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Few would question the value of appropriately used prescriptions to the U.S. health care system. The economics of prescription drugs, however, has undergone increased legislative scrutiny recently, with the now repealed Medicare Catastrophic Coverage Act of 1988 and the proposed Pharmaceuticals Access and Prudent Purchasing Act of 1990. In this DataWatch, we present a review of trends in retail prescription expenditures to provide some substance to the debate about these economic issues.

National Health Spending Trends

Pharmaceutical products and services represent an essential component of health care. Appropriate drug therapy is one of the most cost-effective therapeutic modalities known to modern medicine. The 1988 expenditures for drugs and medical sundries were $41.9 billion. In contrast, only $8.8 billion was spent in 1970 and $1.7 billion in 1950 for this category. This drug and medical sundries category has diminished considerably as a percentage of national health expenditures since 1950, when drugs accounted for 13.6 percent of expenditures. By 1970, the percentage had declined to 11.8 percent, and in 1988, drugs were responsible for 7.8 percent of national health expenditures. Prescription and over-the-counter drugs combined represent approximately 1 percent of gross national product (GNP) in the United States.

Health care expenditures have consistently grown faster than the rest of the U.S. economy for several decades. As Exhibit 1 shows, health care...
Exhibit 1
Consumer Price Index Of Selected Health Items, Annual Percent Change, 1980-1989

<table>
<thead>
<tr>
<th>Year</th>
<th>All items</th>
<th>All medical care</th>
<th>Physician services</th>
<th>Hospital room</th>
<th>Prescription drugs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>13.5%</td>
<td>11.0%</td>
<td>10.5%</td>
<td>13.1%</td>
<td>9.2%</td>
</tr>
<tr>
<td>1981</td>
<td>10.3%</td>
<td>10.7%</td>
<td>11.0%</td>
<td>14.9%</td>
<td>11.4%</td>
</tr>
<tr>
<td>1982</td>
<td>6.2%</td>
<td>11.6%</td>
<td>9.4%</td>
<td>15.7%</td>
<td>11.6%</td>
</tr>
<tr>
<td>1983</td>
<td>3.2%</td>
<td>8.8%</td>
<td>7.8%</td>
<td>11.3%</td>
<td>11.0%</td>
</tr>
<tr>
<td>1984</td>
<td>4.3%</td>
<td>6.2%</td>
<td>6.9%</td>
<td>8.3%</td>
<td>9.6%</td>
</tr>
<tr>
<td>1985</td>
<td>3.6%</td>
<td>6.3%</td>
<td>5.9%</td>
<td>5.9%</td>
<td>9.5%</td>
</tr>
<tr>
<td>1986</td>
<td>1.9%</td>
<td>7.5%</td>
<td>7.2%</td>
<td>6.0%</td>
<td>8.6%</td>
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<tr>
<td>1987</td>
<td>3.6%</td>
<td>6.6%</td>
<td>7.3%</td>
<td>7.2%</td>
<td>8.0%</td>
</tr>
<tr>
<td>1988</td>
<td>4.1%</td>
<td>6.5%</td>
<td>7.2%</td>
<td>9.3%</td>
<td>8.0%</td>
</tr>
<tr>
<td>1989</td>
<td>4.8%</td>
<td>7.1%</td>
<td>7.3%</td>
<td>10.3%</td>
<td>8.7%</td>
</tr>
</tbody>
</table>

Average annual percent change

<table>
<thead>
<tr>
<th>Period</th>
<th>All items</th>
<th>All medical care</th>
<th>Physician services</th>
<th>Hospital room</th>
<th>Prescription drugs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970–1989</td>
<td>6.4%</td>
<td>8.1%</td>
<td>8.1%</td>
<td>10.7%</td>
<td>6.6%</td>
</tr>
<tr>
<td>1970–1979</td>
<td>7.1%</td>
<td>7.8%</td>
<td>8.0%</td>
<td>11.2%</td>
<td>3.6%</td>
</tr>
<tr>
<td>1980–1989</td>
<td>5.5%</td>
<td>8.3%</td>
<td>8.0%</td>
<td>10.2%</td>
<td>9.6%</td>
</tr>
<tr>
<td>1982–1988</td>
<td>3.8%</td>
<td>7.6%</td>
<td>7.4%</td>
<td>9.1%</td>
<td>9.5%</td>
</tr>
</tbody>
</table>


costs inflated at twice the rate of the consumer economy during 1982 to 1988. Prescription drugs were the highest-inflating component of the health care sector during this period, with prices increasing at two and one-half times the rate of inflation in the general consumer economy. This strong inflation in drug prices during the 1980s deserves further study to determine the factors responsible.

Retail Prescription Spending

The nation’s consumers purchased more than 1.73 billion prescriptions in 1989 from retail (chain and independent) pharmacies for a total expenditure level of $28.2 billion. Retail prescription expenditures have increased nearly threefold from $9.7 billion in 1980 and more than sevenfold from $4.0 billion in 1970. The number of retail prescriptions consumed by the American public has shown modest change in the past decade, increasing only 18 percent over the 1.47 billion prescriptions dispensed in 1980 and 62 percent over the 1.07 billion prescriptions dispensed in 1970. Retail outpatient prescriptions represent approximately 70 to 75 percent of the total prescription drug market in the United States. Prescription drugs are also distributed through hospitals, practitioners’ offices, and various government facilities.

The elderly (age sixty-five and over) represented 12.4 percent of the
U.S. resident population in 1988, yet they accounted for 34.3 percent of retail prescription expenditures. The average price for all retail prescriptions was $16.31 in 1989, up from $6.62 in 1980 and $3.77 in 1970.\(^5\) The average prescription price differed little between chain and independent pharmacies in 1989 ($16.31 and $16.30, respectively). When the average prescription price is adjusted for differences over time in the purchasing power of the dollar, the average prescription in 1985 cost the consumer less than the average prescription in 1960 ($11.70 versus $11.28 in 1985 constant dollars).\(^6\) However, the 1985 constant dollar value of the average prescription has increased 25 percent since 1985. Despite growth in the average retail prescription price, the profitability of retail independent pharmacies has been declining over the past three decades. The average independent pharmacy in 1965 had 5.8 percent net profit (before taxes); by 1986, this had declined to 2.7 percent (Exhibit 2).\(^7\)

Over the past four decades, the number of retail community pharmacies has held relatively constant at about 55,000 units.\(^8\) The number of independent pharmacies has been steadily decreasing, while the number of chain pharmacies has been increasing. In 1950, 92 percent of all pharmacies were independents; by 1970, the percentage had slipped to 87 percent; and in 1989, 64 percent of all retail pharmacies remained as independents. Independent pharmacies dispensed 62 percent (1.08 billion) of retail prescriptions in 1989, while chain pharmacies dispensed 38 percent (0.65 billion).

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### Exhibit 2
Average Prescription Price And Pharmacy Net Profit, 1960–1988

<table>
<thead>
<tr>
<th>Average price/net profit</th>
<th>18</th>
<th>15</th>
<th>12</th>
<th>9</th>
<th>6</th>
<th>3</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Rx price (dollars)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net profit (percent)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

New Channels Of Prescription Distribution

About 7 to 10 percent of all retail prescriptions in 1986 were covered, or paid for directly, by managed care plans. These managed care prescription programs have accounted for much of the growth in private third-party coverage of prescriptions. Patients who receive prescriptions through managed care and other third-party programs are often “channeled” to certain providers of prescriptions and other pharmaceutical services. Channeling allows the purchaser of health care products and services to buy in volume to improve administrative efficiency and often to obtain discount prices. Patients may be channeled by employers, insurance companies, health maintenance organizations (HMOs) or preferred provider organizations (PPOs), physicians, hospitals, nursing homes, various types of organizations (such as the American Association of Retired Persons), urgent care centers, and others. When a “patient channel” is formed for directing the prescriptions of a defined group, several alternatives are available for providing prescriptions. Many managed care enrollees are served through contracts with community pharmacies, but others are served by an in-house pharmacy at the managed care site. Prescriptions for ambulatory patients may be obtained on a contractual basis with individual independent or chain pharmacies, a network of pharmacies, hospital outpatient pharmacies, mail order pharmacies, and other types of pharmacies. In the managed care environment, all of these pharmacies may be in direct competition with each other.

Choice of a specific channel, or panel of preferred pharmacy providers, may be made by one corporate decisionmaker for an entire channel of patients. Often these decisions lock patients into one or a few preferred providers for one year or more. Contracts for serving patient channels may develop without public notice, and a given pharmacy may suddenly lose 10 to 30 percent or more of its customer base. Not only does such an event disrupt the pharmacy’s economic base, but it also significantly disrupts the patient’s continuity of pharmaceutical care.

Contracted pharmacies may be engaged through either open or closed panels or networks. Open panels allow participation by all pharmacies in a given market area that meet certain standards regarding level of service and that are willing to accept the offered contractual terms for participation and reimbursement. Closed panels limit pharmacy participation exclusively to those that are members of a defined network, or even a single chain of pharmacies, covering the market area. One study reported that professional fees for third-party plans open to all pharmacies were “virtually identical to those for closed plans.”

Several other distribution methods have developed or shown renewed
strength in recent years. Mail order prescription plans have captured about 6 percent of the outpatient prescription market and are expected to continue growth into the 1990s.\textsuperscript{13} Physician dispensing for a profit has surged in some areas, with 1 to 2 percent of the outpatient prescription market.\textsuperscript{14} Despite popular belief to the contrary, recent evidence suggests that neither mail order nor physician-dispensed prescriptions cost consumers less than similar prescriptions from community pharmacies. For example, the average charge per day’s supply of medication from mail order pharmacies was $0.58, while community pharmacies’ charges averaged $0.56 per day’s supply in 1988.\textsuperscript{15} Urgent care centers and surgicenters have established dispensaries (some with and some without a pharmacist), and many hospitals have activated and expanded outpatient pharmacies and ambulatory care clinics. Another means of direct distribution is via employer-owned pharmacies at the worksite to provide both convenience and hands-on cost management. A corporate-owned pharmacy may be supported by as few as 1,500–2,000 employees and 3,500–5,000 total enrollees, including spouses and dependents.

The organizational structures of pharmacies are changing. For instance, pharmacies have formed networks in more than twenty-five states to facilitate access of independent and small chain pharmacies to the contracted, managed health care market. Advantages of such networks include network administration, benefit contracting, volume purchasing, and cooperative marketing. State professional organizations have formed many of the pharmacy networks, with others formed by wholesalers, groups of pharmacists, insurance companies, and for-profit corporations. These pharmacy networks strive for economies of scale and efficiency, while still maintaining autonomy for the individual member pharmacies.

Retail pharmacists have formed, and joined, retail pharmacy buying groups to increase buying power with pharmaceutical companies. More than one-half of all independent pharmacies in 1988 participated in one or more drug buying groups.\textsuperscript{16} Retail pharmacy buying groups have had moderate success in improving their purchasing power for generic drug products. They have, however, achieved little leverage in obtaining contractually discounted prices on single-source, patent-protected drug products. Nearly all manufacturers have refused to participate in such programs with respect to their single-source products.\textsuperscript{17}

Hospital buying groups and some HMOs have been able to negotiate lower prices on both multiple- and single-source products. Part of their success is due to their control over prescribing and dispensing practices. Typically, these health care settings establish physician- and pharmacist-approved guidelines for both generic and therapeutic product interchange. Through a pharmacy and therapeutics committee, a formulary
of acceptable substitute products is defined, and these products are forced to compete on price through a bid purchasing or negotiation process.

Changes In Prescription Payment Source

The retail prescription market has experienced a significant shift in the source of payment for prescriptions. Private-pay (out-of-pocket) prescriptions have been declining, and direct third-party pay prescriptions have been on the increase (Exhibit 3). A review of this change is essential for understanding the impact of third-party payment on retail prescription expenditures.

Private-pay prescriptions. Private-pay prescriptions are those for which a cash or charge payment for the price of the prescription is made at the time of dispensing. These out-of-pocket expenses are borne solely by many consumers, while other consumers may be reimbursed for these prescriptions under an indemnity insurance plan or may count such prescription charges against an annual deductible. Private-pay (also known as out-of-pocket) prescriptions were the most prevalent payment source in 1989, representing 58.5 percent of all prescriptions dispensed in community pharmacies. In 1969, private-pay customers purchased 88.1 percent of all retail prescriptions dispensed. By 1995, private-pay customers are expected to be less than 40 percent of the retail prescription market due to growth in third-party coverage.

Exhibit 3
Percentage Of Prescriptions Sold At Retail, By Payment Source, 1969–1995

<table>
<thead>
<tr>
<th>Percent of retail prescriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
</tr>
<tr>
<td>80</td>
</tr>
<tr>
<td>60</td>
</tr>
<tr>
<td>40</td>
</tr>
<tr>
<td>20</td>
</tr>
<tr>
<td>0</td>
</tr>
</tbody>
</table>

Source: American Druggist, May 1979–1990; and projections from Purdue University, Pharmaceutical Economics Research Center.

*Projections.*
Third-party prescriptions. Direct-payment third-party prescriptions are those for which the pharmacist must complete a reimbursement form, either manually or electronically, and submit the form to a third party for payment. Most third parties have predetermined payment limits for prescriptions filled on behalf of their patients. The payment amounts are usually less than what the pharmacist would charge a cash-paying customer, even though filling a third-party prescription requires considerably more effort. In 1988, it cost the average chain pharmacy $5.14 to dispense private-pay prescriptions and $6.39 to dispense third-party prescriptions. This additional cost is due primarily to personnel and other administrative expenses for processing third-party claims. Direct third-party prescriptions rose from 11.9 percent of all retail prescriptions in 1969 to 41.5 percent in 1989. Historically, independent pharmacies have had a higher percentage of prescriptions filled under third-party contracts than have chain pharmacies, although chains have significantly closed the gap in the past few years (41.7 percent versus 41.2 percent, respectively, in 1989).

An estimated 7.19 million third-party prescriptions were filled in 1989. Medicaid, the federal/state insurance program for the nation’s poorest citizens, covered 18.9 percent of all retail prescriptions dispensed in 1989. Medicaid prescriptions totaled more than 23.5 percent of all prescriptions dispensed in independent pharmacies and only 11.2 percent of those in chain pharmacies. Among all third-party prescriptions in independent pharmacies, Medicaid prescriptions outnumbered private third-party prescriptions (by a ratio of 4:3) while in chain pharmacies the reverse was true: private third-party prescriptions outnumbered Medicaid prescriptions (by a ratio of 3:1). The rate of third-party volume growth in chains has surpassed the growth rate in independents, with chains making their strongest gains among private third-party prescriptions since 1985.

Economic Transformation Of Retail Pharmacy

As the proportion of third-party prescriptions rises, retail prescription prices will be less influenced by a competitive consumer market and more dominated by private and government third-party reimbursement policies. Retail prescription prices under both private and governmental third-party contracts are usually predetermined by one or more specific limits or formulae, so that third-party reimbursement to the pharmacy is a regulated, prospective payment. In this new economic environment, retail pharmacies will experience changes nearly as dramatic as the advent of diagnosis-related groups (DRGs) for hospitals. With prospective pay
ment limits defined before a prescription is dispensed, the pharmacy becomes a cost center, rather than a profit center. Neither a retail pharmacy’s revenue nor its profit can be increased simply by raising prescription prices. Additionally, increases in manufacturers’ drug product prices to the pharmacy without corresponding changes in payment by third parties will result in a direct reduction of the pharmacy’s operating margin.

Successful pharmacies in this new economic environment must: (1) achieve efficient operating volumes (for instance, greater than 30,000 prescriptions per year); (2) minimize operating expenses; (3) maximize personnel efficiency; (4) monitor and control, to the degree possible, the acquisition cost of drug products (through buying groups, generic substitution, and effective formulary programs); and (5) improve the satisfaction and health of the patient. Most patients under third-party programs pay the same price (or copayment) for a prescription no matter which pharmacy they may choose to have fill their prescription. When price is not a factor, what factors will influence pharmacy choice? Patients are likely to choose the pharmacy where they are treated as an individual and where a pharmacist is available to answer their questions about medications. Thus, competition in a third party–dominated prescription market will be on the basis of service rather than price.

A Framework For Managing Drug Expenditures

Both the channels of distribution and the payment sources in the retail prescription market are experiencing significant change. As prescription drug expenditures continue to grow at a rate substantially above the general inflation rate, purchasers will look for means to understand and manage the growth in drug expenditures. The following framework discusses disaggregation of factors contributing to growth in total expenditures. This framework is then used to analyze changes in Medicaid expenditures between 1982 and 1988. Many of the patterns seen in the retail prescription market are also found in the Medicaid drug program.

Total drug expenditures are determined by multiplying the number of eligible persons (population effect) times the number of prescriptions per person (intensity effect) times the cost per prescription (inflation effect), plus administrative costs. “Population” effects are concerned with a change in the number of persons eligible for a given plan. For example, a change in the definition of poverty or in the number of persons meeting a set poverty level may increase the number of persons eligible for Medicaid. “Intensity” measures the amount of product or service provided per
person, thereby eliminating the influence of population growth on the total number of prescriptions. Intensity may contribute to changes in expenditures because of changes in the need for medications (either more or less illness); changes in prescribing patterns among physicians; changes in drug benefit design (such as copayments) or scope of coverage (such as open or closed formulary); or changes in other factors.

“Inflation” can occur for a number of reasons, including retail prescription price inflation, manufacturer drug product price inflation, and pharmacists’ professional fee inflation. The average price per prescription may also increase as new or improved drug products are introduced into the market as substitutes for older, lower-priced products.

Finally, the total expenditures for a given drug program may be affected by the administrative costs of the program. Because of their high number volume and low dollar value, prescription claims are perhaps the most expensive type of third-party claim to process and administer in proportion to the total dollar value of the benefit delivered. Pharmacy claims accounted for about 57 percent of the number of claims submitted to a state Medicaid program, but only 7 percent of the dollar volume of claims paid. More than ninety-two pharmacy claims were needed in 1984 to collect $1,000 versus only 1.5 nursing home claims or 2.7 hospital claims.

### Medicaid Drug Expenditures

Medicaid’s national drug expenditures in fiscal year 1988 were $3.29 billion, an increase of 9.7 percent over 1987 (Exhibit 4). Between 1982 and 1988, Medicaid drug spending more than doubled (105.6 percent). Factors affecting this growth in drug spending include population, intensity, and inflation. Regarding population, approximately two-thirds of Medicaid beneficiaries (15.3 million) received drug benefits in 1988. From 1982 to 1988, the number of total Medicaid recipients increased 12.3 percent, and the number of Medicaid drug recipients increased 11.7 percent.

Intensity effects increased by 12.5 percent for Medicaid during 1982–1988. Total Medicaid recipients averaged 9.6 prescriptions per person per year in fiscal year 1988, compared to 7.0 prescriptions per year for the average U.S. civilian. Increased health care need based on the lower socioeconomic status of Medicaid recipients is not surprising but may deserve further examination.

Inflation effects (cost per prescription) may include changes in manufacturers’ drug product price, in pharmacists’ professional fee, and in the general economy’s inflation rate. The average Medicaid prescription
charge in 1982 was $9.17 and grew to $14.93 by 1988, a six-year increase of 62.8 percent. In contrast, the average retail prescription price in 1988 was $15.19, up 67.5 percent from 1982.

Inflation in the price per prescription appears to be the major force contributing to increased expenditures in the Medicaid drug program. When broken down to its components, the inflation factor showed that expenditures per prescription for the drug product increased 86.5 percent, and pharmacists' professional fees increased 15.1 percent. In comparison, general inflation (the CPI—all items) over the same period showed an increase of 26.9 percent. The cost of the drug product component increased more than three times as much as general inflation between 1982 and 1988. Pharmacists' professional fees under Medicaid increased at nearly one-half the rate of change in the overall CPI and at less than one-fifth the rate of change in manufacturers' drug product prices. Exhibit 5 shows the prescription price components of Medicaid.
Medicaid Drug Reimbursement Policies

The differential growth of drug product costs and dispensing fees is not surprising when one examines Medicaid drug reimbursement policies. Pharmacy reimbursement is established by the state Medicaid agency and must be accepted by a pharmacy as a condition of participation in the program. In most states, pharmacy reimbursement is a single flat fee per prescription dispensed. State Medicaid programs frequently freeze dispensing fees for three to five years at a time, and in some cases such fees have remained frozen for as long as ten years. The average fee paid by Medicaid to participating pharmacies grew from $3.04 in 1982 to $3.50 in 1988. Medicaid agencies have limited dispensing fees to an average annual growth rate of 2.4 percent (1982 to 1988), which is far below the average rate of growth in the general economy (CPI—all items, 3.8 percent).

Reimbursement for the drug product component of a prescription is also paid to the pharmacy rather than to the manufacturer. Payment for the drug product component of Medicaid prescriptions usually differs
for single-source (patent-protected) products and multiple-source (generically available) products. The amount the pharmacy is paid for single-source products is typically based on the list price established by the manufacturer. This list price is not negotiated with the manufacturer, and, if it is limited, the limit is on pharmacy reimbursement and not manufacturers’ revenue. The amount the pharmacy is reimbursed for multiple-source products in most states is determined by an upper limit established by the Medicaid program. If the pharmacist should happen to use a manufacturer’s product that costs more than the upper limit, the pharmacy reimbursement will be reduced; however, this limited reimbursement does not affect what the pharmacist has already paid the manufacturer for the drug product. In other words, there are no limits on single-source drug product prices, and the limits on multiple-source drug product prices affect the pharmacy and not the drug manufacturer. In the absence of measures to moderate or limit drug product price increases at the manufacturer level, the drug product component of the average Medicaid prescription has grown from $6.13 in 1982 to $11.43 in 1988. This amounts to an average annual growth rate of 11.1 percent. Given the Medicaid drug reimbursement policies and actual expenditure patterns, it is hard to argue that dispensing fees are to blame for the doubling of Medicaid drug program expenditures over the past six years.

Faced with limited budgets for Medicaid, state Medicaid administrators and public policy decisionmakers have been looking for ways to reduce or control program outlays. Since prescription drug expenditures have been one of the fastest-growing components of the Medicaid budget, reducing drug program expenditures has been a high priority for state Medicaid programs in recent years. Comparison of prices paid by Medicaid with prices paid by other purchasers for similar drugs reveals that Medicaid usually pays the highest price in the market, despite the fact that state Medicaid programs pay for 12 to 20 percent of all retail prescriptions in their respective states.

Directions For Public Policy

There are limited resources to pay for entitlement programs, which are growing faster than the revenue bases that support them. This will require increased competition among health care providers and increased scrutiny of health care utilization and costs by program managers. Leveling off the rate of inflation in all sectors of the health care market is a far more critical issue than onetime or notch savings in the level of health expenditures. Prescription drug product prices have been singled out for scrutiny because of their strong inflation rate over the past decade.
Growth in drug expenditures has brought retail and manufacturer pricing practices to the forefront of the public policy agenda. Prescription drug programs, however, will not escape the growing pressure for cost management that has already been imposed upon hospital and physician payment systems.

Accurate identification of the underlying causes of drug expenditure growth are necessary and will require federal research support targeted toward cost management of effective drug therapy. The problems identified will require targeted legislative and regulatory proposals aimed squarely at the root problem and not the symptom. For example, manufacturers’ drug product price inflation cannot be managed through pharmacy reimbursement policies because the pharmacist has little control over manufacturers’ prices. The primary driving force for drug program expenditure growth appears to be inflation in the cost of the drug product component of a prescription and will require solutions aimed at the factors influencing drug product cost. Increases in drug prices by a manufacturer may occur for a variety of reasons, including inflation in the cost of production and raw materials, growth of research and development costs, expansion of the sales force, and increased marketing and advertising expenditures. Also, the drug product component of the prescription price may increase because of growth in the use of newer, higher-cost products versus older, lower-cost products. A careful assessment of the underlying factors contributing to growth in the drug product cost component of the prescription price is necessary so that solutions that may be imposed do not unduly restrain innovation in the pharmaceutical industry.

Several proposals have been made for addressing manufacturers’ drug product prices under state Medicaid programs, including Sen. David Pryor’s (D-AR) Pharmaceuticals Access and Prudent Purchasing Act (PAPPA), an Office of Management and Budget (OMB) proposal, and plans prepared by several pharmaceutical manufacturers. All of these proposals offer some type of rebate to the state Medicaid agency as a means for decreasing expenditures on prescription drugs. In most cases, the rebate is based on the lowest or “best” price to any customer. Rebates will provide a onetime notch in expenditure growth and may prolong by one year (from six years to seven years) the time needed for Medicaid drug program expenditures to double again. However, a simple rebate system will not slow the rate of drug expenditure growth after the first year’s savings have been realized. Any meaningful effort at reducing drug program expenditures under Medicaid, or any other drug program, should involve measures that influence the rate of growth and not just the level of expenditures.
In addition, third-party programs should assure that the limited resources available are used efficiently to improve the health of covered patients. For example, expenditures on necessary drug therapy may be able to reduce spending for other, more costly health care services such as physician office visits, emergency room visits, or hospital admissions. Management of program expenditures should focus not only on the cost of inputs (such as manufacturer rebate programs for lowering drug prices), but also on the cost of achieving desired patient outcomes. Third-party programs must begin to evaluate drug expenditures in the context of their contribution to the total cost per health care outcome.

NOTES

5. Siegelman and Feierman, “Annual Pharmacy Business Survey.”
7. Lilly Digest 1989 (Indianapolis: Eli Lilly and Company, 1989), and previous editions of this series of reports.
11. Ibid.
17. W. Mincy, president, the Linco Group, statement before the Special Committee on
Aging, United States Senate, 18 July 1989.
19. S.W. Schondelmeyer, unpublished projections based on historical data and observed changes in the retail prescription market.
22. Ibid.
24. S.W. Schondelmeyer, projections based on civilian population data from Department of Commerce, *Statistical Abstract of the United States*, 1990, Table 2; and estimates of the number of prescriptions from Siegelman and Feierman, “Annual Pharmacy Business Survey.”
25. Schondelmeyer, “Pharmacy Compensation and Reimbursement.”