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Medicaid Prescription Drug Spending and Use

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Introduction

Medicaid is a major source of payment for prescription drugs. In 2002, the last year for which sufficiently detailed data are available, Medicaid programs and Medicaid managed care plans spent an estimated $29.7 billion for prescribed drugs. Prescribed drugs are one of the most often used and fastest growing Medicaid services. Over 26 million Americans received at least one drug paid for by Medicaid in the year 2000, and data indicate that the number of prescriptions paid for by Medicaid – and presumably the number of recipients – increased considerably in more recent years.

Most Medicaid payments for prescribed drugs (80% in 2000) are for drugs consumed by enrollees age 65 and older and younger persons with disabilities, but these individuals (9 million in 2000) account for only a third of drug recipients in Medicaid (34% in 2000). Utilization is also highly skewed, so a small percentage of enrollees accounts for a large majority of utilization and payments. The highest cost users tend to be older enrollees and data suggest that they generally have one or more chronic conditions. However, even among those with the highest drug costs, prescribed drugs tend to account for no more than one third of total health care payments.

A majority of the aged and disabled individuals who currently receive drugs paid for by Medicaid are also eligible for Medicare. Spending for these dual eligibles is also highly skewed. The top 20% of dual eligibles, as ranked by per capita outpatient drug payments, accounted for nearly two-thirds (64%) of all spending for outpatient drugs provided to dual eligibles in 2000.

Starting in 2006, federal matching funds will no longer be available to states for Medicaid drug coverage provided for all full-benefit dual eligibles, a provision that presumably will shift this population into the newly created Medicare drug benefit (Part D). It is unclear what effect the shift to Part D will have on this group in terms of accessibility of drugs and out of pocket costs. Also, while a Medicare drug benefit might have saved states a large amount of money, states will not realize most of these potential savings because they will have to contribute toward the cost of Part D by returning most of their savings to the federal government. Medicaid will continue to provide prescription drug coverage to other enrolled populations.

Background

Medicaid is a joint federal-state program that pays for medical assistance for individuals and families with low incomes and relatively few assets. Two key roles of the program are to

act as a major source of coverage for health care services for low-income children, caretaker relatives and people with disabilities, and to provide long-term care for older individuals and younger people with disabilities. During federal fiscal year (FFY) 2002 the Medicaid program enrolled an estimated 50.8 million people, with states and the federal government spending an estimated total of $257.6 billion.[1]

Although it is an optional benefit under federal Medicaid law, all states currently provide coverage for outpatient prescription drugs to all categorically eligible individuals and most other enrollees within their Medicaid programs.[2] The bulk of Medicaid prescription drug spending is for elderly and disabled enrollees, including many who are also eligible for Medicare. Medicaid has been a key source of coverage for these "dual eligibles" in the absence of a Medicare drug benefit.

States opting to cover prescribed drugs are required to cover all drugs approved by the Food and Drug Administration (FDA) that are made by manufacturers that have entered into a federal rebate agreement.[3] In exchange, states receive rebates based on formulae established in federal law. Beyond this requirement, states retain significant autonomy over the design of their prescription drug benefits. For example, they can limit the duration (e.g., number of doses) and scope (e.g., total number) of prescriptions, require substitution for brand name drugs with generic equivalents, or make coverage of medications subject to prior authorization. States can also establish a formulary or preferred drug list (PDL) as long as the design process meets federal requirements and any excluded drugs are available through prior authorization. Lastly, states set the levels at which they reimburse pharmacies for drug products and the dispensing fees paid to pharmacists. Although this paper focuses on national data, there is considerable variation in Medicaid drug coverage, expenditures and utilization across states.

Three broad characteristics determine the level of spending for prescribed drugs in any public or private program: the quantity of drugs consumed (e.g., total units), the mix of drugs consumed (e.g., branded vs. generic), and the price per unit of each drug. Although studies often disagree over the extent to which each of these factors drove increased spending in Medicaid and other markets, it is generally agreed that all three factors played a role. The volume of prescriptions and number of prescriptions per user has increased since the early 1990s. Increased use has been attributed to many factors, including improved insurance coverage, population aging, increased diagnosis of chronic conditions, new drugs that treat a wide range of diagnoses, new markets opened by these new drugs, greater emphasis on pharmaceuticals in medical practice, and growth of direct-to-consumer advertising.[4] The unit price for medications has increased as new drugs enter the market at higher prices and prices for existing drugs rise, while the mix of drugs consumed also has shifted to newer, more costly drugs.[5] This shift has been attributed to many factors including (but not limited to) demonstrated or professed advantages of new medications, the effect of advertising on consumer awareness and demand, and low insurance copayments that may make people less sensitive to prices.[6]

Data Sources and Methods

Most data in this report are the authors' estimates based on data from the Centers for Medicare and Medicaid Services (CMS). We draw information from several data sets compiled by CMS to serve different purposes: expenditures from the Quarterly Medicaid Statement of Expenditures for the Medical Assistance Program (Form CMS-64), prescription utilization and reimbursement information from the Medicaid Drug Rebate Program, and person-level eligibility and payment data from the Medicaid Statistical Information System (MSIS). These sources

contain somewhat different measures of drug spending which may lead to slight variations in estimates of total drug spending, even for the same period. We identify the source of each estimate within the text and/or at the bottom of each figure.

The spending figures in this analysis reflect spending for outpatient drugs – that is, those purchased from pharmacies. These figures include drugs for individuals in provider settings where Medicaid pays for drugs separately from other expenses (such as room and board), as is the case with nursing home residents in most states.[7] Expenditures for drugs provided as part of a course of treatment in a hospital or physician's office are not included in our estimates. Some figures include estimated spending for prescribed drugs by health maintenance organizations (HMOs) and other managed care entities serving Medicaid enrollees. To estimate prescription drug utilization and spending within managed care plans, we use a reweighting simulation that assumes that managed care beneficiaries have drug utilization similar to that of fee-for-service beneficiaries with similar characteristics. We then estimate utilization patterns and payments for this simulated managed care population. Additional information about our sources and the process by which we estimated managed care spending is provided in the Appendix.

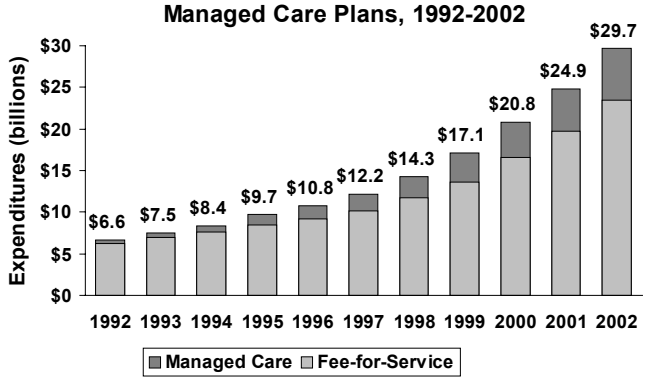
Trends in Medicaid Drug Expenditures and Utilization

Medicaid expenditures for outpatient prescribed drugs totaled an estimated $29.7 billion in federal fiscal year 2002.[8] Drugs paid for by Medicaid on a fee-for-service basis accounted for $23.4 billion (80%) of this total, net of $5.9 billion in rebates from manufacturers required by the federal Medicaid Drug Rebate Program and additional rebates negotiated by states.[9] However, millions of Medicaid participants are enrolled in managed care plans where the plan pays for their outpatient prescribed drugs. We estimate that managed care plans paid $6.3 billion for outpatient prescribed drugs for Medicaid enrollees in 2002.

Prescribed drugs are one of the fastest-growing expenses for Medicaid. Expenditures for prescribed drugs doubled between 1998 and 2002, and they have quadrupled since 1992 (Figure 1). The share of Medicaid spending attributable to prescribed drugs also grew in recent years. In 1998, less than eight percent of Medicaid expenditures were for outpatient prescribed drugs; by 2002, this share climbed to over 11 percent (Figure 2). Between 2000 and 2002, expenditures for prescribed drugs (fee-for-service only) increased by an average of 18.8 percent per year, faster than any other major type of Medicaid-covered service (Figure 3).

Figure 1

Medicaid Expenditures for Outpatient Prescribed Drugs, Including Drugs Provided by Managed Care Plans, 1992-2002



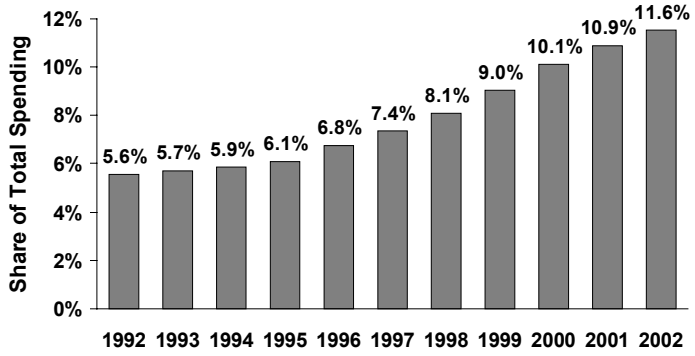
Source: Urban Institute estimates based on data from MSIS and Form CMS-64.
Note: Data are for federal fiscal years (October-September). Fee-for-service drug expenditures are net of rebates.

Medicaid increasingly has become a key source of payment for prescribed drugs, accounting for an estimated 17.5 percent of all personal health care expenditures for drugs in 2002, or more than $1 out of every $6 spent.[10] It is also a rapidly growing segment of states' Medicaid programs, and they have implemented a number of cost control mechanisms in recent years in an effort to rein in rapidly growing prescription drug expenditures.[11]

Rapid growth of drug expenditures is not limited to Medicaid. CMS' actuaries estimate that prescription drug spending by private insurers grew by an average of 17.4 percent per year between 1999 and 2002, comparable to 18.0 percent in Medicaid (Table 1). On a per person basis, drug spending by private insurers may even be rising faster than Medicaid drug expenditures, as enrollment in private insurance fell between 1999 and 2002 while participation in Medicaid increased.[12]

Figure 2

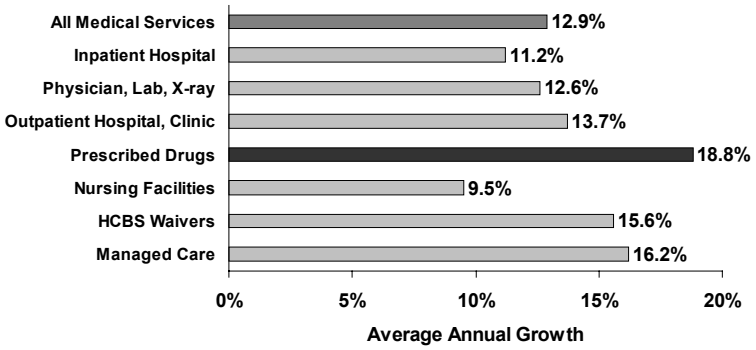
Expenditures for Outpatient Prescribed Drugs as a Share of Total Medicaid Spending, 1992-2002



Source: Urban Institute estimates based on data from Form CMS-64 and the Medicaid Statistical Information System (MSIS).
Note: Data are for federal fiscal years (October-September). Percentages are net of drug rebates.

Figure 3

Average Annual Growth of Fee-for-Service Medicaid Expenditures for Selected Services, 2000-2002



Source: Urban Institute estimates based on data from Form CMS-64.
Note: Rates represent average annual growth in total expenditures made on a fee-for-service basis for the types of services listed. The rate shown for managed care reflects growth in payments to health plans, which cover a wide range of services including prescribed drugs.

Table 1

Growth in Personal Health Care Expenditures and Spending for Prescription Drugs, 1999-2002

	Average Annual Growth of Expenditures for…		Prescribed Drugs as a Share of All Personal Health Care Expenditures	
	All Personal Health Care	Prescribed Drugs Only	1999	2002
Total Payments	8.0%	15.9%	9.8%	12.0%
Private Insurance	9.4%	17.4%	13.1%	16.2%
Medicaid	10.2%	18.0%	10.0%	12.2%

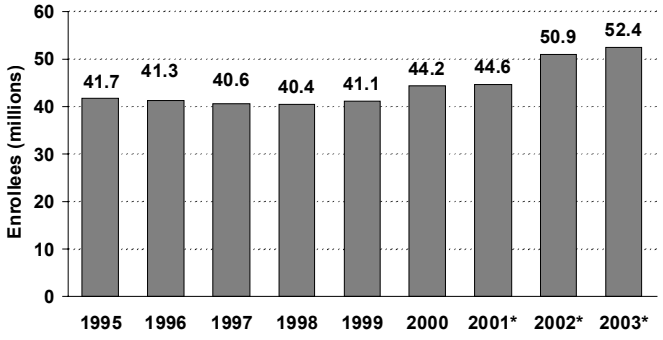
Source: Centers for Medicare & Medicaid Services (CMS), Office of the Actuary, National Health Statistics Group
Note: Years shown are calendar years.

Growth in Medicaid prescription drug spending is partly due to more prescriptions being filled for enrollees. Based on drug utilization data from the Medicaid Drug Rebate Program, we estimate that Medicaid paid for approximately 430 million prescriptions in 2000 and over 525 million in 2002 on a fee-for-service basis – that is, excluding prescriptions paid for by managed care plans.[13] These figures translate to a 10 percent average annual increase in the number of prescriptions paid for by Medicaid.

A contributing factor to the rise in overall utilization is an increase in Medicaid enrollment and, presumably, the number of drug recipients. After a brief decline in late 1990s, the number of enrollees began to increase in 1999 and grew significantly after 2000 (Figure 4). This growth has been attributed to a combination of eligibility expansions enacted by states in the 1990s and the economic downturn of the early 2000s, which lowered incomes and made more people eligible at all eligibility levels.[14] Data on the number of drug recipients in Medicaid are not available after 2000, but if one assumes that the percentage of enrollees receiving at least one prescribed drug has not decreased, then recent enrollment increases would logically increase the number of recipients.

Figure 4

Medicaid Enrollment, 1995-2003



Sources: Values for 1995-2000 are Urban Institute estimates based on data from Form HCFA-2082 and the Medicaid Statistical Information System (MSIS); values for 2001-2003 estimates from Congressional Budget Office baselines produced in March 2002, 2003, and 2004.
Note: "Enrollees" defined as all individuals who sign up for Medicaid at any point in time during the federal fiscal year. This estimate is larger than the number of persons enrolled at any single point in time during the year.

It is likely that the average number of prescribed drugs consumed by each recipient in Medicaid is increasing, but available data do not allow us to observe the number of prescriptions or drug units that each Medicaid enrollee uses. Studies of the U.S. civilian noninstitutionalized population and individuals in private health plans indicate that the number of people taking at least one prescribed drug has increased, as has the average number of prescriptions per user.[15] Assuming that physicians use similar prescribing patterns for Medicaid enrollees as they do for other patients, these trends likely carry over to Medicaid.

The average cost of drugs paid for by Medicaid is increasing. Based on data from the Medicaid Drug Rebate Program, we estimate that the average reimbursement for outpatient prescribed drugs increased from about $49 per prescription in 2000 to $57 in 2002 – a rise of roughly 8 percent per year and more than 16 percent over the two-year period.[16] Although these estimates exclude drugs paid for by managed care plans, fee-for-service payments account for most Medicaid expenditures for prescribed drugs. We could not determine the extent to which these price increases reflect changes in the mix of drugs consumed or general price increases.

A Closer Look at Medicaid Drug Utilization and Spending

In this section, we look more closely at the populations that receive prescribed drugs through Medicaid and the types of drugs that they use. We rely on data from the year 2000

because it is the most recent year for which we have access to data with sufficient detail to observe utilization and spending for specific groups of Medicaid enrollees.

Prescribed drugs are one of the most often used Medicaid services. Data from CMS indicate that about 20.5 million individuals (out of 44.3 million enrollees) received a drug paid for by Medicaid in 2000, and that total payments for these drugs were about $20 billion. However, the 20.5 million recipients do not include drug recipients in Medicaid managed care plans except where the drug benefit is carved out.[17] Likewise, the $20 billion total payments do not include payments made by managed care plans or savings from the Medicaid Drug Rebate Program.[18] Including individuals in managed care plans, we estimate that Medicaid paid for at least one outpatient prescribed drug (i.e., a drug dispensed by a pharmacy) for approximately 26.6 million individuals in 2000, or about 62 percent of all Medicaid enrollees. Total payments for prescribed drugs, adjusted to reflect payments made by Medicaid managed care plans and drug rebates, were about $20.2 billion in 2000.[19]

There are significant differences in prescription drug use and payments among Medicaid enrollees. Enrollees age 65 and older and younger persons with disabilities were 34 percent of all drug recipients in 2000, but 80 percent of payments for prescribed drugs were attributable to these groups (Table 2).

Table 2

Drug Recipients and Payments by Group, 2000

	Dual Eligibles			Other Aged		
	Total	**Aged**	**Disabled**	**& Disabled**	**Adults**	**Children**
Drug Recipients						
Number	5.6 million	3.4 million	2.2 million	3.4 million	5.5 million	12.1 million
Percent of Total	21%	13%	8%	13%	21%	46%
Payments for Prescribed Drugs						
Amount	$10.5 billion	$5.4 billion	$5.1 billion	$5.4 billion	$2.0 billion	$2.1 billion
Percent of Total	52%	27%	25%	28%	10%	10%
Payments per Recipient						
Average for Group	$1,880	$1,590	$2,350	$1,670	$360	$170

Source: Authors' estimates based on data from the Medicaid Statistical Information System (MSIS)

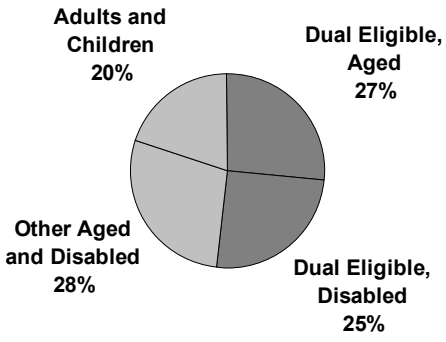
Notes: Includes estimates of recipients enrolled in managed care plans and drug payments by those plans. Average payments per recipient for each group are rounded to the nearest $10 increment.

Although not shown in Table 2, nonelderly disabled enrollees (duals and non-duals) accounted for more payments for drugs than all other eligible groups combined. In contrast, adults and children were 65 percent of drug recipients but accounted for 20 percent of total payments for prescribed drugs. Significantly higher average payments per recipient for aged and disabled recipients indicate that these individuals are much more likely to consume greater numbers of prescriptions for longer periods of time than adults and children (Table 2).

We further estimate that about 5.5 million prescription drug recipients in Medicaid in 2000 were dual eligibles, for whom Medicaid pays the bulk of drug costs in the absence of a

Medicare drug benefit (Table 2). According to earlier Urban Institute estimates, roughly 5.84 million Medicaid enrollees were "full" dual eligibles in 2000; that is, Medicare participants who were eligible for the full range of Medicaid benefits.[20] Combined, these two estimates suggest that 95 percent of "full" dual eligibles receive at least one prescription paid for by Medicaid. Such a high level of utilization is not surprising, given that studies have consistently found lower health status and greater service use among dual eligibles. Relatively high levels of utilization are also reflected by the share of total payments for prescribed drugs attributable to dual eligibles, which we estimate at 52 percent (Figure 5).

Figure 5
Distribution of Medicaid Drug Payments for Dual Eligibles and Other Enrollees, 2000



Total Drug Payments = $20.2 billion

Source: Urban Institute estimates based on data from the Medicaid Statistical Information System (MSIS).

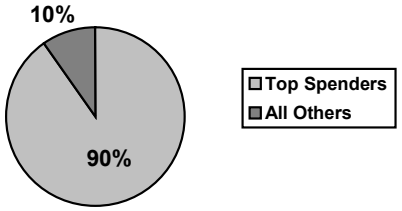
Drug utilization is skewed such that a small percentage of Medicaid enrollees accounts for a large share of total drug payments. One analysis by Pharmaceutical Research and Manufacturers of America (PhRMA) indicates that among individuals who participated in Medicaid for any length of time in 2000, the highest drug spenders[21] used an average of 41 prescriptions (new and refill) during the year while all other Medicaid participants had an average of four.[22] The PhRMA analysis includes every drug used throughout the year and not just those paid for by Medicaid, but drug payment data indicate that use is highly skewed within Medicaid. Limiting our analysis to enrollees without payments to managed care plans, we observed that the top 20 percent of enrollees (ranked by Medicaid payments for prescribed drugs, including individuals with no drug payments) accounted for 90 percent of total payments for prescribed drugs in 2000 (Table 3).[23] Average payments for prescribed drugs were $3,100 for the top 20 percent of drug spenders and only $80 for the remaining 80 percent of enrollees. The distribution of total payments is also highly skewed within each eligible group, although most high-cost individuals come from the aged and disabled populations (Table 3).

While the distribution of spending for prescription drugs is skewed toward high cost users, even among the highest-cost users drugs account for a relatively modest share of total payments for medical services. Across the entire fee-for-service population, average payments for drugs for the top spenders were $3,100 but average payments for medical services (drugs and all other services) were $14,610 in 2000. In contrast, average drug payments for the remaining 80 percent of recipients were $80 and average total payments for this group were $2,200 (Table 3).

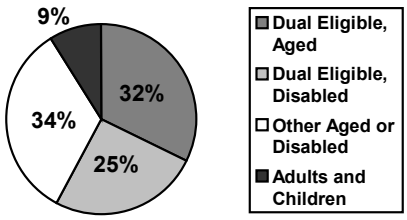
Table 3

Distribution of Fee-for-Service Medicaid Payments for Outpatient Prescribed Drugs, 2000

Distribution of Outpatient Drug Payments, Top 20% of Drug Spenders vs. All Others

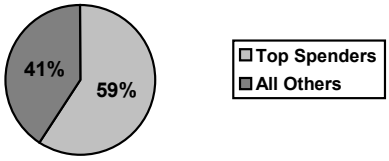


Distribution of Outpatient Drug Payments for the Top 20% of Drug Spenders



Average Payments per Enrollee	All Enrollees	Top Spenders	All Others
Outpatient Prescribed Drugs	$650	$3,100	$80
All Medicaid	$4,560	$14,610	$2,200

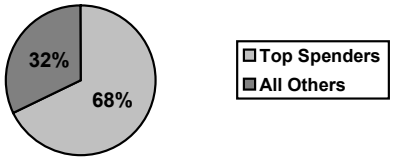
Distribution of Outpatient Drug Payments for Dual Eligible, Aged Enrollees (Age 65+)



Average Payments per Enrollee for…

	Top 20% of Aged Duals	All Other Aged Duals
Prescribed Drugs	$4,450	$740
All Medicaid	$19,790	$8,430

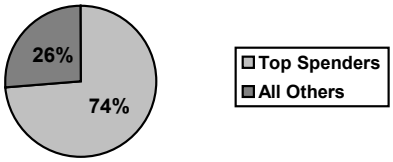
Distribution of Outpatient Drug Payments for Dual Eligible, Disabled Enrollees Under Age 65



Average Payments per Enrollee for…

	Top 20% of Disabled Duals	All Other Disabled Duals
Prescribed Drugs	$8,100	$900
All Medicaid	$22,030	$8,840

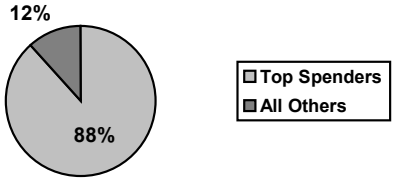
Distribution of Outpatient Drug Payments for Other Aged & Disabled Enrollees



Average Payments per Enrollee for…

	Top 20% of Non-Dual Aged and Disabled	All Other Non-Dual Aged and Disabled
Prescribed Drugs	$6,180	$520
All Medicaid	$23,980	$7,440

Distribution of Outpatient Drug Payments for Nondisabled Adults and Children



Average Payments per Enrollee for…

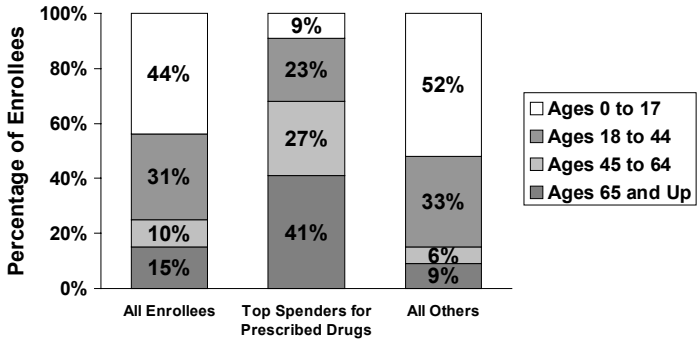
	Top 20% of Adults and Children	All Other Adults and Children
Prescribed Drugs	$650	$20
All Medicaid	$3,520	$970

Source: Authors' estimates based on data from the Medicaid Statistical Information System (MSIS).
Notes: Estimates are for individuals with no reported payments made to HMOs (or, in a few states, prepaid health plans). "Top spenders" are defined as the top 20 percent of enrollees ranked by total drug payments. "All others" are the remaining 80 percent of individuals, including individuals with no reported drug payments. Payments for prescribed drugs are for outpatient prescribed drugs; generally, these are drugs purchased at a retail pharmacy, but also include most drugs purchased for residents of nursing facilities. Generally, drugs provided as a course of treatment in a hospital, physician's office or other provider setting are not reflected here.

Enrollees who account for the most payments for prescription drugs tend to be older. Enrollees age 65 and older accounted for 15 percent of the fee-for-service Medicaid population in 2000, but were 41 percent of top spenders (Figure 6). Enrollees age 45 to 64 were 10 percent of the population, but 27 percent of top spenders. Enrollees under age 45 were 75 percent of the fee-for-service population, but they accounted for just 32 percent of top spenders. Although not shown in Table 3 or Figure 6, we also observed that higher cost enrollees tended to be among the oldest people in each category; that is, higher shares of "top spenders" in the nondisabled adult and disabled groups were age 45 to 64 and average drug spending for people age 75 and older was higher than for people age 65 to 74.

Figure 6

Age Distribution of Fee-for-Service Enrollees, Top Drug Spenders vs. All Others, 2000



Source: Urban Institute estimates based on data from the Medicaid Statistical Information System (MSIS).
Note: Estimates are for individuals with no reported payments made to HMOs (or, in a few states, prepaid health plans). "Top spenders" are defined as the top 20 percent of enrollees ranked by total drug payments. "All others" are the remaining 80 percent of individuals, including individuals with no reported drug payments.

According to the aforementioned PhRMA study, Medicaid enrollees with high drug spending are much more likely to have serious chronic conditions than the rest of the Medicaid population. The most common chronic disease diagnoses among these individuals are essential hypertension, "other nontraumatic joint disorders," diabetes, "other mental conditions" including depression, asthma and "other upper respiratory disease," and lipid (fat/cholesterol) disorders. Many individuals have multiple diagnoses.[24]

Medicaid drug utilization data indicate that drug classifications that accounted for the largest numbers of prescriptions and drug payments in 2000 are generally those used to treat diagnoses highlighted by PhRMA (Table 4). Antihypertensives, ace inhibitors, antianginals, calcium channel blockers and diuretics are all used to treat hypertension (high blood pressure) and other cardio-pulmonary disorders. Nonsteroidal anti-inflammatory drugs (NSAIDs), including newer COX-2 inhibitors, are used for arthritis and other joint disorders. Blood glucose regulators are used to manage diabetes. Anti-anxiety drugs, anticonvulsants, antidepressants, anitmanics and antipsychotics are prescribed for mental conditions. Antiasthmatics and bronchodilators treat asthma and other lung diseases. A large majority of reimbursements within each of these high-use, high reimbursement classes (those in the top panel of Table 4) tends to be attributable to newer, typically brand name drugs. For example, newer drugs collectively known as selective serotonin reuptake inhibitors (SSRIs) accounted for most reimbursements for antidepressants in 2000, and newer COX-2 inhibitors accounted for the vast majority of NSAID reimbursements.

High use drug classes that were not among those with the most reimbursements reflect Medicaid's role as insurer for millions of individuals, especially nondisabled adults and children, whose demand for drugs centers around more short-term, acute illnesses. These include drugs for acid/peptic disorders (e.g., ulcers), analgesics (for pain relief), antihistamines (for allergies), penicillins (for internal bacterial infections), dermatologics (for external fungal infections), and estrogens/progestins (includes drugs used as contraceptives and treatments for osteoporosis,

menopause, certain cancers and blood ailments). Many of these classifications include large numbers of drugs with multiple brand name and generic competitors.

In contrast, table 4 also lists five high reimbursement classes that are not high use. Hyperlipidemia drugs (for fat/cholesterol disorders) and lincosamides/macrolides (for bacterial infections) fell just shy of our cutoff for inclusion on the highest use list, but make it on the high reimbursement list due to higher costs per prescription relative to other high use classes such as antihistamines and penicillins. Antivirals appear on the high reimbursement list because of several drugs primarily used in the treatment of HIV/AIDS with very high per-unit costs.

Table 4
Drug Classifications with the Highest Total Use and Reimbursement in Medicaid, 2000
(Listed Alphabetically)

Most Prescriptions and Highest Reimbursement (Classifications Appearing on Both Lists)	
Ace Inhibitors	
Acid/Peptic Disorders	
Analgesics–General	
Analgesics–Narcotic	
Antianginals	
Antianxiety	
Antiasthmatics/Broncodilators	
Anticonvulsants	
Antidepressants	
Antihypertensives	
Antipsychotics/Antimanics	
Blood Glucose Regulators	
Calcium Channel Blockers	
Estrogens/Progestins	
Non-Steroidal Anti-Inflammatory Drugs (NSAIDs)	
Most Prescriptions Only	**Highest Reimbursement Only**
Anithistamines	Anticoagulants/Thrombolytics
Dermatologics	Antivirals
Diuretics	Gastrointestinal
Electrolyte/Water Regulation	Hyperlipidemia
Penicillins	Lincosamides/Macrolides

Source: Authors' analysis of State Medicaid Drug Utilization Data from CMS.
Note: Classes are from the Food and Drug Administration (FDA) National Drug Code directory. Drugs can fall into more than one class. This table counts all prescriptions and reimbursements for individual drugs under every class listed by the FDA for that drug.

Implications of the Medicare Drug Benefit

The Medicare Prescription Drug, Improvement, and Modernization Act of 2003 (P.L.108-173) established a new, voluntary drug benefit for Medicare beneficiaries, Part D of Medicare, beginning in January 2006.[25] According to previous Urban Institute estimates, there were about 7.2 million dual eligibles in Medicaid in 2002 and most (85%) qualified for full Medicaid benefits, including prescribed drugs.[26] Once Part D begins, federal funding will no longer be available for Medicaid prescription drug coverage for dual eligibles. Most dual eligibles are expected to sign up for Part D; however, the impact of the change in coverage from Medicaid to Medicare for

dual eligibles is impossible to predict given the lack of specific information about design and exact cost of Medicare drug plans, which have yet to be developed.

Medicaid programs spent an estimated $13.1 billion in combined federal and state funds for prescribed drugs for dual eligibles in 2002; states' shares totaled $5.6 billion, about 6 percent of all state dollars spent on Medicaid.[27] Part D will not eliminate states' drug expenditures for dual eligibles. Instead, states will be required to pay Medicare a share of the estimated amount that they would have spent on drugs for dual eligibles in the absence of Part D—a requirement sometimes called the "clawback" provision. This provision will reduce potential savings to states, and there is chance that individual states could end up paying more drug coverage for dual eligibles under Part D than they would have spent otherwise.

Conclusion

Medicaid is a major source of payment for prescription drugs and, like other public and private third-party payers, its expenditures for prescribed drugs have increased quite rapidly in recent years. Growth in Medicaid drug expenditures has been fostered by greater utilization, which is attributable to more people eligible to receive drugs and more prescriptions per user, as well as higher costs for drugs consumed. Increased use and higher costs are not limited to Medicaid and affect most public and private payers.

Within Medicaid, most payments for prescribed drugs are for enrollees age 65 and older and younger persons with disabilities, and many of the highest cost individuals are older and have one or more serious chronic conditions. Over half of the aged and disabled individuals who receive drugs paid for by Medicaid are dual eligibles (5.5 million individuals in 2000). States will pay for prescribed drugs for dual eligibles through Medicaid until January 2006 and will continue to fund this population through the Medicare Part D clawback after that date.

In addition to sharing the costs of Part D, states will continue to provide drug coverage through Medicaid for aged and disabled individuals who do not qualify for Medicare. In 2000, this group accounted for 3.4 million drug recipients (13% of total recipients) and $5.4 billion of Medicaid drug payments (28% of total). Medicaid also will continue to pay for prescription drugs for millions of nondisabled adults and children (17.7 million recipients in 2000; 20% of total payments). Therefore, Medicaid will remain a major source of payment for prescribed drugs for the foreseeable future and, like other public and private third-party payers, states will likely continue to seek ways to limit their costs while protecting the needs of the vulnerable populations that they serve.

Brian Bruen prepared this paper while he was a Research Associate at the Urban Institute. Arunabh Ghosh is a Research Assistant at the Urban Institute.

Endnotes

[1] Holahan, John and Brian Bruen, "Medicaid Spending: What factors Contributed to the Growth Between 2000 and 2002?" (Kaiser Commission on Medicaid and the Uninsured, September 2003). Available at http://www.kff.org/. Last accessed March 30, 2004.
[2] "Categorically eligible" enrollees are persons that Medicaid programs must cover under federal law. The largest groups include: families with children who meet certain of the eligibility requirements in the state's AFDC plan in effect on July 16, 1996; Supplemental Security Income (SSI) recipients (some states are allowed to use more restrictive criteria); children under age 6 and pregnant women with family incomes at or below 133 percent of the federal poverty level (FPL); all poor children under age 19; and recipients of adoption assistance and foster care under Title IV-E of the Social Security Act.
[3] States may exclude drugs from ten categories including drugs for weight loss or gain, hair growth or cosmetic purposes, and barbiturates. For a list of these categories, see Gencarelli, Dawn M., "Medicaid Prescription Drug Coverage: States Efforts to Control Costs" (National Health Policy Forum, May 10, 2003). Available at http://www.nhpf.org/. Last accessed January 27, 2004.
[4] For example, see Dubois, Robert W. et al., "Explaining Drug Spending Trends: Does Perception Match Reality?" *Health Affairs* 19(2): pp.231-239; Burt, Catharine W., "National Trends In Use Of Medications In Office-Based Practice, 1985–1999" *Health Affairs* 21(4): pp.206-14; Berndt, Ernest R., "Pharmaceuticals in U.S. Health Care: Determinants of Quantity and Price" *Journal of Economic Perspectives* 16(4): pp.45-66. Employee Benefits Research Institute (EBRI), "Prescription Drugs: Recent Trends in Utilization, Expenditures, and Coverage." Issue Brief #265 (Washington, DC: EBRI, January 2004).
[5] For example, see National Institute for Health Care Management Foundation (NIHCM), "Factors Affecting the Growth of Prescription Drug Expenditures." Prepared by Barents Group LLC (Washington, DC: NIHCM, July 1999). Available at http://www.nihcm.org. Last accessed April 19, 2004; Merlis, Mark, "Explaining the Growth in Prescription Drug Spending: A Review of Recent Studies" (Report prepared for the U.S. Department of Health and Human Services, Conference on Pharmaceutical Pricing Practices, Utilization, and Costs, August 2000). Available at http://aspe.hhs.gov. Last accessed April 29, 2004.
[6] Berndt, Ernest R., *Op Cit.*
[7] New York State is a notable exception where nursing homes pay for prescribed drugs for their residents out of their reimbursement, rather than Medicaid purchasing those drugs independently.
[8] "Outpatient" drugs are those purchased from pharmacies by/for a specific patient. They exclude drugs provided in hospitals, physicians' offices or other settings where the provider purchases the drugs and dispenses them as part of a course of treatment. In these instances, payment for drugs is included with Medicaid's reimbursement to that provider. However, in most states, drugs for nursing home residents are purchased from institutional pharmacies and payment is separate from reimbursement for other facility services. Therefore, payments for these drugs are generally included in this analysis.
[9] Prior to rebates, fee-for-service expenditures were $29.3 billion. Although states may not allocate the funds obtained through these rebates to their Medicaid budgets, rebates reflect a savings to states and the federal government that we feel is appropriate to reflect in estimates of Medicaid drug payments.
[10] Centers for Medicare and Medicaid Services, Office of the Actuary, National Health Statistics Group, "Personal Health Care Expenditures, by Type of Expenditure and Source of Funds: Calendar Years 1995-2002." Available at http://cms.hhs.gov/statistics/nhe/historical/t9.asp. Last accessed January 27, 2004.
[11] For more on cost containment efforts, see: Bruen, Brian, "States Strive to Limit Medicaid Expenditures for Prescribed Drugs" (Kaiser Commission on Medicaid and the Uninsured, February 2002). Available at http://www.kff.org/. Last accessed March 30, 2004; Moran, William et al., "State Strategies to Contain Medicaid Drug Costs" Doc. No. OEI-05-02-00680 (U.S. Department of Health and Human Services, Office of Inspector General, October 2003); Gencarelli, *Op Cit.*
[12] Kenney, Genevieve, Jennifer Haley and Alexandra Tebay, "Children's Insurance Coverage and Service Use Improve." *Snapshots of America's Families III*, No. 1 (Washington, DC: The Urban Institute, 2003); Zuckerman, Stephen, "Gains in Public Health Insurance Offset Reductions in Employer Coverage among Adults" (Washington, DC: The Urban Institute, 2003). Both documents available at http://www.urban.org. Last accessed April 14, 2004.
[13] These estimates are based on State Drug Utilization Data released by CMS, which likely reflect only drugs consumed by enrollees who receive drugs on a fee-for-service basis and exclude most people

enrolled in Medicaid managed care entities (where the health plan typically pays for drugs as part of its capitated package of services). Adjustments were made in a few states to compensate for likely data problems identified by comparing the reported number of prescriptions and total spending across the years available with data from other sources.

[14] Holahan and Bruen, *Op Cit.*

[15] Stagnitti, Marie N., "Statistical Brief #21: Trends in Outpatient Prescription Drug Utilization and Expenditures: 1997-2000" (Rockville, MD: Agency for Healthcare Research and Quality, September 2003). Available at http://www.meps.ahrq.gov/papers/st21/stat21.htm; American Association of Health Plans, "Prescription Drug Coverage Cost and Utilization Trends: Impact on Health Plans and Consumers" (Washington, DC: AAHP, January 2003). Available at www.aahp.org. Both documents last accessed January 28, 2004.

[16] These amounts are prior to any rebates received from the manufactures.

[17] When drugs are "carved out" they are reimbursed by the Medicaid agency, not the health plan.

[18] Only fee-for-service drugs qualify for the Medicaid Drug Rebate Program.

[19] The discrepancy between the $20.2 billion estimate of drug payments shown here and the $20.8 billion estimate of drug expenditures in 2000 shown in Figure 1 is largely due to differences in how the two data sources used for these estimates measure spending. See the Appendix for more information.

[20] Guyer, Jocelyn, "The Proposed Medicare Prescription Drug Benefit: A Detailed Review of Implications for Dual Eligibles and Other Low-Income Medicare Beneficiaries" (Washington: Kaiser Commission on Medicaid and the Uninsured, September 2003). Available at www.kff.org. Last accessed April 7, 2004.

[21] "Highest drug spenders" are defined as the top 20 percent of drug recipients ranked by total drug spending from all sources, not just Medicaid.

[22] Pharmaceutical Research and Manufacturers of America, "Which Medicaid Recipients Are Cared for with Prescription Medicines? Characteristics of Medicaid Recipients with High Prescription Drug Expenses in 2000" (Washington: PhRMA, Fall 2003). Available at www.phrma.org. Last accessed February 16, 2004.

[23] In making the estimates shown in Table 3, we exclude individuals for whom Medicaid made a payment to an HMO. We exclude these persons to avoid potentially counting enrollees who receive drugs paid for by managed care organizations as people with zero drug payments, since our source data do not include drug payments made by managed care plans. These exclusions may produce a slight bias in payment per enrollee amounts shown in Table 2 if managed care enrollees tend to have lower overall drug costs, and they likely overstate the share of drug spending for aged and disabled enrollees because adults and children are more likely to enroll in managed care. However, we do not believe the potential biases to be significant. Individuals in Tennessee and Pennsylvania also are excluded because of missing data.

[24] PhRMA, *Op Cit.*

[25] For a brief summary of the Medicare drug benefit and its Medicaid-related provisions, see Kaiser Family Foundation, "Medicare: The Medicare Prescription Drug Law" *Fact Sheet* (Washington: KFF, March 2004).

[26] Bruen, Brian and John Holahan, "Shifting the Cost of Dual Eligibles: Implications for States and the Federal Government" (Washington: Kaiser Commission on Medicaid and the Uninsured, November 2003). Available at http://www.kff.org/. Last accessed March 30, 2004.

[27] Bruen and Holahan, *Op Cit.*

Appendix

Data Sources

Most data in this report are the authors' estimates based on administrative data from the Centers for Medicare and Medicaid Services (CMS). We rely on data from several different data sources maintained by CMS, including expenditures from the Quarterly Medicaid Statement of Expenditures for the Medical Assistance Program (Form CMS-64), prescription utilization and reimbursement information from the Medicaid Drug Rebate Program, and person-level files containing eligibility information and aggregated payments reported through the Medicaid Statistical Information System (MSIS). CMS compiles all of these data sets independently to serve different purposes. The net result is that, while they provide valuable insights into the Medicaid drug benefit, each source contains different measures of spending for prescription drugs and drug utilization.

We use Form CMS-64 data primarily to estimate expenditures for prescription drugs and other services over time. Our source data are most comparable to state-level Medicaid Financial Management Reports posted on the CMS Web site. Prescription drug expenditures reported on Form CMS-64 reflect all claims for prescribed drugs that were paid during each quarter of the federal fiscal year, as well as adjustments to reflect overpayment/underpayment in that quarter or earlier fiscal years. Data also include separate measures of mandatory drug rebates from federal agreements and additional rebates from state-specific agreements. We generally report expenditures for prescribed drugs net of these rebates. The utility of Form CMS-64 is limited because it only measures aggregate spending by state and type of service, and there is no breakdown for various eligibility groups.

To look more closely at the distribution of spending across groups of eligible persons – for example, in Table 2 – we use data from the Medicaid Statistical Information System (MSIS). These data include payments by Medicaid for drugs and other services on an individual basis. Payments for prescribed drugs reflect all claims adjudicated during the fiscal year, which can differ from "actual" expenditures as reported on Form CMS-64. Other differences may occur due to differences between how states acquire and report data for MSIS and Form CMS-64. Drug payments in MSIS also reflect the level of spending for drugs prior to rebates, so we make adjustments to account for rebates to be comparable with estimates based on Form CMS-64. Our access to MSIS is currently limited to data for federal fiscal years 1999 and 2000.

A last important data source for this report is State Drug Utilization Data available from the CMS Web site. These data are drawn from information collected by CMS to administer the Medicaid Drug Rebate Program. They include measures of the total number of prescriptions and total units reimbursed by Medicaid in each state for individual drugs, identified by National Drug Code (NDC). This source also includes the total amount reimbursed to pharmacists for the drug. By linking these data with information from the National Drug Code Directory from the Food and Drug Administration, we were able to sort drugs into therapeutic/pharmacological classes. Data quality is difficult to assess, but results were generally consistent with our expectations. Total reimbursement levels for most states were comparable to spending levels observed in our other sources, although our tabulations of total prescriptions and average reimbursement per prescription reflect adjustments where we noticed significant differences in states' total drug reimbursements in the utilization data compared to measures of total drug spending from Form CMS-64 and MSIS or where the reported number of prescriptions was clearly too low or too high based on other observable measures.

Estimating Drug Recipients and Payments Within Medicaid Managed Care Plans

All of the data sources discussed above have one common "flaw." All measures of drug utilization and spending for prescribed drugs in these sources exclude utilization by individuals enrolled in Medicaid managed care plans and payments for these drugs by those plans, except in a few instances where states "carve out" their drug benefit and continue to pay for drugs on a fee-for-service basis. We wanted to get a sense for the total number of people who receive at least one outpatient prescribed drug paid for by Medicaid, plus the total amount that Medicaid and contracted managed care plans spend for these drugs. By not measuring use and spending within managed care plans, our sources underestimate Medicaid's role as a provider of and payer for prescribed drugs.

To estimate prescription drug utilization and spending within managed care plans, we use a reweighting simulation that assumes that managed care beneficiaries have drug utilization similar to that of fee-for-service beneficiaries with similar characteristics. The simulation exercise reweights the FFS population, on whom we have utilization data, so that it looks like the managed care population in size and characteristics, and then estimates utilization patterns on this simulated managed care population.

On a randomly drawn 5% sample of MSIS records, we first estimate state-specific (logit) models of the probability of being a managed care enrollee. Independent variables include basic demographic information (age, sex, race), eligibility category, indicators for any nursing facility or home health use and a set of state dummies. Based on these results, we can calculate the predicted probability that each person is a managed care enrollee based on their independent variables. Then for each FFS enrollee, a weight is calculated based on their predicted probability of being a managed care enrollee. Persons with higher managed care probabilities get higher weights, while persons with lower probabilities get lower weights. The weights are "normalized" so that they add up to the total number of managed care enrollees, and new drug utilization estimates are calculated. This technique allows for predicted utilization to vary among managed care enrollees in the same way it varies among FFS enrollees, so that distributional characteristics can also be estimated for the managed care population.

From the predicted values in the 5% sample, we calculated ratios of drug recipients to enrollees for individuals in managed care plans and individuals in fee-for-service arrangements for each state and enrolled group, as well as the level of drug payments by managed care plans relative to payments for people in fee-for-service arrangements. In general, we applied the same ratios calculated from the 5% sample to the entire MSIS data set (state by state) to get the estimates shown in this report. In a few states with very high levels of managed care this process produced unrealistic estimates, which we adjusted to more plausible levels based on observed recipient and payment levels from states with lower managed care penetration.

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