



MANAGING PROGRAM COSTS IN STATE PHARMACY ASSISTANCE PROGRAMS

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EXECUTIVE SUMMARY

State-sponsored pharmacy assistance programs (SPAPs) provide prescription drug coverage for low-income, older, and disabled persons who are not eligible for Medicaid and who may have no other drug coverage. But, like Medicaid and private insurance programs, SPAPs have confronted steadily increasing prescription drug costs, caused by such overall health care trends as increased prescription drug use, drug price increases, and shifts to newly introduced, more costly drugs. Increases in SPAP enrollment, reflecting such factors as reduced availability of pharmacy coverage through Medicare+Choice plans and expansions of eligibility benefits in SPAPs, also have contributed to SPAP expenditure increases. Faced with increasing costs and mounting budget pressures, SPAPs have experimented with a variety of cost-control measures, although by affecting manufacturers, pharmacies, or consumers these measures have been politically contentious.

The price-management and cost- and use-control strategies examined in this report include:

- Substitution of generic medications for brand-name products.
- Prior authorization (i.e., the state reviews a prescription before it is dispensed).
- Seeking improved manufacturer rebates, differential copayments for preferred and nonpreferred medications.
- Restricted formularies.
- Use of pharmacy benefit managers and administrators.
- Reimbursement of the state by other insurance plans.

This report, the third in a series on SPAPs, reviews expenditure patterns and discusses strategies used to manage costs. The first report provided an overview of state pharmacy benefit programs, including a historical overview of selected programs and cross-state comparisons of program design.¹ The second report described states' efforts to enroll eligible persons into their SPAPs including data on how well states are doing in reaching the Medicare population nationally and specific target populations within states.² The findings of this series are based on results of a survey of all direct-benefit programs in place throughout the year 2000; information collected through qualitative case studies of

¹ Kimberley Fox, Thomas Trail, and Stephen Crystal, *State Pharmacy Assistance Programs: Approaches to Program Design* (New York: The Commonwealth Fund, May 2002).

² Stephen Crystal, Thomas Trail, Kimberley Fox, and Joel Cantor, *Enrolling Eligible Persons in Pharmacy Assistance Programs: How States Do It* (New York: The Commonwealth Fund, September 2003).

programs in Maine, Massachusetts, Minnesota, Nevada, New Jersey, Pennsylvania, South Carolina, and Vermont; and reviews of the literature and program documents.

STRATEGIES EMPLOYED BY STATES TO CONTROL COSTS

Strategies used by states to control pharmacy claims expenditures fall primarily into two categories. *Utilization management* policies aim to limit, where appropriate, use of higher-priced drugs and shift use where possible to less-expensive alternatives. Important examples of these policies include mandatory generic substitution, prior authorization, and prospective drug utilization review. *Price management* strategies aim to negotiate or mandate deeper discounts from pharmacies and manufacturers. A third strategy widely used in the private sector, shifting some of the cost back to the consumer through *increased cost-sharing* (for example, by higher overall copayments or coinsurance), has been incorporated into a number of SPAP program expansions that increased eligibility to higher-income persons in additional program tiers. However, most states have not opted to increase cost-sharing for beneficiaries in their original, lowest income eligibility tiers.

Utilization Management Strategies

Within the broad categories of utilization management and price management, the following strategies emerged as the most prominent.

- Mirroring Medicaid, most SPAPs have mandatory generic substitution policies. To further encourage patients to use generic drugs, a few states have implemented two-tiered copayment programs, with lower copays for generics than for brand-name drugs.
- Prior authorization involves the review of certain prescriptions to determine medical necessity prior to payment. Initially prior authorization was limited to prescriptions of questionable therapeutic appropriateness identified through drug utilization review, but it has been used increasingly by Medicaid to control costs. The threat of prior authorization has also been a negotiating tool, used to get better rebates from manufacturers. Many SPAPs impose prior authorization on experimental or cosmetic drugs. However, with the exception of a few states whose SPAPs are administered by the Medicaid agency, in 2001 most SPAPs did not use prior authorization to contain costs. Those that did found that it yields considerable cost savings, even without supplemental rebates. State officials anecdotally reported minimal impact on consumers' access to clinically necessary drugs, but no formal studies have assessed the impact of prior authorization on health outcomes.

- Two newer SPAPs modeled on insurance plans have experimented with steering patients toward preferred drugs for which the state had negotiated better prices through multitiered copayments. At the time of our case studies, it was too early to assess the impact of such differential copayments on program costs or access.
- Mail-order programs have been popular in the private sector, but only a few state pharmacy programs considered and none had instituted these programs in 2001 (mainly due to strong opposition by pharmacies).
- Most state pharmacy programs have opted to follow the norms of current pharmacy practice by including some drug utilization review, which provides informational warnings about potentially inappropriate prescriptions. Two states (Pennsylvania and New Jersey) have moved substantially beyond these warning systems, convening panels of experts to develop senior-specific prescribing criteria and blocking payment for drug combinations and doses deemed unsafe for the elderly. Neither Pennsylvania nor New Jersey officials view their review program as a cost-containment strategy, seeing it more as a quality improvement and medication error reduction activity. However, preliminary data suggest that there may also be some cost savings from these quality-based initiatives. Given the frequency of medication errors and the national attention to this issue, these senior-specific, quality-focused, prospective drug utilization review systems may be models worthy of replication for Medicare drug benefits as they are implemented.

Price Management Strategies

- Manufacturer rebates are paid by the manufacturer to the state after the drugs have been purchased. The rebate is based on the volume of drugs purchased by enrollees. Some states recover as much as a third of their state program costs from rebates.
- Manufacturers who wish to participate in Medicaid are required by federal law to pay rebates—this is one of Medicaid’s main methods for controlling drug costs. Many state pharmacy programs require the same rebates as Medicaid.
- A few states that contract with private pharmacy benefit managers do not mandate a rebate percentage from manufacturers, but instead give the pharmacy benefit manager the authority to negotiate rebates. These arrangements are fairly new, so it is too early to assess their impact on costs. However, program officials in at least

one state with an open formulary indicated that the rebates from the pharmacy benefit manager have not been as great as expected.

- Pharmacy benefit managers often use closed formularies—which exclude from coverage drugs not listed on the formulary—to shift market share and negotiate better rebates. But closed formularies are uncommon in SPAPs. In 2001, of the three case-study states that used pharmacy benefit managers, only one (Nevada) had a closed formulary, and that was subsequently liberalized with an exceptions process based on medical necessity.
- In addition to manufacturer rebates, which are paid to the state after the drugs have been purchased, SPAPs also offset costs by limiting pharmacy reimbursement rates and dispensing fees paid at the point of sale.
- Most states use the same pharmacy reimbursement rates and dispensing fees as Medicaid, indexed to average wholesale price. According to a recent report of the Department of Health and Human Services Office of the Inspector General, using average wholesale price to define pharmacy reimbursement rates may not accurately reflect actual pharmacy acquisition cost for brand-name drugs. To the extent that SPAPs are also relying on average wholesale price, there may be additional room for cost savings.

CONCLUSIONS

Even using generic substitution and discounted prices, SPAP drug expenditures have escalated. Further study is needed to assess the effects of other strategies (e.g., prior authorization) on pharmaceutical use and outcomes for poor and near-poor consumers.

Recoveries have been sought from Medicare+Choice plans, Medigap, retiree coverage, and from Medicare for some outpatient drugs. However, collecting these reimbursements retrospectively has proved to be difficult for states and few have made significant recoveries. Problems related to coordination of benefits are likely to become even more challenging to states with the enactment of the federal legislation providing for Medicare pharmacy coverage through private plans. Many states will seek to continue to provide pharmacy coverage that is less limited than the federally defined plan. Prior difficulties in coordinating SPAP benefits with other coverage suggest that a great deal of work will be required to achieve effective coordination between SPAPs and the new private pharmacy plans.

Federal proposals have favored the use of pharmacy benefit managers to administer the Medicare benefit, but the cost savings are still unclear. Few SPAPs have opted to use pharmacy benefit managers, and those that have, have only done so recently. Further study is needed to assess the effectiveness of pharmacy benefit managers in controlling state pharmacy costs.

Finally, states' experience with managing costs in their SPAP programs highlights the likelihood of continued public contention and debate over drug pricing and utilization management policies. These initiatives have important economic impact for multiple stakeholders, and therefore are the subject of considerable debate at the state level. All the initiatives ultimately affect manufacturers, pharmacies, and/or consumers, and representatives of each of these constituencies actively seek to represent their interests. Similar debate is likely to continue over future state-level cost-containment initiatives and over program guidelines and policies for the newly enacted Medicare-based benefits.

MANAGING PROGRAM COSTS IN STATE PHARMACY ASSISTANCE PROGRAMS

INTRODUCTION

As many states move forward in implementing new pharmacy programs for the elderly and disabled, states with existing programs but limited budgets face challenges maintaining drug coverage. State pharmacy assistance programs (SPAPs) have, during the last few years, faced the same double-digit increases in pharmaceutical expenditures as many Medicaid and private prescription drug insurance programs.

Direct-benefit SPAPs pay directly for some or all prescription drug costs for eligible low-income elderly and disabled persons. The programs vary considerably from state to state in terms of who is eligible, what drugs are covered, and consumer cost-sharing, but for all, costs have grown steadily. In response, SPAPs have implemented a number of initiatives to control the use of prescription drugs and lower the prices negotiated with manufacturers and pharmacies.

This report on state pharmacy benefit programs, the third in a series, reviews SPAP expenditure patterns and discusses attempted cost-control strategies. The first report, issued May 2002, is an overview of state pharmacy benefit programs. It includes a historical overview of selected programs and cross-state comparisons of program design.³ The second report, issued September 2003, describes states' efforts to enroll eligible persons into their SPAPs. It furnishes data on how well states are doing in reaching the Medicare population, nationally and for specific target populations within states.⁴ Findings of this series of reports are based on a study of state pharmacy assistance programs conducted by the Rutgers University Center for State Health Policy with the sponsorship of The Commonwealth Fund. The results reported are based on a survey of all direct-benefit programs in place throughout the year 2000; qualitative case studies of eight state pharmacy programs (in Maine, Massachusetts, Minnesota, Nevada, New Jersey, Pennsylvania, South Carolina, and Vermont); and reviews of the literature and program documents. (See appendix for complete study methods.)

First, this report presents an overview of SPAP expenditure patterns, taken from the year-2000 survey data. It then uses the eight state case studies to examine program and cost-control strategies. Options discussed include efforts to control the volume of drugs

³ Kimberley Fox, Thomas Trail, and Stephen Crystal, *State Pharmacy Assistance Programs: Approaches to Program Design* (New York: The Commonwealth Fund, May 2002).

⁴ Stephen Crystal, Thomas Trail, Kimberley Fox, and Joel Cantor, *Enrolling Eligible Persons in Pharmacy Assistance Programs: How States Do It* (New York: The Commonwealth Fund, September 2003).

purchased, the use of expensive drugs, and inappropriate prescribing, as well as efforts to reduce the purchase price to state programs. Although few data are available to evaluate the cost-control effectiveness of these strategies, we also include (where possible) assessments by state officials, who were interviewed about the relative impact of each strategy in controlling costs and improving the quality of prescribing.

STATES' PHARMACY PROGRAM COSTS AND USE

As with state Medicaid programs, SPAPs faced double-digit increases in prescription drug expenditures during the study period. For programs in place as of December 2000, total prescription claims costs increased by approximately 17.7 percent between 1999 and 2000 (Table 1). This is lower than increases in Medicaid prescription drug costs, which rose by 21.2 percent during this period (Bruen, 2002) and in overall retail prescription drug spending, which increased by 18.8 percent (National Institute for Health Care Management Research and Educational Foundation, 2001).

Impact of Benefit Expansions on Program Costs

All states experienced increases in prescription costs from 1999 to 2000, but the three that experienced the greatest increases—Maine, Minnesota, and Vermont—all expanded some element of their program during this period. Specifically, Maine expanded the number of drugs covered from 13 conditions to all generic drugs;⁵ Minnesota sought to increase enrollment by eliminating an annual enrollment fee and increasing asset limits; and Vermont reduced enrollee cost-sharing in one of its three pharmacy programs from 50 percent coinsurance to a \$1 to \$2 copayment. These programmatic expansions explain much of the increases in costs in these programs during this period.⁶

Increases in Costs per Enrollee and per Claim

In other states that did not expand benefits, increases in total prescription claims costs were driven mainly by higher costs per claim and per enrollee. The average cost per enrollee and per claim in state pharmacy programs increased at a much greater rate (16.5% and 11.1%, respectively, in reporting states) than total enrollment (5.4%) or average claims per enrollee (4.7%) (Table 2). In four states—Maryland, Michigan, New Jersey, and Pennsylvania—enrollment actually declined during this period. This suggests that the price per claim and the type and cost of specific drugs purchased were significantly contributing to program costs.

⁵ The state also added a catastrophic feature, allowing those that had spent more than \$1,000 on excluded brand-name drugs to only pay the cost-sharing required for generics and the 13 covered conditions thereafter (the greater of \$2 or 20% coinsurance).

⁶ Massachusetts also expanded its program during this period, but 2000 expenditure data were not available.

Table 1. State Pharmacy Assistance Prescription Claims Costs, Number of Claims, and Cost per Claim by State, 1999–2000

State	State Claims Costs			Number of Claims			Cost per Claim		
	1999	2000	Change	1999	2000	Change	1999	2000	Change
Connecticut	\$33,031,372	\$39,058,306	18.2%	597,028	651,585	9.1%	\$55.33	\$59.94	8.3%
Delaware (DPAP)*	N/A	\$608,403	N/A	N/A	18,474	N/A	N/A	\$32.93	N/A
Illinois	\$34,815,790	\$38,836,920	11.5%	1,208,815	1,267,808	4.9%	\$28.80	\$30.63	6.4%
Maine	\$5,373,028	N/A	N/A	213,307	491,578	130.5%	\$25.19	N/A	N/A
Maryland	\$37,700,000	\$45,600,000	21.0%	799,160	883,035	10.5%	\$47.17	\$51.64	9.5%
Massachusetts (PP)†	\$8,900,000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Michigan	\$5,297,925	N/A	N/A	159,000	160,000	0.6%	\$33.32	N/A	N/A
Minnesota	\$515,804	\$2,530,592	390.6%	17,300	69,554	302.0%	\$29.82	\$36.38	22.0%
New Jersey	\$286,596,043	\$324,548,398	13.2%	6,365,855	6,199,291	-2.6%	\$45.02	\$52.35	16.3%
New York	\$141,931,910	\$187,700,000	32.2%	3,741,396	4,227,434	13.0%	\$37.94	\$44.40	17.0%
Pennsylvania‡	\$278,500,285	\$314,938,271	13.1%	9,140,390	9,530,401	4.3%	\$30.47	\$33.05	8.5%
Rhode Island	\$6,015,587	\$7,000,000	16.4%	272,677	300,000	10.0%	\$22.06	\$23.33	5.8%
Vermont (VHAP** and VScript)	\$11,218,518	\$16,862,298	50.3%	249,602	330,605	32.5%	\$44.95	\$51.00	13.5%
Wyoming	\$576,527	\$766,140	32.9%	11,077	12,757	15.2%	\$52.05	\$60.06	15.4%
Totals and Averages§	\$830,901,836	\$977,840,925	17.7%	22,775,607	24,124,048	5.9%	\$36.48	\$40.53	11.1%

Notes: Shading indicates a change in program design between 1999 and 2000. The quantity of pills purchased per claim is based on supply limits set by each state.

* Delaware Pharmacy Assistance Program.

† Pharmacy Program.

‡ Pennsylvania includes both Pharmaceutical Assistance Contract for the Elderly (PACE) and PACE Needs Enhancement Tier (PACENET).

** Vermont Health Access Plan.

§ Totals include only those programs that reported for both 1999 and 2000.

Source: Rutgers Center for State Health Policy Survey of State Pharmacy Assistance Programs, December 2000; and the website: *Wyoming Pharmaceutical Assistance: MMP*. <http://www.firenver.org/health/WY-pharm.html>. Accessed January 23, 2002.

Table 2. State Pharmacy Assistance Enrollment, Claims per Enrollee, and Cost per Enrollee by State, 1999–2000

State	Total Enrollment			Claims per Enrollee			Cost per Enrollee		
	1999	2000	Change	1999	2000	Change	1999	2000	Change
Connecticut	29,969	30,546	1.9%	19.9	21.3	7.1%	\$1,102	\$1,279	16.0%
Delaware (DPAP)*	N/A	2,130	N/A	N/A	8.7	N/A	N/A	\$286	N/A
Illinois	49,186	51,823	5.4%	24.6	24.5	-0.5%	\$708	\$749	5.9%
Maine	38,007	40,277	6.0%	5.6	12.2	117.5%	\$141	N/A	N/A
Maryland	42,385	41,261	-2.7%	18.9	21.4	13.5%	\$889	\$1,105	24.2%
Massachusetts (PP)†	33,000	67,000	103.0%	N/A	N/A	N/A	\$270	N/A	N/A
Michigan	12,968	12,591	-2.9%	12.3	12.7	3.6%	\$409	N/A	N/A
Minnesota	1,215	4,833	297.8%	14.2	14.4	1.1%	\$425	\$524	23.3%
New Jersey	195,005	187,358	-3.9%	32.6	33.1	1.4%	\$1,470	\$1,732	17.9%
New York	111,786	126,302	13.0%	33.5	33.5	0.0%	\$1,270	\$1,486	17.0%
Pennsylvania‡	244,413	237,190	-3.0%	37.4	40.2	7.4%	\$1,139	\$1,328	16.5%
Rhode Island	31,947	33,000	3.3%	8.5	9.1	6.5%	\$188	\$212	12.7%
Vermont (VHAP** and VScript)	13,561	14,400	6.2%	18.4	23.0	24.7%	\$827	\$1,171	41.6%
Wyoming	491	550	12.0%	22.6	23.2	2.8%	\$1,174	\$1,393	18.6%
Totals and Averages§	803,933	847,131	5.4%	29.5	30.9	4.7%	\$1,154	\$1,345	16.5%

Notes: Shading indicates a change in program design between 1999 and 2000. Data reflect end-of-year enrollment.

* Delaware Pharmacy Assistance Program.

† Pharmacy Program.

‡ Pennsylvania includes both Pharmaceutical Assistance Contract for the Elderly (PACE) and PACE Needs Enhancement Tier (PACENET) claims after meeting deductible.

** Vermont Health Access Plan.

§ Totals include only those programs that reported for both 1999 and 2000.

Source: Rutgers Center for State Health Policy Survey of State Pharmacy Assistance Programs, December 2000; and the website: *Wyoming Pharmaceutical Assistance: MMP*. <http://www.firedenver.org/health/WY-pharm.html>. Accessed January 23, 2002.

Benefit Design Variations and Program Costs Across States

SPAPs paid, on average, \$41 per drug claim and \$1,345 per enrollee per year during 2000. State costs per claim varied considerably across states, influenced by the generosity of the benefit offered as well as by the health characteristics of program enrollees.⁷ The number of claims per enrollee during 2000 also varied considerably by state, ranging from approximately nine prescriptions filled per enrollee in Delaware and Rhode Island to 40 in Pennsylvania. We attribute some of these differences to benefit design features. Others are more difficult to interpret. For example, Rhode Island and Maine, which limit drug coverage to certain conditions, had among the lowest number of prescriptions purchased per enrollee (nine to 12). Illinois, however, which also limits coverage to specific conditions, had many more claims per enrollee, averaging 24 per enrollee. Similarly, there is considerable variation in the volume of drugs purchased across comprehensive benefit programs that cover most drugs. For example, New Jersey's Pharmacy Assistance for the Aged and Disabled (PAAD) program and Pennsylvania's Pharmaceutical Assistance Contract for the Elderly (PACE) programs generally covered the same drugs, yet enrollees in the Pennsylvania programs purchased seven more prescriptions per year than enrollees in PAAD.

Much of the difference in claims per enrollee may be related to variations in supply limits set by state programs (discussed below). For example, if one state only allows a 30-day supply per claim, but another allows a 90-day supply, the first state will have a much larger number of claims per enrollee. Because each state uses slightly different supply limit rules, it is difficult to make cross-state comparisons.

STATES' STRATEGIES TO CONTROL PROGRAM USE AND COSTS

State pharmacy programs confront a difficult balancing act in continuing to cover their vulnerable elderly and disabled citizens. With overall pharmacy expenditures rising at a rate much higher than inflation, states are looking for strategies to limit their financial exposure. At the same time, states want to maintain access to affordable drug coverage to near-poor residents, many of whom are unable to afford much more than nominal copayments.

Given these constraints, states have considered a variety of strategies for controlling program utilization and costs. The options available, based on prevalent practices in the public and private sectors, generally fall into four categories. First, a program can reduce its costs by limiting the benefit, either through tightening eligibility requirements, limiting

⁷ For more detail on differences in benefit design by SPAP see the first report in this series, Kimberley Fox, Thomas Trail, and Stephen Crystal, *State Pharmacy Assistance Programs: Approaches to Program Design* (New York: The Commonwealth Fund, May 2002).

the drug selection available, increasing consumer cost-sharing, or imposing annual caps. Second, it may set up barriers that deter enrollees from purchasing expensive drugs or that seek to change purchasing or prescribing behaviors. Examples include mandatory generic substitution, prior authorization of expensive brand-name drugs, expanding the use of formularies, use of multitiered copayments or preferred pricing, and instituting supply limits. States have also used retrospective and prospective drug utilization review (RDUR and PDUR, respectively) to assess the appropriateness of prescribing and changing prescribing behaviors. Third, pharmacy programs use price negotiation to obtain higher manufacturer rebates or lower prices at the pharmacy level. Finally, as the payer of last resort, public programs have developed cost-recovery systems to maximize program revenues and recoup costs from third-party payers.

These strategies are often combined and used to varying degrees. States are often under considerable political pressure not to implement some of them, because of a negative impact on consumers, pharmacies, or manufacturers. As one state indicated, saving money in state pharmacy programs ultimately means taking money from one, two, or all three of these groups. This section describes the most common approaches taken by state pharmacy programs and their impact on reducing costs, based on findings from our eight case-study states. Because many of these strategies have only recently been implemented, data are scarce on their effectiveness in reducing program costs.

Cost-Sharing and Other Benefit Design Strategies

As indicated in the first report of this series, most SPAPs built some cost-sharing into the initial design of their programs. These features vary by state but include copayments, coinsurance, deductibles, annual fees, or fixed benefits in the form of benefit caps or limits on the number or type of drugs covered. For the most part—in contrast to trends in the private insurance sector—most states have not opted to increase cost-sharing over time for beneficiaries in their original, lowest-income eligibility tiers, given the economic vulnerability of these beneficiaries. Higher cost-sharing has, however, been a feature of several SPAP program expansions that add eligibility for additional income tiers.

Protecting consumers from further cost-sharing not only demonstrates states' continued commitment to maintaining access for their enrollees but also has financial consequences for states. In Pennsylvania's PACE program, which was implemented in 1984, the state had maintained a \$6 copayment for most of the program's history. In the initial years the copayment represented 30 percent of program costs. In 2001, enrollee copayments accounted for only 15 percent of program costs.

Utilization Controls

Utilization controls reduce costs by influencing which drugs are purchased and in what quantities. Table 3 indicates the controls employed in the eight case-study states. These strategies include mandatory generic substitution, prior authorization, formularies, tiered copays, and supply limits. In contrast to changes in benefit design (which often require changes in state law), many utilization controls can be implemented as administrative actions and do not require statutory amendments.

Mandatory Generic Substitution

Mirroring Medicaid, nearly all states have mandatory generic substitution requirements for their pharmacy programs. Under these policies, pharmacists are required to automatically fill a brand-name prescription with a generic equivalent, unless the prescribing physician writes “dispense as prescribed” on the prescription. Some states closely monitor physicians’ use of the override allowance through their RDUR programs, sending warning letters to doctors who have liberally taken advantage of the override. To further encourage patients to use generic drugs, a few states have implemented two-tiered copayment programs, with lower copays for generics than for brand-name drugs.

Mandatory generic substitution yields considerable savings to states, as the average cost of a generic is much lower than the cost of a multisource brand-name drug. In some states, generic drugs account for nearly half of claims paid. It is difficult to calculate the specific savings, because there is no way to identify which prescriptions were written as generics and which were changed as a result of the program. Nonetheless, program officials in Pennsylvania indicated their belief that mandatory generic substitution probably yields the greatest cost savings among cost-containment mechanisms.

Manufacturers generally oppose stricter generic substitution, which limits the sale of brand-name drugs. In contrast, across all case-study states, generic substitution programs have been strongly endorsed by pharmacy trade groups (pharmacy profit margins are higher on generics). In fact, some pharmacy representatives argued for an even stronger substitution policy, requiring that every treatment regimen begin with generics and only move to brand name if necessary.

Table 3. Key Cost-Containment Initiatives of Case-Study States, 2001

State	Mandatory Generic Substitution	Multitiered Copays	Supply Limits	Prior Authorization	Formulary
Maine	Yes	No, but 20% coinsurance or \$2 copay, whichever is greater.	90-day limit.	Yes. Drugs in 15 therapeutic classes subject to basic prior authorization, and 58 drugs subject to dose consolidation.	Open
Massachusetts	Yes	Yes. For lower income groups: \$5 generic, \$12 preferred, \$25 or 50% (whichever is greater) nonpreferred. For higher income groups: \$10 generic, \$25 preferred, \$25 or 50% (whichever is greater) nonpreferred.	90-day prescriptions subject to mail-order requirements.	Yes	Restricted
Minnesota	Yes	No. No copays.	90-day limit. 30-day minimum for maintenance drugs.	Yes. Drugs in two therapeutic classes (proton pump inhibitors and COX-2 inhibitors).	Open
Nevada	N/A	Yes. \$10 generic and \$25 preferred brand. Nonpreferred brands not covered unless deemed medically necessary.	N/A	N/A	Closed
New Jersey	Yes	No. \$5 copay for all drugs.	34-day limit on initial prescription, 34 days or 100 doses on refills, whichever is greater.	No	Open
Pennsylvania	Yes	PACE:* No. \$6 copay for all drugs. PACENET:† Yes. \$8 generic and \$15 brand.	30 days or 100 units, whichever is less.	No	Open
South Carolina	Yes	Yes. \$10 generic and \$21 brand.	30-day limit.	No	Open
Vermont	Yes	VHAP‡ and VScript: Yes. \$1 for drugs costing less than \$30 and \$2 for drugs costing more than \$30. VScript Expanded: No, but 50% coinsurance.	30-day minimum for maintenance drugs. Maximum of five refills. Drugs in four therapeutic classes have specific quantity limits.	Yes. Drugs in 15 therapeutic classes.	Open

Notes: Maine's DEL program only covers drugs used to treat certain conditions. Vermont's VScript and VScript Expanded programs only cover maintenance drugs. However, most drugs that meet those restrictions are covered in both programs.

* Pharmaceutical Assistance Contract for the Elderly.

† PACE Needs Enhancement Tier.

‡ Vermont Health Access Plan.

Source: Rutgers Center for State Health Policy Case Studies.

Multitiered Copayments

A few state pharmacy assistance programs are beginning to experiment with cost-saving measures used in the private sector, such as using multitiered copayments to steer patients toward preferred drugs. Two case-study states were using multitiered copays for generic, preferred name-brand, and nonpreferred name-brand drugs; both were new programs that aimed to follow an “insurance” model.

In Massachusetts’s Prescription Advantage insurance plan, the determination of preferred status was based on the recommendations of the program’s pharmacy benefit manager (PBM) contractor. While rebates and cost are considered, preferred status could also be assigned based on utilization or need, with an effort to include those drugs that the elderly regularly use.

Case-study states with tiered copays for preferred and nonpreferred drugs had a medical exceptions process that permitted the lower copayments if the nonpreferred drug was deemed medically necessary. In Massachusetts, according to statute, the Prescription Advantage nonpreferred copayment could be lowered to the preferred copayment in cases where the patient provided a physician’s letter indicating that the drug was medically necessary and there was no therapeutic equivalent on the preferred list. If such a therapeutic equivalent did exist, the doctor would be required to indicate why that drug was not expected to work for this particular patient. Nevada required that physicians attempt step therapy, whereby a patient can only get a nonpreferred brand-name drug if a generic equivalent or preferred brand-name drug proves ineffective.

Supply Limits

Another program control strategy utilized by states is to set maximum limits on the supply of drugs that an enrollee can purchase per prescription. Maximum supply limits vary; they range from 30 days or 100 units (whichever is less) in Pennsylvania to 90 days in Maine and Vermont. In many cases, supply limit rules follow those utilized in the state’s Medicaid program.

State officials in case-study states with 30-day supply limits indicated that the limits are primarily intended to reduce waste, that is, prescriptions being filled but not used. Officials argue that supply limits encourage more frequent contact with pharmacists and health care providers, thereby improving quality and reducing the opportunity for fraud. In contrast, officials in states that have 90-day supply limits are focused on cost containment. The aim of these policies is to encourage patients to purchase in bulk, thereby reducing the ingredient and dispensing costs to the state.

Pharmacists strongly support supply limits—the higher ingredient costs and additional dispensing fees increase their revenues. Consumers oppose supply limits, because they raise out-of-pocket costs by increasing the frequency of copayments and because of the additional “hassle factor.” Some consumers argue that supply limits create a monetary and administrative disincentive that discourages enrollees from refilling the prescription at all, thereby reducing utilization and lowering state costs.

Efforts to impose supply limits after a program has been in place for some time can meet with strong resistance by enrollees. During the late 1990s, New Jersey passed legislation that limited PAAD to a 34-day supply for each prescription and refill. The intent of the supply limit was to reduce waste. New Jersey advocates for seniors and PAAD enrollees opposed the policy. Eventually, the advocates prevailed, and the law was repealed. As a compromise, the state now limits the first prescription to 34 days but allows refills to be dispensed as a 90-day supply or 100-unit dosage, whichever is greater.

Prior Authorization

Prior authorization, or mandatory advance approval for the dispensing of specific medications, is one of the methods some Medicaid programs use to control drug expenditures. The prior authorization process involves the review of certain medications, particularly expensive brand-name drugs, to determine medical necessity and/or cost effectiveness prior to payment. It has been used to control the use of expensive drugs, to negotiate better rebates from manufacturers, and, to a lesser extent, to monitor quality of care and appropriateness of prescribing. While a few state pharmacy programs impose prior authorization requirements on experimental or cosmetic drugs that are off-formulary, in general, state pharmacy programs have not used prior authorization to the same degree as Medicaid programs. In fact, some state statutes explicitly prohibit the use of prior authorization in these programs.

However, a few case-study states whose state pharmacy programs are administered by the Medicaid agency have applied their Medicaid prior authorization programs to their SPAPs. For example, in 2001 Maine, Vermont, and Minnesota expanded prior authorization to their state aged and disabled pharmacy assistance programs as well as Medicaid. All three states have a medical exceptions process, which allows the prescription to be filled if deemed medically appropriate after consultation with the physician.

In general, prior approval in these programs has focused on expensive brand-name drugs. The list of drugs that require prior authorization varies by state and is defined by state-appointed advisory groups of pharmacists, physicians, and consumers based on

specific criteria. In Maine, according to program officials, the state concentrated its expanded prior authorization efforts on the 90 drugs (of 1,900 dispensed) that account for half of Medicaid drug expenditures. As of January 2001, Maine's prior authorization program, which program officials suggest represented the fullest use of prior authorization in the country, included a list of 70 drugs. Maine also required dose consolidation⁸ for another 60 drugs.

When Maine introduced prior authorization (at the recommendation of the state pharmacy association), it also added 32 over-the-counter drugs to the list of drugs that the state would cover, allowing consumers to substitute these lower-cost alternatives where appropriate. While some Medicaid and SPAP programs cover some over-the-counter drugs, the lists are usually fairly limited. In Maine's program, the over-the-counter medications require a doctor's prescription and include many commonly used products, such as acetaminophen, Pepto-Bismol, and saline nasal spray and drops, as well as some vitamin and mineral supplements.

At the time of our case studies, both Minnesota's and Maine's prior authorization programs were relatively new, so the states had not yet fully assessed the level of savings generated by them. However, in approving \$500,000 to expand the prior authorization program in Minnesota's Medicaid program, the state indicated that it expected the program to save several million dollars. In Maine in 2001, prior-authorized claims accounted for only 0.5 percent of the state's Drugs for the Elderly total claims and 0.8 percent of the Medicaid programs claims, comprising in total only 35,000 out of 5,000,000 drug claims in the state. Nonetheless, while numbers specific to Drugs for the Elderly were unavailable, Maine estimates that during 2001 prior authorization in both the Medicaid and state pharmacy programs saved the state \$15 million, or 8.3 percent, and resulted in a 10 percent reduction in average price per prescription. More than one-third of the savings was achieved through the dose consolidation program. Within the standard prior authorization program, 43 percent of the savings were from proton pump inhibitors alone.⁹

However, implementing prior authorization is controversial. Maine's Medical Society strongly opposed prior authorization, as have some consumer groups. Some state programs are wary of using prior authorization as a cost-containment tool, seeing it as a

⁸ Dose consolidation requires that the pharmacist fill the prescription at the more concentrated level if that is possible, the idea being that, for example, one 100-milligram tablet is less expensive to produce than two 50-milligram tablets.

⁹ Kevin Concannon, "Perspectives on Promoting the Appropriate Use of Pharmaceuticals," unpublished presentation materials used for the Rutgers Center for State Health Policy Invitational State Pharmacy Assistance Summit, March 2002.

barrier that may have negative repercussions on access to drugs and quality of care. Further study is needed to assess the effects of prior authorization on access and health outcomes.

Price Negotiation Strategies

The cost of a prescription reflects the manufacturer's price and any rebates, wholesaler markups, and pharmacy markups and dispensing fees. According to data from the National Association of Chain Drug Stores, approximately 74 percent of every dollar of prescription sales goes to manufacturers, 23 percent to pharmacists, and 3 percent to wholesalers (Kreling, Mott, Wiederholt, Lundy, and Levitt, 2000). States, in addition to controlling drug use through their Medicaid and state pharmacy programs, negotiate rebates with manufacturers and price discounts with pharmacies.

Manufacturer Rebates

Most state pharmacy programs follow the model of the Medicaid drug rebate program and require pharmaceutical companies to provide rebates to the state as a condition of providing coverage for their drugs.¹⁰ State programs typically use one of two rebate models: the Medicaid model, which mandates a rebate percentage, and the pharmacy benefit manager model, whereby market share is applied for leverage in the negotiation of rebates with the manufacturers. State program officials indicated that rebates are second only to mandatory generic substitution in terms of the savings they produce for state pharmacy programs.

Relationship to Medicaid Rebates. In our survey of states, 11 out of 16 state pharmacy programs reported that they used the same basic rebate formula as Medicaid (Table 4). Under federal law, manufacturers that wish to participate in the Medicaid program are required by the Omnibus Budget Reconciliation Act of 1990 (OBRA 1990) to pay state Medicaid programs a quarterly rebate for each covered outpatient drug reimbursed by Medicaid. The basic Medicaid rebate on brand-name drugs is either 15.1 percent of the average manufacturer price (AMP) or "the lowest price the manufacturer charges any private purchaser in the United States (called the best price)," whichever is lowest (ibid.). The rebate formula for generic drugs is AMP minus 11 percent.

¹⁰ Some programs will cover a drug without a manufacturer rebate agreement, if the drug is the only one used to treat a particular condition.

Table 4. Manufacturer Rebates, Pharmacy Discounts, and Dispensing Fees
by State Pharmacy Assistance Programs, 2000 and 2001

State	Manufacturer Rebate Formula	Pharmacy Reimbursement Formula	Dispensing Fee to Pharmacies
Connecticut	Same as Medicaid.	AWP – 12%, FUL*	\$4.10
Delaware (DPAP)†	Same as Medicaid.	AWP – 12.9%, FUL, state MAC‡	\$3.65
Delaware (Nemours)	No rebates.	N/A, drugs are distributed from one central pharmacy.	N/A
Illinois	Negotiated by pharmacy benefit manager (PBM).	AWP – 10%, MAC	\$3.60
Maine	Same as Medicaid.	AWP – 10%, MAC	\$3.35
Maryland	Same as Medicaid basic rebate.	AWP – 10% or WAC + 10%, whichever is lower**	\$4.21
Massachusetts§	Negotiated by PBM.	Retail: AWP – 13%, MAC Mail order: AWP – 21.5%, MAC	Retail: \$2.50 Mail order: \$0
Michigan	Same as Medicaid.	AWP – 13.5 % or AWP – 15.1% depending on number of stores in chain, MAC, FUL	\$3.72
Minnesota	Same as Medicaid without CPI penalty.	AWP – 9%, state MAC	\$3.65
New Jersey	Same as Medicaid without CPI penalty.	AWP – 10%, MAC	\$3.73 to \$4.07 depending on sales volume and level of service
Nevada	Negotiated by PBM.	Not set, but averages AWP – 14%	\$2.50
New York	Same as Medicaid including Consumer Price Index (CPI) penalty as of October 2000.	AWP or AWP – 5% for high-volume pharmacies	\$2.75 or \$3.00 depending on level of service
Pennsylvania	Flat rebate on innovator and noninnovator drugs is AMP – 17%. CPI penalty.	AWP – 10%	\$3.50
Rhode Island	Same as Medicaid basic rebate without CPI penalty.	AWP – 13%	\$2.75
South Carolina	Negotiated by PBM.	AWP – 10%	\$4.05
Vermont	Same as Medicaid.	AWP – 11.9%, MAC, FUL	\$4.25
Wyoming	N/A	AWP – 4%, FUL	\$4.70

Notes: Table covers states with programs in place throughout 2000 and case-study states.

* AWP is average wholesale price; FUL is the Federal Upper Limit price for name-brand drugs. “In 1987, regulations limited the amount which Medicaid could reimburse for drugs with available generic drugs under the federal upper limit program. These limits are intended to assure that the Federal government acts as a prudent buyer of drugs. The concept of the upper limits program is to achieve savings by taking advantage of the current market prices.” Center for Medicare and Medicaid Services. *Federal Upper Limits on Drugs*. <http://www.hcfa.gov/medicaid/drugs/drug10.htm>. Accessed on February 12, 2002.

† Delaware Pharmacy Assistance Program.

‡ MAC is maximum allowable cost.

** WAC is the wholesale acquisition cost, or the price that wholesalers pay for drugs purchased from manufacturers (National Pharmaceutical Council. *Pharmaceutical Benefits Under State Medical Assistance Programs*, 2000).

§ Massachusetts’s former programs, the Pharmacy Program and Pharmacy Program Plus, both used the state Medicaid rates for rebates and pharmacy discounts (WAC + 10% plus \$3 dispensing fee).

Sources: Rutgers Center for State Health Policy Survey of State Pharmaceutical Assistance Programs, December 2000; Rutgers Center for State Health Policy Case Studies, September 2000–August 2001; and National Pharmaceutical Council. *Pharmaceutical Benefits Under State Medical Assistance Programs*, 2000.

All state pharmacy programs must sign separate rebate contracts with manufacturers, even if the program is administered through the Medicaid agency.¹¹ In other words, if a SPAP is able to negotiate a better rebate than the current best price, this does not change the best price rebate paid to Medicaid programs nationally. As a result, SPAPs could theoretically negotiate better manufacturer rebates than Medicaid. However, none of the case-study states were getting rebates better than best price. Note that under OBRA 1990, SPAPs are specifically excluded from the list of purchasers considered for the calculation of Medicaid best price.

OBRA 1990 also has a provision to counter attempts by the industry to inflate the base price of the drug. If the price of a drug increases faster than the rate of inflation, as measured by the Consumer Price Index (CPI), the Medicaid program collects an additional rebate (called the CPI penalty). The CPI penalty is “equal to any increase in the AMP above the inflation rate” and is intended to discourage manufacturers from offsetting the cost of the rebate by simply raising the AMP for drugs (Cook, 1999 p. 33). This provision in Medicaid is strongly opposed by manufacturers and has not been included in the rebate calculations of SPAPs in New Jersey, Minnesota, and Rhode Island.

Rebates Negotiated by Pharmacy Benefit Managers. Most SPAPs do not rely on PBMs in the same way as the private sector. Some SPAPs that by statute mandate either the Medicaid or some other rebate percentage may use pharmacy benefit administrators (PBAs), but these PBAs are primarily used for claims processing. Unlike PBMs, PBAs do not receive any portion of the rebates, which are paid directly to the state by the pharmaceutical company.

The few states that do not mandate a rebate percentage from manufacturers contract with PBMs to negotiate rebates, as is done in the private sector. Even in the states, PBMs have been somewhat limited in using mechanisms traditionally used to negotiate higher rebates, such as closed formularies that cover only one drug, or a limited number of drugs, in each therapeutic class. Closed formularies guarantee a manufacturer a certain sales volume, and in return PBMs receive better rebates (Cook, Kornfield, and Gold, 2000).

Closed formularies are increasingly used by Medicare HMOs and other private sector prescription drug plans. According to one report, the proportion of HMOs using closed formularies increased from about 25 percent in 1996 to about 37 percent in 1999

¹¹ Note that the programs that have extended Medicaid eligibility for drug-only benefits to low-income seniors do not need to negotiate separate contracts because the benefit is included under the Medicaid program.

(U.S. General Accounting Office, 1999). However, of the three case-study states that used PBMs only Nevada, in one of its two offered products, used a closed formulary. Many drugs that are commonly used by the older population were not included, and that product has been discontinued. Massachusetts's Prescription Advantage Rx insurance plan was originally proposed with a closed formulary, but was modified to have a restricted formulary. South Carolina uses an open formulary.

PBM rebate negotiations are confidential, so how the rebates obtained by PBMs relate to those obtained by Medicaid is unclear. In theory, the PBM should not be able to negotiate lower rates than Medicaid, because Medicaid should always be getting best price. Program officials in South Carolina indicated that the rebates from the PBM have not been as great as they had expected, but this may be because the state did not allow the PBM to use a closed or restricted formulary to promise greater market share. Massachusetts began using the PBM only six months before the case study and had no data at that time regarding the size of the rebates received.

Each of the three case-study states that utilize PBMs to negotiate rebates have different incentive policies regarding the portion of the rebate proceeds that PBMs are allowed to keep. In South Carolina, which also reported lower than expected rebates, the PBM was required to return all manufacturer rebates to the state. In contrast, in Nevada's insurance-based model, the state paid an insurer a premium for each program participant. The insurer then subcontracted with a PBM to negotiate rebates. The insurance company assumes all risk over and above the state's premium payments, so the insurer and the PBM keep all of the rebates negotiated from manufacturers.

In Massachusetts's program, the state recovers 90 percent of the rebates from the PBM if the dollar differential between copayments in the preferred and nonpreferred tiers is at least \$6. This arrangement is premised on the theory that as a general rule, copay savings of \$5 to \$9 are considered a minimum incentive to influence enrollees to choose a preferred drug and shift market share (Segedin, 1999). The larger dollar differential in copays helps the PBM negotiate greater rebates from manufacturers by promising a greater market share for these drugs. If the difference in copays is less than \$6 (as it is in the current program design), the state receives only 81 percent of the rebates.

Pharmacy Discounts

SPAPs offset costs not only via manufacturer rebates (which are paid to the state after the drugs have been purchased). They also mandate discounts from pharmacies at the point of

sale. If pharmacies want to participate in the SPAP, they must agree to a discounted price that is typically set in state statute.

Relationship to Medicaid Pharmacy Discounts. As with rebate formulas, most states use the Medicaid formula for reimbursing pharmacies for prescription drugs. However, unlike the rebate formula, which was set by federal legislation (OBRA 1990), Medicaid pharmacy reimbursement rates are based on state legislation and differ from state to state (Table 4). These rates are indexed to the Average Wholesale Price (AWP) list, and are generally referred to as a percentage of AWP. AWP prices are published by commercial suppliers of drug pricing data (Gencarelli, 2002).

As shown in Table 4, most SPAPs reimburse pharmacies at AWP less 10 percent for brand-name drugs. Generic drug pricing is usually based on either the Federal Upper Limit price set by the Centers for Medicare and Medicaid Services¹² or a state Maximum Allowable Cost (MAC) price list. Some states, such as Minnesota, have a state specific MAC list that requires lower prices for drugs on the list. State MAC pricing can mean considerable savings for pharmacy programs, but also lower revenues for pharmacies. Because of this, pharmacy groups in Pennsylvania have fought (successfully) against the implementation of MAC pricing in the PACE and PACENET programs. However, facing declining lottery revenues, in 2001 the state reintroduced a number of cost-containment measures, one of which was to institute “MAC” pricing, based on the current Medicaid Federal Upper Limit model. This change was estimated to save the program \$28 million annually. Representatives from pharmacy groups in the other case-study states were generally satisfied with the Medicaid reimbursement rate, at least compared to the rates paid by managed-care companies.

It is difficult to estimate states’ savings through these pharmacy discounts relative to retail prices because, unlike rebates, the savings are deducted prior to the state paying the claim. However, according to a recent report of the Office of the Inspector General (U.S. Department of Health and Human Services, 2001), using AWP as the base may not accurately reflect pharmacies’ actual acquisition cost for brand-name drugs, which were estimated to be AWP minus 21 percent. To the extent that state pharmacy programs are also relying on AWP, there may be additional room for cost savings. Efforts in the states to decrease the reimbursement rate have met with stiff opposition from pharmacy groups. Even so, several case-study states have passed legislation to lower their reimbursement rate. Most recently, in 2000 Vermont lowered its rate from AWP minus 10 percent to AWP minus 11.9 percent, and four other states with SPAPs proposed lowering their

¹² This price list can be found at <http://www.hcfa.gov/medicaid/drugs/drug10.htm>.

reimbursement rate and/or dispensing fee in 2001 (American Society of Consultant Pharmacists, 2001).

Pharmacy Discounts Negotiated by PBMs. Where PBMs administer the state benefit, either the Medicaid reimbursement formula or one developed by the PBM for its network pharmacies are used. Pharmacy reimbursement rates from PBMs are generally lower than those for Medicaid. For example, pharmacy programs in Nevada and Massachusetts¹³ arranged for their PBMs to negotiate prices with the pharmacies, rather than using the Medicaid rate, and the average reimbursement rate and dispensing fees for these states were lower than most states' Medicaid rates, approximating AWP minus 13 to 14 percent plus a \$2.50 dispensing fee. Indeed, pharmacy reimbursement appears to be an area in which PBMs can generate significant savings for a program (Cook, 1999). In Massachusetts, the PBM receives a specified reimbursement rate from the state, and can keep the difference if it is able to negotiate a better rate with pharmacies. PBM strategies can put considerable price pressure on pharmacies, and some state pharmacy groups have opposed the use of PBMs to negotiate prices for state pharmacy programs. In South Carolina, state pharmacy groups successfully lobbied to have pharmacy reimbursement set at the Medicaid rate for the SilverCard program, even though it was being administered through a PBM.

Pharmacies also receive a dispensing fee for each prescription filled for program enrollees. As with the reimbursement rates, these fees often follow the Medicaid model and vary greatly between states. The actual fee amounts seem to be largely based on state custom rather than the actual cost of filling a prescription. State pharmacy representatives differed in their views on the fairness of the dispensing fee, with several respondents citing a 1996 Health Care Financing Administration study that estimated the actual cost for a pharmacy to dispense a Medicaid prescription to be between \$6 and \$8 (Kreling, Lipton, Collins, and Hertz, 1996). Pharmacy groups in New Jersey have advocated for the state to increase the Medicaid and PAAD dispensing fee. A bill to increase the fee by \$1 was vetoed by then Governor Whitman in 1999 on the grounds that the state's fees were comparable to those of other state pharmacy programs. Pharmacy representatives from several states argued that serving the populations in these programs (older adults and disabled) generally requires more effort than serving other customers because they are taking more medications and may need more attention because of their age. Like reimbursement rates, dispensing fees paid by PBMs are often lower than those paid by state Medicaid programs.

¹³ Prior to the Prescription Advantage program, which was implemented in 2001, Massachusetts used the Medicaid rebate, pharmacy reimbursement rate, and dispensing fee.

Mail-Order Pharmacies. PBMs also are able to control pharmacy costs by influencing patients to use mail order for their prescriptions. This represents a significant potential area for savings. Massachusetts, for example, pays AWP minus 21.5 percent for prescriptions filled by mail order versus AWP minus 13 percent for those filled by pharmacies, an 8.5 percent saving (Table 4).

In the private sector, many health plans have sought additional cost savings by encouraging plan members to fill prescriptions through mail-order programs (Mays, Hurley, and Grossman, 2001). This is done by either requiring mail order for maintenance drugs, or by having lower copays for mail-order prescriptions. Mail-order reimbursement rates in the private sector vary widely but appear to offer significant savings in many cases. A recent study found that in the private sector, the percentage of AWP paid to mail service pharmacies is almost always less than that paid to retail pharmacies, averaging (for branded products) AWP minus 18.5 percent versus AWP minus 13.5 percent for retail pharmacies (Pharmacy Benefit Management Institute, 2001). Retail pharmacies are strongly opposed to mail-order incentives or mandates, which they argue take business away from local pharmacies and can compromise patient safety by forcing patients to get drugs from several different sources, creating the potential for drug interactions.

At the time of our case studies, while a few state pharmacy programs had considered mandating mail order for maintenance drugs, none had implemented this requirement, mainly due to strong opposition by pharmacies. For example, in Massachusetts's original plan proposed by the Heinz Family Foundation (Lewis, 2000), enrollees would have been required to use mail order for maintenance drugs in order to reduce program costs. However, the final statute establishing Prescription Advantage did not require mail-order purchase but instead allowed the state the option of instituting such a requirement if necessary. As of March 2003, the state had not implemented the mail-order requirement.

Other Strategies for Reducing State Expenditures: Pooled Purchasing and Federal Waivers

In an effort to further lower the costs of providing a pharmacy benefit to low-income seniors, states have also pursued innovative new approaches. Some states, particularly those that have less negotiating power due to their smaller market share, have considered joining with other states to negotiate better rebates as a group. The few pooled purchasing initiatives under discussion during the study period primarily involved Medicaid programs and some state employee benefits programs. State pharmacy programs have not generally been included. However, Maine, Vermont, and New Hampshire agreed to join efforts in

the bulk purchase of drugs for their Medicaid and state pharmacy programs through a single PBM. For the most part, these efforts are only in their initial stages and it may be too soon to determine how much money states can save through this pooling strategy.

Another option to limit state expenditures is to seek federal matching funds by expanding Medicaid eligibility to low-income aged and disabled for a drug-only benefit. Until recently, Vermont was the only state to successfully accomplish this. In 1995, Vermont incorporated drug-only coverage for elderly persons earning up to 125 percent of the federal poverty level into the state's 1115 waiver request to expand Medicaid eligibility. The state was deemed to meet the budget neutrality criteria for waivers through the anticipated cost savings from the shift to a Medicaid managed-care model. Since most states have already transitioned to Medicaid managed care, this approach to computing budget neutrality has not been available for most states. More recently, the Center for Medicare and Medicaid Services (CMS) has approved a number of waivers under its newly created 'Pharmacy Plus' waiver program, which allows states to expand a Medicaid drug-only benefit to low-income seniors, if the state can demonstrate an expansion in drug coverage while maintaining budget neutrality. As of February 2003, five states had received waiver approval to extend a drug-only benefit to some portion of their population: Illinois, Wisconsin, South Carolina, Florida, and Maryland.¹⁴ Ten other states had filed applications with the U.S. Department of Health and Human Services; others had passed laws or were engaged in discussions about establishing such a program.¹⁵ For most states, cost neutrality is based on the anticipated savings in institutional long-term care costs resulting from providing outpatient drugs.

Recovery of Third-Party Payments from Other Insurers and Medicare

Another tool less frequently used by SPAPs to lower state program costs is recouping third-party costs from other insurers. To the extent that low-income SPAP enrollees have access to other drug coverage, some of the drugs paid for by SPAP may actually be reimbursable by Medicare+Choice plans, Medigap insurance, current or former employment-based health insurance, or retirement benefits. Certain outpatient drugs are also covered by Medicare.¹⁶ To the degree that state pharmacy programs are currently paying for drugs that are covered by these other sources, states may be able to recover considerable funds. Of the 16 states surveyed, only four reported recoveries from third-party payers for their state pharmacy programs.

¹⁴ Maryland received its waiver through an amendment to an existing 1115 waiver.

¹⁵ National Council of State Legislatures, "Pharmacy Plus: State Programs for Expanded Coverage," March 25, 2003. Available at <http://www.ncsl.org/programs/health/pharmplus.htm>.

¹⁶ Since 1998, the Medicare program has covered some outpatient drugs including diabetic supplies, immunosuppressives, and chemotherapeutics.

Coordination of benefits and retrospective billing to third-party payers can be complicated, and some states simply avoid the problem by excluding from program eligibility people who are covered by any other drug insurance. Minnesota, Nevada, South Carolina, and Vermont exclude applicants from the program if they have other prescription drug coverage. Several other states allow people to enroll only after their other drug benefits have been exhausted. However, many states permit people to enroll in state pharmacy programs even if they have other drug coverage.

For the case-study states that offer coverage to applicants with other prescription drug benefits, the coordination of benefits process has been difficult. The first issue that the programs have faced is identifying whether applicants have other coverage. While this information is requested on the application, several respondents reported that this information is “notoriously inaccurate.”

States have used a variety of strategies for verifying drug coverage information, including providing finder’s fees to claims processors for managed-care companies that identify plan enrollees that are also SPAP enrollees. Pennsylvania previously used the “pay and chase” approach of billing companies retrospectively for prescriptions filled by enrollees with other drug coverage. Pennsylvania had only limited success, finding that this method returned only about 40 cents on the dollar. Eventually, the state sued the insurance companies over nonpayment. As part of the legal settlement, the state negotiated a means to prospectively block claims for enrollees with third-party coverage by requiring insurance companies to provide the state program with enrollment files to match with program enrollees. The PACE program then switched to a “cost avoidance system” that simply denies the claim, leaving the pharmacy to bill the other plan if the enrollee is identified as having other coverage. The state pays its share only after the other plan has paid its part. A pharmacist representative in the state expressed his displeasure with this method, noting that insurance companies often have tiered formularies, deductibles, and benefit caps that have to be compared with the state pharmacy benefit, which makes this process more complicated.

Medicare does not currently include a comprehensive outpatient drug benefit, but it does cover some outpatient drugs (e.g., immunosuppressives, chemotherapeutic agents, and diabetic supplies). The number and cost of these drugs is not insignificant. New Jersey estimates that its PAAD program expends approximately \$8 million annually for these cancer treatments that are covered by Medicare. Many states simply block payment for these claims in their state pharmacy programs, forcing the pharmacies to become Medicare providers in order to collect payment or consumers to submit forms to Medicare for

reimbursement. In some states (e.g., Pennsylvania), the program will pay the 20 percent coinsurance required by Medicare for the enrollee.

In contrast, New Jersey has opted to cover these drugs and retrospectively seek reimbursement from Medicare. Respondents familiar with this program indicated that the negotiations with the Centers for Medicare and Medicaid Services to coordinate benefits were lengthy, took a considerable amount of time and energy, and had not reached final resolution as March 2003. The lengthy and complicated coordination between PAAD and the Centers for Medicare and Medicaid Services that was required for the state to recover Medicare reimbursement for only a few drugs is another indication that, with the passage of a Medicare drug benefit, significant administrative coordination issues will need to be resolved between Medicare and states with preexisting direct benefit programs in order to maintain seamless access to drugs for their enrollees.

STRATEGIES TO IMPROVE THE APPROPRIATENESS OF PRESCRIBING

The increasing use of medications and growing attention to medication errors has prompted some states to develop strategies for monitoring the appropriateness of prescribing. Inappropriate prescribing may have cost implications as well. Recognizing that many physicians do not have the most updated information about drugs and do not screen for possible adverse drug effects on a routine basis (Institute of Medicine, 1999; Newcomer, 2000), most SPAPs have implemented drug use review programs similar to the state's Medicaid program. However, these programs can vary in sophistication and scope.

Medicaid DUR Requirements

Under federal law, state Medicaid agencies are required to adopt both RDUR and PDUR programs, to monitor inappropriate drug therapies¹⁷ (U.S. Pharmacopoeia Drug Utilization Review Advisory Panel, 2000). The drugs reviewed can vary by state. The law requires only that states' Medicaid DUR criteria be based on peer-reviewed literature and drug compendia, and must be in the public domain (ibid.). RDUR is conducted after medications are dispensed. Usually based on an analysis of payment claims data, RDUR identifies patterns of inappropriate drug treatment for retrospective interventions (profiling individual physicians, identifying frequent prescribing problems for a particular drug or class of drugs, sending letters to physicians advising them to change their prescribing practices, and other education efforts). PDUR occurs at the point of sale, when the pharmacist reviews the prescription for any potential problems before dispensing the medication. By using Medicaid databases and software that incorporates DUR criteria into

¹⁷ Omnibus Reconciliation Act of 1990 (OBRA 90).

computer algorithms, online prospective drug utilization review (OPDUR) permits the review of prescriptions written by multiple physicians filled at different pharmacies for the same person. Although not required by federal law, most states have implemented OPDUR, in large part because some states were reporting millions of dollars of savings (U.S. General Accounting Office, 1996).

However, OPDUR implementation can take many forms. The DUR criteria incorporated in the software used by the state or the state's vendor can set the bar high or low for what is deemed inappropriate. The software may only warn the pharmacist that there may be a problem—a “soft edit” that the pharmacist can easily override (Lyles, Zuckerman, DeSipio, and Fulda, 1998). Alternatively, the system may use any number of “hard edits” that stop payment for certain prescriptions. Pharmacists cannot simply override hard edits, and states mandate some form of direct communication between pharmacists and physicians (and other prescribers) prior to payment. Efforts to alert prescribers at the point of care are considered more effective in changing prescribing and “represent the next frontier of DUR intervention” (Monane, Matthias, Nagle, and Kelly, 1998).

Drug Utilization Review in Two State Pharmacy Assistance Programs

Since the OBRA 1990 mandates affect only the Medicaid ambulatory pharmacy benefit, state pharmaceutical programs are not required by federal law to implement drug utilization review. Nonetheless, all of the state programs reviewed in this report do follow the norms of current pharmacy practice by conducting both RDUR and OPDUR (Table 5). However, many states use OPDUR commercial software with soft edits only, allowing the pharmacist to easily override the warning. They generally do not have hard-edit capabilities, or a sophisticated system for medical exceptions. In Vermont, pharmacists are notified if the patient is filling the prescription too early, but the pharmacist can override the notification. Vermont has tried to encourage pharmacists to follow up on these notifications by offering a \$5 payment if they contact the prescriber and an additional \$10 if the call results in a change to the prescription.

Two states (New Jersey and Pennsylvania) reported that they have developed OPDUR systems that move substantially beyond these warning systems in three ways. First, they have put in place an advisory group of scientists and clinicians to develop DUR criteria that are specifically designed for older adults. To prevent an overdose in older adults, in whom drug clearance may be slower for metabolic reasons, the criteria include notifications of the need for lower dosages of fairly common drugs. Also hard edits, which block payment for the prescription in situations recommended for such action by the

Table 5. State Pharmacy Assistance Programs' Drug Utilization Review Point-of-Sale Edits, 2000

State	Drug-Drug Interactions	Therapeutic Duplication	High Dose	Low Dose	Duration of Therapy	Early Refill	Generic Equivalent	Third-Party Coverage	Age-Specific Dose	Other
Connecticut	X	X	X	X	X	X	X	X		
Delaware (DPAP)*	X	X	X	X		X				Noncompliance, late refill.
Illinois	X	X	X	X	X	X	X		X	Gender check, disease state, drug allergy alert, pregnancy precaution warning.
Maine	X	X	X	X		X	X			
Maryland	X	X	X	X	X	X	X	X		Pregnancy precaution warning.
Massachusetts	X	X	X	X	X	X	X		X	Drug-disease contraindications, late refills, controlled substance issues, pregnancy precaution warning.
Michigan	X	X	X	X	X	X	X	X		Drug-disease contraindications, drug allergy interactions, clinical abuse/misuse.
Minnesota	X	X	X	X	X	X	X	X		Pregnancy precaution warning.
New Jersey	X	X	X	X	X	X	X			Pregnancy precaution warning.
New York	X	X	X			X				
Pennsylvania	X	X	X		X	X	X	X	X	Acute to maintenance dose, maximum initial dose.
Rhode Island	X	X				X		X	X	Disease state.
Vermont	X	X				X	X	X		
Wyoming	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

* Delaware Pharmacy Assistance Program.

Source: Rutgers Center for State Health Policy Survey of State Pharmaceutical Assistance Programs, December 2000.

advisory committee (because the potential for medication error is serious), have been instituted. Finally, New Jersey and Pennsylvania have developed a medical exceptions process to provide a way to consider individual patients' needs (Hare, Reinhard, Brick, Tepper, and Zanna, 2000).

Pennsylvania's senior-focused DUR strategy, which was implemented in 1991, is now the largest public mandatory DUR program in the country. PACE administrators convene a DUR technical advisory group of six physicians and five pharmacists who meet as a confidential team of scientific advisors to the state, reviewing and adapting criteria to be clinically sensitive to the needs of the senior population. Although in its initial stages the program monitored only a few drugs, the program has evolved over time and currently has DUR edits in place for drugs in 14 therapeutic classes. The edits in Pennsylvania's online DUR system are mandatory; pharmacies cannot override them. There is a medical exceptions process, but about 80 percent of these are denied, which program officials believe attests to the clinical accuracy of the DUR exclusions they have imposed.

The initial implementation cost of Pennsylvania's senior-specific OPDUR was \$6 million; the state spends another half a million annually to add and update the criteria and to administer the medical exceptions process. The state does not attempt to calculate cost savings obtained through DUR, seeing it as more of a quality improvement and medication error reduction activity than a cost-containment strategy. But state administrators believe that the costs of continually updating the clinical criteria and providing a responsive medical exceptions process are justified and may be offset by some savings from rejected claims. They have not conducted any formal assessment of these costs and potential savings.

In terms of errors averted, in periods of stability approximately 2 percent of claims submitted per week fail the initial edit, most commonly for excessive dosing and duration of therapy. Of these, more than half are denied even after further review through the state's medical exceptions process.¹⁸ Cumulatively, this represents approximately 140,000 potential medication errors that the state is able to avert annually. This estimate does not include the number of medication errors that are avoided by modifying prescribing behaviors before the prescription is filled. State officials noted that edit rates are much

¹⁸ Thomas Snedden, "Pennsylvania Pharmaceutical Assistance Contract for the Elderly (PACE) and PACE Needs Enhancement Tier (PACENET)," presentation for state pharmacy invitational summit, "Growing Needs, Limited Resources: Confronting Challenges of State Pharmacy Programs," Rutgers Center for State Health Policy, New Brunswick, N.J., March 11, 2002.

higher when new drugs are initially added to the DUR system, but stabilize over time as physicians modify prescribing behaviors accordingly.

New Jersey's system, implemented in 1999, is based to a significant extent on Pennsylvania's model. The state has had a gradual phase-in of the clinical edits. Most denials have been for therapeutic duplication. In the first year of the new OPDUR/medical exceptions process program, 3,272 potentially life-threatening drug interactions were identified for both the Medicaid and PAAD program. Of these, dispensing pharmacists resolved 1,784 cases, while the contractor resolved or changed 1,262 cases through consultation with the pharmacists and/or the prescriber. The remaining 226 were stopped at the point of service.

As in Pennsylvania, New Jersey officials do not view their OPDUR/medical exceptions process program as a cost-containment strategy. However, the first annual report documented a "slowing of expenditures" in the PAAD program after implementation of the program—from a four-month growth rate of 20.67 percent to a four-month comparison growth rate of 11.23 percent after program implementation (New Jersey State Drug Utilization Review Board, 2000). The report also indicated that changing prescribing habits through this program would quite likely result in a combined PAAD and Medicaid savings of \$2 million per month.

Other states have demonstrated interest in the New Jersey and Pennsylvania OPDUR/medical exceptions process programs. However, the implementation costs and potential resistance from physicians and pharmacists present barriers. Pharmacists in both states strongly support the need for assertive strategies to prevent prescribing errors but would like to be reimbursed for the extra administrative burden they bear in dealing with hard edits and medical exceptions process contractors. Physician groups also support state policy to reduce medication errors, but individual physicians are often less than pleased when their own prescription is rejected and they must provide medical justification for overriding the hard edit. Since cost savings are ambiguous, the Pennsylvania and New Jersey experience suggests that the most appropriate goal for state development of OPDUR/medical exceptions process systems is that of improving patient safety and appropriateness of prescribing, and that states should anticipate the possibility of physician and pharmacist resistance. Both New Jersey and Pennsylvania recommend gradual infrastructure development and implementation to overcome potential barriers.

COST-CONTAINMENT LESSONS FROM STATE PHARMACY PROGRAMS

As federal policymakers work to implement the newly passed Medicare drug benefit and other states move ahead in developing their own programs, the experience of existing state pharmacy programs can be very instructive. States' efforts in designing solutions to fill gaps in prescription drug coverage provide concrete examples for federal and other state policymakers in determining what—and what not—to do in developing a prescription drug benefit. The following is a summary of some of the cost-containment lessons of state pharmacy program experience.

Generic Substitution and Manufacturer Rebates Are Particularly Important for Program Savings

Program officials recognize that states will have difficulty in maintaining growth rates of 17 to 20 percent in state senior pharmacy programs and are beginning to implement stricter cost-control strategies. Of the measures used by states, generic substitution and manufacturer rebates are estimated to result in the greatest impact on per-prescription expenditures. Although states do not specifically track the cost savings from generic substitution, some program officials suggested that this strategy yielded the most savings of the various cost-control initiatives, as generic drugs account for nearly half of the claims paid in many programs and the average cost of a generic is approximately half that of a multisource brand-name drug. Rebates from manufacturers also comprise a large share of savings, constituting an average of 15 percent of state pharmacy costs and as much as 36 percent in one state. In addition to the rebate formula used by the program, this return rate is influenced by many factors, including the mix of brand-name drugs used by participants, the use of generic drugs, the pharmacy reimbursement rate, and the amount of cost-sharing required by the program. States also save a significant amount through pharmacy discounts, even though pharmacy-level prices and dispensing fees are generally higher than those negotiated in the private sector.

Stiffer Cost-Containment Efforts Are Likely in the Future; More Evaluation of Impact Is Needed

Even with generic substitution and discounted prices, SPAP costs have escalated significantly. To date, state pharmacy programs have generally refrained from implementing the more stringent measures (e.g., imposing annual caps or significantly increasing cost-sharing features) employed by the private sector to limit access. Similarly, only a few have employed some of the more aggressive controls, such as closed formularies or prior authorization, used by private insurers and Medicaid. This is due largely to anticipated negative public response to restricting access solely to save money.

Instead states have opted to focus primarily on price savings through rebates and discounts, and on less intrusive approaches to move patients toward less expensive drugs.

However, given the budget pressures in many states, it is likely that cost-containment efforts will expand over time. Programs that are collocated in their Medicaid programs may increasingly adopt strategies used by those programs, including prior authorization requirements for more expensive drugs. Given how little is known about the impact of these initiatives on access and health outcomes, further study is needed to assess the effect of these cost-containment interventions on health outcomes of consumers.

Cost-Containment Strategies with the Greatest Savings Potential Face Political Hurdles

Strong political pressure by interest groups at the state level has limited the ability of individual states to impose stringent cost-containment policies. Many measures that have been proposed by state officials to reduce program costs have met with strong resistance from consumers, pharmacists, or manufacturers and have generally been rejected or significantly scaled back. Efforts to increase cost-sharing in the form of differential copayments between generic and brand drugs have been controversial; given the low incomes of beneficiaries in most programs, it is unclear how much savings could be obtained through this route without adversely affecting access to treatment and cost burden. Pharmacists generally favor measures that increase use of generic drugs, because generics often provide larger margins at the pharmacy level. However, state efforts to further reduce pharmacy discounts, such as basing generic discounts on maximum allowable cost pricing as opposed to a percentage of AWP, are strongly contested by pharmacies as are efforts to shift program administration to PBMs. Manufacturers oppose any form of what they perceive as price controls, including efforts to further improve rebates through supplemental rebate strategies.

Little Experience with PBMs to Estimate Level of Savings, If Any

While federal proposals have favored the use of PBMs to administer the Medicare benefit, the cost savings potential for management of public pharmacy programs by private PBMs is still unclear. Few SPAPs had opted to use PBMs to negotiate prices and were in many cases unsure of the financial benefits of doing so. At least one state reported lower than expected rebates for their PBM.

Online Prospective Drug Utilization Review Can Protect Patient Safety and Reduce Costs

Given the increased national attention to medication error, Medicare drug benefits should include systems that monitor and support patient safety and reduce the opportunity for medication errors, as indeed is required under the 2003 federal legislation. Based on two states' experience, federal policymakers may want to go further than Medicaid's prospective drug utilization review systems, which alert pharmacists of potential medication errors but generally allow them to override the warning. Pennsylvania and New Jersey have gone beyond these systems by developing senior-specific safety criteria and blocking payment for drug combinations and doses identified by a panel of experts as clinically unsafe for the elderly. Both states allow medical exceptions, but only after physician and pharmacist consultants have discussed it with the prescriber and are able to demonstrate clinical necessity. The administration of the medical exceptions process can be costly, but these programs have not only averted medication errors, they can also yield significant cost savings. Although these programs reduce access to some drugs, as with other initiatives (e.g., prior authorization), access is denied based on clinical criteria and patient safety (not solely on cost), which may make these programs more palatable to consumers, physicians, and pharmacists.

REFERENCES

- American Society of Consultant Pharmacists (2001). "News from the American Society of Consultant Pharmacists." Available at: <http://www.ascp.com/public/news/2001/04/24-sca.shtml#5>, accessed January 11, 2002.
- Avorn, J. (2001). "Improving Drug Use in Elderly Patients: Getting to the Next Level." *Journal of the American Medical Association* 286 (22).
- Browdie, R. (2001). "Advisory Committee Report on Containing Costs in the Pennsylvania Pharmaceutical Assistance Contract for the Elderly (PACE)" (Harrisburg, Pa.: Commonwealth of Pennsylvania Department of Aging).
- Bruen, B. K. (2002). "States Strive to Limit Medicaid Expenditures for Prescribed Drugs." (Washington, D.C.: The Henry J. Kaiser Family Foundation).
- Connecticut Department of Social Services (2001). "Connecticut Pharmaceutical Assistance Contract to the Elderly and Disabled (ConnPACE) Annual Report, July 1, 2000–June 30, 2001." (Hartford, Conn.: Author).
- Cook, A., T. Kornfield, and M. Gold (2000). *The Role of PBMs in Managing Drug Costs: Implications for a Medicare Drug Benefit*. (Menlo Park, Calif.: The Henry J. Kaiser Family Foundation).
- Cook, A. E. (1999). "Strategies for Containing Drug Costs: Implications for a Medicare Benefit." *Health Care Financing Review* 20 (3).
- Dyckman, Z. (1996). "Proposed Enhancements to the PAAD Program to Improve Program Cost-Effectiveness." (Trenton, N.J.: New Jersey Council of Chain Drug Stores).
- Gencarelli, D. M. (2002). "Average Wholesale Price for Prescription Drugs: Is There a More Appropriate Pricing Mechanism?" Report No. NHPF Issue Brief No. 775 (Washington, D.C.: National Health Policy Forum).
- Guo, J. J., J. T. Gibson, G. R. Hancock, and K. N. Barker (1995). "Retrospective Drug Utilization Review and the Behavior of Medicaid Prescribers: An Empirical Marginal Analysis." *Clinical Therapeutics* 17 (6).
- Hare, G. T., S. C. Reinhard, J. H. Brick, C. Tepper, and M. T. Zanna (2000). "Polypharmacy. Reducing Adverse Events Among the Elderly in New Jersey." *New Jersey Medicine* 97 (1).
- Institute of Medicine (1999). *To Err Is Human: Building a Safer Health System*. (Washington, D.C.: National Academy Press).
- Kidder, D., and J. Bae (1999). "Evaluation Results from Prospective Drug Utilization Review: Medicaid Demonstrations." *Health Care Financing Review* 20 (3).
- Kreling, D. H., H. L. Lipton, T. Collins, and K. C. Hertz (1996). "Assessment of the Impact of Pharmacy Benefit Managers." Report No. NTIS pub # PB97-103683 (Washington, D.C.: Health Care Financing Administration, U.S. Department of Health and Human Services).

- Kreling, D. H., D. A. Mott, J. B. Wiederholt, J. Lundy, and L. Levitt (2000). *Prescription Drug Trends: A Chartbook*. (Menlo Park, Calif.: The Henry J. Kaiser Family Foundation).
- Lewis, J. R. (2000). "Heinz Plan to Overcome Prescription Drug Expenses: Creating a Comprehensive and Affordable Prescription Drug Program for All Persons 65 and Over and Persons with Disabilities in Massachusetts." (Washington, D.C.: Heinz Family Philanthropies).
- Lyles, A., I. H. Zuckerman, S. M. DeSipio, and T. Fulda (1998). "When Warnings Are Not Enough: Primary Prevention Through Drug Use Review." *Health Affairs* 17 (5).
- Mays, G., R. Hurley, and J. Grossman (2001). "Consumers Face Higher Costs as Health Plans Seek to Control Drug Spending." Issue Brief Number 45 (Washington, D.C.: Center for Studying Health Systems Change).
- Monane, M., D. M. Matthias, B. A. Nagle, and M. A. Kelly (1998). "Improving Prescribing Patterns for the Elderly Through an Online Drug Utilization Review Intervention: A System Linking the Physician, Pharmacist, and Computer." *Journal of the American Medical Association* 280 (14).
- Moore, W. J., K. Gutermuth, and E. E. Pracht (2000). "Systemwide Effects of Medicaid Retrospective Drug Utilization Review Programs." *Journal of Health Politics, Policy & Law* 25 (4).
- National Institute for Health Care Management Research and Educational Foundation (2001). *Prescription Drug Expenditures in 2000: The Upward Trend Continues*. (Washington, D.C.: Author).
- New Jersey State Drug Utilization Review Board (2000). "Annual Report: October 1, 1999 through September 30, 2000." (Trenton, N.J.: New Jersey Department of Human Services and New Jersey Department of Health and Senior Services).
- Newcomer, L. N. (2000). "Medicare Pharmacy Coverage: Ensuring Safety Before Funding." *Health Affairs* 19 (2).
- Okano, G. J., and K. L. Rascati (1995). "Effects of Medicaid Drug Utilization Review Intervention Letters." *Clinical Therapeutics* 17 (3).
- Pharmacy Benefit Management Institute (2001). *The Takeda and Lilly Prescription Drug Benefit Cost and Plan Design Survey Report: 2001 Edition*. (Albuquerque, N.M.: Wellman Publishing).
- Segedin, D. (1999). "Three-Tier Co-payment Plans: Design Considerations and Effectiveness." *Drug Benefit Trends* 11 (9).
- Soumerai, S. B., and J. Avorn (1986). "Economic and Policy Analysis of University-Based Drug 'Detailing'." *Medical Care* 24 (4).
- Tester, R. (2001). "Administrative Beginnings of the South Carolina Senior Prescription Drug Program (SilverCard)." Presentation made at the National Academy for State Health Policy Annual Conference, Charlotte, N.C.

- U.S. Department of Health and Human Services, Office of Inspector General (2001). "Medicaid Pharmacy—Actual Acquisition Cost of Brand-name Prescription Drug Products." Report No. A-06-00-00023 (Washington, D.C.: Author).
- U.S. General Accounting Office (1996). "Prescription Drug Benefits: Implications for Beneficiaries of Medicare HMO Use of Formularies." Report No. GAO/AIMD-96-72 (Washington, D.C.: United States General Accounting Office).
- U.S. General Accounting Office (1999). "Prescription Drugs and Medicaid: Automatic Review Systems Can Help Promote Safety, Save Money." Report No. GAO-HEHS-99-166 (Washington, D.C.: Author).
- U.S. Pharmacopoeia Drug Utilization Review Advisory Panel (2000). "Drug Utilization Review: Mechanisms to Improve Its Effectiveness and Broaden Its Scope." *Journal of the American Pharmaceutical Association* 40 (4).

APPENDIX. STUDY METHODS

The findings are based on the results of a survey of all direct benefit programs in place throughout the year 2000, information collected through qualitative case studies of selected states conducted in 2000 and 2001, and reviews of the literature and program documents. The survey was conducted by the Rutgers Center for State Health Policy during the fall of 2000 and was sent to all states that had a direct benefit program in place throughout the year 2000 (N = 19 programs in 15 states). The authors of the survey based its questions on key programmatic design features of interest to policymakers and also on prior surveys conducted by the AARP Public Policy Institute, the National Conference of State Legislatures, the National Governors' Association, and the National Pharmaceutical Council. We received surveys, after telephone follow up, from 14 out of 15 states (18 out of the 19 programs), resulting in a response rate of 93 percent. Completion rates for individual survey questions varied significantly. Although states were able to provide much descriptive information on their programs, few supplied estimates of persons eligible, demographics of their enrollees, or the proportion of enrollees actively using the benefit.

To supplement the surveys and to more fully capture how various programs operate in practice and have evolved over time, we selected eight states with direct benefit programs for in-depth qualitative case studies that were conducted in 2000 and 2001. Two of these case studies were conducted for a parallel study funded by the AARP Public Policy Institute, focusing on how states have addressed prescription affordability. The remaining case-study states were selected based on criteria that included representation of a diversity of program models, a balance between well-established and newer programs, relevance to Medicare proposals being discussed, program size, and regional distribution.

The case-study states were Massachusetts, Minnesota, Nevada, Pennsylvania, South Carolina, and Vermont, and in addition Maine and New Jersey, which had been part of the AARP study.¹⁹ Case-study data included semistructured interviews with key informants and review of program documents from each state. The interview protocol focused on the impetus for the program or recent expansions, other options considered, design decisions and how they were arrived at, start-up and implementation issues, and perceived impact. Respondents for key informant interviews varied somewhat by state but generally included program administrators (21), other officials in Medicaid bureaus or related state agencies involved in outreach or administration (6), representatives of pharmacy benefits managers or claims processors (3), legislators or legislative staff (7),

¹⁹ California's Medicare Discount Program was selected as part of the AARP analysis of different approaches taken by states. Because this report focuses on direct-benefit programs, California is excluded from this analysis.

pharmacist trade group representatives (13), and consumer representatives (13). State documents included enrollment forms, outreach materials, annual reports, requests for proposals, contracts with suppliers, and program websites.

CASE STUDY LEAD STATE OFFICIALS INTERVIEWED AND PROGRAM WEBSITES

Maine

Kevin Concannon, Commissioner
Maine Department of Human Services

Maine Prescription Drug Assistance Program

<http://www.state.me.us/dhs/beas/medbook.htm>

Massachusetts

Ann Hartstein, Assistant Secretary, Executive Office of Elder Affairs
Massachusetts Department of Elder Affairs

Prescription Advantage

<http://www.800ageinfo.com/Programs/pa.cfm>

Minnesota

Jim Chase, Director, Purchasing and Service Delivery
Minnesota Department of Human Services

Minnesota Prescription Drug Program

<http://www.dhs.state.mn.us/HealthCare/programs/medicare-related.htm>

Nevada

Debra King, Administrative Services Officer IV, Senior Prescription Program
Nevada Department of Human Resources

Nevada Senior Rx

<http://www.nevadaseniorr.com>

New Jersey

Kathleen Mason, Director, New Jersey Pharmacy Assistance for the Aged and Disabled (PAAD) program

New Jersey Department of Health and Senior Services

Pharmaceutical Assistance to the Aged & Disabled program

<http://www.state.nj.us/health/seniorbenefits/paadapp.htm>

Senior Gold Prescription Plan

<http://www.state.nj.us/health/seniorbenefits/seniorgolddiscount.htm>

Pennsylvania:

Tom Snedden, Director, PACE program

Pennsylvania Department of Aging

Pennsylvania PACE/PACENET

<http://www.aging.state.pa.us/aging/cwp/browse.asp?A=293>

South Carolina

Robin Tester, Assistant Director of the Office of Insurance Services

South Carolina State Budget and Control Board

Larry Fernandez, Director of Research, Office of Senior and Long Term Care Services

South Carolina Department of Health and Human Services

South Carolina Silverxcard

<http://www.silverxcard.com>

Vermont

Paul Wallace-Brodeur, Director, Office of Vermont Health Access

Vermont Department of Prevention, Assistance, Transition, and Health Access

Vermont VHAP/VScript/VScript Expanded

<http://www.dsw.state.vt.us/districts/ovha/ovha8.htm>

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#590 *Enrolling Eligible Persons in Pharmacy Assistance Programs: How States Do It* (September 2003). Stephen Crystal, Thomas Trail, Kimberley Fox, and Joel Cantor, Rutgers Center for State Health Policy. In this report, the authors examined 15 state pharmacy programs in operation in 2000 and determined that those with the simplest application procedures and fewest restrictions on enrollment, such as up-front fees or deductibles and in-person interviews, have the highest participation rates.

#664 *Employer-Sponsored Health Insurance and Prescription Drug Coverage for New Retirees: Dramatic Declines in Five Years* (July 23, 2003). Bruce Stuart, Puneet K. Singhal, Cheryl Fahlman, Jalpa Doshi, and Becky Briesacher. *Health Affairs* Web Exclusive. The authors report that the proportion of Medicare beneficiaries in the 65-to-69 age group receiving employer-sponsored drug benefits fell from 40 percent in 1996 to just over 35 percent in 2000 and say that the erosion in retiree coverage, coupled with a lack of adequate alternatives, adds particular urgency to the Medicare drug debate.

#648 *Whither Seniors' Pharmacare: Lessons from (and for) Canada* (May/June 2003). Steven G. Morgan, Morris L. Barer, and Jonathan D. Agnew. *Health Affairs*, vol. 22, no. 3. (In the Literature summary). The authors find that the tension between seniors' health needs and drug industry policies has hampered effective prescription drug regulation and argue that political leadership and more comprehensive utilization management and competitive pricing policies are needed to create a sustainable pharmaceutical benefit program in Canada and abroad.

#646 *Reference Pricing for Drugs: Is It Compatible with U.S. Health Care?* (May/June 2003). Panos Kanavos and Uwe Reinhardt. *Health Affairs*, vol. 22, no. 3. (In the Literature summary). The authors explore arguments for and against reference pricing—an approach in which the insurer covers only the prices of low-cost, benchmark drugs and patients pay the difference in price for higher-cost alternatives—and discuss how this approach might work in the United States.

#628 *Medicare+Choice Plans Continue to Shift More Costs to Enrollees* (April 2003). Lori Achman and Marsha Gold, Mathematica Policy Research, Inc. The authors report that in 2003: monthly plan premiums for beneficiaries in Medicare+Choice average \$37, up from \$32 in 2002 and \$23 in 2001; the percentage of enrollees with drug coverage is slightly down, while a larger percentage of plans provide coverage only for generics; and a higher percentage of enrollees now have copayments for hospital stays and physician visits.

#627 *State Medicaid Prescription Drug Expenditures for Medicare–Medicaid Dual Eligibles* (April 2003). Stacy Berg Dale and James M. Verdier, Mathematica Policy Research, Inc. This issue brief reports that Medicaid prescription drug coverage for approximately 6 million “dual eligibles”—low-income seniors and persons with disabilities who are covered by both Medicaid and Medicare—accounts for nearly half of all Medicaid spending on prescription drugs, including both federal and state shares of Medicaid prescription costs.

#591 *New York Seniors and Prescription Drugs: Seniors Remain at Risk Despite State Efforts—Findings from a 2001 Survey of Seniors in Eight States* (December 2002). David Sandman, Cathy Schoen, Deirdre Downey, Sabrina How, and Dana Gelb Safran. Although New York has one of the nation's largest and most effective prescription drug assistance programs for the elderly, nearly one of five seniors in the state had no coverage for medications in 2001, according to this analysis. As a result of lack of coverage or inadequate benefits, one-fifth of all New York seniors, including one-third of those without drug coverage, reported they skipped doses of medication or did not fill a prescription because of cost concerns.

California Seniors and Prescription Drugs (November 2002). Tricia Neuman, Michelle Kitchman, Teresa McMeans, Dana Gelb Safran, Wenjun Li, and Andrea Bowen. Copies of this report (#6058) are available from The Henry J. Kaiser Family Foundation, 1450 G Street, NW, Suite 250, Washington, DC 20005, Tel: 800-656-4533, <http://www.kff.org/content/2002/6058>.

#544 *Stretching Federal Dollars: Policy Trade-Offs in Designing a Medicare Drug Benefit with Limited Resources* (August 2002). Marilyn Moon and Matthew Storeygard, The Urban Institute. In this policy brief, the authors suggest that a modest Medicare prescription drug benefit could be crafted that provides some coverage to all beneficiaries while protecting those with low incomes and high out-of-pocket expenses.

Prescription Drug Coverage and Seniors: How Well Are States Closing the Gap? (July 31, 2002). Dana Gelb Safran, Patricia Neuman, Cathy Schoen, Jana E. Montgomery, Wenjun Li, Ira B. Wilson, Michelle S. Kitchman, Andrea E. Bowen, and William H. Rogers. *Health Affairs* Web Exclusive. Article available online only at <http://www.healthaffairs.org/WebExclusives/2105Safran.pdf>.

Seniors and Prescription Drugs: Findings from a 2001 Survey of Seniors in Eight States (July 2002). Michelle Kitchman, Tricia Neuman, David Sandman, Cathy Schoen, Dana Gelb Safran, Jana Montgomery, and William Rogers. Copies of this report (#6049) are available from The Henry J. Kaiser Family Foundation, 1450 G Street, NW, Suite 250, Washington, DC 20005, Tel: 800-656-4533, <http://www.kff.org>.

#530 *State Pharmacy Assistance Programs: Approaches to Program Design* (May 2002). Kimberley Fox, Thomas Trail, and Stephen Crystal, Rutgers Center for State Health Policy. State pharmacy assistance programs for Medicare beneficiaries help only a small proportion of the Medicare population—just 3 percent, or 1.2 million beneficiaries out of 39 million nationwide. According to the authors, a federal program is needed to fill this gap in coverage, and it should coordinate with the 28 state programs currently in place.