AFFORDING PRESCRIPTION DRUGS:
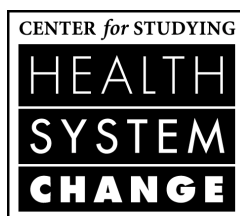# NOT JUST A PROBLEM FOR THE ELDERLY

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Research Report No. 5

April 2002

AFFORDING PRESCRIPTION DRUGS – NOT JUST A PROBLEM FOR THE ELDERLY

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ABSTRACT

Policymakers have devoted much attention recently to expanding outpatient prescription drug coverage for elderly persons. New findings from the 2000-01 Community Tracking Study household survey show that many nonelderly adults also have problems affording prescription drugs. The problem is particularly serious among persons who are uninsured or enrolled in Medicaid, of whom about one out of four in each group reported that they couldn't afford a prescription medication. The high rate of access problems among Medicaid enrollees is particularly significant given that all state Medicaid programs provide coverage for prescription drugs. State efforts to control Medicaid prescription drug costs are also contributing to access problems among beneficiaries.

Introduction

Policymakers are focusing on ways to extend coverage for prescription medications to millions of elderly Medicare beneficiaries who currently aren't covered through the Medicare program and have no other source of coverage. However, it is often overlooked that many nonelderly adults also have problems affording prescription medications. While most nonelderly adults have prescription drug coverage through employer-sponsored health insurance or the Medicaid program, over 26 million lack health insurance coverage for any kind of medical care. This is more than twice the number of elderly Medicare beneficiaries who don't have prescription drug coverage.[1]

In addition, a high proportion of adult Medicaid enrollees are at high risk for not being able to afford prescription medications due to low incomes and high prevalence of chronic conditions. Despite the fact that the Medicaid program in all fifty states provides coverage for prescription drugs to most Medicaid beneficiaries, there is concern that state efforts to control the escalating costs of prescription medications may harm beneficiary access to prescription medications, especially given the high risk characteristics of the adult Medicaid population.[2]

In this research report, data from the 2000-01 Community Tracking Study (CTS) household survey are used to estimate the number and proportion of nonelderly adults who do not obtain prescription medications due to cost. The findings show that a much higher percentage of nonelderly adults who are uninsured or enrolled in Medicaid have problems affording prescription medications compared to elderly Medicare beneficiaries. Medicaid beneficiaries experience problems affording prescription medications due largely to their much lower incomes and high prevalence of chronic conditions. The report also examines the effects of state cost control methods on Medicaid beneficiaries' access to prescription drugs.

Source of Data

The CTS household survey is designed to produce representative estimates for the U.S. population as well as 60 randomly selected communities. The sample for the surveys was obtained primarily through random digit dialing, supplemented by in-person interviews to represent households without telephones. Three rounds of the survey have been completed, including surveys conducted in 1996-97, 1998-99, and 2000-01. This study is based on the 2000-01 CTS household survey, which was conducted between

August, 2000 and September, 2001.   The survey contains observations on a total of about

60,000 persons.   The sample for this study is based on 39,000 adults age 18-64,

including about 1,800 who are in Medicaid or state coverage. [3]   The response rate for the

survey was about 60 percent.

During the survey, respondents were asked the following question: "During the

past 12 months, was there any time you needed prescription medicines but didn't get

them because you couldn't afford it?"   Responses were based on self-reports for all

adults (i.e. no proxy reporting).

Problems Affording Prescription Medications

About 23 million American adults—or 12 percent of the adult population—could

not afford to get at least one prescription medication in the past year, according to the

2000-01 CTS survey (Table 1).   The majority of those who report cost barriers to

prescription drugs are nonelderly (age 18-64), and a higher percentage of nonelderly

adults reported cost barriers compared to those 65 and over (13 percent for nonelderly

adults vs. 8 percent for elderly).

Insurance status.   Problems with affording prescription medications among nonelderly

adults appear to be concentrated primarily among those who are uninsured or enrolled in

Medicaid and other state coverage. More than one-fourth of uninsured persons (29

percent) reported that they did not obtain prescription medications due to cost, the highest

percentage among health care coverage categories.   This is more than three times the rate

reported by those with employment-sponsored health insurance (8 percent).   Virtually all

employer-sponsored health plans provide some form of prescription drug coverage.[4]

More surprising, however, is the high rate of cost barriers encountered by persons with Medicaid and other state coverage (26 percent).   Unlike uninsured persons who have no coverage for prescription drugs, all state Medicaid programs provide prescription drug coverage for most Medicaid beneficiaries.   The high rate of reported cost barriers reflects characteristics of adult Medicaid beneficiaries—especially those with low incomes and high prevalence of chronic diseases—which puts them at high risk for encountering problems in affording prescription medications.   These factors—and how they affect cost barriers to prescription drugs—are discussed below.

Income.   Cost barriers to prescription drugs for people with low incomes (incomes less than 200% of poverty) are almost five times greater than reported by the highest income group (25 percent for low income persons vs. 6 percent for those with incomes of 400% of poverty or higher).   Even among those with employer-sponsored coverage, low income persons were more than four times as likely to report cost barriers to prescription drugs compared to higher income persons with employer coverage (Table 2).   Almost one-third of low income uninsured persons experienced cost barriers to prescription drugs, although disparities in access to prescription drugs between uninsured and those with employer coverage are substantially greater among higher income persons.

Health status.   Cost barriers to prescription drugs are highest for those persons who likely need them the most—persons with chronic health conditions.   Seventeen percent of those with a single chronic health condition reported cost barriers compared to 10 percent for those with no chronic health conditions (Table 3).   Among those with 2 or more chronic health conditions, the rate of cost barriers was 2.5 times that of persons with no chronic conditions (25 percent vs. 10 percent).   The higher rate of cost barriers

reflects in part the greater need for medications, and therefore greater opportunity for incurring significant health care expenses.

Cost barriers are greater for those with chronic conditions across all categories of insurance coverage. Especially striking is the high proportion of Medicaid and uninsured persons with chronic health conditions who report not being able to afford prescription drugs. About 40 percent of those with Medicaid or other state coverage, and more than 60 percent of uninsured persons with 2 or more chronic conditions reported not obtaining prescription medications due to cost.

Medicaid beneficiaries at higher risk

Much of the difference in the rate of cost-barriers between Medicaid beneficiaries and those with employer-sponsored coverage is accounted for by lower incomes and higher rates of chronic diseases among Medicaid beneficiaries, which puts them at much higher risk of experiencing cost barriers to prescription drugs. Half of adult nonelderly Medicaid beneficiaries have incomes below the federal poverty level, and three-fourths have incomes below 200% of poverty (Table 4). By contrast, only 3 percent of those with employer coverage have incomes below the poverty level, and 14 percent have incomes below 200% of poverty.

In addition, Medicaid beneficiaries tend to be sicker. More than half of adult nonelderly Medicaid beneficiaries have a chronic condition, and over one-fourth have 2 or more chronic conditions. Less than one-third of those with employer coverage have a chronic condition, and only 10 percent have 2 or more chronic conditions.

Indeed, when differences in income, health status, and other factors are accounted for, rates of cost barriers to prescription drugs for Medicaid enrollees are similar to those

with employer-sponsored coverage, and both groups have much lower rates of cost barriers compared to uninsured persons.[5]

Nevertheless, the high rate of cost barriers to prescription medications among Medicaid beneficiaries is still troubling since the intent of Medicaid was to reduce or eliminate inequities in access to care arising from high risk factors such as low incomes and poor health status.   In fact, Medicaid beneficiaries have achieved greater parity with privately insured persons in other aspects of medical care, including unmet needs for general medical care, having a usual source of care, and contact with a physician in the last year (Table 5).   And while Medicaid and uninsured persons experience similar high levels of cost barriers to prescription drugs, Medicaid beneficiaries have substantially better access on other aspects of medical care compared to uninsured persons.

Assessing the Effects of Medicaid Cost-Controls on Beneficiary Access

States have implemented a variety of methods to control escalating prescription drug costs in their Medicaid program.   Many of these methods attempt to influence prescribing patterns and utilization, and therefore also have the potential for affecting access to prescription drugs among beneficiaries.   Although these methods vary from state to state, the most common include copayments, dispensing limits (limiting the number of prescriptions, refills, or pills per prescription), prior authorization requirements for certain drugs, requirements that generic brands be used, and "step-therapy" protocols (requiring that physicians prove that a lower cost drug is ineffective before prescribing a more costly alternative).[6]

Do these cost control methods also make it more difficult for beneficiaries to obtain medications?   To answer this, we examined whether Medicaid enrollees in states that had implemented these policies were more likely to report not getting a prescription drug due to cost.   Information on Medicaid state prescription drug policies was linked to the CTS survey data.[7]   Variables were constructed for each of the 5 cost control methods described above to indicate whether the individual lived in a state that had implemented that particular method (see Appendix Table 1 for a listing of the specific cost control methods adopted by each of the states in the CTS sample).   Variables were also constructed to indicate the number of cost control methods adopted by the state in which the individual lives.

OLS regression was used to examine both the effects of individual cost control methods on beneficiary access, as well as the cumulative effects of these policies when states implemented more than one.[8]   The sample for this analysis includes persons age 18-64 with Medicaid and other state coverage in states with information on prescription drug policy (about 1,500 persons).   Because there may be a high degree of correlation among these measures, separate regressions were run to test the individual effects of each of the state policy variables.

The regression analyses also control for factors that may be correlated with both state Medicaid prescription drug policies and reported cost barriers to prescription drugs. These include person-level age, gender, race/ethnicity, family income, chronic health conditions, self-rated health status, marital status, and family composition.   Because rules for prescription drug coverage often differ for those beneficiaries in Medicaid managed care plans, the analysis includes an indicator for whether or not the person is

enrolled in an HMO plan (self-reported) as well as a state-level measure for the percent

of all Medicaid beneficiaries in Medicaid managed care plans.   The number of

physicians per 1,000 persons in the county is included as a measure of the supply of

medical providers.   Indicators for the four Census regions in the U.S., as well as

indicators for residence in large metropolitan areas, small metro areas, and nonmetro

areas are included to control for any variations in prescription drug use and prescribing

patterns that are correlated with geographic region and place of residence (see Appendix

Table 2 for a full listing of dependent and independent variables and means).

Results.   The results from the regression analyses are summarized in Table 6 (see

Appendix Table 3 for the full regression results).   The first set of estimates reflect the

increase in the probability of experiencing cost barriers associated with each of the state

cost control methods.   Individually, none of the five cost control measures had

statistically significant effects on the probability of experiencing cost barriers, although

the probability for at least one of the state policies (step-therapy requirements) was fairly

sizeable.

That individual cost control methods do not significantly affect beneficiary access

to medications is perhaps not too surprising, since many of the restrictions are fairly

nominal and are unlikely to affect very many Medicaid enrollees.   For example,

copayments amount to no more than a one or two dollars per prescription, which is

considerably lower than copayments typically required by private insurance plans.

Limits on the number of prescriptions (ranging from about 3 to 10 new prescriptions per

month in states that have them) are likely to affect only heavy users, and prior

authorization requirements apply to only a limited number of drugs.

However, implementing multiple cost control methods affects beneficiary access

to prescription drugs to a greater extent than any single measure. In fact, the probability

of reporting cost barriers to drugs in states that had implemented 4 or 5 of these methods

was 18 percentage points higher compared to beneficiaries in states with either one or no

cost control methods. Other factors being equal, one-third of beneficiaries in states with

4 or 5 cost control methods experienced cost barriers to care, compared to 25 percent in

states with 2 or 3 methods, and 15 percent in states with 0 or 1 method (Table 7).[9]

States that implement multiple cost control methods may be much more

aggressive in trying to control Medicaid prescription drug costs. Not only would the

cumulative effects of implementing these policies erode access to a greater degree than

any single method, but the individual methods themselves may be more stringent (e.g.

higher copays, stricter dispensing limits) in states that are more aggressively trying to

control costs. While greater cost savings in the Medicaid program may be realized, it

appears that a consequence of aggressive cost control policies is a reduction in

beneficiary access to prescription drugs.

Implications

While the policy focus has been on expanding prescription drug coverage for

elderly Medicare beneficiaries, the results in this report suggest that policymakers should

not ignore the difficulties that many nonelderly adults have in affording prescription

medications. The current policy emphasis on expanding Medicare prescription drug

coverage is understandable, given that elderly Medicare beneficiaries in general have higher need for prescription medications, higher utilization, and incur higher costs compared to nonelderly persons.[10]   However, this report shows that an even greater number of nonelderly adults are vulnerable to cost barriers to prescription medications, either due to a complete lack of health care coverage (i.e. uninsured), or limitations in Medicaid prescription drug coverage relative to the needs of beneficiaries.

In lieu of new federal and state programs to provide assistance for prescription drug expenses, problems with affording prescription medications for many nonelderly persons could grow worse.   First, many states are currently experiencing budgetary pressures in their Medicaid programs, due in large part to rising Medicaid prescription drug costs.   If these pressures continue or worsen, states could become even more aggressive in trying to control prescription drug expenditures, which could further impair beneficiary access to drugs.   While some may justify these cost control methods as being consistent with those used by many private insurance plans (e.g. copayments, generic drug requirements), policymakers should keep in mind that the impact of these methods on Medicaid beneficiaries is likely to be greater given their higher need and lower incomes, compared to most persons with private insurance.

In addition, slow economic growth and rising health insurance costs put more working adults (and their family members) at risk of being uninsured.   Although not as medically needy as Medicaid and Medicare beneficiaries, uninsured persons lack coverage for any type of health care service, and therefore perhaps face even more difficult choices about whether to pay for prescription drugs in lieu of other needed medical or non-medical services.   Furthermore, uninsured persons usually face higher

prices for prescription drugs compared with most insured persons, since public and private health insurance plans typically negotiate price discounts for pharmaceuticals.

Finally, the importance of prescription drugs in medical care is increasing. Both the number of people using prescription drugs and the number of prescriptions per user are increasing.[11] Expenditures for prescription drugs now account for about 11 percent of personal health care expenses, up from about 6 percent in 1988.[12] The importance and cost of prescription drugs in medical care is likely to increase in the future with the development of new drug products, including from the still nascent field of biotechnology. As drug products increase in both importance and cost, policymakers will be confronted with the challenge of making these both affordable and accessible to all Americans.

Limitations of the study

The primary measure used in this study (i.e. problems affording prescription drugs) is based on self-reports. As such, we cannot determine the medical necessity of the prescription drugs that survey respondents were not able to obtain. However, it is very unlikely that the high rate of cost barriers to prescription drugs among Medicaid beneficiaries (relative to those with employer coverage) is explained by a greater inability to obtain medically unnecessary drugs, especially given the high prevalence of chronic health conditions among adult Medicaid beneficiaries.

In addition, the measure of cost barriers to prescription drugs is based on people's perceptions and self-assessments of their ability to afford prescription drugs, not the actual level of financial burden. Thus, the higher rate of reported cost barriers to

prescriptions drugs among nonelderly adults compared to elderly adults does not necessarily mean that the actual financial burden of obtaining prescription drugs is higher for nonelderly adults.   Rather, the lower rate of cost barriers among elderly persons may indicate that they are more willing to incur the costs of obtaining prescription medications than are nonelderly persons.

It should also be noted that there is considerable variation within each of the Medicaid cost control methods in terms of how restrictive they are and which types of drugs are restricted.   For example, there is variation in the level of copays among states that use this method (from 50 cents to $2 per prescription).   Limitations on the number of new prescriptions also vary across states that use this method (from 3 per month to 10 per month), and different drugs are subjected to preauthorization requirements.   However, it is not possible to incorporate all of this detail into the analysis, and it is at least a reasonable starting point to compare individuals in states with any of these types of restrictions to individuals in states without these restrictions.

Finally, there are seven states in the CTS study for which there was no information on Medicaid prescription drug policy, including Arizona, Colorado, Ohio, Oklahoma, Tennessee, Texas, and Wisconsin.   It is unknown as to how the exclusion of these states affects the results from the analysis of Medicaid cost control methods, although the rate of reported cost barriers among Medicaid beneficiaries in these states is similar to beneficiaries in other states.

Notes

1. Kaiser Family Foundation. *Prescription Drug Trends – A Chartbook*, July, 2001.

2. Bruen, Brian K. *States Strive to Limit Medicaid Expenditures for Prescribed Drugs,* Kaiser Commission on Medicaid and the Uninsured, February 2002.

3. Includes state-only programs that provide comprehensive health coverage to eligible individuals, as well as coverage through the State Children's Health Insurance Program (SCHIP). Few adults were eligible for SCHIP at the time of the survey, and most individuals in this category were covered by Medicaid.

4. Kaiser Family Foundation/Health Research and Educational Trust. *Survey of Employer Health Benefits, 1999.*

5. This conclusion is based on multivariate regression analysis on the probability of not obtaining a prescription medication due to cost. Along with income and chronic conditions, the analysis also controlled for age, gender, race/ethnicity, self-rated health status, marital status, and family composition. Binary variables for each of the insurance coverage categories in Table 1 were included as independent variables, with "uninsured" as the omitted category.

6. For a more thorough discussion of state Medicaid prescription drug policies, see Schwalberg, Renee, et al., *Medicaid Outpatient Prescription Drug Benefits: Findings from a National Survey and Selected Case Study Highlights.* Kaiser Commission on Medicaid and the Uninsured, October 2001; and Bruen, Brian K., *States Strive to Limit Medicaid Expenditures for Prescribed Drugs,* Kaiser Commission on Medicaid and the Uninsured, February 2002.

7. Information on state Medicaid prescription drug policy was obtained from Schwalberg et al., *Medicaid Outpatient Prescription Drug Benefits.* The analysis is limited to states where there are sample persons included in the CTS household survey. This includes 34 states and the District of Columbia. All of the most populous states have CTS sample persons. However, individuals in seven states that are in the CTS sample but for which the states did not respond to the survey of Medicaid prescription drug benefits are excluded from the analysis. The excluded states are Arizona, Colorado, Ohio, Oklahoma, Tennessee, Texas, and Wisconsin.

8. While probit or logistic regression is normally used with binomial dependent variables, OLS is used in this analysis because the coefficients reflect probabilities, and therefore are easier to interpret. Further analysis shows that results based on logistic regression analysis are very similar to OLS results.

9. These are based on regression-adjusted means, computed from the regression coefficients and sample means of the population with Medicaid and other state coverage.

10. Cohen JW, Machlin SR, Zuvekas SH et al. Health care expenses in the United States, 1996. Rockville (MD): Agency for Healthcare Research and Quality; 2000. *MEPS* Research Findings 12. AHRQ Pub. No. 01-0009.

11. Merlis M, "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.

12. Levit K, Smith C, Cowan C, et al., "Inflation Spurs Health Spending in 2000," *Health Affairs* 23(1): 172-181, 2002.

Table 1. Percent not obtaining prescription drug due to cost.

	Percent not obtaining prescription drug due to cost
All adults (age 18 and over)	12
Age 18-64	13*
Age 65 and over	8
Insurance coverage (age 18-64)	
Employer coverage	8**
Other private coverage	11**
Medicaid/other state coverage	26
Other coverage	16**
Uninsured	29

  *Difference with age 65 and over is statistically significant at .05 level
**Difference with uninsured (age 18-64) is statistically significant at .05 level.

Estimates reflect the percentage who responded "yes" to the following question:
"During the past 12 months, was there any time you needed prescription medicines but
didn't get them because you couldn't afford it?"

Source: Community Tracking Study household survey, 2000-2001.

Table 2. Percent not obtaining prescription drug due to cost, by insurance coverage and income for nonelderly adults (ages 18-64).

	Less than 200% of poverty	**Between 200 and 400% of poverty**	**400% of poverty and higher**
All persons (age 18-64)	25	12*	6*
Employer-sponsored coverage	18	10*	4*
Medicaid/ other state	27	23	--
Uninsured	34	24*	21*

--Sample size too small for reliable estimates
*Difference with persons with incomes below 200% of poverty is statistically significant at .05 level.

Estimates reflect the percentage who responded "yes" to the following question:
"During the past 12 months, was there any time you needed prescription medicines but didn't get them because you couldn't afford it?"

Source: Community Tracking Study household survey, 2000-2001.

Table 3. Percent not obtaining prescription drugs due to cost, by insurance coverage and chronic condition status for nonelderly adults (ages 18-64).

	No chronic conditions	**1 chronic condition[1]**	**2 or more chronic conditions[2]**
All persons age 18-64	10	17*	25*
Employer-sponsored coverage	6	11*	15*
Medicaid and other state coverage	16	26*	41*
Uninsured	23	48*	61*

*Difference with persons with no chronic conditions is statistically significant at .05 level.

[1]Conditions asked about in the survey include diabetes, arthritis, asthma, chronic obstructive pulmonary disease, hypertension, coronary heart disease, cancer, benign prostrate disease, depression, other serious medical problem that limits usual activities.

Estimates reflect the percentage who responded "yes" to the following question: "During the past 12 months, was there any time you needed prescription medicines but didn't get them because you couldn't afford it?"

Source: Community Tracking Study household survey, 2000-2001.

Table 4. Health and income characteristics by insurance type (age 18-64).

	Medicaid/other state coverage	**Uninsured**	**Employer-sponsored coverage**
Percent with incomes below poverty	50	26	3
Percent with incomes between 100-200% of poverty	25	30	11
Percent with 1 chronic condition[1]	23	14	20
Percent with 2 or more chronic conditions[1]	29	6	10

[1]Conditions asked about in the survey include diabetes, arthritis, asthma, chronic obstructive pulmonary disease, hypertension, coronary heart disease, cancer, benign prostrate disease, depression, other serious medical problem that limits usual activities.

Source: Community Tracking Study household survey, 2000-2001.

Table 5. Selected measures of access to care, by insurance status.

	Employer-sponsored coverage	Medicaid/state coverage	Uninsured
Percent not obtaining Rx due to cost	8*	26	29
Percent not getting needed medical care due to cost	3*	6*	16
Percent with no regular source of care	13*	16*	46
Percent with no physician visit in last year	21*	16*	55

*Difference with uninsured is statistically significant at .05 level.

Source: Community Tracking Study household survey, 2000-2001.

Table 6. Summary of the effects of state Medicaid prescription drug policies on beneficiaries' access to prescription drugs.

	Probability of not getting prescription drug due to cost
Effects of individual cost control methods[1]	
State requires preauthorization for certain drugs	4.5
State requires copayment for drugs	3.1
State limits the number of prescriptions	-0.1
State has "fail-first" requirement	8.5
Generics required by state law	0.9
Effects of multiple cost control methods[2]	
State has implemented 4 or 5 of the above methods	18.2*
State has implemented 2 or 3 methods	10.0**

*Difference with persons in states that have 0 or 1 requirement is statistically significant at .05 level.
**Difference with persons in states that have 0 or 1 requirement is statistically significant at .10 level.

[1]Items were included individually in separate regressions.
[2]Items were included in a single regression.

Sample includes persons enrolled in Medicaid or state coverage programs.

Results based on OLS regression controlling for the following characteristics: age, gender, family income, marital status, presence of children in the family, race/ethnicity, whether interview conducted in English, general health status, chronic conditions, enrollment in HMO, Medicaid managed care penetration in the state, U.S. Census region, residence in metro or nonmetro area, number of physicians per 1,000 persons in the county of residence.

Table 7.   Summary of Effects of State Medicaid Cost-Control Methods on Beneficiaries' Access to Prescription Drugs[1]

	Percent Not Getting Prescription Drug Due to Cost[2]
State Has Implemented 0 or 1 Method	15
State Has Implemented 2 or 3 Methods	25**
State Has Implemented 4 or 5 Methods	33*

[1]These methods include copayments, limits on the number of prescriptions, mandatory substitution of generics for brand-name drugs, preauthorization requirements, and step-therapy requirements.

[2]Estimates reflected regression-adjusted means, computed based on the coefficients from the regression model (see Appendix Table 3) and variable means for the sample of persons age 18-64 enrolled in Medicaid or other state coverage.

 *Difference with persons in states that implemented 0 or 1 requirement is statistically significant at .05 level.

**Difference with persons in states that implemented 0 or 1 requirement is statistically significant at .10 level.

Note: Sample includes persons ages 18-64 enrolled in Medicaid or state coverage programs.

Source: Community Tracking Study Household Survey, 2000-01

Appendix Table 1. Summary of Medicaid prescription drug policies in states that are included in the CTS survey (as of October, 2001).

	State has any preauthorization requirement	State requires copayment	State has limits on the number of prescriptions	State has "step-therapy" requirement	State law requires use of generics
Alabama	Yes	Yes	No	No	No
Arkansas	Yes	Yes	Yes	Yes	No
California	No	Yes	Yes	No	Yes
Connecticut	No	No	No	No	No
D.C.	Yes	Yes	No	Yes	Yes
Florida	Yes	No	Yes	No	Yes
Georgia	Yes	Yes	Yes	No	No
Illinois	No	No	Yes	No	No
Indiana	No	Yes	No	Yes	Yes
Kentucky	Yes	No	No	No	Yes
Louisiana	No	Yes	No	Yes	No
Maine	Yes	Yes	No	No	No
Maryland	Yes	Yes	No	No	No
Massachusetts	Yes	Yes	No	No	No
Michigan	Yes	Yes	No	No	No
Minnesota	Yes	No	No	Yes	Yes
Missouri	Yes	Yes	No	No	No
Nevada	Yes	No	Yes	No	Yes
New Jersey	Yes	No	No	No	Yes
New York	Yes	Yes	Yes	No	No
North Carolina	Yes	Yes	Yes	No	Yes
Oregon	Yes	No	No	No	No
Pennsylvania	Yes	Yes	No	No	No
South Carolina	Yes	Yes	Yes	No	Yes
Utah	Yes	Yes	No	Yes	No
Virginia	No	Yes	No	Yes	No
Washington	No	No	No	Yes	No
West Virginia	Yes	Yes	Yes	Yes	Yes

Adapted from Schwalberg et al., *Medicaid Outpatient Prescription Drug Benefits: Findings from a National Survey and Selected Case Study Highlights.* Study sponsored by Kaiser Family Foundation, October, 2001.

Note: States that are in the CTS household survey but did not respond to the survey of Medicaid prescription drug benefits are: Arizona, Colorado, Ohio, Oklahoma, Tennessee, Texas, and Wisconsin.

Appendix Table 2. Means of dependent and independent variables used in regression analysis for the effects of cost control methods on prescription drug access (Persons age 18-64 with Medicaid or other state coverage).

Variable	Percent of persons
Did not get prescription drug due to cost (%)	25.5
State Medicaid prescription drug policy	
Limits on the number of prescriptions	57.8
Step-therapy requirement	17.1
Generics required	45.8
Prior authorization requirement	71.9
Copay required	74.9
State uses 0 or 1 policies	9.3
State uses 2 or 3 policies	74.7
State uses 4 or 5 policies	16.0
Person characteristics	
Age 18-34	44.2
Age 35-44	25.2
Age 45-54	17.3
Age 55-64	13.3
Female	68.7
Family income LT 100% of poverty	49.9
Family income 100-199% of poverty	25.2
Family income 200-299% of poverty	12.4
Family income 300-399% of poverty	4.5
Family income 400% of poverty or higher	8.0
White	47.9
Black	26.8
Hispanic	20.1
Other race	5.2
Interview not conducted in English	10.7
Excellent, very good health	31.6
Good health	28.5
Fair or poor health	39.9
0 chronic conditions	47.5
1 chronic condition	23.0
2 or more chronic conditions	29.5
Married	23.5
Children in family	46.0
Covered by Medicaid only part year	18.1
Managed care	
Person enrolled in HMO	31.2

Variable	Percent of persons
Percent of Medicaid beneficiaries in managed care (state-level)	61.0
Other community, regional variables	
Number of physicians per 1,000 persons (county)	2.9 (Mean)
South region	34.7
Northeast region	26.6
Midwest region	14.9
West region	23.8
Large MSA residence (greater than 200,000 persons)	73.6
Small MSA residence (less than 200,000 persons	5.4
Nonmetro area	21.0

Appendix Table 3.   Full regression results for the effects of multiple cost control methods on the probability of not getting prescription drugs due to cost.

Variable	Coefficient
Intercept	0.09
State has 2 or 3 cost control methods (compared with 0 or 1)	0.10**
State has 4 or 5 cost control methods (compared with 0 or 1)	0.18*
Age 35-44	0.02
Age 45-54	0.04
Age 55-64	-0.05
Female	0.11*
Family income 100-199% of poverty	0.005
Family income 200-299% of poverty	-0.01
Family income 300-399% of poverty	-0.11*
Family income 400% of poverty or higher	-0.12*
Black	0.05
Hispanic	-0.01
Other race	0.004
Interview not conducted in English	-0.06
Excellent, very good health	-0.11*
Good health	-0.05
1 chronic condition	0.09*
2 or more chronic conditions	0.21*
Married	0.03
Children in family	0.02
Covered by Medicaid only part year	0.13*
Person enrolled in HMO	-0.01
Percent of Medicaid beneficiaries in managed care (state-level)	-0.0002
Number of physicians per 1,000 persons (county)	-0.02*
Northeast region	-0.05
Midwest region	-0.02
West region	0.03
Large MSA residence (greater than 200,000 persons)	-0.03
Small MSA residence (less than 200,000 persons	0.04

  * $p < .05$
** $p < .10$

Note: Effects of individual cost-control methods are shown in Table 6 (all based on separate regressions).   Effects of other independent variables are similar across all regression models.