

## Prescription Drugs: Recent Trends in Utilization, Expenditures, and Coverage

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- Prescription drug costs, which rose by 15.7 percent in 2001, are the fastest rising component of medical expenditures and accounted for 16.7 percent of the total increase in health care spending that year. Americans spent more than \$140 billion on prescription drugs in 2001—or about 10 percent of the nation's health bill, approximately the same level noted in 1960.
- Nearly half of the nation's prescription bill (47.4 percent) was paid by private insurance. Individuals paid slightly more than 30 percent out-of-pocket. This is a reversal of the pattern in the early 1990s, when out-of-pocket payments were substantially greater than insurance reimbursement. The segment of the bill paid by government programs has remained stable over time.
- More than three in five Americans fill at least one prescription annually. While the segment of the population not filling any prescriptions has remained largely constant, those who do take pills are filling more prescriptions. More than half of those older than 75 filled more than 15 prescriptions (including refills) annually. Adult prescription drug use is inversely correlated with income.
- Most of the drug bill increase reflects increased consumption. The cost per pill is increasing at a much more modest rate. However, the impact of price increases on the increasing expenditures for prescription drugs has grown since 1996, when it accounted for 15.8 percent of the increase. In 2002, price increases were responsible for 29 percent of the total increase in prescription drug expenditures.
- Drug costs interact with other medical cost components. Greater drug utilization may decrease hospital and other medical bills. Conversely, restrictions on drug utilization could lead to greater costs elsewhere. There is some evidence that newer drugs may be better than older drugs at preventing other health care costs.
- Roughly half the prescriptions filled annually are for generic drugs. Such substitutes tend to enter the market priced at 70–80 percent of the relevant brand-name drug, with such prices falling to 40 percent or less as the market becomes more competitive. Many health plans actively encourage (or even require) the use of generic drugs.
- Ninety-nine percent of employees covered by employment-based health insurance have prescription drug coverage, and more than 6 in 10 are in three-tier drug benefit plans. Employers and health plans are using tiered benefit structures and other means to encourage price sensitivity among their members and influence drug utilization.
- On Dec. 8, 2003, the president signed into law the Medicare Prescription Drug, Improvement, and Modernization Act of 2003 (P.L. 108-173), which creates a voluntary prescription drug benefit for Medicare beneficiaries to begin in 2006. Retirees and policymakers are concerned that a drug benefit under Medicare may cause employers to drop retiree drug coverage, and the legislation includes an employer subsidy to encourage them to continue to provide it.

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The author wishes to acknowledge the helpful comments of Craig Copeland, Steve Findlay, Dan Fox, Bob Fraser, Paul Fronstin, Mark Gibson, Roland McDevitt, Dana Noble, Greg Portner, Dallas Salisbury, Martin Sepulveda, Miles Snowden, Bruce Taylor, Kimberly Westrich, and Kelly Willis. All errors and other issues with the paper remain the responsibility of the author.

## ***Introduction***

Health care expenditures in the United States totaled \$1.42 trillion in 2001, up from \$26.9 billion in 1960 (or \$133 billion in 2001 dollars).<sup>1</sup> This 2001 amount was nearly 11 times what was spent on health care in 1960, when national health expenditures accounted for 5.1 percent of gross domestic product (GDP); in 2001, they accounted for 14.1 percent of the GDP.

About 10 percent of those expenditures in 2001, more than \$140 billion, was spent on prescription drugs. Much attention has been given to the role prescription drugs play in the increase in health care expenditures: Prescription drugs account for a growing share of total expenditures and have grown at a faster rate than other health care sectors for many years, although their rate of growth has slowed. According to the latest national health expenditure figures, prescription drug expenditures experienced a growth rate of 15.7 percent between 2000 and 2001, compared with 8.7 percent for overall health care expenditure growth.

Prescription drugs are an integral tool in today's medical care. As the population ages and the average lifespan lengthens, and as the prevalence of chronic illness rises, many Americans are using more prescription drugs than in the past, including both new and previously available medicines. Personal drug expenses are increasing, and private health insurance is covering more of the expenditures than in previous years. Health plan sponsors, including employers and states, are looking for the best ways (and using various tools) to both control their prescription drug expenditures and enhance the quality of their prescription drug benefits.

This *Issue Brief* provides an examination of the utilization of and expenditures on prescription drugs; the growth of these expenditures; and the sources of that growth. Considerable discussion is devoted to factors that influence the rate of growth in prescription drug expenditures. In addition, trends in prescription drug benefit plans (among both private and public sponsors) and efforts to control spending on drugs are discussed. These include tiered benefit structures, increased use of generic drugs, evidence-based drug effectiveness reviews, and prescription drug importation, among others.

## ***Personal Prescription Drug Utilization and Expenses***

In 2000, 62.3 percent of Americans purchased or obtained at least one prescription drug, about the same as in 1997 (62.1 percent) (Figure 1, pg. 22). In general, older Americans, females, whites, those in fair or poor health, and those with health insurance were much more likely to have used prescription drugs (Figure 2, pg. 23). Among adults, the likelihood of using prescription drugs increases steadily with age, and more than half of those age 75 and over used 15 or more prescription drugs (including refills) in 2000.<sup>2</sup> It is interesting to note that adults with personal income less than \$15,000 per year were the *most* likely to use prescription drugs in 2000, while those with income of \$75,000 or more were the *least* likely to use them. Since health status is correlated with income, it is reasonable that those with the lowest personal income were the most likely to have used prescription drugs, as they may have more need for medicines. However, when children are included and the data are viewed by poverty status, Americans whose family income was below the federal poverty level were the least likely to have used a prescription drug, and their median prescription drug expenditures were the lowest as well.

Americans under age 65 with no health insurance coverage were much less likely than those with coverage to use prescription drugs (37.6 percent of the uninsured versus 61.7 percent of those with private insurance and 62.1 percent of those with public coverage) (Figure 2). They also had the lowest average total drug expenditures but the highest out-of-pocket expenditures among the under-

65 age group. Among those age 65 and over, those with Medicare and other public coverage, such as Medicaid, were most likely to have used prescription drugs in 2000, to have used 15 or more prescriptions (including refills), and had the highest average spending. However, those with only Medicare coverage had the highest average out-of-pocket spending on prescription drugs.

Intensity of use, or number of prescription drugs used per person (including refills), appears to be increasing over time (Figure 1). Between 1997 and 2000, Americans became more likely to purchase or obtain 15 or more prescription medicines per year (14.1 percent in 1997, 16.1 percent in 2000). However, the likelihood that a person purchased or obtained no medicines remained largely the same (37.9 percent in 1997, 37.8 percent in 2000). The likelihood that a person took one to two or three to five medicines decreased over the same time period, and the likelihood that a person obtained six to 14 medicines increased, from 14.3 percent in 1997 to 15 percent in 2000.

### ***National Prescription Drug Expenditures***

National annual health expenditures increased from \$26.9 billion in 1960 (\$133 billion in 2001 dollars) to \$1.42 trillion in 2001 (Figure 3, pg. 24). Over the same time period, prescription drug expenditures increased from \$2.7 billion (\$13.4 billion in 2001 dollars) to \$140.6 billion. In comparison, hospital expenditures increased from \$9.3 billion in 1960 (\$46 billion in 2001 dollars) to \$451.2 billion in 2001, physician expenditures went from \$5.3 billion (\$26.2 billion in 2001 dollars) to \$313.6 billion, and nursing home expenditures increased from \$0.8 billion (\$4 billion in 2001 dollars) to \$98.9 billion during the period.

In 1960, 34.6 percent of national health expenditures were for hospital care, 19.7 percent went to physician services, 3 percent was spent on nursing home care, and 10 percent went to prescription drugs (Figure 4, pg. 25). In comparison, in 2001, 31.7 percent of total health care expenditures were for hospital care, 22 percent were for physician services, 6.9 percent went to nursing home care, and 9.9 percent was spent on prescription drugs (Figure 4).

In 2001, the percentage of national health expenditures spent on prescription drugs reached the level it had been in 1960, after a decrease between 1960 and 1980 and a subsequent rise. This decline in the percentage of national health expenditures going to prescription drugs was mainly due to the tremendous growth in hospital and physician payments after the introduction of Medicare and Medicaid in 1965. That growth continued until the mid-1990s, when the expansion of managed care plans reduced the growth rate of hospital and physician costs (Copeland, 1999).

In 2001, prescription drug expenditures represented 9.9 percent of total health care spending, up from 9.3 percent in 2000 and 8.6 percent in 1999. Prescription drug expenditures have grown at double-digit rates every year since 1980, with the exception of 1993 and 1994. Prescription drug expenditures increased 15.7 percent in 2001, compared with an 8.7 percent increase for health expenditures in general (Figure 5, pg. 26). This growth rate for prescription drug spending had decreased from 19.7 percent in 1999 and 16.4 percent in 2000. Even so, prescription drugs showed the fastest growth among the various sectors in 2001.

As mentioned above, spending continues to increase, but growth in prescription drug expenditures has slowed, and continued deceleration in growth rates for prescription drug expenditures is expected (Heffler et al., 2003). A rate of 14.3 percent is projected for 2002, and a rate of 9.2 percent is expected to be reached by 2012. Even with a slowed growth rate, however, drug spending growth is expected to outpace total health spending growth over the next decade. An average annual growth rate of 11.1 percent is expected for prescription drugs, while total health spending is expected to grow at 7.3 percent per year. By 2012, prescription drug expenditures are expected to account for 14.5 percent of total health expenditures, up from 9.9 percent in 2001, and to amount to \$445.9 billion that year.

## Sources of Prescription Drug Expenditures

Of the \$140.6 billion spent on prescription drugs in 2001, nearly half was paid for by private health insurance (47.4 percent, or \$66.6 billion). In comparison, private out-of-pocket payments accounted for 30.7 percent, Medicaid paid for 17.2 percent, Medicare paid for 1.7 percent, and other public plans covered 3 percent of prescription drug expenditures in 2001 (Figure 6, pg. 27).<sup>3</sup>

Private fund payments<sup>4</sup> for prescription drugs increased from \$43.8 billion in 1994 to \$109.7 billion in 2001. The two private-fund sources of payments for prescription drugs (out-of-pocket payments and private health insurance payments) both have experienced higher spending levels. Out-of-pocket payments for prescription drugs increased from \$26.3 billion in 1994 to \$43.1 billion in 2001, and private health insurance payments increased from \$17.5 billion to \$66.6 billion over the same time period (Figure 7, pg. 28). The percentage of all private payments for prescription drugs increased from 8.6 percent to 14.1 percent during this time frame.

While prescription drug expenditures accounted for just 5.8 percent of national health expenditures in 1994, they accounted for 9.9 percent of total expenditures in 2001. Similarly, the percentage of both out-of-pocket payments and private health insurance payments that go toward prescription drugs increased between 1996 and 2001 (Figure 7). The percentage of out-of-pocket payments accounted for by prescription drugs went from 17.4 percent to 21 percent over the period, and the percentage of private health insurance payments going to prescription drugs increased from 7.8 percent to 13.4 percent. While both increased, however, the percentage of private health insurance payments that went to prescription drugs increased at a faster rate than the percentage of out-of-pocket payments going to prescription drugs. The percentage of out-of-pocket payments that went for prescription drugs increased 20.7 percent, while the proportion of private insurance payments going to prescription drugs increased 71.8 percent between 1996 and 2001.

Furthermore, in 1994, 80.2 percent of all prescription drug expenditures were made with private funds, while 19.8 percent were made with public funds (Figure 7). These proportions have remained relatively constant; in 2001, 78 percent of prescription drug expenditures were made with private funds, and 21.9 percent were made with public funds. However, the proportions among the different private expenditure categories have shifted. In 1994, 60 percent of private funds going toward prescription drugs were out-of-pocket expenditures, and 40 percent of private expenditures on prescription drugs were from private health insurance. In contrast, in 2001, 39.3 percent of private prescription drug expenditures were out-of-pocket, while 60.7 percent were from private health insurance.

In terms of percentage growth, all private fund health payments increased 8.5 percent in 2001 (Figure 8, pg. 29). Private fund payments for prescription drugs grew 15.7 percent, the same as the overall growth rate for prescription drug expenditures. However, private insurance payments for prescription drugs increased 17.5 percent in 2001, the lowest growth rate since at least 1995. This growth in prescription drug expenditures compares with 10.5 percent overall growth in private insurance payments in 2001. In fact, the growth in prescription drug payments accounted for 21 percent of the growth in private health insurance payments and 24.3 percent of the growth in all private fund payments in 2001. Consequently, prescription drug expenditures are a significant factor in the increased payments from private sources, but their role in the growth has diminished since 1997, when 33.5 percent of the increased private health insurance payments could be explained by prescription drugs. While prescription drugs' contribution to growth in private health insurance growth has decreased, their contribution to growth in out-of-pocket payments has increased.

Prescription drug expenditures were responsible for 16.7 percent of the total increase in health care spending in 2001 (Figure 8). While still a relatively small proportion of the health care dollar in comparison with hospital and physician payments, prescription drug costs have been one of the fastest growing segments for several years and contribute more than their share toward the growth of national health expenditures.

## **Contributors to Expenditure Growth**

The prescription drug inflation rate has been greater than the overall medical inflation rate since 1998 (Figure 9, pg. 30). Since that year, prescription drugs have shown a higher inflation rate than physician services, but hospital services inflation has outpaced both in several years, most recently in 2000, 2001, and 2002.

Different factors contribute to the growth in prescription drug expenditures, including price increases for previously available products and increased product volume (more purchases of both previously available and new drugs). It is important to assess the relative impact of each factor on the total growth in expenditures. Price increases have grown from less than 2 percent annually prior to 1997 to nearly 5 percent in 2002 (Figure 9). The impact of price increases on the increasing expenditures for prescription drugs has grown since 1996, when it accounted for 15.8 percent of the increase. In 2002, price increases were responsible for 29 percent of the total increase in prescription drug expenditures. While price inflation accounts for more of the increase over time, the overwhelming majority of the cost growth in prescription drugs continues to be due to increased utilization of products.

## **Discussion of Factors Affecting Expenditure Growth**

Several factors contribute to increasing expenditures on prescription drugs, including new drugs coming onto the market, new formulations of current drugs, the incidence and prevalence of chronic illnesses, the potential for drugs to substitute for other types of medical care, and marketing efforts by drug manufacturers. Meanwhile, other factors may be serving to slow the increase from that seen in previous years. These include expiring patents on brand-name products (leading to generic competition), drugs moving to over-the-counter status, fewer new drugs being approved, and health plan sponsors implementing various plan design innovations to encourage use of generics, control utilization, and slow drug spending.

As noted above, the overwhelming majority of the growth in prescription drug payments is due to the increased volume of drugs being consumed. In addition to more of previously available drugs being prescribed and consumed, this also includes new drugs, although fewer new drugs have been introduced recently than in previous years. In 2002, only 17 new drugs and nine new biologics were approved by the Food and Drug Administration (FDA), the fewest new drugs approved since 1983. The introduction of new prescription drugs contributes to expenditures in various ways. New drugs have patent protection, so they can be priced without competition to regulate the prices. Many older drugs have lost their patent protection and now have generic competition, which limits their prices and their contribution to health expenditures. Another aspect of this are so-called “me too” drugs, which are those that vary slightly in composition from another brand-name drug but may result in very little clinical change or significance. “Me too” drugs allow the manufacturer to acquire patents on the new formulations and charge higher prices as brand-name drugs.

Prescription drug expenditures also are rising due to the prevalence of chronic illnesses among Americans, such as diabetes, asthma, and arthritis. Chronic illnesses are more likely to be diagnosed and treated than in the past, and much of the treatment for chronic illnesses includes drug therapy. In addition, existing patients may receive more prescriptions than in the past. Much of the growth in prescription drug expenditures for diabetes and asthma patients resulted from increased intensity of treatment per patient, or more prescriptions per patient (Dubois et al., 2000). Also, drugs now exist to treat some conditions where none were available before, or newer (and often more expensive) drugs are now available for some conditions. For some diseases and some drugs, the drugs must be taken for long periods of time or even for life. These factors contribute to increased expenditures, while improving quality of life for patients with chronic illnesses. It is important to note that many chronic illnesses remain undertreated, and increased use of prescription drugs may be warranted. A recent RAND study found deficits in the quality of health care delivered to adults in the United States,

including underuse of recommended prescription drugs for several diseases and conditions (McGlynn et al., 2003).

Prescription drugs have the potential to substitute for other types of health care services, such as emergency room visits and hospitalizations, and to help alleviate the need for other more costly forms of treatment. In this case, increases in prescription drug expenditures may lead to decreases in other health care expenditures, and restrictions on access to prescription drugs may increase costs in other areas. According to Kleinke (2001), there are no aggregate studies that look at all drug use for the total population and compare it to other medical services use and costs. However, studies have found economic benefits in certain populations or for certain diseases resulting from certain drugs or drug classes. For example, studies have found that restrictions on reimbursement of prescription drugs can lead to increased institutionalization in nursing homes, increased emergency visits and hospitalizations, and increased total health care costs (Kleinke, 2001).

In addition, there is some evidence that newer drugs may be better than older drugs at preventing other health care costs. In fact, Lichtenberg (2002) found that newer prescription drugs were associated with less spending on nondrug items, such as hospital stays, for certain conditions. The study found that, in the entire population, a reduction in the age of drugs utilized reduces nondrug expenditures 7.2 times as much as it increases drug expenditures. Most of the expenditure reductions are due to reductions in hospital and physician office visit expenditures. The Medicare population also was analyzed separately, and the study found that a reduction in the age of drugs utilized reduces nondrug expenditures by all payers 8.3 times as much as it increases drug expenditures and reduces Medicare non-drug expenditures six times as much as it increases drug expenditures. Furthermore, Medicare beneficiaries with private prescription drug coverage use newer drugs than Medicare beneficiaries without public or private prescription drug coverage. The study also found that people consuming new drugs were significantly less likely to die by the end of the survey than people consuming older drugs. In previous research, Lichtenberg (2001) found that people taking newer drugs were significantly less likely to miss work due to their conditions than were people taking older drugs.

The promotion of prescription drugs has received much attention as a driver of the increase in prescription drug expenditures. Prescription drug manufacturers market their products directly to consumers through advertisements on television, in magazines, on the Internet, and through various other means, and they market their products to physicians by sending sales representatives to their offices, providing free samples for distribution to patients, and advertising in professional journals. Direct-to-consumer (DTC) advertising has increased markedly, and spending on DTC advertising more than doubled, since 1997 when FDA issued draft guidance on how regulations applied to television and radio ads for prescription drugs (Weissman et al., 2003).

While pharmaceutical manufacturers spend more than 10 times more of their budgets on research and development than they do on marketing activities, spending on DTC advertising has grown more rapidly than spending on research and development. The U.S. General Accounting Office reports data from IMS Health showing that, in 2001, 55 percent of the \$19.1 billion total spending on pharmaceutical promotional activities was spent on providing free samples to physicians (which arguably is a financial benefit to those patients who receive the free drugs), 29 percent was spent on detailing (in-person visits by drug company representatives to office-based and hospital-based physicians), 14 percent (or \$2.7 billion) was spent on DTC advertising, and 2 percent went to advertising in professional journals (Figure 10, pg. 31) (U.S. General Accounting Office, 2002).

DTC advertising appears to increase prescription drug utilization and expenditure (U.S. General Accounting Office, 2002). Sales for heavily advertised drugs have grown more quickly than have sales for drugs that are not heavily advertised to consumers. Between 1999 and 2000, the number of prescriptions dispensed for the most heavily advertised drugs rose 25 percent, while the number for drugs not heavily advertised rose only 4 percent. Prices, however, rose more slowly for the most heavily advertised drugs than for other drugs (6 percent versus 9 percent). In addition to the impact

of DTC advertising, however, other factors may have served to increase utilization of these drugs as well, such as their indications for chronic illnesses (and related long-term demand) and simultaneous promotion to physicians.

Overall, about 5 percent of American consumers have both requested and received a prescription for a particular drug due to DTC advertising (U.S. General Accounting Office, 2002). Critics claim that the promotion of prescription drugs may lead to inappropriate requests for new and expensive drugs, and inappropriate prescribing of those drugs. They also voice the concern that DTC advertising interferes with the doctor-patient relationship. Supporters, on the other hand, focus on the educational aspects of the marketing tools and how advertisements may encourage patients to talk to their doctors and get needed treatments. A survey by Weissman et al. (2003) found that about 35 percent of respondents reported having a discussion about an advertised drug or a health concern in a visit to a physician as a result of DTC advertising. About half had previously been diagnosed with the condition discussed during the visit, while nearly one-fourth received new diagnoses during the visit. About 43 percent of the new diagnoses were “high priority” conditions, according to criteria set by the Agency for Healthcare Research and Quality and the Institute of Medicine, and many respondents received treatments, whether the advertised drug or another treatment, as a result of the visit.

When patents on prescription drugs expire, generic versions of the drugs may enter the market and compete for market share. These generic substitutes typically enter the market at 70 to 80 percent of the brand-name price, and prices fall to 40 percent or less of the brand-name price as more generic versions enter the market. About one-half of prescriptions filled in the U.S. are now generic. Use of generic drugs in place of brand-name drugs contributes to significant savings for consumers and plan sponsors. In light of the possible cost savings, many plan sponsors actively encourage (or even require) the use of generic drugs. Most plans charge higher copayments for brand-name drugs than for generic drugs, and many utilize generic substitution requirements. Some, including Anthem and several insurers in California, have instituted limited-time “zero-copays” for generics or one-time discounts of as much as \$10 on the cost of copayments for generic drugs. Also, some health plans and plan sponsors have begun “counter-detailing” efforts, in which representatives educate physicians and pharmacists about generic alternatives to brand-name medications. Over the next five years, patents will expire on drugs that represented 16.8 percent of U.S. prescription drug sales in 2002 (Express Scripts, 2003). The introduction of generic versions of these drugs and the subsequent reduction in prices and expenditures could be significant.

Another factor which may serve to slow spending on prescription drugs is the movement of certain drugs to over-the-counter (OTC) status. For example, prescription-strength Claritin, a non-sedating antihistamine, became legal to sell OTC in December 2002. In response, some plan sponsors have dropped coverage for similar products, such as Allegra, Zyrtec, and Clarinex, or have begun charging higher copayments for those products, to reduce costs by encouraging members to use the OTC product. While expenditures may be reduced for plan sponsors, however, consumers taking the drugs may see increased costs if they are required to pay the full cost of the OTC drug, when they previously paid only a part of the cost of the prescription drug.<sup>5</sup> Plans also have encouraged use of the OTC products by mailing coupons to members who have a history of a condition that indicates need for the product. More movement from prescription to OTC status is predicted as drugs lose patent protection and manufacturers, plan sponsors, third-party payers, and the FDA create pressure for these changes (Tufts Center for the Study of Drug Development, 2003).

### ***Employment-Based Coverage***

Prescription drug coverage is a standard component of the vast majority of employment-based health plans. In 2003, 99 percent of employees with employment-based health coverage were covered for prescription drugs (Gabel et al., 2003). Employer costs for prescription drug benefits



have increased significantly for the past several years. Among large employers, costs rose 16.1 percent in 2003, compared with increases of 16.9 percent in 2002, 17.8 percent in 2001, and 18.3 percent in 2000 (Mercer Human Resource Consulting, 2003a; Mercer Human Resource Consulting, 2003b).

As was discussed above, growth in private insurance payments for prescription drugs has outpaced the growth in out-of-pocket payments for drugs. In 2001, private health insurance paid \$66.6 billion for prescription drugs, while consumers paid \$43.1 billion out-of-pocket. In an effort to combat the increasing costs of their drug benefits, employers over the past few years have made a variety of changes to their prescription drug benefit plans. Some of these cost control strategies include formularies (lists of covered drugs), cost sharing (tiered benefit structures, copayments, coinsurance, and deductibles), generic substitution requirements, and coverage of over-the-counter products. Many of the efforts put more of the responsibility for drug expenses on employees and give them more cost-sharing decisions. In addition to employers that already have implemented changes, 57 percent of large employers say they are very or somewhat likely to increase employee cost-sharing for prescription drugs next year (Gabel et al., 2003).

Employers and health plans also have used additional utilization management techniques, such as concurrent drug utilization review (DUR) and retrospective DUR, prior authorization, therapeutic substitution, disease management, and step therapy.<sup>6</sup> In general, use of these techniques has increased slightly over the past several years (Takeda/PBMI, 2003). Other utilization management techniques implemented by employers and health plans have included half-tablet programs, quantity limits, duration limits, and high-utilization user programs.

Employers and health plans that implement a range of drug benefit management techniques and increased employee cost sharing may be able to significantly limit the increases in their prescription drug costs. According to AdvancePCS, a large pharmacy benefit manager (PBM), employers that have incorporated AdvancePCS' Performance Drug List with three-tier copayments, mail-order service, generic incentive programs, managed drug limitations, prior authorization, drug utilization review, and physician education saw their costs increase only 4.5 percent in 2001 (AdvancePCS, 2002).

Many drug plans now have mail-order prescription drug fulfillment available. Often mail order is less expensive for the plan, as it takes advantage of bulk volume purchasing discounts and other arrangements between the mail order pharmacy and drug manufacturers. Also, mail order avoids the additional retail pharmacy fill fee for each prescription, a typical PBM arrangement with retail pharmacy chains. In 2002, about 9 in 10 large firms offered a mail-order option (Hewitt Associates, 2002). Initially, mail-order copayments were set at low levels relative to retail copayments in order to encourage use of mail order. However, copayments for mail order have increased more rapidly than those for retail in recent years. Many employers found that the low mail-order copayments caused some prescriptions to be more expensive to fill by mail than through retail, so efforts have been made to structure the copayments more appropriately (Takeda/PBMI, 2003). Surveys show a high level of satisfaction with mail-order drug fulfillment.

The use of formularies to guide choices of prescription drugs has increased among employers and health plans. In 2003, 71 percent of covered workers were in a plan using a formulary, which specifies which drugs will be covered, statistically unchanged from 70 percent in 2002, and up from 60 percent in 2001 and 43 percent in 2000 (Kaiser/HRET, 2003). There are different types of formularies, the most common being the managed or incentive-based formulary, in which the use of preferred drugs is encouraged with financial incentives. The use of incentive-based formularies is increasing over time. The use of both closed and open formularies has decreased, as the use of tiered benefit structures has increased.

A closed formulary is one that contains a list of drugs that are approved for coverage under the plan. Other drugs are covered on an exception-only basis. Only 2 percent of employers used closed formularies in 2002, down from 8 percent in 1999 (Takeda/PBMI, 2002; Takeda/PBMI, 2003).

Closed formularies remain in managed care plans, but are largely extinct in employer-managed prescription drug benefits. In general, fewer employers are excluding coverage for certain drugs from their benefit plans. Three-tier drug benefit plans and prior authorization strategies make it less necessary to exclude drugs. An open formulary is one in which all FDA-approved drugs are included. Thirty-five percent of employers used open formularies in 2002, down from 67 percent in 1999. The incentive-based formulary is growing in popularity; use of this type grew from 25 percent of employers in 1999 to 63 percent in 2002 (Takeda/PBMI, 2003). In an incentive-based formulary, the use of preferred drugs is encouraged by financial incentives, often within a tiered benefit structure. Often a list of nonpreferred drugs is created, and a higher copayment level is assigned to these drugs.

Employers and health plans are encouraging the use of generic drugs and preferred brand-name drugs through their formularies in combination with tiered benefit structures. In tiered benefit structures, prescription drugs are divided into categories, or tiers, and copayment or coinsurance amounts are set for the different tiers: The lowest amount for the first tier, which usually includes generic drugs and higher amounts for each successive tier. These tiered structures provide a financial incentive for employees to use generic or preferred brand-name drugs in order to pay less out-of-pocket. The use of three-tier structures is increasing; 63 percent of covered workers were in three-tier plans in 2003, up from 27 percent in 2000, while at the same time, two-tier structures declined from 49 percent to 23 percent of covered workers (Figure 11, pg. 32). Only 13 percent of employment-based plans charge the member the same amount regardless of the type of drug (Kaiser/HRET, 2003).

The use of four-tier drug benefit structures may be becoming more prevalent. The use of four-tier structures was reported by several large employers in 2002 (Takeda/PBMI, 2003). Most often, these plans include a higher fourth tier, for which the copayment is equal to the entire cost of the drug, but the member is entitled to the discounted price negotiated by the plan sponsor, insurer, or PBM (Takeda/PBMI, 2002). Common plan designs for various tiered benefit structures are shown in Figure 12 (pg. 33).

Copayment amounts are another area where employers and health plans can influence utilization and expenditures to reduce their costs. Copayment amounts have increased in all mail-order and retail categories. For example, for a nonpreferred drug (such as a brand-name drug when a generic is available), the average copayment amount was \$29 in 2003, up from \$25 in 2002 and \$17 in 2000. Much smaller increases are seen for first-tier drugs. Average copayment amounts for first-tier drugs increased to just over \$9 in 2003 from just under \$9 in 2002, up from just over \$7 in 2000<sup>7</sup> (Kaiser/HRET, 2003) (Figure 13, pg. 34). Often the first-tier copayment level is kept intentionally low to encourage members to use generic drugs (Takeda/PBMI, 2002).

Most prescription drug plan cost-sharing is achieved through copayments. However, some plan sponsors and health plans use coinsurance, intended to increase patient sensitivity to the price of drugs by charging a proportion of the total cost rather than a fixed dollar amount. Interest in using coinsurance for prescription drugs is increasing, but it is still rather rare. In 2003, for generic drugs, 86 percent of covered employees had copayments, while only 9 percent had coinsurance, 2 percent had both, and 2 percent had neither. For preferred drugs, 88 percent of covered employees had copayments, 7 percent had coinsurance, 3 percent had both, and 2 percent had neither. For nonpreferred drugs, 86 percent had copayments, 8 percent had coinsurance, 2 percent had both, and 3 percent had neither (Kaiser/HRET, 2003). While the proportion of large employers using coinsurance remained constant at 19 percent from 2001 to 2002, interest in the strategy increased; 28 percent of employers were considering coinsurance in 2002, while in 2001, 23 percent were considering it (Hewitt Associates, 2002). Member coinsurance rates have increased since 2000, but remained relatively consistent from 2002 to 2003 for employees covered under this type of plan. Member coinsurance rates averaged 20 percent for generic drugs, 24 percent for preferred drugs, and 29 percent for nonpreferred drugs in 2003, about the same as in 2002 (Kaiser/HRET, 2003).

Another tool employers and health plans may use to increase member sensitivity to costs and to control expenditures is a drug plan deductible. Use of deductibles, however, is not too common. In 2003, only 8 percent of employees faced a separate deductible for prescription drug coverage. However, the average deductible amount has increased from \$88 in 2000 to \$161 in 2003 (Kaiser/HRET, 2003).

Also in 2002, 5 percent of large employers reported covering some over-the-counter (OTC) products, such as aspirin, ibuprofen, or smoking cessation products, for their members (Takeda/PBMI, 2003). This is a relatively new development and reflects a disease-management-oriented approach or step-therapy approach. In 2003, the Internal Revenue Service (IRS) ruled that OTC medications now qualify for reimbursement under Sec. 125 flexible spending accounts (FSAs). This also may serve to encourage use of OTC products as the first step in the treatment of an illness.

Overall, plans of all types are using various tools to manage the costs of prescription drugs for their members. The most common method is to require a higher payment for brand-name drugs when a generic is available: 87 percent of preferred provider organizations (PPOs), 81 percent of health maintenance organizations (HMOs), and 80 percent of point-of-service (POS) plans used this tactic in 2002 (Mercer Human Resource Consulting, 2003). The majority of plans also require adherence to quantity limits: 61 percent of HMOs require such limits, along with 57 percent of PPOs and 54 percent of POS plans. Forty percent or more of all types of plans also require members to pay more at nonnetwork pharmacies, to obtain authorization for certain drugs, and to pay 100 percent of the cost for lifestyle or discretionary drugs. Very few plans are using none of these cost management provisions (6 percent of HMOs and POS plans, 3 percent of PPOs) (Figure 14, pg. 35).

While employers are giving much attention to the issue of prescription drug costs and expenditures, they may be missing the larger picture of total disease management, which in many cases may include the prudent use of appropriate prescription drugs. Disease management programs focus on chronic illnesses and emphasize the prevention of acute episodes and complications of the disease (Christensen, 2002). Diseases commonly targeted by disease management include hypertension, diabetes, asthma, and depression. For those employers and health plans that are using disease management programs for certain diseases, it may be one of the only ways they are looking at prescription drug utilization in a broader, total-care context. Care must be taken to encourage continued use of drugs that prevent the need for more expensive health care services and that serve to maintain the health and productivity of employees. Employer attention to this context and strategy is increasing (Takeda/PBMI, 2003).

## **Public Coverage**

Public entities, such as municipalities, states, and the federal government, provide health care benefits to various groups. They provide health insurance coverage as employers to public-sector employees. And they provide health insurance coverage to enrollees in public programs, such as Medicare and Medicaid. For their health insurance programs that include prescription drug coverage, they have used many of the same cost-control mechanisms utilized by private employers. This section briefly discusses prescription drug coverage under Medicaid and Medicare as well as cost-control mechanisms used by public entities to attempt to rein in prescription drug expenditures.

### **Medicaid**

Medicaid, the combined federal-state health insurance program for the poor, is the largest government purchaser of prescription drugs in the United States. Although an optional benefit under federal Medicaid law, prescription drug coverage for Medicaid beneficiaries is provided by all 50 states. In 2001, combined federal-state Medicaid spending on prescription drugs totaled \$24.1 billion (Centers for Medicare & Medicaid Services, 2003). In order for a pharmaceutical company to have

its drugs reimbursed by the Medicaid program, it must pay a rebate on its products,<sup>8</sup> and it must participate in three additional governmental discount programs under the 1992 Veterans Health Care Act, including the Federal Supply Schedule (FSS), a governmentwide list of discounted products approved for federal agency procurement (Copeland, 1999).

Medicaid spending for prescription drugs increased an average of 18.8 percent per year from 2000 to 2002, compared with 11.9 percent average annual growth for total expenditures in the program (Holahan and Bruen, 2003). Just as private health insurers and employers have made efforts to control prescription drug spending in recent years, states have taken actions as well to try to control outlays for prescription drugs for Medicaid beneficiaries. Many states are facing serious budget crises, and Medicaid budgets are one area that is receiving much scrutiny.

Various tools and programs have been used by states in the effort to control Medicaid prescription drug spending, and further efforts are under consideration. In fact, in 2003, 39 states were considering changes to their programs in areas such as prior authorization, pharmacy reimbursement rates, bulk purchasing, copayments, and limitations on the number of prescriptions (National Conference of State Legislatures, 2003).

According to a report by the National Health Policy Forum (Gencarelli, 2003), between 35 and 40 states use prior authorization programs, which often are linked to the state's preferred drug list. These programs generally require prescribers to get prior approval before prescribing drugs not found on the list. Many states also are encouraging use of more generic drugs, either through mandatory substitution laws or prescriber and pharmacy education and incentives. And many states are looking at instituting or increasing copayments for Medicaid beneficiaries, within permissible limits. Other efforts include disease management, the use of PBMs to administer the benefit, changes in reimbursement formulas, purchasing pools with other states, and step therapy, which is currently used for one or more drugs in 11 states and the District of Columbia.

Florida has used a unique tactic as part of its effort to control costs. The state has entered into contracts with several pharmaceutical manufacturers (the first being Pfizer in 2001) in which the drug companies provide disease management and other services for state Medicaid beneficiaries in exchange for their drugs being included on the Medicaid preferred drug list without providing rebates to the state. According to Pfizer, its program saved the state \$15.9 million in the first seven months; the company has promised to save the state \$33 million in the first two years, and \$45 million in the next two years (Kaiser Daily Health Policy Report, 2003a). The savings realized by the programs provided by drug companies, however, may be less than the savings that could be reaped by requiring the cash rebates that are currently waived. A report by Florida's legislative Office of Program Policy Analysis and Government Accountability found that an additional \$64.2 million could be saved per year by requiring only cash rebates as opposed to allowing these other programs in exchange for placement of drugs on the preferred list (Florida, 2003). However, the analysis of the report was disputed by the state's Agency for Health Care Administration, as it did not take into account future savings that may be accrued through improvements in beneficiaries' health that may result from the programs, in comparison with the immediate rebate savings (Lundine, 2003). Florida recently renewed the contract with Pfizer for its disease management program.

A comprehensive effort to make evidence-based decisions about drug coverage, mainly in state Medicaid programs, is embodied in the Drug Effectiveness Review Project of the Center for Evidence-based Policy, headquartered in Oregon. The project uses systematic reviews of medical evidence to assess the relative effectiveness of drugs within pharmaceutical classes (e.g., comparing the effectiveness of cholesterol-lowering drugs one to the other). Purchasers then use the information to determine which drugs to include on their lists of preferred drugs. This allows purchasers to emphasize the use of drugs found to be more effective than others in the class, and where the drugs are similar in effectiveness, to concentrate on purchasing the least-costly drug in the class. Emphasis is placed on educating providers and changing drug selection and prescribing behavior to be consistent with evidence about effectiveness. Ten organizations, including several states, a large

foundation, and the Canadian Coordinating Office for Health Technology Assessment, have joined the project, and several additional membership contracts are pending (Gibson, 2003b).

The Drug Effectiveness Review Project has focused mainly on decisions made in Medicaid programs, but is transferable to most purchasers of prescription drugs. The center focuses on informing state policymakers and is funded by public and private participants sharing the costs. The project produces drug class reviews to support preferred drug lists, formularies, or disease management activities; each participant uses the evidence to draw conclusions for their particular use. The project's work, the systematic, evidence-based reviews of classes of drugs, is performed at Evidence-based Practice Centers (EPCs), designated by the Agency for Healthcare Research and Quality (AHRQ) as particularly qualified for doing health outcomes research. The work is peer-reviewed by researchers outside of the EPC performing the review. The systematic approach serves to avoid bias in the research (Gibson, 2003a).

## **Medicare**

On Dec. 8, 2003, the president signed into law the Medicare Prescription Drug, Improvement, and Modernization Act of 2003 (P.L. 108-173). This legislation will add a prescription drug benefit to Medicare, the federal health insurance program for the elderly and disabled, which currently does not include an outpatient prescription drug benefit as one of its guaranteed benefits.<sup>9</sup> Consequently, despite the fact that the elderly and disabled are the most likely to use prescription drugs, many may not have a source of coverage that provides prescription drug benefits and currently must pay out-of-pocket for any prescriptions they may need.

The Medicare prescription drug legislation establishes a voluntary prescription drug benefit for Medicare beneficiaries to begin in 2006<sup>10</sup> and is projected to cost about \$400 billion over the next 10 years. Enrollment will be encouraged (and adverse selection discouraged) by providing a limited enrollment period; if a beneficiary chooses not to enroll during this period but elects coverage at a later date, he or she will face an additional penalty. Enrollees will pay a monthly premium (of approximately \$35) and will be subject to an annual deductible of \$250. After the deductible is paid, the beneficiary will pay 25 percent of drug expenses up to \$2,250, and then will pay 100 percent of the expenses up to \$5,100, after which 95 percent of the costs will be covered by the program. Low-income enrollees will be exempt from the premium and deductible, but will pay a copayment of \$1 for generic drugs and \$3 for brand-name drugs. Prior to the initiation of the drug benefit in 2006, discount cards will be made available to beneficiaries.

The Congressional Budget Office (CBO) estimates that total expenditures for prescription drugs for the Medicare population will total roughly \$1.8 trillion over the period 2004 through 2013, more than quadruple the \$400 billion to be spent on the new Medicare drug benefit. This equals almost half of the projected Medicare outlays over the same period of \$3.9 trillion. CBO expects Medicare beneficiaries' spending for prescription drugs to increase at an average annual rate of about 9 percent over the period, even without a prescription drug benefit. Furthermore, Medicare beneficiaries' drug expenditures primarily are concentrated among a smaller subgroup of the population. In 2000, 65 percent of total drug spending by the Medicare population was accounted for by about 26 percent of enrollees who had annual prescription drug expenditures of \$2,000 or more each. The 32 percent of beneficiaries who had annual expenditures of \$500 or less each made up only about 4 percent of total expenditures (Holtz-Eakin, 2003b).

CBO analysis of the Medicare Current Beneficiary Survey (MCBS) finds that 75 percent of Medicare beneficiaries, or about 30 million individuals, had some form of insurance coverage for prescription drugs for at least part of the year in 2000 (the most recent year for which data are available), and 25 percent, or 10 million people, had no coverage. In 2000, nearly 30 percent of Medicare beneficiaries obtained drug coverage through employer-provided retiree health benefits, 16 percent were covered under the Medicaid program, 12 percent had drug coverage through individually purchased Medigap insurance policies, and the remainder (17 percent) had drug

coverage through their Medicare+Choice plan or another state or federal program (Holtz-Eakin, 2003b). Nearly 90 percent of Americans age 65 and over used at least one prescription drug in 2000 (Figure 2).

There is much concern among policymakers and retirees with prescription drug benefits from former employers that the provision of a prescription drug benefit under Medicare may cause employers to drop coverage of prescription drugs for retirees, since the Medicare benefit would be less generous on the whole than employer-provided benefits. In order to encourage employers to continue to offer coverage of retirees' prescription drug costs, the Medicare prescription drug legislation includes a subsidy of 28 percent of enrollee drug costs between \$250 and \$5,000 in annual spending. It is estimated that the subsidy will cost approximately \$86 billion over 10 years. Even with the subsidy, however, issues with its structure and generosity may cause employers to discontinue their plans.

In 2001, 11.2 percent of all private establishments in the United States offered health benefits to Medicare-eligible retirees (Agency for Healthcare Research and Quality, 2003). Because the largest firms tend to be those that offer retiree health benefits, about 30 percent of all Medicare beneficiaries were covered by employment-based health benefits in 2001 (Salisbury and Fronstin, 2003). About one-half of all large firms (those with 1,000 or more employees) offered health benefits to retirees in 2003, while 32 percent of mid-size firms (those with 200–999 employees), 20 percent of small firms (with 50–199 employees), and about 10 percent of firms with fewer than 50 employees offered retiree health benefits (Kaiser/HRET, 2003). Among large firms that offer retiree health benefits, 96 percent provide coverage for prescription drugs (Kaiser/Hewitt, 2002). The vast majority of employers with drug coverage for retirees provide unlimited drug benefits (89 percent), while 11 percent have a separate drug benefit limit. Employer prescription drug costs for retirees age 65 and older are projected to increase by about 19 percent in 2003 (Segal, 2003). Many of the same cost management strategies that are utilized in prescription drug plans for current workers are used in plans that cover retirees as well, such as formularies, tiered-copayment structures, mandatory generics when available, prior authorization, and mail order.

Generally, employers are more likely to reduce or not offer retiree health benefits for future retirees, while for current retirees (who are already receiving the benefits) they would make other changes in cost-sharing or generosity of benefits. Employer-provided drug coverage is becoming less commonly available to new retirees. Stuart et al. (2003) report that the proportion of Medicare beneficiaries ages 65 to 69 with drug coverage from an employer declined from 40 percent in 1996 to 35 percent in 2000.

CBO has reported that, under the Medicare prescription drug legislation, 2.7 million Medicare beneficiaries, or 23 percent of participants in the Medicare prescription drug program with employment-based prescription drug benefits, would no longer have those employment-based benefits. Of all Part B enrollees (including those who likely would not enroll in the Medicare program) with employment-based drug coverage, 17 percent would lose that coverage as a result of employer decisions to eliminate drug coverage for retirees, due to the Medicare prescription drug benefit (Holtz-Eakin, 2003a).<sup>11</sup> Similarly, Thorpe (2003) finds that about one-fourth of retirees with retiree drug benefits today, or approximately 2.1 million private sector retirees, would lose their coverage and instead would receive less generous Medicare prescription drug benefits. He also finds that when state government retirees are included (since the bill increases the financial incentives for states to drop coverage), the total number of retirees who would lose coverage could be as high as 2.7 million.

These estimates, however, reflect expected employer behavior over the 10-year budget estimating period, and do not take into consideration other factors that may impact employers' decisions to continue to offer prescription drug coverage. An EBRI analysis found that between 2 percent and 9 percent of current Medicare beneficiaries with employment-based retiree health benefits for prescription drug coverage would lose those benefits if Medicare provides outpatient

prescription drug coverage, solely as a result of that change in the program. Other environmental factors, such as business, accounting, and cost trends, are causing a decrease in the percentage of retirees covered by retiree health benefits, regardless of policy changes in the Medicare program (Salisbury and Fronstin, 2003). The EBRI researchers used a combination of data on employment-based benefits and polling data from private-sector employers regarding their expected actions if a Medicare drug benefit were to be enacted.

### **Related Policy Issue: Importation of Prescription Drugs**

A strategy for prescription drug cost containment that is increasingly utilized by individuals and that has attracted the attention of municipal and state governments (as well as Congress in its negotiations over the Medicare prescription drug legislation) is prescription drug importation. Some, mainly brand name, prescription drugs are less expensive in other countries than in the United States, due to economic and regulatory factors. Currently there is much interest among Americans in purchasing prescription drugs in Canada and other nations in order to pay these lower prices. Older Americans have been especially active in acquiring prescription drugs from foreign countries in order to save money, since prescription drugs currently are not covered under the traditional Medicare program. People in the United States were expected to spend about \$800 million on purchases of prescription drugs from Canada in 2003 (Kaiser, 2003b).

The federal Food, Drug and Cosmetic Act prohibits the importation of prescription drugs from other countries into the United States. However, the FDA for some time has allowed or overlooked limited quantities of prescription drugs purchased abroad by individuals for their own use. Recently, the FDA has begun to enforce the law in regard to businesses that are facilitating the purchase of drugs from Canada. The FDA cites safety as its prime concern, since foreign drugs may not comply with U.S. drug safety laws, unapproved or counterfeit drugs may be shipped to the United States, and the agency cannot guarantee the safety of imported prescription medications. In sting operations, the FDA has ordered drugs through prescription drug importers or online pharmacies and has received generic versions not approved by the FDA (but approved in Canada) or improperly stored and shipped medicines. In addition, examinations of imported prescription drugs conducted by FDA and U.S. Customs and Border Protection officials in summer 2003 found that 88 percent of the drugs did not meet specifications for use in this country, and included counterfeit drugs, those approved for animal but not human use, those with dangerous interactions or side effects, those that have been withdrawn from the U.S. market, and narcotics (U.S. Food and Drug Administration, 2003).

Bills to allow the importation of prescription drugs have been introduced and passed in Congress, but none has been implemented. In 2000, such a bill was passed by Congress and signed into law by President Clinton, but implementation of the law depended upon certification by the secretary of Health and Human Services that it would not result in health risks and would result in significant reductions in health costs. The secretary found it impossible to make such certifications. In 2002, the Senate passed legislation that would have permitted U.S. residents to import a 90-day supply of prescription drugs for personal use from Canada; however, the House of Representatives did not pass the bill (Gross, 2003b). Last year, the House of Representatives passed a bill allowing importation, and the Medicare prescription drug legislation includes an importation provision that depends on the certification of safety and cost savings by the secretary of Health and Human Services, who has stated that he would not be able to make such certifications.

In order to take advantage of lower drug prices in Canada, several states and municipalities have expressed interest in purchasing prescription drugs in Canada for state and municipal employees, retirees and their dependents, as well as for state health insurance programs, including Medicaid and for prison inmates. The city of Springfield, MA, in July began a voluntary importation program for city employees, retirees, and dependents who receive health benefits through the city. Other cities and states have undertaken studies and have sent delegations to Canada to meet with officials and

pharmacies there to examine these programs. A recent Illinois report finds that the state could save up to \$56.5 million per year by importing lower-cost drugs, and state employees and retirees could save another \$34.2 million per year, for a total of over \$90 million in savings.<sup>12</sup> However, a study by the National Taxpayers Union found the Illinois savings estimates to be inflated, and that savings would be at most \$2.7 million.<sup>13</sup>

In response to importation initiatives and online pharmacies that allow Americans to purchase prescription drugs from Canada, several pharmaceutical manufacturers have taken steps to limit drug shipments to Canada, in order to limit the supply of drugs for importation, or have warned pharmacies that they will limit sales if the shipments to the United States do not cease. These actions have raised concerns of increased prices for Internet sales of drugs and of possible drug shortages for Canadian consumers. They also have prompted lawsuits (and a congressional request for an investigation by the attorney general) alleging that pharmaceutical companies are violating antitrust laws in their efforts to prevent U.S. residents from reimporting U.S.-made drugs. The companies' actions have reduced the number of medicines available for importation, and some online Canadian pharmacies have reported problems getting enough drugs to fulfill orders from the United States (Harris, 2003).

Late in 2002, a group of physicians and pharmacists formed the North American Pharmotherapeutic Consultant Association, an international association whose purpose is to address quality concerns about prescriptions filled in Canada and other countries so as to increase access to affordable prescription drugs. The group has developed quality assurance standards for mail-order pharmacies throughout North America to help allay fears about the quality of imported drugs. The Internet and Mailorder Pharmacy Accreditation Commission (IMPAC) performs on-site compliance surveys of mail-order pharmacies; one has been accredited to date, and two are scheduled to be surveyed in December 2003. The goal of IMPAC is to provide quality oversight through the accreditation process, to promote, advocate and create access to high quality, affordable prescription drugs, to create opportunities for cross-border collaboration to better manage health care resources, and to lead and participate in development of health policy related to the quality of pharmotherapeutic management.<sup>14</sup>

## **Conclusion**

Prescription drugs are a crucial component in the effort to cure disease and preserve health. As the American population ages, and as current and new drugs continue to be an important part of the medical treatment and management of disease, prescription drug expenditures are expected to continue to increase. Employers and health plans, both private and public, have instituted many different tools in the effort to control costs while providing access to necessary medicines, maintaining or improving the productivity of their work force, and enhancing the value of their prescription drug benefits.

The annual growth in prescription drug expenditures has slowed in recent years, but prescription drugs continue to experience rates of increase that are the highest of any health care sector. Various factors contribute to these growth rates, in both causing increases and contributing to the slowdown. While increased intensity of use, the incidence and prevalence of chronic illnesses, prescription drug marketing, and price inflation contribute to increased drug expenditures, expiring patents and the introduction of generics, the movement of certain drugs to over-the-counter status, plan design innovations, and the potential for prescription drugs to substitute for other types of medical care may serve to rein in that growth or prevent expenditures in other sectors.

As plan sponsors continue to assess their prescription drug benefits in the effort to reduce or contain spending, care must be taken to encourage the use of necessary and effective medicines. Evidence-based drug effectiveness reviews and disease management programs may be especially



useful in coordinating treatment in a beneficial way for patients and preventing unnecessary drug spending for employers and health plans.

### ***Major Issues Beyond the Scope of This Paper***

**Access to Generic Prescription Drugs:** Private and public payers are interested in expanding access to generic drugs. FDA regulations took effect in August 2003 that allow only one 30-month delay in cases in which makers of brand-name prescription drugs claim patent infringement by generic drug companies, rather than the multiple delays they had been permitted prior to that date. Proposals are being discussed that would eliminate a 180-day period of market exclusivity for the first generic drug to come to market, if the manufacturer of that drug enters into anticompetitive deals or fails to come to market in a timely manner. This would speed up generics coming to market, which would increase access for all Americans, regardless of health plan type.

**Compliance and Medication Errors:** Patient compliance must be considered in relation to prescription drug utilization. Noncompliance may include not filling or refilling a prescription, taking partial or reduced doses, or taking the medication incorrectly (not according to instructions, such as with alcohol or with or without food). Full compliance may serve to increase utilization, and perhaps expenditures, but health status may improve as well, and other health care utilization and expenditures may be avoided or reduced. The related issue of medication errors must be considered as it relates to patient safety. This issue would include discussions of computerized physician order entry (CPOE), drug interactions, and practitioner communication, and would incorporate new ideas, such as including the diagnosis on the written prescription so the pharmacist can check that it matches the prescribed medication.

**Evidence-Based Decision Making:** Further study is needed in the area of prescription drug effectiveness. This discussion would include an assessment of the current state of the evidence as well as an examination of efforts to deepen the knowledge base in this area. Drug prescribing decisions require evidence, but often these decisions are not evidence-based (and may be made based on advertisements or physician detailing). This discussion would mention the need to test drugs within classes in comparison to one another, rather than each to a placebo, in order to determine relative effectiveness. Information gathered from such research would serve to allow use of the lowest-cost drugs where science shows equivalent outcomes. Also included would be a discussion of relevant court cases, such as an upcoming Supreme Court case related to step-therapy and prior authorization requirements. The discussion would also include mention of alternatives to prescription drug therapy, such as lifestyle changes and other interventions, and their effectiveness.

**Prescription Drug Research and Development:** This discussion would assess the funding of prescription drug research and development, and assess the proportion funded by private industry versus public sources. It would include a discussion of prescription drug manufacturer profits and compare the industry to others. The discussion would also include an assessment of prescription drug pricing in various countries.

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## Endnotes

<sup>1</sup> Inflated using GDP chain-type price index (2001=100.0).

<sup>2</sup> Total prescribed medicines includes free samples and refills. This is the total number of prescribed medicines that persons purchased or obtained in a given year. Multiple purchases or refills of the same medication are considered separate prescribed medicines in calculating this total.

<sup>3</sup> These data are from the Centers for Medicare & Medicaid Services' (CMS) National Health Accounts. Public spending does not include government contributions for health insurance for public-sector employees. Because the government is playing the role of employer, CMS classifies these expenditures as private-sector spending. Furthermore, forgone tax revenue not collected because of the tax preference for spending on health care services is not counted as spending by CMS. For more on this topic, see Daniel M. Fox and Paul Fronstin, "Public Spending for Health Care Approaches 60 Percent," letter to the editor in *Health Affairs* (March/April 2000): 271–272.

<sup>4</sup> Private fund payments are expenditures that do not arise from a government-sponsored program, and include payments made by individuals directly out of their own pockets and those made by private health insurers. Any payments made by private individuals or by individual or group coverage by private insurers are included in this category.

<sup>5</sup> The Internal Revenue Service recently ruled that expenditures for over-the-counter (OTC) medications could be reimbursed through flexible spending accounts (FSAs). This will serve to mitigate some of the costs of OTC medications for consumers, if they are able to pay for those drugs with pre-tax dollars.

<sup>6</sup> Step therapy provides access to certain drugs only to those patients who are most likely to benefit from the products. It may allow access to those drugs based on some criteria, such as age, or it may require that patients try generic or low-cost medicines first and receive brand-name or newer medicines only if the other medicines fail.

<sup>7</sup> The average copayment for generic drugs was \$7.42 in 2000, \$8.05 in 2001, \$8.74 in 2002, and \$9.47 in 2003.

<sup>8</sup> For more information on pharmaceutical inclusion requirements for Medicaid programs, see National Pharmaceutical Council, *Pharmaceutical Benefits Under State Medical Assistance Programs*, 2002, available at [www.npcnow.org/issues\\_productlist/medicaidpharmaceutical.asp](http://www.npcnow.org/issues_productlist/medicaidpharmaceutical.asp)

<sup>9</sup> Many health maintenance organizations (HMOs) that offer Medicare+Choice Plans to Medicare beneficiaries offer drug benefits. In 2003, 11 percent of Medicare beneficiaries were enrolled in Medicare+Choice plans.

<sup>10</sup> For more information on the Medicare prescription drug bill, see Kaiser Family Foundation, *Prescription Drug Coverage for Medicare Beneficiaries: A Side-by-Side Comparison of S. 1 and H.R. 1, and the Conference Agreement (H.R. 1)*, Nov. 26, 2003, available at [www.kaiser.org](http://www.kaiser.org)

<sup>11</sup> CBO assumes that active workers and those with prescription drug coverage through the Federal Employees Health Benefits program and the Tricare for Life program would continue to receive prescription drug coverage through those programs and would generally choose not to participate in the Medicare prescription drug program.

<sup>12</sup> Full report: Ram Kamath and Scott McKibbin, *Report on Feasibility of Employees and Retirees Safely and Effectively Purchasing Prescription Drugs from Canadian Pharmacies*, Office of Special Advocate for Prescription Drugs, Illinois Department of Central Management Services, Oct. 27, 2003.

<sup>13</sup> For the National Taxpayers Union *Issue Brief*, see: [www.ntu.org/taxpayer\\_issues/ntu\\_issue\\_briefs/ib\\_ntu\\_147.php3#\\_ednref1](http://www.ntu.org/taxpayer_issues/ntu_issue_briefs/ib_ntu_147.php3#_ednref1)

<sup>14</sup> For more information on the North American Pharmotherapeutic Consultant Association, see [www.napca.org](http://www.napca.org)

**Figure 1**  
**Prescription Drug Utilization, 1997–2000**

	Percentage With Use	Total Prescribed Medicines Purchased or Obtained, Including Refills				
		None	1–2	3–5	6–14	15 or more
(percentage of population)						
1997	62.1%	37.9%	20.5%	13.2%	14.3%	14.1%
1998	61.8	38.2	20.0	12.4	15.1	14.4
1999	62.4	37.6	19.6	12.0	15.6	15.2
2000	62.3	37.8	18.9	12.2	15.0	16.1

Source: Employee Benefit Research Institute estimates from the Medical Expenditure Panel Survey, 1997–2000 Full Year Consolidated Data Files.

Note: Total prescribed medicines includes free samples and refills.

**Figure 2  
Prescription Drug Utilization and Expenditure, by Various Demographics, 2000**

	Percentage With Use	Total Prescribed Medicines Purchased or Obtained, Including Refills					Total Expenditure, per Person With Use		Out-of-Pocket Expense, per Person With Use	
		None	1-2	3-5	6-14	15 or more	Median	Mean	Median	Mean
		(percentage)					(dollars)			
Total Population	62.3%	37.8%	18.9%	12.2%	15.0%	16.1%	\$186	\$594	\$71	\$274
<b>Age in Years</b>										
Under age 6	56.9	43.1	32.5	15.7	7.3	1.4	32	86	14	37
Ages 6-17	46.2	53.8	24.4	11.2	7.7	2.8	61	213	20	70
Ages 18-24	49.6	50.4	22.8	12.3	11.0	3.5	71	221	30	98
Ages 25-34	55.8	44.2	20.3	14.3	14.4	6.8	116	348	49	137
Ages 35-44	59.9	40.1	19.6	12.8	15.7	11.8	162	480	60	183
Ages 45-54	69.3	30.7	13.6	11.5	19.5	24.6	355	793	121	338
Ages 55-64	80.2	19.8	10.8	10.5	23.9	35.1	551	990	175	422
Ages 65-74	87.8	12.2	7.6	10.0	23.6	46.6	713	1,128	294	609
Ages 75-84	90.4	9.6	5.4	10.6	22.5	51.9	753	1,141	370	653
Age 85 and over	93.8	6.2	8.9	12.2	20.5	52.3	650	1,056	353	706
Under age 65	58.6	41.5	20.5	12.5	13.9	11.6	135	483	51	197
Age 65 and over	89.4	10.7	7.0	10.4	22.9	49.1	717	1,124	321	635
<b>Sex</b>										
Male	54.9	45.1	19.7	10.9	12.1	12.3	146	546	51	224
Female	69.2	30.8	18.1	13.5	17.9	19.8	219	631	90	312
<b>Race/Ethnicity</b>										
White	67.5	32.5	18.6	13.2	17.0	18.7	222	632	83	297
Black	50.8	49.2	18.7	9.7	11.4	11.1	125	487	49	215
Hispanic	47.2	52.8	20.2	9.7	9.1	8.2	92	434	35	184
Other	51.2	48.9	19.8	10.8	10.9	9.7	107	490	43	175
<b>Total Personal Income: Age 18 and Over</b>										
Less than \$15,000	68.1	31.9	14.9	11.3	16.1	25.8	333	872	131	436
\$15,000-\$29,999	66.0	34.0	16.5	12.5	17.4	19.7	265	669	110	310
\$30,000-\$74,999	65.9	34.1	16.4	12.5	19.9	17.1	249	569	90	237
\$75,000 or more	65.5	34.6	17.4	13.5	17.6	17.0	219	526	87	223
<b>Poverty Status</b>										
Less than 100% of poverty	58.6	41.4	20.9	10.1	10.8	16.8	139	691	45	308
100% to less than 125% of poverty	60.2	39.8	15.6	12.7	11.9	20.0	213	749	71	416
125% to less than 200% of poverty	59.6	40.4	18.2	11.0	12.9	17.5	181	685	79	352
200% to less than 400% of poverty	61.9	38.1	19.4	12.4	14.5	15.5	176	569	72	270
400% or more of poverty	64.8	35.2	18.4	13.1	17.9	15.5	205	543	75	229
<b>Health Status</b>										
Excellent or very good	55.5	44.5	21.4	12.6	13.3	8.3	113	350	44	156
Good	69.7	30.3	16.1	12.7	18.6	22.2	282	676	104	310
Fair or poor	88.4	11.6	9.1	9.2	17.9	52.3	811	1433	284	678
<b>Health Insurance Status</b>										
Under age 65, any private insurance	61.7	38.3	20.9	13.4	15.8	11.6	145	445	53	171
Under age 65, public coverage only	62.1	37.9	21.8	11.8	11.0	17.6	119	796	22	286
Under age 65, uninsured	37.6	62.5	16.9	7.9	6.3	6.5	89	382	80	330
Age 65 and over, Medicare only	88.6	11.4	8.2	10.6	21.2	48.6	655	1073	380	745
Age 65 and over, Medicare and private	89.8	10.3	6.3	10.7	24.8	48.0	729	1081	318	587
Age 65 and over, Medicare and other public	91.1	9.0	5.7	7.6	19.5	58.3	991	1569	248	603

Source: Employee Benefit Research Institute estimates from the Medical Expenditure Panel Survey, 2000 Full Year Consolidated Data File.  
 Note: All variables are for full-year 2000, except health status, which contains information from some respondents from late 1999 and from early 2001, due to the overlapping panel design of the survey. Total prescribed medicines includes free samples and refills.

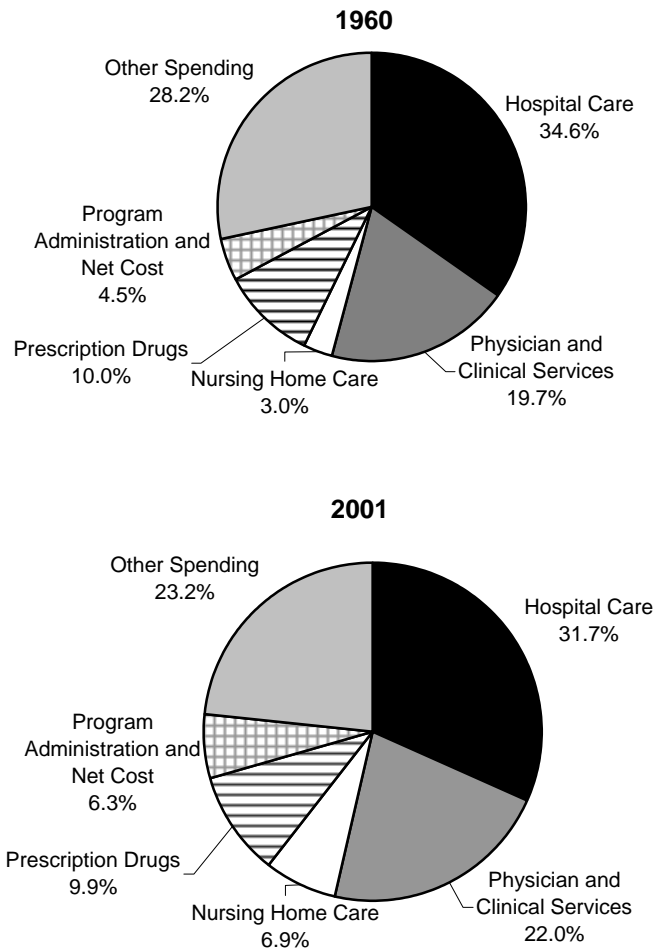
**Figure 3**  
**National Health Expenditures: Totals, Various Years 1960–2001**

	1960	1970	1980	1988	1990	1993	1994	1995	1996	1997	1998	1999	2000	2001
	(\$ billions)													
Total	\$26.9	\$73.1	\$245.8	\$558.1	\$696.0	\$888.1	\$937.2	\$990.1	\$1,039.4	\$1,092.7	\$1,150.0	\$1,219.7	\$1,310.0	\$1,424.5
Hospital	9.3	27.6	101.5	209.4	253.9	320.0	332.4	343.6	355.2	367.6	378.4	393.7	416.5	451.2
Physician	5.3	14.0	47.1	127.4	157.5	201.2	210.5	220.5	229.4	241.0	256.8	270.2	288.8	313.6
Nursing home	0.8	4.2	17.7	40.5	52.7	65.7	68.3	74.6	79.9	85.1	89.1	89.6	93.8	98.9
Prescription drugs	2.7	5.5	12.0	30.6	40.3	51.3	54.6	60.8	67.2	75.7	87.3	104.4	121.5	140.6
	(percentage)													
Percentage of Total														
Hospital	34.6%	37.8%	41.3%	37.5%	36.5%	36.0%	35.5%	34.7%	34.2%	33.6%	32.9%	32.3%	31.8%	31.7%
Physician	19.7	19.2	19.2	22.8	22.6	22.7	22.5	22.3	22.1	22.1	22.3	22.2	22.0	22.0
Nursing home	3.0	5.7	7.2	7.3	7.6	7.4	7.3	7.5	7.7	7.8	7.7	7.3	7.2	6.9
Prescription drugs	10.0	7.5	4.9	5.5	5.8	5.8	5.8	6.1	6.5	6.9	7.6	8.6	9.3	9.9

Sources: Katharine Levit et al., "Trends in U.S. Health Care Spending, 2001," *Health Affairs* (January/February 2003): 154–164; and "National Health Expenditures in 1997: More Slow Growth," *Health Affairs* (November/December 1998): 99–110; Centers for Medicare & Medicaid Services, Office of the Actuary, National Health Statistics Group ([www.cms.hhs.gov/statistics/nhe/historical/tables.pdf](http://www.cms.hhs.gov/statistics/nhe/historical/tables.pdf)); and Employee Benefit Research Institute calculations from the data.



Figure 4  
**Distribution of Total National Health Expenditures,  
 1960 and 2001**



Source: Employee Benefit Research Institute calculations from Katharine Levit et al., "National Health Expenditures in 1997: More Slow Growth," *Health Affairs* (November/December 1998): 99–110; and "Trends in U.S. Health Care Spending, 2001," *Health Affairs* (January/February 2003): 154–164.  
 Note: Other spending includes spending for dentist services, other professional services, home health care, durable medical products, over-the-counter medicines and sundries, public health, research and construction.

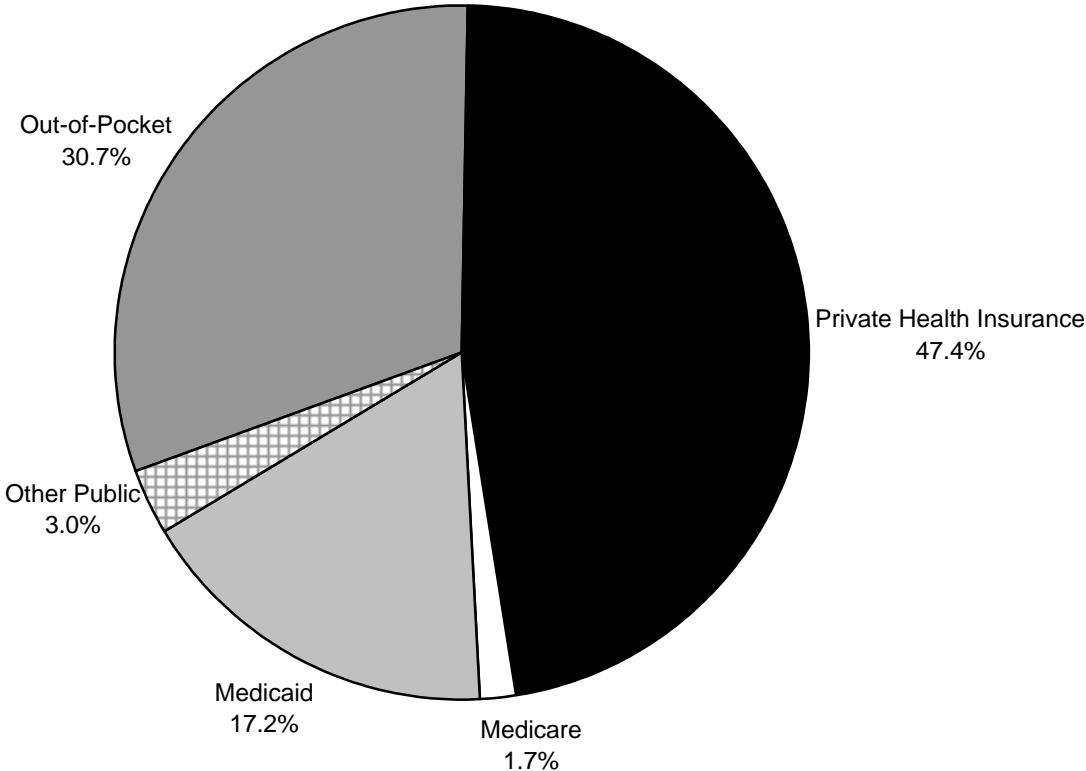
Figure 5  
**National Health Expenditures: Average Annual Percentage Growth  
 From Prior Year Shown, Various Years 1970–2001**

	1970 <sup>a</sup>	1980	1988	1990	1993	1994	1995	1996	1997	1998	1999	2000	2001
Total	10.6%	12.9%	10.8%	11.7%	8.5%	5.5%	5.7%	5.0%	5.1%	5.2%	6.1%	7.4%	8.7%
Hospital	11.7	13.9	9.5	10.1	8.0	3.9	3.4	3.4	3.5	2.9	4.1	5.8	8.3
Physician	10.1	12.9	13.2	11.2	8.5	4.6	4.8	4.0	5.0	6.6	5.2	6.9	8.6
Nursing home	17.4	15.4	10.9	14.1	7.6	4.0	9.1	7.2	6.4	4.7	0.5	4.7	5.5
Prescription drugs	7.5	8.2	12.4	14.7	8.4	6.6	11.2	10.5	12.8	15.2	19.7	16.4	15.7

Source: Katharine Levit et al., "Trends in U.S. Health Care Spending, 2001," *Health Affairs* (January/February 2003): 154–164; and Centers for Medicare & Medicaid Services, Office of the Actuary, National Health Statistics Group ([www.cms.hhs.gov/statistics/nhe/historical/tables.pdf](http://www.cms.hhs.gov/statistics/nhe/historical/tables.pdf)).

<sup>a</sup> Average annual growth, 1960–1970.

Figure 6  
Sources of Payment for Prescription Drug Expenditures, 2001



Source: Employee Benefit Research Institute calculations from Katharine Levit et al., "Trends in U.S. Health Care Spending, 2001," *Health Affairs* (January/February 2003): 154–164.

**Figure 7  
National Health Expenditures and Prescription Drug Expenditures, by Source of Funds, 1994–2001**

	1994	1995	1996	1997	1998	1999	2000	2001
	(billions)							
National Health Expenditures (total)	\$937.2	\$990.1	\$1,039.4	\$1,092.7	\$1,150.0	\$1,219.7	\$1,310.0	\$1,424.5
All Private Funds	509.8	532.5	557.5	589.2	628.4	669.7	718.7	779.9
Out-of-pocket payments	n/a	n/a	152.0	162.2	175.2	184.4	194.7	205.5
Private health insurance	n/a	n/a	344.1	359.9	382.0	412.1	449.0	496.1
Total Public Expenditures	427.3	457.7	481.9	503.6	521.6	550.0	591.3	646.7
Federal	298.8	323.5	344.2	360.2	368.7	386.2	415.1	454.8
State and local	128.5	134.2	137.7	143.4	152.9	163.8	176.2	191.8
Prescription Drug Expenditures (total)	54.6	60.8	67.2	75.7	87.3	104.4	121.5	140.6
All Private Funds	43.8	48.6	53.3	60.0	68.8	82.2	94.8	109.7
Out-of-pocket payments	26.3	26.0	26.5	27.9	30.5	34.4	38.1	43.1
Private health insurance	17.5	22.6	26.9	32.2	38.3	47.9	56.7	66.6
Total Public Expenditures	10.8	12.2	13.8	15.7	18.4	22.2	26.7	30.8
Federal	5.8	6.6	7.8	9.0	10.5	12.7	15.3	17.6
State and local	5.0	5.6	6.0	6.8	7.9	9.5	11.4	13.2
	(percentage)							
Prescription Drugs (percentage of source)	5.8%	6.1%	6.5%	6.9%	7.6%	8.6%	9.3%	9.9%
All Private Funds	8.6	9.1	9.6	10.2	10.9	12.3	13.2	14.1
Out-of-pocket payments	n/a	n/a	17.4	17.2	17.4	18.7	19.6	21.0
Private health insurance	n/a	n/a	7.8	8.9	10.0	11.6	12.6	13.4
Total Public Expenditures	2.5	2.7	2.9	3.1	3.5	4.0	4.5	4.8
Federal	1.9	2.0	2.3	2.5	2.8	3.3	3.7	3.9
State and local	3.9	4.2	4.4	4.7	5.2	5.8	6.5	6.9
Prescription Drugs (percentage of expenditures paid by source)								
All Private Funds	80.2	79.9	79.3	79.3	78.8	78.7	78.0	78.0
Out-of-pocket payments	48.2	42.8	39.4	36.9	34.9	33.0	31.4	30.7
Private health insurance	32.1	37.2	40.0	42.5	43.9	45.9	46.7	47.4
Total Public Expenditures	19.8	20.1	20.5	20.7	21.1	21.3	22.0	21.9
Federal	10.6	10.9	11.6	11.9	12.0	12.2	12.6	12.5
State and local	9.2	9.2	8.9	9.0	9.0	9.1	9.4	9.4
Prescription Drugs (percentage of total private/public expenditures paid by source)								
All Private Funds	100	100	100	100	100	100	100	100
Out-of-pocket payments	60.0	53.5	49.7	46.5	44.3	41.8	40.2	39.3
Private health insurance	40.0	46.5	50.5	53.7	55.7	58.3	59.8	60.7
Total Public Expenditures	100	100	100	100	100	100	100	100
Federal	53.7	54.1	56.5	57.3	57.1	57.2	57.3	57.1
State and local	46.3	45.9	43.5	43.3	42.9	42.8	42.7	42.9

Source: Centers for Medicare & Medicaid Services, Office of the Actuary, National Health Statistics Group; and Employee Benefit Research Institute calculations from the data: [www.cms.hhs.gov/statistics/nhe/historical/tables.pdf](http://www.cms.hhs.gov/statistics/nhe/historical/tables.pdf)

**Figure 8**  
**National Health and Prescription Drug Expenditures**  
**Annual Growth Rate, by Source of Funds, 1995–2001**

	1995	1996	1997	1998	1999	2000	2001
National Health Expenditures	5.6%	5.0%	5.1%	5.2%	6.1%	7.4%	8.7%
All Private Funds	4.5	4.7	5.7	6.7	6.6	7.3	8.5
Out-of-pocket payments	n/a	n/a	6.7	8.0	5.3	5.6	5.5
Private health insurance	n/a	n/a	4.6	6.1	7.9	9.0	10.5
Total Public Expenditures	7.1	5.3	4.5	3.6	5.4	7.5	9.4
Federal	8.3	6.4	4.6	2.4	4.7	7.5	9.6
State and local	4.4	2.6	4.1	6.6	7.1	7.6	8.9
Prescription Drug Expenditures	11.4	10.5	12.6	15.3	19.6	16.4	15.7
All Private Funds	11.0	9.7	12.6	14.7	19.5	15.3	15.7
Out-of-pocket payments	-1.1	1.9	5.3	9.3	12.8	10.8	13.1
Private health insurance	29.1	19.0	19.7	18.9	25.1	18.4	17.5
Total Public Expenditures	13.0	13.1	13.8	17.2	20.7	20.3	15.4
Federal	13.8	18.2	15.4	16.7	21.0	20.5	15.0
State and local	12.0	7.1	13.3	16.2	20.3	20.0	15.8
<b>Percentage of Growth in Each Source Attributable to Prescription Drugs</b>							
National Health Expenditures	11.7	13.0	15.9	20.2	24.5	18.9	16.7
All Private Funds	21.1	18.8	21.1	22.4	32.4	25.7	24.3
Out-of-pocket payments	n/a	n/a	13.7	20.0	42.4	35.9	46.3
Private health insurance	n/a	n/a	33.5	27.6	31.9	23.8	21.0
Total Public Expenditures	4.6	6.6	8.8	15.0	13.4	10.9	7.4
Federal	3.2	5.8	7.5	17.6	12.6	9.0	5.8
State and local	10.5	11.4	14.0	11.6	14.7	15.3	11.5

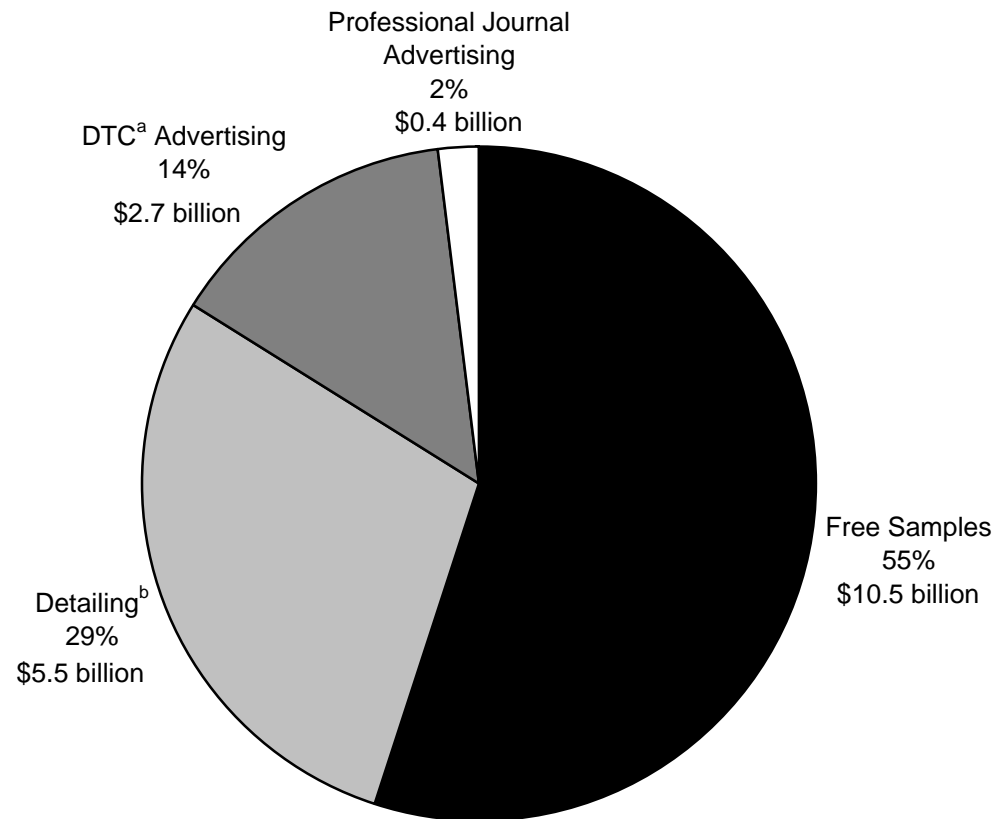
Source: Employee Benefit Research Institute calculations from Centers for Medicare & Medicaid Services, Office of the Actuary, National Health Statistics Group ([www.cms.hhs.gov/statistics/nhe/historical/tables.pdf](http://www.cms.hhs.gov/statistics/nhe/historical/tables.pdf)).

**Figure 9**  
**Medical Care Inflation, by Sector, and Prescription Drug Expenditure Growth, by Source, 1994–2002**

	1994	1995	1996	1997	1998	1999	2000	2001	2002
Medical Care Inflation (from previous year)	4.8%	4.5%	3.5%	2.8%	3.2%	3.5%	4.1%	4.6%	4.7%
Hospital services	5.5	4.6	4.5	3.3	3.2	4.2	6.0	6.6	9.0
Physician services	4.4	4.5	3.6	3.0	3.0	2.8	3.7	3.6	2.8
Prescription drugs	3.4	1.9	3.4	2.6	3.7	5.7	4.4	5.4	5.2
Increase in Prescription Drug Expenditures (from previous year)	8.1	9.7	10.1	14.2	n/a	18.8	14.7	n/a	16.9
Increased use of existing medicines and new medicines	6.4	7.8	8.5	11.7	n/a	14.6	10.8	n/a	12.0
Price increases	1.7	1.9	1.6	2.5	n/a	4.2	3.9	n/a	4.9
Increase in Prescription Drug Expenditures - Contribution of Source									
Increased use of existing medicines and new medicines	79.0	80.4	84.2	82.4	n/a	77.7	73.5	n/a	71.0
Price increases	21.0	19.6	15.8	17.6	n/a	22.3	26.5	n/a	29.0

Sources: U.S. Department of Labor, Bureau of Labor Statistics, Detailed Expenditure Tables, [www.bls.gov/cpi/cpi\\_dr.htm](http://www.bls.gov/cpi/cpi_dr.htm); National Center for Health Statistics, *Health, United States, 2001 With Urban and Rural Health Chartbook*; *Health, United States, 1999 With Health and Aging Chartbook*; *Health, United States, 1998 With Socioeconomic Status and Health Chartbook*; *Health, United States, 1995* (Hyattsville, MD: National Center for Health Statistics, 2001, 1999, 1998, 1995); Craig Copeland, "Prescription Drugs: Issues of Cost, Coverage, and Quality," *EBRI Issue Brief* no. 208 (Employee Benefit Research Institute, April 1999); PhRMA, *Industry Profile* (Washington, DC: Pharmaceutical Research and Manufacturers of America, 1998); PhRMA, *Pharmaceutical Industry Profile 2003* (Washington, DC: Pharmaceutical Research and Manufacturers of America, 2003); and Employee Benefit Research Institute calculations from the data.

Figure 10  
Pharmaceutical Promotional Spending, 2001

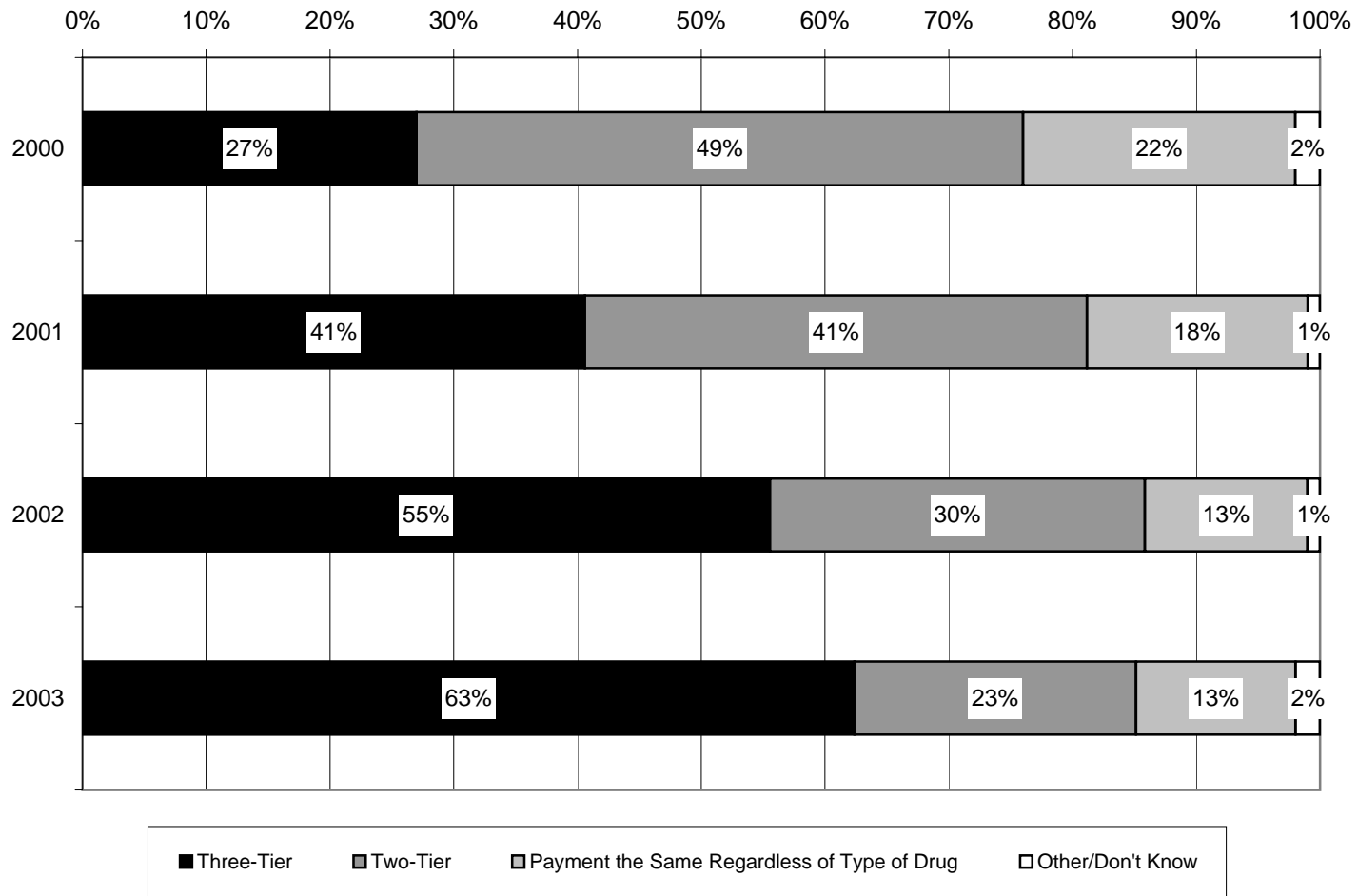


Source: U.S. General Accounting Office, *Prescription Drugs: FDA Oversight of Direct-to-Consumer Advertising Has Limitations*, Report to Congressional Requesters, GAO-03-177 (Washington, DC: U.S. Government Printing Office, October, 2002).

<sup>a</sup> Direct-to-consumer.

<sup>b</sup> Personal visits to physicians.

Figure 11  
**Percentage of Covered Workers Facing Different Cost-Sharing Formulas  
 for Prescription Drug Benefits, 2000–2003**

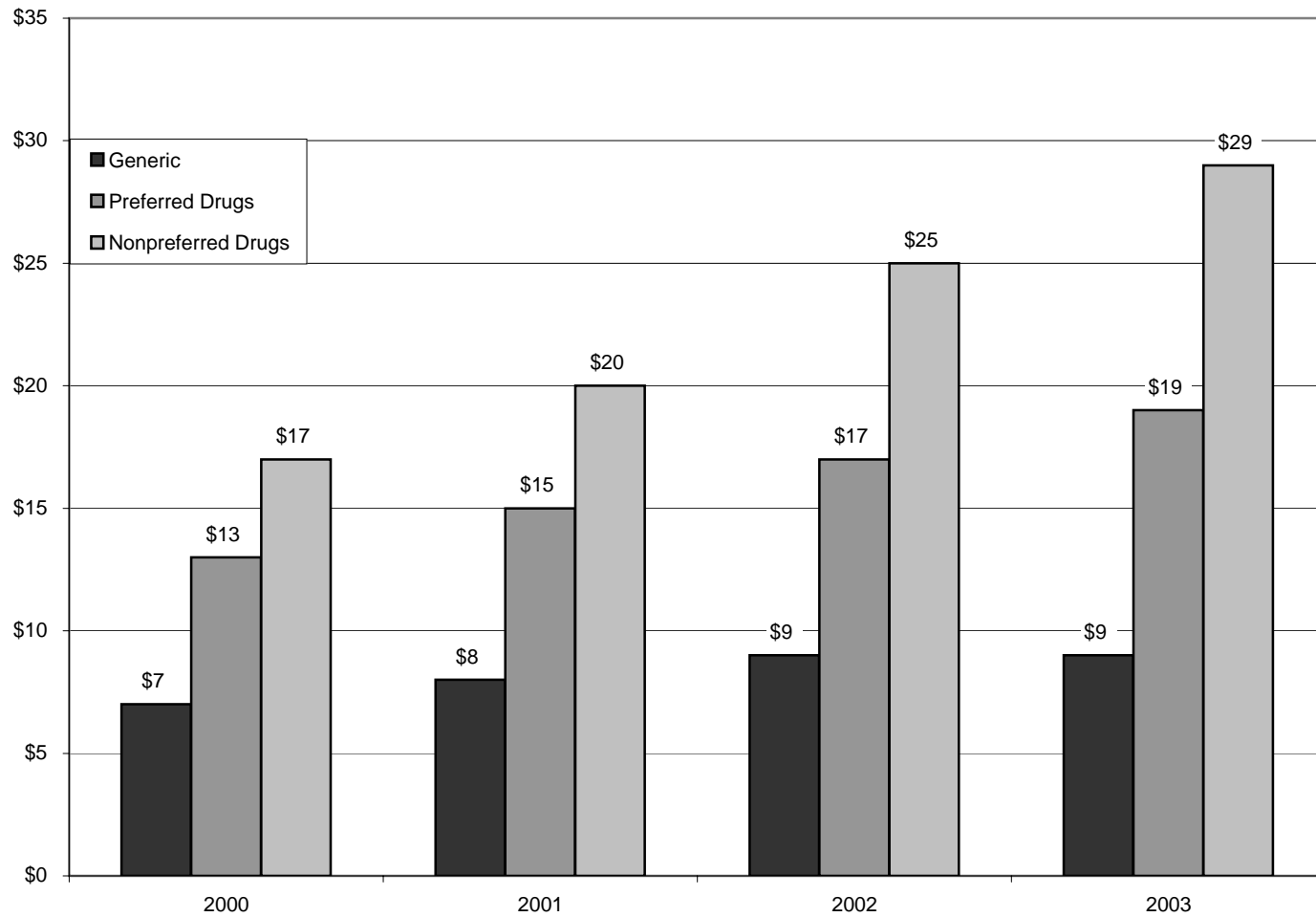


Source: Kaiser Family Foundation and Health Research and Educational Trust, *Employer Health Benefits*, 2000–2003 annual surveys.



Figure 12 Common Plan Designs for Multi-Tier Copayments			
Tier	2-Tier Design	3-Tier Design	4-Tier Design
First Tier	Generic	Generic	Generic
Second Tier	Brand	Preferred Brand	Preferred Brand
Third Tier		Nonpreferred Brand	Nonpreferred Brand
Fourth Tier			Lifestyle or other high-cost drugs
Source: Takeda Pharmaceuticals America, Inc., and Pharmacy Benefit Management Institute, <i>The Takeda Prescription Drug Benefit Cost and Plan Design Survey Report</i> , 2002 Edition.			

Figure 13  
**Average Copayment for Generic Drugs, Preferred Drugs, and Nonpreferred Drugs, 2000–2003**



Source: Kaiser Family Foundation and Health Research and Educational Trust, *Employer Health Benefits*, 2000–2003 annual surveys.  
 Note: The average copayment for generic drugs was \$7.42 in 2000, \$8.05 in 2001, \$8.74 in 2002, and \$9.47 in 2003.

Figure 14  
**Prescription Drug Plan Cost-Management  
 Provisions, by Plan Type, 2002**

Percentage of Employers With Prescription Drug Plans in Which Participants Must:	HMO <sup>a</sup>	PPO <sup>b</sup>	POS <sup>c</sup>
Pay More at Nonnetwork Pharmacy	42%	45%	47%
Pay More for Brand Drugs When Generic Drugs Are Available	81	87	80
Pay 100% for Lifestyle/Discretionary Drugs	40	40	40
Adhere to Quantity Limits	61	57	54
Obtain Authorization for Certain Drugs	45	41	43
None of These	6	3	6

Source: Mercer Human Resource Consulting, *Mercer National Survey of Employer-Sponsored Health Plans*, 2002 Survey Tables.

<sup>a</sup> Health maintenance organization.

<sup>b</sup> Preferred provider organization.

<sup>c</sup> Point-of-service plan.

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