

**Trends in State Medicaid Prescription Drug Policies 1990-2004:
What are the main policy tools states are using?**

by

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Abstract

We present the first systematic description and analysis of state policies limiting prescription drug access under Medicaid during 1990-2004. We document the range of policy tools states are using, analyze changes over time by policy type and by the overall approach taken by individual states. Analysis of specific policy categories reveals an increased use of restrictions in nearly all areas. Analysis of policies at the state level demonstrates substantial variation across states, but a clear upward trend in access restrictions over time. In addition to restricting overall drug access, states are increasingly employing policies that control use of specific drugs.

I. Introduction

Spending on prescription drugs was the fastest-growing expense category in Medicaid between 2000 and 2004—growing on average over 16 percent a year (Holahan and Ghosh, 2005).¹ Policymakers' concerns about managing the use and costs of Medicaid prescription drug benefits have grown in response. The Medicaid Commission's 2005 report to the Secretary of the Department of Health and Human Services recommends several ways that states can reform their pharmacy benefits, for example, by the use of a three-tiered co-payment system (Medicaid Commission, 2005). Surveys of state Medicaid programs in 2000 and 2003 concluded that states had already introduced many policies to control their drug benefit costs (Crowley et al, 2003). In fiscal year 2005, forty-three states reported that they are taking action to control Medicaid prescription drug costs (Smith et al, 2004).

Federal rules do not require states to cover prescription drugs under their Medicaid plans, but all states currently provide this benefit to most Medicaid beneficiaries. Federal law sets minimum requirements for prescription drug coverage for those states choosing to provide this benefit, but states are allowed significant flexibility in administering their programs. Thus the nature and stringency of state policies used to control prescription drug spending vary across states and over time. Although select policy changes have gained widespread attention among media and policy analysts, the extent of policies and their changing prevalence over time have not been systematically documented.²

This article provides an analysis of changes in states' Medicaid prescription drug policies over the time period 1990-2004. Our focus is on state policies that most directly impact Medicaid beneficiaries' access to prescription drugs, including co-payments for prescription drugs, prescribing limits, incentives to encourage use of generic drugs, prior authorization of drug use, and preferred drug lists.³ Understanding trends in these policies is

of particular importance because of research suggesting that Medicaid beneficiaries perceive poorer access to prescription drugs than those with private insurance coverage, and that these access disparities have increased over time.⁴

The article is organized as follows. Section II describes the construction of our database documenting states' policies over time. Section III analyzes trends in states' use of specific policy tools in four broad policy areas: co-payments, prescribing limits, generic drugs, and prior authorization policies including preferred drug lists. Section IV examines the set of policies used by each state, and how state-level policy utilization has changed over time. Section V summarizes and discusses our findings.

II. Data Sources and Methods

We compile data from secondary and primary sources to analyze state Medicaid prescription drug policies over 1990-2004. The principal source of information used in creating our policy database is *Pharmaceutical Benefits Under State Medical Assistance Programs*, a report published annually by the National Pharmaceutical Council (NPC) based on their surveys of states. Data on states' preferred drug list policies were not available in the NPC reports. Data on dates of authorization were obtained from the National Council of State Legislatures (NCSL) for the period 2000 through 2004, and dates of implementation were then obtained from states' Medicaid websites. We utilize the implementation dates in this article.

The NPC reports are available in hard-copy (1990-1999) or pdf (2000-2004) formats and organized into tables of state comparisons of individual policy variables. To create a database for research, we entered these data into electronic spreadsheet formats and organized the raw data into a state by year dataset. This dataset format facilitates systematic coding and tracking of individual policies and of the entire set of policies

employed by each state. This allows us to provide a more complete picture of policy trends and the combination of tools used at the individual state level.

The NPC reports contain detailed charts and descriptions of state Medicaid pharmacy benefit programs, including the features we are interested in studying. However, the surveys do not report all policies in every year. Missing information was added to the database where possible, and the data were checked against and supplemented with data from other published sources where available.⁵ As a final step, we created individual state profiles from the information we gathered, and mailed this information to each state's Medicaid office to verify their accuracy and gather information where certain years were missing.

Because of the nature of their Medicaid programs, data on Arizona and Tennessee are not available for most policies in most years; therefore, our database covers 48 states plus the District of Columbia. With some exceptions, we were able to gather data on each state policy for every year in the study period 1990-2004. For clarity of presentation we display data here for only four selected years: 1990, 1996, 2000 and 2004.

We use the database to analyze cross-state and over time patterns in state Medicaid prescription drug benefit restrictions. We track the prevalence and stringency of each specific policy used by the states over the study's time period, to examine the evolution in state policy instruments to control drug usage and cost. The combined extent and scope of policies employed by each state is also tracked to evaluate how a state's overall approach relates to other states, and how this has changed over time. Taken together, the results of these analyses portray the evolving character of state Medicaid prescription drug policy.

III. Trends in States' Use of Specific Policies

The article analyzes state policy trends in four broad policy areas: co-payments, prescribing limits, generic drugs, and prior authorization policies including the use of preferred drug lists.

A. Cost-sharing Policies

Under Medicaid law, states are permitted to implement “nominal” cost-sharing for certain groups of beneficiaries. This has been defined as co-payments from \$.50 to \$3.00 per prescription, though the federal government⁶ has granted waivers allowing for cost-sharing levels up to \$5.00 per prescription. Co-payments may be used to shift costs to beneficiaries and to direct them toward cheaper drugs. Medicaid law prohibits cost-sharing for children under age 18, pregnant women, those receiving hospice care, and those in inpatient hospitals, nursing facilities or intermediate care facilities for persons with mental retardation (ICF/MRs). Moreover, during the time period surveyed here, states cannot deny a beneficiary access to a prescription because of failure to pay the co-payment.⁷

Our state policy data show that cost-sharing requirements have become increasingly prevalent over the study period.

- *Cost-sharing policies are used in a large majority of states. The number of states with cost-sharing has doubled since 1990 (Exhibit 1).*

In 1990, 20 states required a co-payment from beneficiaries to receive prescription drugs. By 2004, the number of states requiring cost-sharing had grown to 40, with eight states adding co-payments between 2000 and 2004.

- *States have increased the use of tiered co-payment systems that require higher co-payments for brand name drugs (Exhibit 1).*

In 1996 (the first year data on this item is available), only 3 states charged differential co-payments for brand-name and generic drugs. By 2004, 17 states employed a tiered co-

payment system. The vast majority of states adopting the tiered systems have done so since 2000, when only 4 states used tiered co-payments.

- *States have greatly increased the levels of cost-sharing imposed on beneficiaries since 1990.*

In 1990, 18 of the 20 states with cost-sharing had payment levels of \$1.00 or less. In 2004, only five of the 39 states had co-payments of \$1.00 or less, 18 had co-pays ranging up to \$3.00 and four states went to \$5.00. The median (maximum) co-pay among states with cost-sharing rose from \$1.00 in 1990 to \$3.00 in 2004.

- *The difference in co-payments required for brand versus generic drugs has increased in states with tiered co-payment systems.*

In both 1996 and 2000, the median co-payment amount for brand-name drugs among states that used a tiered co-payment system \$2.00. The median co-pay for generics was \$0.50 in both years. But the next four years saw rapid change: in 2004, the median co-payment for brand-name drugs was \$3.00 and that for generics was \$1.00.

B. Generic Drug Policies

Medicaid law requires states to cover all FDA-approved medications by pharmaceutical manufacturers who have rebate agreements with the federal government. However, Medicaid law also allows for states to require or encourage the use of generic medications, in ways beyond the use of tiered co-payment systems already discussed. States may also require physicians to prescribe the lowest cost multi-source drug first. Often called fail-first or step requirement, this policy requires an individual to use and “fail” on a particular drug – the lowest cost one – before Medicaid allows a higher priced alternative.⁸

Analysis of the data reveals that generic drug policies are receiving increased attention from the states.

- *States are adopting policies that require physicians substitute generic alternatives for brand-name drugs (Exhibit 2).*

In 1990, only 12 states required that physicians prescribe generics when available. In 2004, this number had grown to 41 states. The period between 2000 and 2004 saw a large increase in states mandating generics – from 33 states in 2000 to 41 in 2004.

- *States use “fail first” policies less frequently than other generic drug policies, but have increased the use of these policies in recent years (Exhibit 2).*

In 1996 (the first year data are available) only 8 states had such a policy in place. By 2004 this number had grown to 14.

C. Prescribing Limits

States have much flexibility in how prescription drugs are dispensed in their Medicaid programs. Medicaid federal law states only that benefits such as prescription drugs must be provided so they are “sufficient in amount, duration and scope to reasonably achieve their purpose.” (Crowley et al, 2003). Federal regulations also allow for states to place appropriate limits on quantities per prescription and other utilization control methods.

The state policy data show relatively little change in prescribing limits over the study period, as compared to other policy areas.

- *A vast majority of states have some limits on prescribing and this has remained relatively constant since 1990 (Exhibit 3).*

In 2004 47 states placed some limits on prescribing; this has not changed much since 1990 when 43 states had some form of prescribing limits. Although most states impose prescribing limits, there is variation in the specific nature and the extent. A few states impose limits on how many prescriptions per month a beneficiary may receive, but the use of this policy has changed little over the study period.

- *States use of policies to limit how many prescriptions a beneficiary may receive per month has not increased over the last decade and a half. (Exhibit 3).*

In 2004, 15 states limited the number of prescriptions a beneficiary may receive.⁹

This has not changed much since 1990 – when 12 states had limits on the number of prescriptions per month.

- *The number of states that limit the quantity of pills in each prescription has increased since 1990, but this number has remained relatively constant from 2000 to 2004 (Exhibit 3).*

In 1990, 29 states placed limits on how many pills are allowed in each prescription.

This number grew to 43 states in 2004. A large number of states introduced these limits between 1990 and 1996 rather than in more recent periods. By 1996 39 states placed limits on the quantity of pills per prescription.¹⁰

D. Prior Authorization

States have the flexibility to require prior authorization of drugs within their Medicaid prescription drug programs. Under these laws, states may require that physicians request and receive permission before a particular drug can be prescribed and dispensed. Sometimes this program works in conjunction with a “formulary” or “preferred drug list program”. If states operate a prior authorization program, they must provide a response within 24 hours of a request for a prescription drug, and must provide a 72-hour emergency supply of the medication. The data show that prior authorization programs have been prevalent among the states throughout the study period: 40 states had prior authorization programs in 1991 (first year data available) and 49 states had a program in place in 2004 (Exhibit 4). Nonetheless, program scope and activity has increased greatly over the study period.

- *States are reviewing a much larger number of prior authorization requests over time.*

In 1998 (first year of available data), for the 30 states reporting data the number of requests per state ranged from 25 to 895,000 and the median state reviewed 16,000 requests. By 2004, for the 40 states reporting data the number of requests ranged from 28 to 2,900,000

and the median state reviewed 77,500 requests. Among the 27 states that reported in both 1998 and 2004, eight saw a decrease in prior authorization requests over the time period and 19 states saw an increase in requests. The median change in prior authorization requests from 1998 to 2004 among these states was an increase of 273%.

- *States are approving a lower percentage of prior authorization requests over time.*

In 1998 (first year of data), for the 24 states reporting data the range of approval percentages was 60% to 98%, with the median state approving 90% of requests. In 2004, for the 39 states reporting data approvals ranged from 27% to 100%, with the median state approving 82% of requests. Among the 22 states reporting data for both years, the change in approval percentages over time ranged from a decrease of 63% to an increase of 31%, with the median state approving 2% fewer requests in 2004 than in 1998.

A Preferred Drug List (PDL) is a list of drugs available to Medicaid beneficiaries without prior authorization. All other drugs require prior authorization or approval by the state Medicaid office. By Medicaid law, even when a drug is not on a state's PDL, it must be made available through a request for prior approval from the state. PDLs are required to include all drugs made by manufacturers with rebate agreements in effect with the federal Department of Health and Human Services, with some exceptions to this rule (such as if the drug is similar to other drugs on the PDL). Some states have excluded certain drugs under these exceptions.

- *The past five years have seen rapid adoption of PDLs by the states (Exhibit 4).*

In 2000, no states had a preferred drug list operating in their Medicaid program. In 2001, only two states (Florida and Georgia) had implemented a PDL program. By 2004 30 states had implemented PDL programs.¹¹

IV. Trends in the Scope of State Restrictions

We measure the scope of state's activism in controlling Medicaid prescription drug access by examining the number of policies in place in the state. We first examine five important policies for which we have data over the entire study period: co-payments, generic substitution, limits on number of prescriptions, limits on quantity per prescription, and use of prior authorization (data available since 1991). Exhibit 5 compares states' use of these five policies in 1990 and 2004.¹² We also consider these five policies plus three additional policies for which we have data for later years only: tiered co-payments, fail first policies and PDLs. Exhibit 5 shows the use of these three policies by each state in 2004.

Comparison of the number of policies used in each state for 1990 and 2004 demonstrates a substantial upward trend in access restrictions over time.

- *States' use of five policy tools that were available in 1990 has greatly increased over the period 1990-2004 (Exhibit 5).*

In 1990 only one state (California) had all five policies in place, while one state (Indiana) utilized none of the policies and seven additional states used only one of the five. The median number of policies per state in 1990 was two (out of five). By 2004 all states employed at least two of these policies and eleven states used all five. The median number of policies per state in 2004 was four (out of five).

Examination of states' adoption of the three newer policies (tiered co-pays, fail-first, PDLs) shows considerable variation in policy activism across the states.

- *States are adopting three new policies at very different rates, but the majority of states employs at least one of the new policies in 2004(Exhibit 5).*

Four states (Georgia, Maryland, Minnesota and Vermont) had adopted all three of the new policies by 2004, while 11 states had adopted none. The median state had adopted one of the new policies by 2004.

Analysis of the set of eight policies – the original five plus the three newer policies – reveals that as states have adopted new policy tools, they do so without substantially reducing their use of the earlier policies.

- *By 2004 states have substantially increased the number of policies adopted from among a set of eight select policy tools (Exhibit 5).*

States' use of these eight policies in 2004 ranged from two (New Mexico and South Dakota) to eight (Georgia). The median state had five of the eight policies in place in 2004. Thus, the median state added one of the newer policies and two of the older policies between 1990 and 2004.

The data also show that states' policy activism relative to other states can change greatly over time. With some exceptions, states that are relatively restrictive in 2004 tend to have been among the more restrictive states in 1990 as well. However, some states including Minnesota, North Carolina and Oklahoma have greatly increased their relative use of restrictions over time. On the contrary, many states that are among the least restrictive in 2004 would not have been so classified in 1990. For example, Connecticut, Hawaii, Rhode Island and Texas had in place about the median number of policies in 1990, but are among the least restrictive in 2004. This is because the number of policy restrictions has not increased over time in these states, while other states have been more proactive in policy changes.

V. Discussion

Analysis of state data from 1990 to 2004 shows that states now employ a much larger set of restrictions on prescription drug access under Medicaid than they did in the past. This trend has intensified since 2000 as states have faced increasing budgetary pressures overall and in their Medicaid programs.

Analysis of specific policy categories reveals an increased use of restrictions in nearly all areas. The data also show distinct patterns in the timing of different types of policies

adopted by the states. Co-payments and prescription limits were adopted as relatively early cost-containment strategies— in many states prior to 1996. Mandatory substitution of generic drugs for brand name drugs was also a relatively early policy, although adopted later in many states. In recent years states have added to these policies a more nuanced set of access restrictions that rely on controls on selected drugs: tiered co-payments, fail first policies, and preferred drug lists. While still relatively less common among the states, trends suggest that these latter policies may be expected to become more prevalent in the coming years.

Recent policy adoption trends suggest that states wanting to control Medicaid prescription drug costs are increasingly turning to policies that control the use of specific drugs, in order to control the cost per prescription. The extent to which these new restrictions are effective in changing prescribing behavior and reducing costs is a critical question for the states, as is the impact of the new prescribing hurdles on beneficiary health if indeed they do change prescribing behavior. The impact of these policies on Medicaid drug costs versus beneficiary health outcomes in selected disease areas is of particular interest, as the new policies may raise significant new access hurdles for some Medicaid beneficiaries.

While there is some research documenting the effects on access and health status of formularies, cost-sharing and limiting the number of prescriptions,¹³ we know little about other cost control policies or the combined effect of the current extent and scope of restrictions.¹⁴ The data collected for this study show considerable variation across the states in the specific policies used, in the scope of policy restrictions, and the extent of policy changes over time. These differences provide fertile ground for research into the impact of state policies on the growth in Medicaid drug costs and overall program costs, on beneficiary access to drugs, and the relationship between access restrictions and beneficiary health outcomes.

**Exhibit 1
State Copayment Policies
1990-2004**

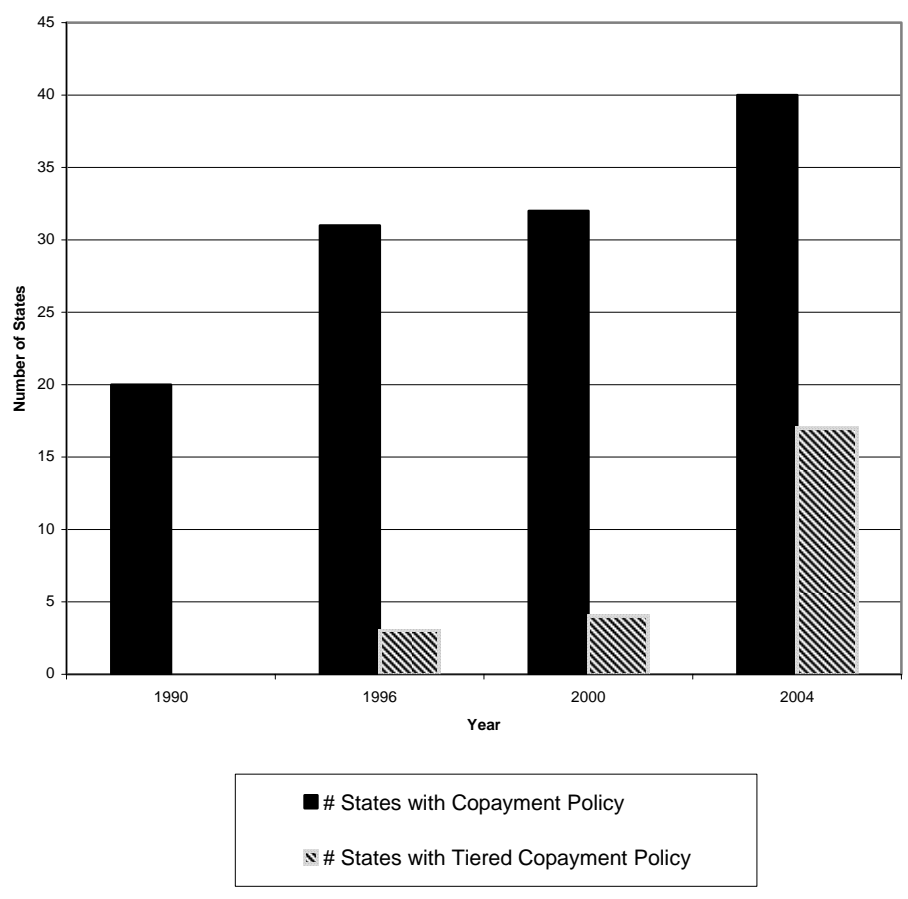


Exhibit 2
State Generic Substitution Policies
1990-2004

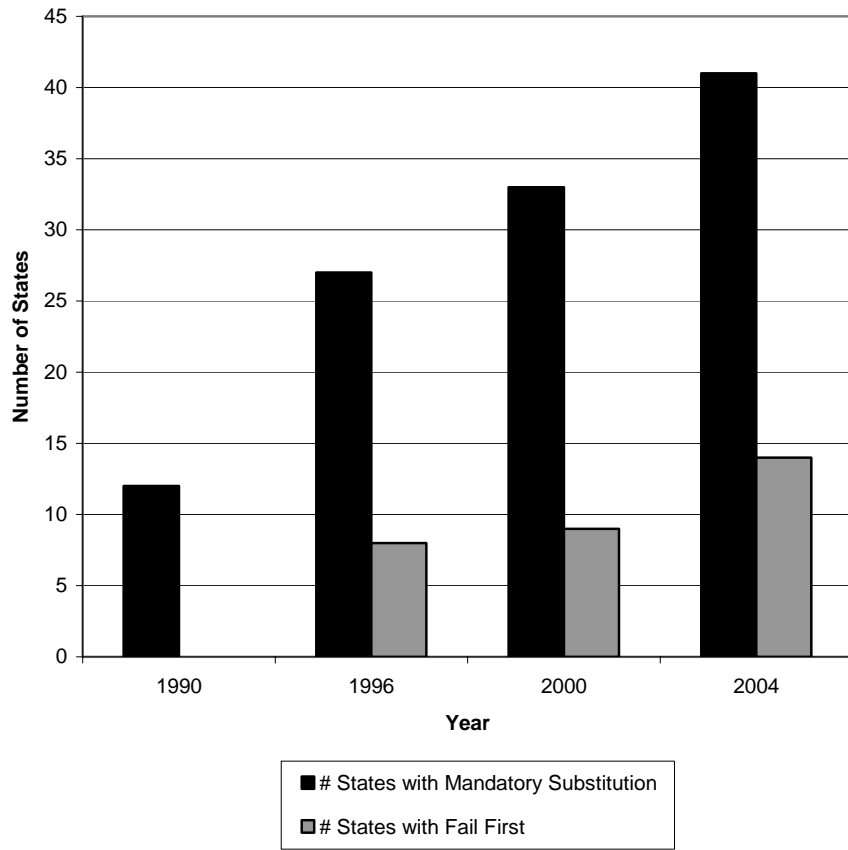


Exhibit 3
State Prescription Limit Policies
1990-2004

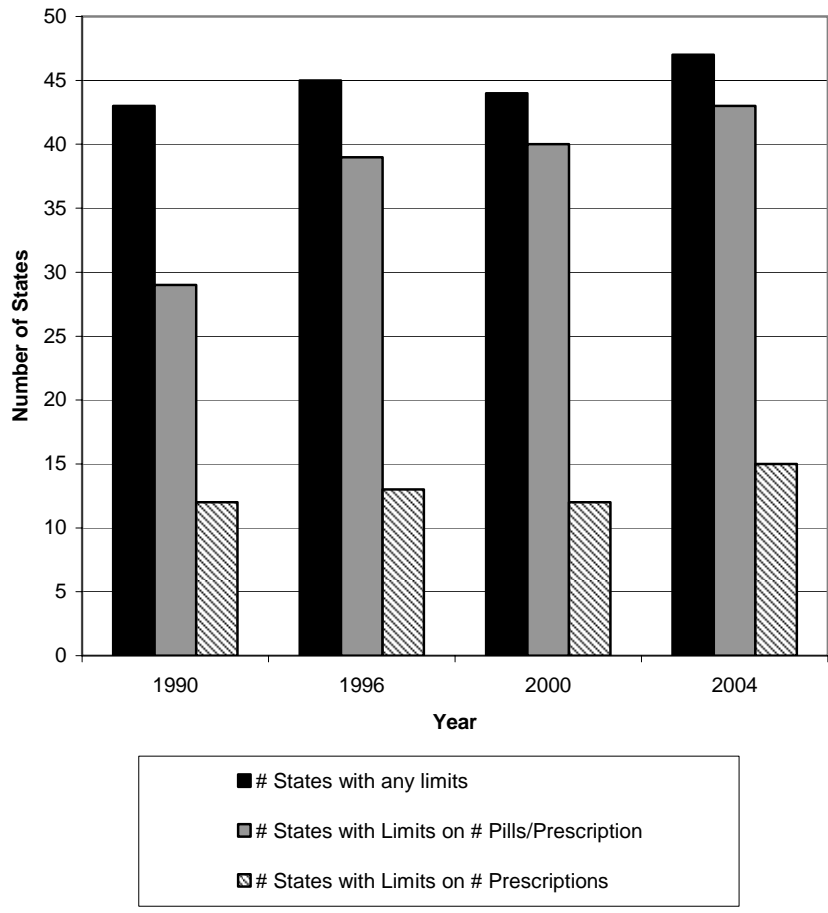


Exhibit 4
State Prior Authorization Policies
1990-2004

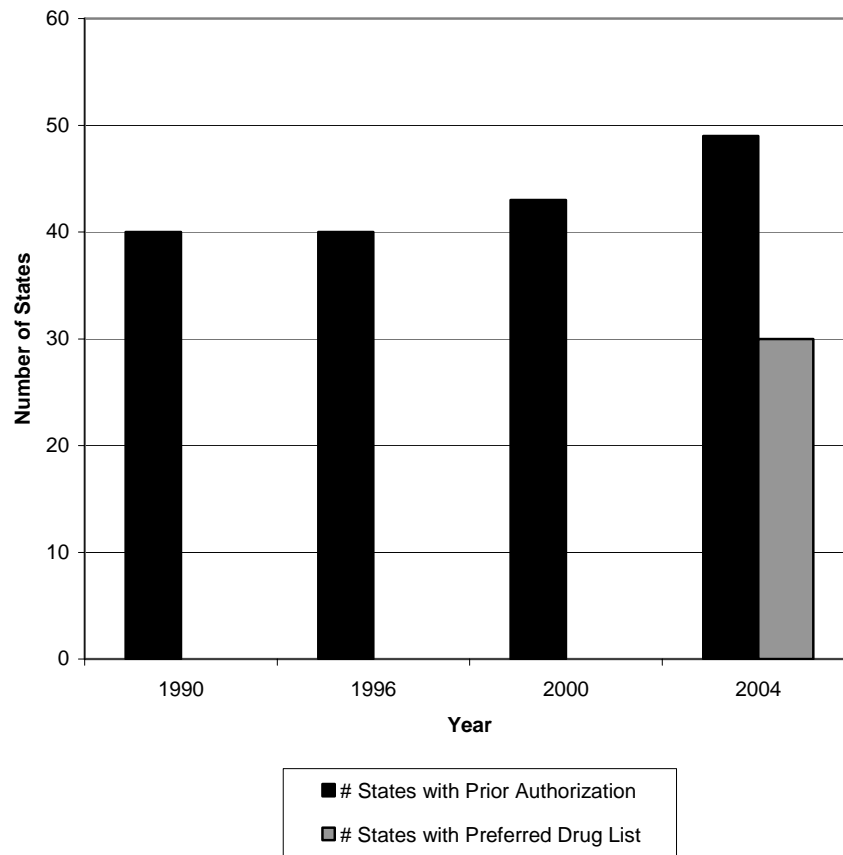


Exhibit 5

State	1990					2004									
	Copay	Generic	Rx per Mo	Qty per Rx	Auth	Prior	Copay	Generic	Rx per Mo	Qty per Rx	Auth	Prior	Tiered Copay	Fail First	PDL
Alabama	Yes	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
Alaska	No	Yes	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No	Yes
Arkansas	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No
California	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No	Yes	Yes
Colorado	Yes	No	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No	No
Connecticut	No	No	Yes	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No	No
D.C.	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No	No
Delaware	No	No	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No	No
Florida	No	No	Yes	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No	No	Yes
Georgia	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Hawaii	No	Yes	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No	No	No
Idaho	No	No	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No	No	Yes
Illinois	No	No	No	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	No	Yes
Indiana	No	No	No	No	No	No	Yes	Yes	No	No	Yes	Yes	No	Yes	Yes
Iowa	Yes	Yes	No	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	Yes	No
Kansas	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes
Kentucky	No	No	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes
Louisiana	No	No	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No	No	Yes
Maine	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes
Maryland	Yes	No	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
Massachusetts	No	Yes	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No	Yes
Michigan	Yes	No	No	No	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	No	Yes
Minnesota	No	No	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
Mississippi	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Missouri	Yes	No	No	No	Yes	Yes	Yes	Yes	N/A	N/A	Yes	Yes	No	Yes	Yes
Montana	Yes	No	No	No	No	No	Yes	Yes	No	Yes	Yes	Yes	Yes	No	No
Nebraska	No	No	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No	No
Nevada	No	No	Yes	No	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No	No	Yes
New Hampshire	Yes	No	No	Yes	No	No	Yes	Yes	No	Yes	Yes	Yes	Yes	No	Yes
New Jersey	No	No	No	No	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No	No	No
New Mexico	No	Yes	No	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes	No	No	No
New York	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No
North Carolina	Yes	No	Yes	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
North Dakota	No	Yes	No	No	No	No	Yes	Yes	No	Yes	Yes	Yes	Yes	No	No
Ohio	No	No	No	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	No	Yes
Oklahoma	No	No	Yes	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes
Oregon	No	No	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No	Yes
Pennsylvania	Yes	Yes	No	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No
Rhode Island	No	No	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No	No	No
South Carolina	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes
South Dakota	Yes	No	No	No	No	No	Yes	No	No	No	Yes	Yes	No	No	No
Texas	No	No	Yes	No	Yes	Yes	No	No	Yes	No	Yes	Yes	No	No	Yes
Utah	No	No	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	Yes	No
Vermont	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
Virginia	Yes	No	No	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No	Yes
Washington	No	No	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No	Yes	Yes
West Virginia	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No	Yes
Wisconsin	Yes	No	No	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No	Yes
Wyoming	No	No	No	Yes	No	No	Yes	Yes	No	No	Yes	Yes	No	No	No
	20	12	12	29	40		40	41	15	43	49		17	14	30

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¹ During the same time period, overall Medicaid spending grew a little over 10 percent per year (Holohan and Ghosh, 2004).

² Examples include Texas and Kentucky's exclusion of the antipsychotic medication Zyprexa from their preferred drug lists.

³ There are other efforts being made to control Medicaid drug costs that we do not discuss as they impact the cost per prescription to Medicaid rather than the number or type of medications used by patients. Examples are changes to the reimbursement formula from pharmaceutical companies and extension of the rebate program to Medicaid managed care.

⁴ Using data from 1994, Berk and Schur (1998) found that after controlling for health status, Medicaid beneficiaries have the same access to a usual source of care and a similar number of doctor visits as those with private coverage, but are twice as likely to report not being able to obtain prescription drugs. This study found that 7 percent of those with Medicaid were unable to obtain a prescription drug when needed, compared to 2.9 percent of those with private coverage or 13.6 percent of those who had no coverage. Estimates based on the 2000 and 2003 Community Tracking Study (CTS) showed much higher percentages of people unable to afford

prescription drugs, and similar disparities between Medicaid beneficiaries and the privately insured (Cunningham, 2005). One study that found no differences in access is Elam (2004). Using 1996 MEPS data, this study found that Medicaid beneficiaries had about the same access to antidepressant drugs as those with private coverage.

⁵ Kaiser Family Foundation surveys of the states (Kaiser Commission on Medicaid and the Uninsured, 2001, 2003) provide the most comprehensive comparison sources.

⁶ State programs are overseen by the Centers for Medicare and Medicaid (CMS).

⁷ The Deficit Reduction Act of 2005 substantially increases the allowable scope of cost-sharing beginning in April 2006 (<http://ccf.georgetown.edu/pdfs/recontable020906.pdf>).

⁸ States may also offer pharmacists an incentive fee to distribute generic drugs. These policies are used less often by the states, with only six states having such a policy in 2004. These policies may also indirectly affect beneficiary access to brand name drugs.

⁹ New York is included in this number. Although it imposes no monthly limit, the state does impose an annual limit of 40 prescriptions per beneficiary. This limit may be over-ridden with physician approval.

¹⁰ 22 states also report limits on the number refills per prescription in the 2004 NPC survey, and this number has not changed much since 1990. Moreover, many of the refill limits apply only over a time period, such as 5 refills per 6 month period, and are used in conjunction with quantity limits of 30 day supplies per prescription.

¹¹ Data compiled by the authors from information obtained from the National Council of State Legislators (NCSL) found at (<http://www.ncsl.org/programs/health/medicaidrx.htm>), and confirmed from state Medicaid websites. Our dates comprise the year of implementation rather than the year of legislative authorization (as shown on NCSL website). Our data show that 35 states had implemented PDLs as of 2005.

¹² Data on prior authorization policies is reported for 1991 and 2004.

¹³ For the effects of cost-sharing see Roemer et al, 1975; Nelson et al, 1984; Stuart and Zacker, 1999; the effects of limiting or capping the number of prescriptions per month for Medicaid beneficiaries Soumerai et al, 1991; Sourmerai et al, 1994; Martin et al, 1996 and the mixed evidence on the effect of formularies see Dranove, 1989; Moore and Newman, 1993.

¹⁴ Studies on the impact of prior authorization restrictions on program costs (not access to drugs) include Smalley et al (1995).