maine is excluded from national averages and other estimates that include these claims.

Expenditures through HCBS waivers comprise a considerable portion of total Medicaid spending for the average HCBS waiver enrollee. Nationally, expenditures for all Medicaid services were \$33,700 per HCBS waiver enrollee. In total, expenditures for HCBS waiver services accounted for 62 percent of all Medicaid expenditures for HCBS waiver enrollees. Percentages varied across states, from 10 percent of total expenditures in Rhode Island to 88 percent in New Mexico (data not shown). The wide range can be attributed to differences in the services offered through HCBS waivers across states as well as in how states divide long-term care service provision across HCBS waivers, HCBS offered in the state plan, and reliance on ILTC services. (Chapter 6 further discusses utilization and expenditure rates for long-term care services offered in the community as compared to institutional settings.)



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

**1915(b) Waiver** Medicaid waiver authorized by the Social Security Act. These waivers allow states to implement mandatory managed care delivery systems or otherwise limit individuals' choice of provider under Medicaid.

**1915(c) HCBS Waiver** Medicaid waiver authorized by the Social Security Act. These waivers allow states to offer long-term care services beyond the scope of the allowed Medicaid benefit package and serve people in community settings. Also called home- and community-based services (HCBS) waivers.

**1915(b)(c) Waiver** Medicaid waiver authorized by the Social Security Act. These waivers implement both 1915(b) and 1915(c) program authorities to provide long-term care services, including HCBS, through managed care or other provider choice restrictions. These waivers must meet all federal requirements for both waiver types.

**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 aged 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 United States 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.

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

**Children's Health Insurance Program (CHIP)** authorized in 1997, this program provides enhanced federal matching funds to help states expand health care coverage to the nation's uninsured children. CHIP is jointly financed by federal and state governments and administered by states. States may administer CHIP through

their Medicaid program (referred to as M-CHIP) or as a separate program (referred to as S-CHIP); M-CHIP children are included in the MAX data and reported under the poverty-related maintenance assistance status (MAS).

**Comprehensive Managed Care** health care plans that provide comprehensive medical services to people in return for a prepaid fee. This group includes health maintenance organizations (HMOs), health insuring organizations (HIOs), and Program of All-Inclusive Care for the Elderly (PACE) plans.

**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.

**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 2008.

**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.

**Enrollees** for the purposes of this chartbook, people enrolled in Medicaid for at least one day in 2008 (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, and assist with access to primary care. States also maintain Family Planning waivers that provide only these services to enrollees who are otherwise ineligible for Medicaid.

**Federal Fiscal Year (FFY)** the federal fiscal year begins on October 1 and ends on September 30 of the following year; FY 2008 runs from October 1, 2007, through September 30, 2008.

**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 2008, 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.

### **Home- and Community-Based Services**

**(HCBS)** 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 6 MAX service types in HCBS: adult day care, home health, hospice care, personal care services, residential care, and private-duty nursing (sometimes referred to as community long-term care). These services may be offered through a 1915(c) HCBS waiver or under the Medicaid state plan.

**Inpatient Care** health care received when a person is admitted to a hospital.

**Inpatient File (IP)** MAX inpatient hospital care claims file, which includes inpatient hospital services as well as some bundled services such as lab tests or prescription drugs filled during an inpatient stay.

**Institutional Long-Term Care (ILTC)** Medicaid-covered institutional or inpatient long-term care services. ILTC includes four service types: (1) nursing facility services, (2) intermediate care facility services for the mentally retarded (ICF/MR), (3) mental hospital services for the aged, and (4) 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 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 of 2003 (MMA)** 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 HCBS waivers, and immigrants who qualify for emergency Medicaid benefits only.

**Other Services File (OT) MAX** other services claims file, which includes claims for all Medicaid services that are not reported to the inpatient (IP), institutional long-term care (LT), or prescription drug (RX) files. Other claims include claims for home and community-based services, physician and other ambulatory services, and lab, X-ray, supplies and other wraparound services.

**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 enrollment of 0.5 person-years).

**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.

**Prescription Drug File (RX) MAX** prescription drug claims file, which includes all Medicaid prescriptions filled, except those bundled with inpatient, nursing home, or other services.

**Primary Care Case Management (PCCM)** a type of managed care plan that involves the payment of a small premium (often \$3 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. These plans are one type of comprehensive managed care plan.

**Qualified Disabled and Working Individuals (QD-WIs)** 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 QD-WIs.

**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.

**Restricted-Benefit Enrollees** Medicaid enrollees who receive only limited health coverage. In this chartbook, restricted-benefit enrollees include

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 1931/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.

**Section 209(b) States** states that have elected to use eligibility requirements more restrictive 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.

**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

<b>1115</b> Section 1115 waiver	<b>MAS</b> maintenance assistance status
<b>1915(b)</b> Section 1915(b) waiver	<b>MAX</b> Medicaid Analytic Extract
<b>1915(b)(c)</b> Section 1915(b)(c) waiver	<b>MC</b> managed care
<b>1915(c)</b> Section 1915(c) waiver, also known as HCBS waiver	<b>MMA</b> Medicare Prescription Drug, Improvement, and Modernization Act of 2003 (MMA)
<b>1931</b> Section 1931/Cash assistance	<b>MN</b> medically needy
<b>AFDC</b> Aid to Families with Dependent Children	<b>MSIS</b> Medicaid Statistical Information System
<b>BHO</b> behavioral health organization	<b>OT</b> occupational therapy in the context of specific services; “other” services in the context of summary type of service; MAX other types of claims file
<b>BOE</b> basis of eligibility	<b>PACE</b> Program of All-Inclusive Care for the Elderly
<b>CHIP</b> Children’s Health Insurance Program	<b>PCCM</b> primary care case management
<b>DME</b> durable medical equipment	<b>PHP</b> prepaid health plan
<b>DSH</b> disproportionate share hospital	<b>PS</b> [MAX] person summary [file]
<b>EDB</b> [Medicare] Enrollee DataBase	<b>PT</b> physical therapy
<b>ESRD</b> end-stage renal disease	<b>QDWI</b> Qualified Disabled and Working Individual
<b>FFS</b> fee-for-service	<b>QI</b> Qualified Individual
<b>FFY</b> federal fiscal year	<b>QMB</b> Qualified Medicare Beneficiary
<b>FMAP</b> federal medical assistance percentage	<b>Rx</b> prescription drugs; MAX prescription drug claims file
<b>FPL</b> federal poverty level	<b>SLMB</b> Specified Low-Income Medicare Beneficiary
<b>HCBS</b> home- and community-based services	<b>SSI</b> Supplemental Security Income
<b>HMO/HIO</b> health maintenance organization/health insuring organization	<b>TANF</b> Temporary Assistance for Needy Families
<b>ICF/MR</b> intermediate care facility for the mentally retarded	<b>UPL</b> upper payment limit
<b>ILTC</b> institutional long-term care	
<b>IP</b> inpatient; MAX inpatient claims file	
<b>LT</b> MAX long-term care claims file	

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